CSULB Catalog

87/88

Undergraduate
and Graduate
Studies Bulletin

California State University, Long Beach

The Constitution of the United States of America

1787-1987

Dear Student:

This year marks the 200th anniversary of the drafting of the Constitution of the United States of America. It is appropriate that California State University, Long Beach commemorate this bicentennial in its 1987 *Bulletin* for there is a very direct relationship between the rights and responsibilities that we enjoy as citizens of this country under the Constitution and the rights and responsibilities that we enjoy as citizens of an academic community.

Several of the "founders" who established the form of government for the United States later served in the First Congress which met in 1789. There they took special care to enumerate, in the form of the first ten Amendments to the Constitution which are known as the Bill of Rights, those special "rights and personal liberties" for which Americans had fought so hard in the revolution against British rule. Arguably, the most important of these rights, hence its placement at the top of the list, is the right to free speech. As the First Amendment states, "Congress shall make no law . . . abridging the freedom of speech, or of the press. . . ." In the First Amendment, the framers categorically guaranteed American citizens the right to express their ideas and to be informed by the ideas of others.

Without these freedoms, where would universities be? Are not teaching and learning dependent upon the free expression and interpretation of ideas? Justice Oliver Wendell Holmes once remarked that the "Constitution is made for people of fundamentally differing views." Universities, as well, are made for people of differing views. Learning takes place when we get together and share those views. So central is this idea of free speech in the teaching/learning environment that we have given a special name to it: "academic freedom." "Academic freedom" encourages faculty and students to share and interpret their ideas and those of others, no matter how controversial — or even offensive — those ideas may be to some. Only in this way can critical thinking develop, thought be refined, and learning advanced. Such an environment is essential to the preservation of our democratic republic as it enters its third century of existence.

In this bicentennial year, students in universities would do well to read the Constitution and especially the Bill of Rights. The activities in which we engage — teaching and learning — are directly related to the freedoms embodied in them.

Stephen Horn
President of the University

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Using this Bulletin

The California State University, Long Beach Bulletin is the General Catalog of Undergraduate and Graduate Studies. It describes the courses, programs and services of the University projected for academic years 1987-1988. Most of the policies and regulations affecting students are contained in this Catalog, and each student is responsible for becoming familiar with these rules. Some areas are very detailed and complex, the prospective or enrolled student may wish to have additional advice from the Academic Advising Center, LIB E-106, or a particular academic department.

Institutional and Financial Assistance

The following information concerning student financial assistance may be obtained from the Office of Financial Aid, SSA 274, (213) 498-5581:

1. Student financial assistance programs available to students who enroll at California State University, Long Beach;
2. The methods by which such assistance is distributed among recipients who enroll at California State University, Long Beach;
3. The means, including forms, by which application for student financial assistance is made and requirements for accurately preparing such application;
4. The rights and responsibilities of students receiving financial assistance; and
5. The standards the student must maintain to be considered to be making satisfactory progress for the purpose of establishing and maintaining eligibility for financial assistance.

The following information concerning the cost of attending California State University, Long Beach is available from the Office of Financial Aid, SSA 274, (213)498-5581:

1. Fees and tuition (where applicable);
2. Estimated costs of books and supplies;
3. Estimates of typical student room and board costs or typical commuting costs; and
4. Any additional costs of the program in which the student is enrolled or expresses a specific interest.

Information concerning the refund policy of the University for the return of unearned tuition and fees or other refundable portions of costs is available from the University Business Office, SSA 158, (213) 498-5541.

Information concerning the academic programs of the University may be obtained from the Office of School Relations, SSA 124, (213) 498-5358, or the Academic Advising Center, LIB E-106, (213) 498-4837, or the appropriate department may include:

1. The current degree programs and other educational and training programs;
2. The instructional laboratory, and other physical plant facilities which relate to the academic program;
3. The faculty and other instructional personnel;
4. Data regarding student retention at California State University, Long Beach and, if available, the number and percentage of students completing the program in which the student is enrolled or expressed interest; and
5. The names of associations, agencies, or governmental bodies which accredit, approve, or the institution and its programs, and the procedures under which any current or prospective student may obtain or review upon request a copy of the documents describing the institution's accreditation, approval, or licensing.

Information regarding special facilities and services available to handicapped students may be obtained from the Office of Disabled Student Services, Union 206, (213) 498-5401 or (for the deaf) 498-5426.

Suggestions for this Bulletin

We are always interested to know what improvements to this catalog the readers believe to be appropriate. We accept suggestions in writing and incorporate them in future editions when we can. The Bulletin is produced by Dr. James R. Brett, Office of the Vice President for Academic Affairs.

Cover design and photography are by the Office of University Publications.

1987-1988 ACADEMIC CALENDAR

JUNE

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MAY

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FALL SEMESTER 1987

First Day of Semester	Monday — August 24
Registration	Mon.-Thur. — August 24, 25, 26, 27
Convocation	Friday — August 28
FIRST DAY OF INSTRUCTION	Monday — August 31
Labor Day Holiday	Monday — September 7
Veterans Day (OPEN)	Wed. — November 11
Thanksgiving Holiday	Thur.-Fri. — November 26,27
LAST DAY OF INSTRUCTION	Friday — December 11
Final Examinations	Mon.-Fri. — December 14, 15, 16, 17, 18
Last Day of Semester	Tuesday — December 22

SPRING SEMESTER 1988

First Day of Semester	Friday — January 22
Registration	Fri.-Tue. — January 22, 25, 26
FIRST DAY OF INSTRUCTION	Wednesday — January 27
Geo. Washington Holiday	Monday — February 15
Spring Recess	Mon.-Fri. — March 28, 29, 30, 31, and April 1
LAST DAY OF INSTRUCTION	Monday — May 16
Study Day	Tuesday — May 17
Final Examinations	Wed.-Tue. — May 18, 19, 20, 21, 23, 24
Commencements	Wed.-Fri. — May 25, 26, 27
Last Day of Semester	Fri. — May 27

WINTER SESSION 1988

FIRST DAY OF INSTRUCTION	January 4
M.L. King, Jr. Holiday	January 18
LAST DAY OF INSTRUCTION	January 22

SUMMER SESSION 1987

FIRST SESSION	June 1 - July 10
SECOND SESSION	June 15 - July 24
Independence Day Holiday	- July 3
THIRD SESSION	July 13 - August 21

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Assistant to the President ..... Barbara J. Holden

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Deputy Business Manager: Controller ..... Ray Soliman
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Director of Payroll ..... Sandra Gunderson
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Director of Athletics ..... John Kasser
Assistant Director/Athletic Fund Development Donna Cole

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CSULB Advisory Board

The California State University, Long Beach Advisory Board consists of community leaders interested in the development and welfare of the University. The Board serves the President in an advisory capacity, particularly in matters which affect University and community relations. Members are nominated by the President and appointed by the Board of Trustees for terms of four years.

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400 Golden Shore
Long Beach, California, 90802-4275
213-590-5506

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The Honorable Willie L. Brown, Jr., Speaker of the Assembly
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Dr. W. Ann Reynolds, Chancellor of The California State University

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Appointments are for a term of eight years, except for a student Trustee and alumni Trustee whose terms are for two years. Terms expire in the year in parentheses. Names are listed in order of appointment to the Board.

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Correspondence with the Trustees should be addressed:
c/o Trustees Secretariat
400 Golden Shore, Suite 322
Long Beach, California 90802-4275

The University

History

The University was founded in 1949 as Los Angeles-Orange County State College mainly to serve the area of Orange County and southeastern Los Angeles County. It began instruction in temporary, rented facilities in Long Beach with a faculty of 13 and a student body of 160 juniors, seniors and graduate students.

In 1950 the City of Long Beach acquired and donated a one-million-dollar 320-acre permanent site for the college and the name was changed to Long Beach State College. By 1953, construction started on the permanent facilities and the first freshmen and sophomores were enrolled. Formal dedication ceremonies were held in 1955. The institution was renamed California State College at Long Beach in 1964, but after nearly a decade of rapid expansion and growth, in June 1972 the Legislature designated it California State University, Long Beach in recognition of its role as a comprehensive institution of higher learning and academic research.

Nearly a third of the 65 baccalaureate degrees are subdivided into degree options which brings the total number of separate bachelor's degrees to 128. Among the 54 graduate degree programs are 23 degree options available in 6 of the degrees, bringing the graduate degree total to 71. In addition, 47 baccalaureate "minor" programs are offered, 36 public school teaching credentials, 57 practice and applications oriented certificate programs and special courses of study in the American language and in military officer training are available.

The University's nine units — Applied Arts and Sciences, Business Administration, Graduate Education, Engineering, Fine Arts, Humanities, Natural Sciences, the Graduate Center for Public Policy and Administration and Social and Behavioral Sciences — provide a learning environment, not only for high school, community college, and college graduates, but also for thousands of persons already well into their careers and professions.

The campus offers a cultural diversity which encourages the free exchange of ideas and philosophies. The University

is a center for intellectual curiosity and debate, proud of its heritage of academic freedom and its integral involvement in the community, state, and nation.

Setting

The hilltop portion on the 322-acre campus overlooks the Pacific Ocean. Sixty permanent buildings house the various schools, 70 academic departments and programs, 8 centers, 5 institutes, and 3 clinics.

An impressive University Student Union is located at the crossroads of the campus providing a focal point for the total campus community. A centralized Student Services/Administration center in close proximity to the Union add needed services. Specialized facilities for Engineering and Industrial Technology, Microbiology, Music, and Nursing have recently been completed. Under construction are a new International House and North Campus Library. In the planning stage are a new School of Business Administration complex and a combined University Arboretum and Art Museum.

A central feature of the landscape design is a planting of 3,200 Helen Borcher flowering peach trees donated by the citizens of Long Beach. Secluded landscape areas and buildings of appropriate scale help maintain a learning environment that encourages small group identification and personal privacy in the midst of 33,000 individuals sharing the same site, on what is essentially a large urban campus.

The campus has assumed a highly individual character. In 1965, the International Sculpture Symposium contributed 9 monumental pieces and designs to the University. These works received credits in 21 national and international publications, and in 1972 additional community funds in the form of a trust provided for the completion of the Carlson Memorial Tower, designed by French sculptor Andre Bloc. The campus sculpture collection has continued to expand with the addition of works by Kengiro Azuma, J.J. Beljon, Andre Bloc, Kosso Eloul, Clare Falkenstein, Gabriel Kohn, Piotr Kowalski, Robert Murray, Tenhold Peterson, Ben Barker, Glenn Miller, Guy Dill, Tom Van Sant, Robert Irwin, Bryan Hunt, and Woods Davy. These acquisitions were made possible through private donations.

Purpose

The general mission of California State University, Long Beach is to provide quality instruction through the master's degree in the liberal arts and sciences, in applied fields, and in the professions. The specific mission of

California State University, Long Beach is shaped by its origins and heritage, by its present strengths and potentialities, and by its visions and aspirations. The University is one of the comprehensive urban universities within The California State University System. The urban setting of the University demands a comprehensive approach to the education of the broad and diverse constituencies of the region, the second largest metropolitan area in the nation. The commitment of the University is and must be to enrich the life of the region it serves, while also deriving support and relevance from it. In seeking distinction as an outstanding state university, CSULB is committed to quality in all of its educational programs.

As a comprehensive University, CSULB seeks to provide instruction leading to appropriate degrees in every discipline and field of study necessary to the continued progress and prosperity of the human community. Those degree programs currently offered are those which are from time to time proposed in the Academic Master Plan and represent the responses which the University, its students, faculty, administrators, and alumni, have made to an ever-changing social and physical environment — such as changes in student interests, changes in student placement opportunities, changes in the resources which are external to the University, and changes to the relationships among academic disciplines. The responses of the University are contingent upon preservation of the liberal arts and sciences and general education core as well as the strengths of major disciplinary programs, which incorporate the essential function of instruction, research, creative activity, and service at the frontiers of human knowledge. A particular focus has been given to interdisciplinary and international-intercultural connections between and within fields of study.

The liberal arts and sciences are the academic core of the University upon which the quality of the whole is founded. These fields provide instruction in the basic skills necessary for advanced training and the academic foundation necessary to acquire philosophical, analytical, empirical, historical, and applied knowledge. To provide sound, forward-looking instructional programs in the applied fields and in the professions, the mission of the University is governed by the precept that an appropriate balance with the liberal arts and sciences be maintained, both within applied and professional programs and between them and the traditional center of intellectual endeavor. A major emphasis has also been given to field experiences and internships so that students have an opportunity to relate theory and practice by working with successful professionals in their chosen field.

Post-baccalaureate instruction is equally necessary to the mission of the University. Graduate instruction provides access to advanced learning at minimal cost to men and women already engaged in occupational pursuits as they advance to positions of expertise and influence in society. Master's degree programs also provide that essential frame of reference for the participation of students and faculty in research and useful applications appropriate to the urban setting and comprehensive nature of the University.

Accreditation

The University is accredited by the Western Association of Schools and Colleges, the agency responsible for granting national accreditation to colleges and universities in the western United States. It is accredited by the California State Board of Education and is on the list of approved institutions of the American Association of University Women.

Art ..... National Association of Schools of Art and Design
Business Administration ..... American Assembly of Collegiate Schools of Business
Chemistry (undergraduate) ... American Chemical Society, Committee on Professional Training
Communicative Disorders (graduate) ..... American Speech and Hearing Association, Education and Training Board
Dance ..... National Association of Schools of Dance
Design ..... National Association of Schools of Art and Design
Interior Design ..... Foundation for Interior Design Education Research
Engineering (undergraduate: Chemical, Civil, Computer, Electrical, Mechanical, Ocean) ... Accreditation Board for Engineering and Technology
Home Economics .. American Home Economics Association
Environmental Factors: Interiors ..... Foundation for Interior Design Education Research
Journalism .... American Council on Education for Journalism
Music ..... National Association of Schools of Music
Nursing ..... National League for Nursing
Physical Therapy ..... American Physical Therapy Association
Public Policy and Administration ..... National Association of Schools of Public Affairs and Administration

Social Work .. Council on Social Work Education
Theatre Arts ... National Association of Schools of Theatre
University Art Museum .... American Association of Museums

Academic Organization of the University

During the regular session California State University, Long Beach is as large as a small city. Thirty-four thousand students, eighteen hundred faculty members and nearly twelve hundred staff members study and work on campus each week. In order to operate, the campus has been organized into nine separate units and many academic departments and programs. The names of the Schools, Departments, and Programs and their current Deans, Chairs, and Directors are shown on the facing page.

Schools

Schools are usually composed of academic areas with some common characteristics. Because of this, schools themselves suggest a way to look at the enormous fund of knowledge that is this University. One function of a school is to provide a forum for the faculty and the students to express academic matters before a knowledgeable group of people. At the university level this is a very important aspect of the educational process.

For students who have just begun their life in the University, some of the departments of the schools will be unknown territory. Other departments and programs will turn out to be considerably different from first expectations or previous experiences with high school subjects with the same or similar names. For students who have begun to focus their academic interests, exploration of the departments and programs of a school beyond the favorite first contact area will often prove to be a valuable part of the process of choosing an academic major.

This catalog is organized so that the departments and programs of the individual schools are listed all in the same section. In order to find Mathematics, for instance, you need to know that it is within the School of Humanities. The list on the facing page, or the table of contents, will solve these riddles for the beginning student. For the continuing student, the names of deans and department chairs should be useful for times when information or approvals are not available from faculty or other administrative offices.

Departments, Programs and Studies

The elemental unit of academic organization at this University is the Department. Departments are most often coincident with a discipline and usually share the same name. Faculty are members of Departments. Programs on the other hand, are associated with the academic curricula. Thus, the department of Biology has many programs, including degrees in Biology, Botany, Entomology, a minor in Physiology, and a certificate in Biomedical Art. On the other hand, Gerontology is not a part of any one department and offers a certificate program. Some of the academic areas in this catalog are called Studies, e.g., Asian Studies, Religious Studies. This means that the field is essentially an interdisciplinary one in the general sense. These areas may be Departments or Programs at CSULB.

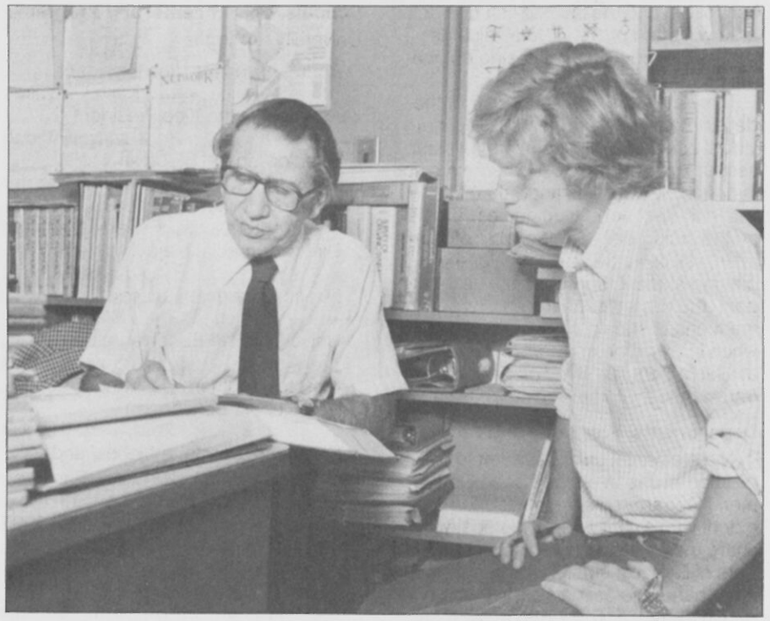
Schools, Departments, and Programs

University Programs
Acting Associate Vice President ..... Keith I. Polakoff
Assistant to the Vice President ..... Eunice M. Wood
Director, Liberal Studies ..... Richard Porter
Director, University Scholars Program .... Roberta Markman
Director, Special Major Program ..... Kristi Jones
Director, Experiential Learning ..... Wade Hawley
University Post-Baccalaureate Advisor ..... Kristi Jones
Director, Southern California Ocean Studies Consortium ..... Murray Dailey
Director of Sports, Athletics, and Recreation .....
School of Applied Arts and Sciences ..... Dean Donald Lauda
Associate Dean — Academic Programs ..... Andy Sinclair
Associate Dean — Graduate Studies/ Research ..... Peter Cortese
Associate Dean for Student Services ..... Barbara Coffman
Aerospace Studies ..... Earlton C. Donnell
Criminal Justice ..... Judy Kaci
Gerontology ..... Dorothy Fornia
Health Care Administration ..... Robert E. Tumelty
Health Science .... Allan Henderson
Home Economics .... Bonnie Rader
Industrial Education ... Irvin Lathrop
Nursing ..... Colleen Sparks
Physical Education ... William Husak
Physical Therapy ..... Ray J. Morris
Recreation and Leisure Studies ..... Marilyn A. Jensen
Vocational Education ..... Richard Resurreccion
School of Business Administration ..... Dean Mohamed Moustafa
Associate Dean .....
Associate Dean .....
Associate Dean for Student Services ..... Jean Relleve Caveness
Accountancy ..... John Martinelli
Finance, Real Estate and Law ..... Wendell McCulloch
Management and Human Resources Management .. Jonathan Monat
Management Information Systems ..... Merle Martin
Marketing ..... Frank Alfieri
Quantitative Systems . Owen Jenson
School of Education ..... Dean John P. Sikula
Associate Dean — Graduate Studies Research ..... Carolyn Denham
Director of Support Services and Planning ..... John A. McAnlis
Associate Dean for Student Services ..... Len Hightower
Educational Psychology and Administration .... Russel Orpet
Instructional Media ..... Richard J. Johnson
Teacher Education ..... Robert Roth
School of Engineering ..... Dean Richard Williams
Associate Dean Timothy Jordanides
Associate Dean for Student Services ..... David Crandall
Chemical Engineering . Lloyd R. Hile
Civil Engineering ... Hsiao-Ling Chu
Computer Science and Engineering ..... John Lane
Electrical Engineering ..... Michael Hassul
Engineering and Industrial Technology Arthur W. Grossman
Mechanical Engineering .. Hillar Unt
School of Fine Arts Dean Wayne Sheley
Associate Dean .... Thomas Ferreira
Associate Dean for Student Services ..... Bron Pellissier
Art ..... Robert Ramsey
Dance ..... Joan Schlaich
Design ..... Robert Eggers
Music ..... Jerry Neil Smith
Theatre Arts ..... Bernard J. Skalka
School of Humanities ..... Dean Karl W.E. Anatol
Associate Dean — Educational Policy ... Beverly Delong-Tonelli
Associate Dean — Instructional Support ..... Virginia Warren
Associate Dean for Student Services ..... Barbara Coffman
Communicative Disorders ..... Dwayne C. Craven

Comparative Literature
..... Roberta Markman
English ..... Robert A. Hipkiss
French/Italian Frederick M. Swensen
German, Russian and Classics
..... Mary Purcell
Journalism ..... Wayne Kelly
Linguistics Program Stephen B. Ross
Mathematics and Computer Science
..... Charles Austin
Medieval and Renaissance Studies
..... Edward A. Gosselin
Mediterranean Studies
..... David C. Hood
Philosophy ..... William Johnson
Radio, Television, and Film
..... Saundra McMillan
Religious Studies . Robert Eisenman
Spanish and Portuguese
..... Mary Purcell
Speech Communication
..... Richard Porter

School of Natural Sciences
..... Dean Roger D. Bauer
Associate Dean ..... James Jensen
Associate Dean for Student Services
..... David Crandall
Anatomy Physiology ... Rajen Anand
Biology ..... Larry Leamy
Chemistry ..... Kenneth L. Marsi
Environmental Studies
..... Roswitha Grannell
Geological Sciences . Charles Walker
Microbiology ..... Vern Eveland
Physics-Astronomy ..... S.I. Salem
Science Education ... William C. Ritz

School of Social and Behavioral Sciences ..... Dean Chae-Jin Lee
Acting Associate Dean, Educational Policy . Dorothy DeF. Abrahamse
Associate Dean for Student Services
..... Bron Pellissier
American Indian Studies
..... Richard Danay
Anthropology ..... Eleanor Bates
Asian American Studies .. Lloyd Inui
Asian Studies ..... San-Pao Li
Black Studies . Skyne Uku-Werthimer
Computer Studies .... Glenn Walker
Economics ... Joseph P. Magaddino
Geography ..... Gary Peters
History ..... Edward A. Gosselin
Human Development Program
..... Norma Tarrow
Latin American Studies
..... Federico Sanchez
Legal Studies in the Liberal Arts
..... Albie Burke
Mexican American Studies
..... Francisco Hidalgo
Political Science ..... Ron Schmidt
Psychology ..... Lyle R. Creamer
Russian-East European Studies Program ..... Harold Shevsky
Social Work ..... Paul Abels
Sociology ..... Marsha Harman



Women's Studies Program
..... Sharon Sievers
Graduate Center for Public Policy and Administration
..... Dean Melchior Powell
Coordinator-for Faculty Affairs
..... Peter Shaw
Coordinator for Student Affairs
..... Stephen Blumberg

Center for International Education
..... Dean Maurice Harari
Director — Student Services
..... Edward Blankenship
Associate Director — Student Services ..... Terri L. Hunter
Director — American Language Institute ..... Karen Fox
Director — International Admissions
..... George LaDue
Administrative Officer .....
Assistant to the Dean
..... Denysia P. Watilo

University Library
.... Jordan M. Scepanski, Director
Director, Learning Resources
..... Robert Rheinish
Associate Director .... Helen Britton
Associate Director Roman V. Kochan

University Extension Services
..... Dean Donna George

University Extension Services is the community outreach branch of the University. It is a self-supporting entity which provides general education as well as professional training for the adult. Approximately 450 seminars, briefings, short courses, and certificate programs are provided each semester throughout the Los Angeles-Orange County region. University Extension Services encompasses the Extended Education Office, the Summer Session Office (the largest in the CSU system), the South Coast Center for Professional Training and Development, and the University Television Center. In the area of professional training, the South Coast Center provides customized company training, creates and manages company retraining, and offers qualified researchers and trainers to assist companies in designing their own training. The University Television Center offers a series of public information broadcasts on local Long Beach and Lakewood cable systems, The University Television Center is also constructing a facility which, working in concert with the South Coast Center and academic schools, will have the potential to deliver training via television to on-site business and industry locations.

The Faculty

The faculty of California State University, Long Beach is a dedicated group of men and women. Each has been well-prepared for the work of providing instruction to undergraduate and graduate students. The faculty create an intellectual atmosphere that encourages students to develop a spirit of investigation which becomes a life-long approach to issues and problems. It is the faculty's hope that students will gain respect for excellence of performance and take advantage of the wide range of educational opportunities available to them.

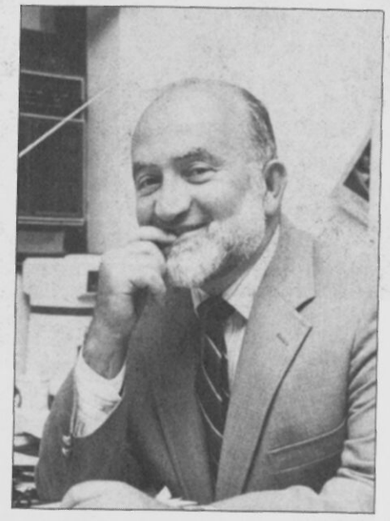
Faculty earn academic rank as they develop their course materials, research, academic and community service, and publications. The highest faculty rank is "Professor," sometimes called "full Professor." The intermediate rank is "Associate Professor. Most faculty begin their careers as "Assistant Professors."

The faculty are assigned to departments and programs within schools of the University. The Department Chair is the academic leader of the department faculty.

A Dean is the chief executive officer of a school. Deans are appointed by the Vice President for Academic Affairs in consultation with the President and the school faculty. Most schools have one or more Associate Deans to assist in the administration of school resources.

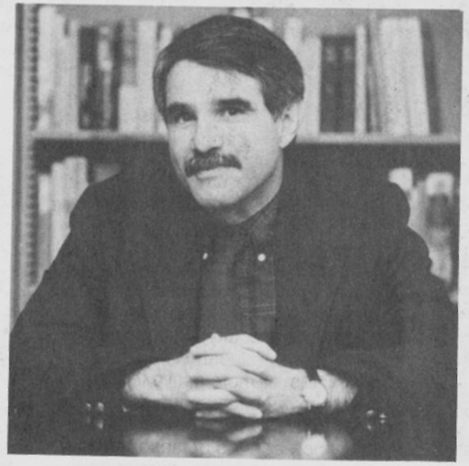
Elsewhere in this Bulletin you will find the explicit policy of the University on grades and grading as well as policies on class attendance, withdrawal from courses, and cheating and plagiarism.

These and other policies reflect the concerns of the faculty that students take seriously the opportunities made available to them. Beyond these rules and regulations the faculty expect student participation in education that may be different from or more active than that students have been used to in secondary schools. For every discipline the fund of knowledge to be absorbed, understood, and added to is expanding rapidly. The essential expectation is that the students will use not only the 150 instructional days per year to the best possible advantage, but that by reflecting on the learning process they will also learn how to educate themselves.



Academic Senate, Councils, and Committees

The faculty is subdivided into departments and programs. Normally these sub-divisions have committees to discuss curriculum and other matters. Since departments and programs are constituent parts of the schools, they also send members to school-level committees and councils. These bodies serve to develop, refine, and review curriculum. At the University level faculty members from all of the schools are elected to several councils and to the Academic Senate. Many of these councils, their subcommittees, and the Academic Senate have also provided for staff and student membership.



The University Library

The University Library excels in all forms of information delivery to students, faculty, and members of the community. A modern six-story building houses almost a million volumes together with over a million and a half indexed slides. microtexts, video tapes and film strips, maps, art prints, and sound recordings. With 250,000 square feet of available space, the Library has extensive study facilities, a media center, microfilm viewing areas, a multi-station IBM PC microcomputer laboratory, and instructional facilities. An extensive collection of newspapers and other periodicals is located conveniently on the main floor adjacent to the photocopying facilities.

Direct personal assistance in the use of library resources is provided by the staff at the Information Desk and in the Reference Center. Help with use of the card catalog, the automated Library Information Network, an electronic card catalog, and the Serials Record is readily available. Assistance with general inquiries and in searching for in-depth information on specific academic topics is also available in the Reference Center.

The OnLine Search Service in the Reference Center is available for retrieval of information from over 300 databases. Librarians use sophisticated search strategy techniques and recently developed electronic equipment to provide easily read printed bibliographies from the databases of DIALOG, Bibliographic Retrieval Services (BRS), System Development Corporation (SDC), and Research Libraries Information Network (RLIN). Search Helper is another electronic search service used by librarians in providing reference assistance to users who need brief listings of citations on currently popular topics. These online services not only save time in conducting comprehensive literature searches, but also provide detailed subject specificity and the most current information available.

The Bibliographic Instruction Program of the library is one of the most comprehensive instructional programs offered by an academic library. The program includes a required course and a series of non-credit presentations on bibliographic resources and library searching techniques in various disciplines. Outstanding collections in history, politics, and the humanities are found in Library Special Collections. Adjacent to the University Art Museum, where noted artists are exhibited throughout the year, the Special Collections section brings together extensive holdings on the history of California, the Emancipation movement, and the history of art and painting. Among the holdings is a notably complete collection of first editions, private printings, manuscripts, and ephemera, anthology appearances, and criticism on the author Robinson Jeffers. California legislators Vincent Thomas, Mark Hannaford and Richard Hanna have donated to the Library papers and files covering their years of public service. The Library has also developed extensive holdings on radicalism in Southern California centering on the political activities of Dorothy Healy. The Whittington Collection contains over half a million photographic negatives reflecting nearly fifty years of commercial photography in the Los Angeles area; the collection is especially rich in photographs of fashions, transportation, and architecture.

Original art works, photographic prints by Edward Weston and Ansel Adams as well as numerous contemporary West Coast photographers, and the additional collections contained in the University Archives also add to this rapidly developing section of the Library.

Operating as part of the Library, the University's Learning Resources department, which includes the Audio-Visual and Multi-Media Centers, offers a variety of creative, technical, consultative, production and distribution assistance in support of classroom instruction.

Library services include facilities for the handicapped and a Kurzweil Reading Machine for the blind; a collection of California State approved public school texts, and a large selection of award-winning books for younger readers. The University Library is depository for Federal, State, and local government documents.

Faculty, graduate and undergraduate students have access to the Library's national and international interlibrary loan services, organized among the 18 other CSU campuses and the nine campuses of the University of California. The Library is a member of the Center for Research Libraries and has full access to its collection of over three million volumes of valuable research items.

Automated circulation and book processing services round out the picture of a modern university research library, ready to offer the finest resources and the most advanced technology, in support of academic study, research, and recreational learning.

University Computer Facilities

The University maintains an extensive array of main-frame, minicomputers, and microcomputer laboratory facilities. Three hundred terminals are connected to the University's powerful CDC Cyber 750 computer, a Prime Model 2 super-mini, a Prime 9755 super-mini, and a Cyber 760 computer located off-campus at the State University Data Center. A large x.25 network interlinks these systems and mainframe and minicomputers located on the other 18 CSU campuses and a Cray XMP located at the University of California at San Diego.

Ten convenient computing laboratories situated throughout the campus provide access to an extensive collection of software packages and programming languages. Over 500 microcomputers are available for student use. These include IMB PC's and compatibles, Apple II's, MacIntoshes, and specialized microcomputers. and 36 Victor microcomputers. Many of the microcomputers have access to the Cyber 750 and others of the larger mini- and mainframe computers. Students also use University graphics terminals, plotters, and a laser printer for graphics applications.

In addition, several schools of the University have specialized computers installed, used primarily for upper-division and graduate students. Among these are the School of Engineering's DEC PDP 11/44, Computervision 4000, Data General MV 8000 and a DEC VAX 8700. The School of Business Administration has a sophisticated local area network of PC's used for instruction. the Department of Mathematics and Computer Science operates its own ATT 3B5 minicomputer. Additional computing facilities are dedicated to faculty research.

Over two hundred courses incorporating computers into the learning experience are offered in the academic program of the University. The courses range from programming courses and the use of statistical software for analysis of social science research to English composition and music.

Research Centers and Institutes

Center for Aerodynamics Research — Tuncer Cebeci, Director
Center for Career Studies — Paul Bott, Director
Center for Criminal Justice Research and Training — Arthur Basile, Director

Center for Educational Applications of Brain-Hemisphere Research — Betty Edwards, Director
Center for Educational Research and Services — Robert Berdan, Director
Center for Health and Behavior Studies —
Center for Human Population Studies — Kuang-Ho Chen, Director
Institute for Space Power Studies — Ralph Cooper, Director
Institute for Science and Math Education — William Ritz, Director
Institute of Parasitology — Murray Dailey, Director
Molecular Ecology Institute — Kenneth Jenkins, Director
Pacific Rim Institute — Maurice Harari, Director
Summer Institute of the Arts — Ralph Duckwall

Honor Societies

Phi Beta Kappa — Phi Beta Kappa, founded at the College of William and Mary in 1776, is the oldest and most prestigious honor society for students of the liberal arts and sciences. Pursuant upon action taken by the United Chapters of Phi Beta Kappa exactly two hundred years after the original foundation, a chapter was established at California State University, Long Beach in 1977.

Graduating seniors are elected to membership in Phi Beta Kappa on the basis of extraordinary scholarly performance at this University, after detailed study of their records by faculty members who are themselves members of Phi Beta Kappa. No specific action on the part of the student is necessary to initiate consideration. In reviewing candidates the Elections Committee of the chapter will look basically for evidence of broad liberal arts and cultural interests, scholarly excellence and good character. Certain specific minimum requirements must also normally be met;

1. Residence at CSULB for at least four full semesters (60 units at the time of graduation.
2. A grade point average of 3.70 or more in courses taken at CSULB and in all college work.
3. A major, or the equivalent, in one of the liberal arts or sciences.
4. At least 90 semester hours in liberal subjects. This work should include:
   a. Reasonable breadth of work outside the major.
   b. Knowledge of a foreign language at least minimally appropriate to a liberal education. This means satisfactory completion of at least one course at the second year college level or three years of a single language in high school or the equivalent.
   c. Knowledge of mathematics at least minimally appropriate to a liberal education. This means, at a minimum, satisfactory completion of course work to the level of one of the following; Mathematics 111, 112, 115B, 115S, 117 or the equivalent.

The Elections Committee may make minor exceptions to the specific requirements noted above provided there are compensating strengths in a student's background or record.

Inquiries should be directed to the President of the University chapter of Phi Beta Kappa, Dr. Roberta Markman, c/o Department of Comparative Literature.

Two additional societies which may elect students from all academic areas are:

Mortar Board — A national honor society for senior students who have achieved academic excellence and have made personal contributions to campus life through service and research — a 3.0 GPA is required.

Phi Kappa Phi — A national honor society for men and women which recognizes superior scholarship in all academic areas — membership includes both students and faculty.

Other societies may limit membership to particular academic areas. Among these organizations at California State University, Long Beach are the following:

Beta Alpha Psi (Accounting) National scholastic fraternity to give recognition to excellence in the field of accounting.

Beta Gamma Sigma (Business Administration) National honorary business society to recognize superior academic performance.

Chi Epsilon (Civil Engineering) National honor society open to Civil Engineering majors with a 2.9 GPA.

Eta Kappa Nu (Electrical Engineering) National honor society furthering area interests and promoting scholarship. GPA requirements for seniors 2.8, for juniors 3.0.

Kappa Delta Pi (Educational National honor society for teachers, encourages high professional, intellectual and personal standards. Recognizes outstanding contributions to education.

Omicron Nu (Home Economics) National honor society, recognizing superior scholarship and promoting leadership and research in the field of Home Economics.

Phi Alpha (Social Work) National honor society to improve the goals of social work on campus. GPA requirement 3.0.

Phi Delta Gamma (Scholarship) National honor society for graduate women students. Fosters academic achievement and professional preparation.

Phi Delta Kappa (Education) National organization which promotes service, research and leadership in education. Members include both students and faculty.

Phi Epsilon Kappa (Physical Education) National society for recognition in sports and physical education, GPA 3.0 requirement and faculty recommendation.

Phi Mu Alpha-Sinfonia (Music) National organization for students in music. Promotes music in America, especially contemporary American music.

Phi Alpha Alpha (Public Administration) National society to encourage scholarship among students of public administration.

Phi Sigma Tau (Philosophy) National honor society for students with a strong undergraduate concentration in philosophy.

Pi Kappa Lamda (Music) National honor society for scholastic achievement in music.

Pi Lambda Theta (Education) National organization for undergraduate and graduate students. Purpose is to maintain high standards of scholarship and preparation for teaching.

Pi Mu Epsilon (Mathematics) National honor society recognizing distinction in mathematics.

Pi Sigma Alpha (Political Science National honor society for political scientists. Open by invitation to upper-division and graduate students with a 3.0 G.P.A.

Pi Tau Sigma (Mechanical Engineering) National honorary fraternity encouraging and recognizing outstanding scholastic achievement of students in the field.

Sigma Alpha Iota (Music) National organization for women in music. Aims to further the development of music in America through performance, study and participation in both campus and community projects.

Sigma Theta Tau (Nursing) International honor society recognizing superior scholastic achievement, leadership, and community service in nursing.

Sigma Tau Delta (English) National honor society conferring distinction for high achievement in the study of English language and literature.

Sigma Xi (Science) National honor society Tau Beta Pi (Engineering) National honor society recognizing engineering students for academic achievement and participation in activities. Members are elected from top 20 percent of the senior and top 12 percent of the junior class.

Fine Arts Public Performances and Exhibitions

The School of Fine Arts presents more than 350 performing and visual arts events each year; many are works by faculty and students; others are performances by world renown artists. With the support of the Louise Carlson Cultural Fund and the Lillian Newman Komaroff Memorial for the Performing Arts, the School presents an annual performing arts series featuring outstanding professional artists and touring companies.

Most of the performing arts events are held in three intimate facilities; the University Theatre with a proscenium stage and seating for 400; the Studio Theatre, a complete "flexible" theatre seating 230; and the 280-seat Gerald R. Daniel Recital Hall, part of the modern University Music Center.

The Department of Art presents a weekly schedule of graduate student exhibitions in School of Fine Arts Galleries B and C. Annual events include a New Faculty Exhibition each October, Christmas Art Sale during the first week of December, Student Art Exhibition in the University Art Museum each May, and an Alumni Exhibition each June.

The Department of Dance presents two major performances each year during the first weekends of December and May. The modern dance concerts feature works by CSULB's highly acclaimed dance faculty performed by the faculty and students. Informal concerts featuring choreography by CSULB students are presented each semester. The Annual Intermedia Festival each May is a unique collaboration between the Departments of Dance and Music.

The Department of Design presents the Senior Design Show, an outstanding exhibition of projects by Interior Design, Graphic Design, and Industrial Design students, each May in the Graduate Center. Design graduate students present exhibitions throughout the year in Galleries B and C.

The Department of Music presents more than 100 concerts each year featuring 18 performing groups including the Symphony Orchestra, Wind Symphony, Jazz Ensembles, University Choir, String Quartet, Handbell Choir, Opera, Forty-Niner Chorus, Men's Chorus, Women's Chorus, Collegium Musicum, Forty-Niner Band, and others. During the first week of December, the Choral Studies Program presents the Annual Winter Festival Concert at the First Congregational Church in Long Beach.

The Department of Theatre Arts produces six major productions each year. Acclaimed for quality acting and elaborate sets, the theatre season includes comtemporary dramas, classics, musicals and opera. Each May, the department presents exciting student one acts — an audience favorite.

Tickets for all dance, music and theatre arts performances are sold through the CSULB Fine Arts Ticket Office (213) 498- 5526 located in the southwest corner of the Theatre Arts Building. The Ticket Office is open from 10 a.m. to 4 p.m. Monday-Friday and is open one hour prior to performance. Faculty, staff and student rates are available for most performances. Visa and Mastercard are honored.

University Art Museum

The University Art Museum, located on the fifth floor of the CSULB Library, provides the campus and surrounding communities with quality exhibitions in the visual arts on a year-round basis and presents scholarly publications, guest lectures and educational outreach programs designed to reach a broad general public. Programs which are an integral part of the museum include the Museum Studies Certificate Program, which trains students for careers in museum work; Art to the Schools, which brings educational projects in the visual arts into the classroom; the Summer Institute for Teachers, which helps teachers utilize the resources of museums as part of their curriculum; and Get the Picture, a workshop to acquaint youth with the history and heritage of the city of Long Beach and surrounding regions.

In 1984, the University Art Museum was accreditated by the American Association of Museums and thus ranks among the top ten percent of the nation's 6,000 plus museums. It is one of only two nationally accredited art museums in a public university in southern California. Its exhibitions and collections — including the Monumental Sculpture

Collection spread thoughout the 322 acre campus — have brought the University and Long Beach area recognition from both the professional art community and an international public. The Museum has an active community membership program which offers special events, museum tours and international travel opportunities planned exclusively for museum members. All students are invited to join ArtPartners, the student and young professional group affiliated with the University Art Museum. For information about University Art Museum activities, call (213) 498-5761.

The Earl Burns Miller Japanese Garden

Beauty, simplicity, harmony, and peace are all expressed in a traditional Japanese garden. California State University, Long Beach and the community have been enriched by the Earl Burns Miller Japanese Garden, which provides a setting to experience these important qualities.

Mrs. Loraine Miller Collins' appreciation of Japanese culture is reflected in the planning for the garden, The detailed design was careful work of Long Beach landscape architect Edward R. Lovell, whose visits to Japan and a number of its gardens enhanced the project. The Japanese stone sculptures were personally selected by Mrs. Collins, as were the bonsai pines, and the furnishings for the teahouse.

The natural effects of the garden design are an expression of the Japanese attitude of respect and love for all nature, a valuable heritage which has been continued. Everything in a Japanese garden has significance — the moss-covered rocks, the brilliant colors of the azaleas, the cascading water, the gracefulness of the forms of the trees, the movement of the colorful koi in the lake. Placement of plants and rocks are all based on asymmetry and rhythm. Every element is part of an overall composition which provides for a delightful sense of peace and harmony.

A unique aspect of the garden is that it has been designed to encourage access by the physically handicapped.

The Forty-Niner Shops

The Forty-Niner Shops, an auxiliary organization, enhances and supports the educational processes of CSULB by providing goods and services at reasonable and competitive prices. The Forty-Niner Shops, Inc. operates the University Bookstore, Campus Copy Center, the new University Dining Plaza, and a variety of food and refreshment stations across the campus. Forty-Niner Shops, Inc. is a nonprofit corporation which has faculty, student and administrative representation on its Board of Directors.

The University Bookstore provides for the supply and sale of required textbooks, school supplies, stationery, and additional items for personal use. Services include notary public, check cashing, and the sale of money orders and stamps.

The Campus Copy Center offers copying, duplicating, offset printing, book and report binding, transparencies and typewriter rentals. The Library Copy Center, an extension of the Campus Copy Center, is provided for copying needs in that location.

The University Dining Service includes the residence dining units, the new University Dining Plaza, consisting of four dining areas featuring a wide range of foods and service formats, the University Student Union dining facilities, and the satellite food operations on campus. Catering services are available for campus functions.

The University Student Union

The University Student Union (USU), paid for with student fees is located in the center of campus and occupies approximately 148,000 square feet. With its large interior patios, flexible multipurpose and meeting/dining rooms, comfortable lounges and food service facilities, the Union is the campus community and hospitality center. It houses and serves as the headquarters for the Associated Students, Inc. (student government and business office), Student Affairs, University-related student groups, Legal Counseling, United Campus Ministries, Disabled Student Services, University Alumni Office, an Information/Ticket Booth, and much, much more.

The Information/Ticket Booth, located on the Plaza Level, offers local bus schedules and maps. Bus passes, newspapers, photo developing and tickets to student organization campus events are sold there. A Ride Board is provided for students interested in forming car pools to or from school and during vacation periods. The Scheduling Office provides a central scheduling and coordinating service for the entire campus, including a printed Master Calendar for daily and monthly events. The Student Affairs area provides advising for student organizations, as well as mail boxes, organizational files and work space for all student groups. Forty-Niner Shops, Inc. provides breakfasts, luncheons and banquets with a wide variety of menus, as well as regular food service in the Oak Room, Mother Lode Cafeteria, and the Deli. The Counter sells various candies, popcorn, sodas and sundry items. Mighty Muffins, located on the Mall Level, offers an all natural selection of muffins, scones, cookies and beverages.

Recreational facilities in the Games Area include bowling, billiards, table tennis, pinball and video games, table games and a television lounge. For outdoor recreational enjoyment, a swimming pool, shower facilities and outdoor barbeque are available. The Outing Center offers backpacking and camping equipment rentals at reasonable prices.

In addition, outdoor recreational trips are planned for skiing and camping enjoyment. These programs are open to the campus community. The Graphics Center offers silkscreen, graphic arts and photography equipment complete with a darkroom. Tournaments, workshops, team and other group activities are planned to enhance recreational experiences.

The large multipurpose room, meeting and dining rooms and the small auditorium provide a variety of facilities to various organizations for meetings, conferences, speakers, dances, films and concerts as well as luncheons and banquets.

A wide variety of commercial services are also available. In addition to the food services, the Union offers hair care (Gary Co.), word processing (Mitchell's Word Processing), travel services (Campus Travel), typesetting and graphics (Collegiate Graphics), and a copy center (Kinko's Copy Center).

Graduate Center

The University has established the Graduate Center to facilitate greater dialogue among graduate students, faculty, and interested persons and groups of the community. Dedicated on May 20, 1974 by Robert Maynard Hutchins, the distinguished educational philosopher, the Graduate Center functions as a focal point for scholarly and creative activities, as a reception center for honored guests of the University, as a facility for the presentation of special lectures and seminars, and as a gallery for showing student and professional art exhibits. Reservations are made in the Office of Faculty Development.

The Soroptimist House

The Soroptimist House, presented to the Associated Students by the Soroptimist Club of Long Beach, provides a facility for parties, receptions and informal meetings. It has a terraced patio for outdoor events, carpeted lounges, a complete kitchen and a dance area available for scheduling by all campus organizations and departments. The Soroptimist House has a small, intimate home-like setting. Reservations may be made at the Scheduling Desk in the University Student Union.

KLON-FM 88 Public Radio

FM88/KLON (88.1 on the FM dial), a noncommercial educational radio station staffed by nine full-time professionals, is licensed to the California State University, Long Beach Foundation. KLON's primary signal coverage is the southern portion of the Los Angeles basin with secondary coverage to most of Los Angeles and Orange Counties. It has a current audience of 135,000 and a potential of 2,000,000.

The station is on the air 20 hours per day with a program format principally of information, public affairs and jazz. News programming is oriented toward greater Long Beach, Pacific Rim business affairs. KLON provides diverse professional learning opportunities for CSULB students including a unique opportunity for students in the Radio/TV and Journalism departments to gain experience in a full-time, professional radio station with direct supervision by faculty members and industry professionals. Over 40 students are currently involved in the operation of the station. KLON provides additional learning experiences for students in marketing, graphic design, industrial design and public relations.

FM88 is a listener-supported radio station, funded by a combination of institutional, governmental, corporate, foundation and private contributions. Its studios occupy 4,500 square feet of Faculty Office I (FO-1) on the CSULB campus.

University Development

The Office of University Development actively encourages and coordinates the receipt, acknowledgement, and disbursement of donations from alumni, parents, graduating seniors, and many friends of the University, including private foundations and corporations. Millions of dollars are given annually in support of various activities which further the educational mission of CSULB.

Annual Fund Phonathon: Opportunities for Quality

Alumni, too, give generously to the University. Throughout the year, thousands of CSULB alumni are contacted by student callers in the various Annual Fund Phonathon/Opportunities for Quality campaigns. Several donor club levels have been established in the Annual Fund, and special benefits are given to the members. Most funds from the annual alumni fund effort are directed to meet the needs of the Schools and departments. Some of the funds are used to specially designated projects.

Alumni Scholars Program

The annual Opportunities for Quality Phonathon continues to support an Alumni Scholars Program. Each year, fifteen outstanding high school seniors are named "CSULB Alumni Scholars" and receive $1000 stipends, renewable annually, based on the grade point average which is maintained. Unique features of the Alumni Scholars Program include assigned faculty mentors for each student and outreach activities which require the students to return to their high schools during the year to provide information concerning CSULB.

Parents' Fund

A Parents' Fund campaign was initiated in 1986 and the response was excellent. In a one-month campaign, for example, 43 percent of the parents contacted responded with average pledges of nearly $100 per family. The willingness of parents to pledge financial support to the University is a confirmation of CSULB providing an excellent educational environment for the students it serves.

Senior Gift Campaign

A past campus tradition was reinstated with a phonathon campaign directed toward the Senior Class of 1986. In just three weeks, graduating seniors responded generously in support of a lasting gift to the CSULB campus. Monies provided by those donors are designated toward the construction of permanent picnic sites across the campus. In the future, each Senior Class will choose its commemorative gift to the University.

Major Gifts

The Office of University Development works with individual donors in securing current and deferred gifts. Major named gifts on campus include such legacies as the Isabel Patterson Child Development Center and the Earl Burns Miller Japanese Garden.

Other donors have established trusts to provide continuing funds for special events, for example, the Carlson Fund for the Performing Arts and the Zeitlin Lectures in the visual arts. Private donations provided a portion of the funds used to complete the new International House complex. Other contributions will be used for amenities in the proposed School of Business Administration and the University Art Museum buildings.

Even more, endowed scholarships honoring individuals and families have been established in all areas of the University. In 1986, the $1.1 million endowed Chair in Health and Behavior was established by the FHP Foundation. Other individuals have included CSULB in their wills by providing for future scholarships, endowed faculty chairs, and lectureships, or the transfer of cash, securities, real property, personal libraries, private collections, works of art, and musical instruments.

Major gifts may serve restricted purposes in accordance with the donor's designation, or their use may be left to the discretion of the CSULB Foundation and the President of the University. For additional information, please contact the Vice President for Development, (213) 498-5197.

University Foundation

The California State University, Long Beach Foundation is a nonprofit, tax-exempt corporation organized to administer grants and contracts for research and other activities related to the University's programs. The Foundation also accepts donations, gifts and bequests for University-related use, and provides tax-deductible advantage to the donor.

The research and other activities involving the Foundation are related directly to the academic program. They involve substantial interaction between faculty, staff, and students. Often, businesses, government, and non-profit agencies in the broader Southern California community are also involved and participate in the benefits of the projects.

Donations, gifts and bequests provide a significant addition to the accomplishments of the University. Public funds provide the support for most of the instructional and instructionally-related activities and facilities, but private contributions are essential for the support of creative faculty efforts which extend beyond normal instructionally supported areas; scholarships for diverse students; and needed physical facilities such as seminar rooms, libraries, and laboratories which become available to enhance the learning process.

Facilities which cannot be provided through available public funding also depend upon outside contributions. The beautiful Louise Carlson Memorial Tower (designed by the late French sculptor Andre Bloc), the Isabel Patterson Child Development Center and the Earl Burns Miller Japanese Garden are outstanding examples of such donations which enrich the University environment both aesthetically and functionally.

Because Foundation resources can be allocated with greater flexibility than those of the University itself, they possess an added potential for responding to the changing needs of the University and the community, including the financing of innovative projects.

Charitable donations counseling and consulting services are available to potential donors. Information can be secured from the Vice President for Development (213) 498-5197 or by addressing a letter to the California State University, Long Beach Foundation, a 501(c)(3), non-profit corporation recognized by the Internal Revenue Service.

Student Services and Activities

Academic Advising Center

The Academic Advising Center, located in Library East, Room 106, serves students who seek advice and information concerning general education requirements, electives, University rules and regulations, graduation requirements and academic probation. Students who have not declared a major are encouraged to look upon the Center as their academic home.

Service is provided on a walk-in basis by well-trained upper division or graduate student peer advisors. The Center is open from 9:00 a.m. to 7:00 p.m. Monday and Thursday and from 9:00 a.m. to 4:00 p.m. Tuesday and Wednesday. The Center is closed on Fridays. Hours may vary during holiday and vacation periods.

Faculty Office Hours

The faculty of the University are available to meet students during office hours. In addition to regularly scheduled office hours, many members of the faculty are available to students through the scheduling of special appointments. Times of office hours are posted outside each faculty office and are also available at the department office.

Learning Assistance Center

Located in the University Library, East-12, the Learning Assistance Center is an all-university support service that helps students increase their learning efficiency and effectiveness. The Center houses three academic support programs: 1) Learning Skills Services, 2) Tutorial Services, and 3) Supplemental Instruction.

Learning Skills Services provides diagnostic and prescriptive materials for self-help in study management, textbook study-reading, listening/notemaking, examination techniques, writing improvement, research paper writing, memory, and concentration, in addition to special collections of course support materials such as content glossaries, handbooks, outlines, programmed texts, and audio-visual materials for self-learning and systematic review. The Center also houses course materials supplied by or recommended by professors for student assignments or course reviews. Assistance is available to help students who want to prepare for such standardized tests as the MCAT, LSAT, DAT, GRE, GMAT, NTE, and CBEST. International students who wish to improve their conversational command of the American language may use the Conversation Laboratory in the Center for help with enunciation, pronunciation, idioms, and diction.

Tutorial Services provide tutors for general education courses, for the Writing Proficiency Examination, and the Entry Level Mathematics test. Special tutoring is available for all Educational Opportunity Program (EOP), Student Special Services Program (SSSP), and Student Affirmative Action (SAA) students.

Supplemental Instruction

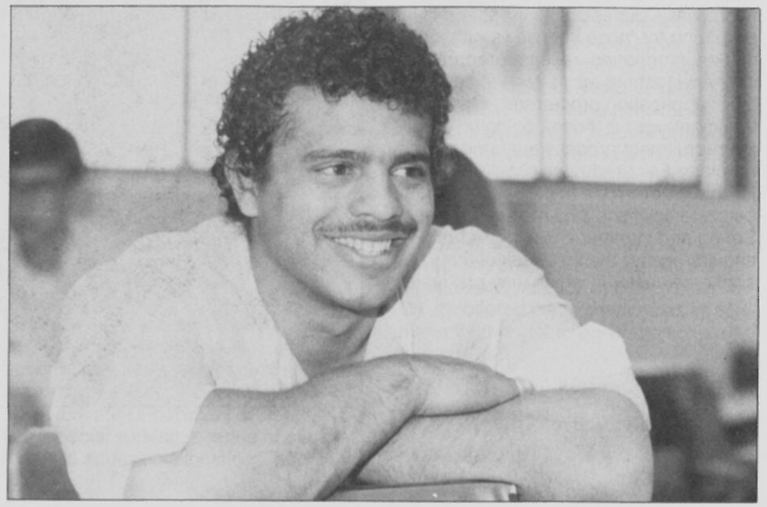
The University offers supplemental instruction for students who have experienced difficulty with the Writing Proficiency Examination or with certain courses in which language and learning skills are particularly necessary.

S-I 050A-E. Preparation for the WPE (1) F,S

Non-baccalaureate-level course designed to prepare students for the Writing Proficiency Examination (WPE). S-I 050A is open to students who have not yet attempted the WPE. S-I 050B,C,D, and F are designed for students who have failed the WPE. Students will be assigned to two hours a week in the course appropriate to their performance level. CR/NC grading only. Each course is repeatable until the WPE is successfully passed. [Activity]

S-I 060. Supplemental Instruction (1) F,S

Non-baccalaureate credit course. This course is attached to specified sections of certain courses to provide directed group study. Each class is designed to teach learning strategies and techniques which will assist students in mastering course concepts. Emphasis is on skill development in reading comprehension, critical analysis of material, notetaking, essay-writing, and test review. Students must enroll concurrently in the associated course. [Lecture - Discussion] Grading: CR/NC only. Repeatable with different associated courses.



Supplemental Instruction coordinates learning assistance activities for students in high risk courses with optional course tutorials, as well as study skills diagnosis and prescription to master course concepts and to perform more effectively in course assignments and examinations. For further information phone: 498-5350 or 498-4192, or visit the Center on the first floor, East Library.

Career Development Center

The Career Development Center facilitates employment processes for students, alumni and job recruiters and is a clearinghouse for information vital to career planning, internships, and job procurement.

Help is given to those in the process of delineating career goals. This is especially important for lower division students as they formulate educational and employment strategies. Various job fairs, discussion groups and speakers programs are all designed to encourage meaningful career exploration. The Career Resources Room provides a wide selection of materials relating to the world of work. Audio-video presentations are also in the center and available for student use.

Assistance is also offered to students who want to obtain work experience related to their academic studies. The Cooperative Education/Internship program is designed to integrate classroom studies with practical on-the-job experience through paid or volunteer positions for qualified students. Each semester over 900 students are involved in internships. Academic credit is available for many of the internship experiences.

More than 500 recruiters conduct interviews with applicants on campus each year. Counselors assist students in preparing for these interviews with job market information, resume preparation, interview techniques, letter writing and other application procedures. Orientation meetings for those beginning the job recruitment process are conducted regularly. Fall graduates should register for this program the first week of the fall semester in which they plan to graduate. Spring and summer session graduates should register the first week of the spring semester in which they graduate.

Counselors with relevant academic background and practical work experience assist students who seek to find the field which will provide them with maximum satisfaction. The counselors do not literally "place" graduates in jobs; rather, they attempt to create a situation wherein the student is offered the opportunity to explore many possible situations from which he or she may ultimately choose, and the counselors give assistance in the decision-making process.

Teacher and school administration candidates receive assistance through the Educational Placement Center in the School of Education. Candidates may maintain files of references which will be duplicated and sent in support of educational job applications.

Upon request, the campus will furnish information concerning the recent employment of students who have graduated from programs or courses of study which have the purpose of preparing students for a particular career field. This information includes data concerning average starting salary and the percentage of previously enrolled students who obtained employment. The information provided may include data collected from either graduates of the campus or graduates of all campuses in The California State University. Copies of the published information are available from H. Edward Babbush, Director of the Career Development Center, 1250 Bellflower Blvd., Long Beach, CA. 90840, 498-5551.

The University Counseling Center

The University Counseling Center offers a strong array of services in direct support of helping students achieve a satisfactory and meaningful academic experience. Staff members of the Counseling Center are trained in applied psychology and student development services delivery at both the M.A. and Ph.D levels. Staff members are skilled in assisting students to translate their individual personal development, career development, and previous educational experience into optimal academic achievement and collegiate life experience.

Students are seen at the Center on an immediate, walk-in basis by an intake counselor. Counselors are assigned to students based on the type of problem expressed and/or identifed in the initial review. Most individual counseling is short-term and lasts three to five sessions. The staff is also trained to address complex types of career and personal problems that may require more extensive counseling. Crisis intervention services are available on an immediate basis.

In addition to one-to-one counseling across all areas of personal development and problems in living, individual counseling is provided to students needing intensive career exploration and educational counseling (not formal academic advising). The Center has a full range of interest, ability, and personality-style psychological tests to augment the self-exploration process. An extensive group counseling program exists for specific kinds of counseling issues such as shyness or interpersonal skill development. The Explorations in Communications Program offers topical discussion groups each semester which focus on University-wide concerns such as the returning adult student. The mini-workshops offered on campus acquaint students with our focus on enhancing various life skills such as assertiveness and time management. The Center also operates an exceptionally well-equipped biofeedback program for stress reduction.

The University Counseling Center is open from 8:00 a.m. to 7:00 p.m. Monday through Thursday, and from 8:00 a.m. to 5:00 p.m. on Friday. The telephone number is 498-4001.

Student Health Service

The Student Health Service, located on State University Drive near the Residence Halls (phone 498-4771), provides outpatient care for acute illness or injury. This basic medical service, provided for all enrolled students, is without charge since it is covered by the student fees paid at registration. The Health Service is open from 8:00 a.m. to 7:00 p.m. Monday through Thursday and from 8:00 a.m. to 5:00 p.m. on Friday. Evening only students are given priority Monday through Thursday from 4:00 to 7:00 p.m. During periods between semesters, and on weekdays when classes are not in session, the Student Health Service is open from 8:00 a.m.to 5:00 p. m. No off-campus calls are made at any time. Medical emergencies arising on campus when the Health Service is closed are directed to the Department of Public Safety (dail 911).

Other medical services provided by the Student Health Service include health and psychiatric counseling, immunizations, laboratory tests, pap smears, x-rays, physical therapy and family planning. Specialty consultant services include gynecology, dermatology, psychiatry, orthopedics and minor surgery. Provision is also made for outside referrals in other medical specialties, In addition to basic medical services provided at no charge, elective physical examinations are performed for a nominal fee.

The Health Service Pharmacy provides many medications. Prescriptions for long-term or costly medications must be filled at outside pharmacies.

Health education programs designed to promote good health practices, disease prevention, proper nutrition and appropriate self care of illnesses are provided on a regular basis. Discussion groups will be scheduled to discuss any health topics of concern to a group of students.

A Health History form must be completed by each new student. The Health History will be kept in the Student Health Service in secure confidential files.

The Student Health Service provides a procedure to evaluate requests for medical withdrawal from the University. For further information see item 4 in this Bulletin under "Withdrawal from Classes of the University."

The Student Health Service is unable to provide prolonged medical care for chronic disorders or for disorders that require hospitalization and extensive evaluation.

It is strongly recommended that students obtain supplementary group health, accident and hospital insurance. Brochures and applications are available at the Associated Students, Inc. Office and the Student Health Service. This insurance must be purchased during or shortly following registration.

Disabled Student Services

The Disabled Student Services provides services, programs and activities for use by all disabled students, staff, and faculty of the University or visitors. Services include priority registration, registration assistance, fee authorizations from the Department of Rehabilitation, special parking, change of classrooms to accessible locations, counseling and advisement, special adaptive equipment, emergency wheelchair loan and minor repair, referral to on-campus and off-campus resources, liaison with faculty and staff, extracurricular activities, and career development. Interpreter, reader and notetaker services are available to qualified disabled students.

Special orientation tours of the campus are available to the disabled student by appointment. All services also are offered to students with temporary disabilities. Further information is available from the Disabled Student Services office: 498-5401, and TDD 498-5426 for the hearing impaired.

Isabel Patterson Child Development Center

In January of 1975, the University and the Associated Students opened the Isabel Patterson Child Development Center to provide quality child care services to the University and community.

The facility was made possible by the generous donation of Isabel Patterson CSULB alumna. It was designed by Frank Sata, a recognized architect in the field of early childhood education.

The services provided enable a student parent to attend classes at the University, The children of University staff, faculty, administration and then community are offered these services as space allows following the registration of student children.

The Center is a year-round facility. In addition to the child development program, an infant toddler program for children 6 months to 2 1/2 years and a six-week summer day camp for 5-12 year old children are offered.

The environment of the Center allows children to move freely and choose activities that fit their needs. Activities include reading, music, water and sand play, art, science, cognitive games and dramatic play. Some of the program's goals are to help children be responsible and able to solve their problems, to be inner-directed, to be aware of alternatives and able to make choices, and to be free from sex role and other stereotyping, The program includes a family style breakfast, lunch and afternoon snack.

The Center employs professional early childhood education staff members. The part time teaching staff is composed of CSULB students who are required to participate in the Center's comprehensive training program.

A child in good health, toilet trained and 2 1/2 through 5 years of age is eligible for the program. Children through 8 years of age are admitted after school.

The Center is open from 7:00 a.m. to 6:30 p.m. during the academic year and from 7:00 a.m. to 6:00 p.m. during the summer. Campus holidays are observed. For information call (213) 498-5333.

Women's Resource Center

The Women's Resource Center is a support center for women on campus which assists students with both their academic and personal concerns. The Center houses a women's library, offers support groups, peer counseling, and free legal advice. It provides referrals to community services, scholarship information, and is a clearinghouse for current events of interest to women. The Center also offers a comfortable lounge where students can study, chat with friends, or hold meetings. Personal orientations to campus are offered each semester to new reentry women.

In addition, The Women's Resource Center sponsors extra-curricular educational events throughout the school year. The seminars, workshops and/or conferences range from the more current theoretical women's issues to practical concerns of university women. The Center is open from 9:00 a.m. to 5:00 p.m. Monday through Thursday, and from 9:00 a.m. to 1:00 p.m. on Friday. The Women's Resource Center services are free and available to women and men, campus and community. The Center is located in LA3-105. For further information, please call (213) 498-5466.

CSULB Campus Organizations

Special Interest Clubs

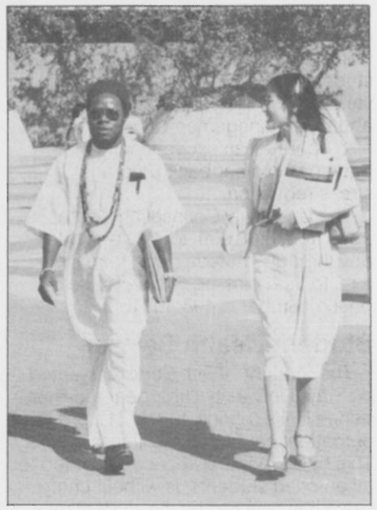
Advocates Assn., American Indian Leaders of Today and Tomorrow, Air Force ROTC, Archers, Army ROTC, Arnold Air Society, Black Dolphin Workshop, Black Law Society, Black Students in Science Organization, Chicanos for Community Medicine, Child and Family Association, Cinema Society, Circle K, College Students in Broadcasting, Crew Club, Engineering Day, Eta Sigma Gamma, Fantasy Science Fiction Society, Fencing Club, Forty-Niner Rangers, Forty-Niner Ski Club, Forty-Niner Toastmasters Club, Forty-Niner Tournament Water Ski Club, Gay Lesbian Student Union, Gospel Choir, Graeco-Roman Classics Club, International Assoc. of Business Communicators, Journalism Student Assn., Korean Engineering Club, Law Society, Long Beach Entrepreneur Assn., Macintosh Users Group, Medieval and Renaissance Studies Student Assn., Meet the Industries Night, Men's Gymnastics Club, Men's Soccer Club, Model United Nations, National Society of Black Engineers, National Press Photographers Assn., Native American Student Council, Organization of Pre-Professional Students, Potters Guild, Pre-Veterinary Club, Real Estate Society, Residence Hall Assn., Rugby Club, Sailing Assn., Scuba Assn., Semper Fidelis, Senior Citizens at CSULB, Shotokan Karate Club, Snow Ski Team, Social Dance Club, Society of Hispanic Professional Engineers, Society of Ingenuity Innovation, Society of Women Engineers, Taekwondo Club, University Photographic Assn., Students Against Driving Drunk, Student Alcohol Awareness Center, Student Council of Consumer Interests, Student Dietetic Assn., Student Faculty Council (Home Economics), Student Home Economists in Business, Students for a Public Interest Research Group, Surf Club, Visual Communication Design.

Sororities

Alpha Kappa Alpha, Alpha Omicron Pi, Alpha Phi, Delta Delta Delta, Delta Gamma, Delta Sigma Theta, Delta Zeta, Gamma Phi Beta, Sigma Gamma Rho, Sigma Kappa, Zeta Phi Beta, Panhellenic Council.

Fraternities

Acacia, Alpha Gamma Omega, Alpha Phi Alpha, Delta Chi, Delta Upsilon, Kappa Alpha Psi, Kappa Sigma, Omega Psi Phi, Phi Beta Sigma, Phi Kappa Tau, Sigma Alpha Epsilon, Sigma Chi, Sigma Pi, Theta Chi, Inter-fraternity Council, Black Greek Letter Council.



Cultural Clubs

Armenian Students Assn., Asian American Colloquium, Black Cultural Program Committee, Black Performing Arts Ensemble, Black Student Union, Cambodian Student Assn., Chinese Student Assn., Folkloristas Del Pueblo, General Union of Palestine Students, Indian Student Assn., Indonesian Student Assn., International Moslem Student Assn., Iranian Student Union, Japanese Student Assn., Korean International Student Assn., Korean Student Assn., La Raza Student Coalition, Malaysian Assoc. Students., Moslem Student Society in Southern California, Muslim Students Assn., Norwegian Student Assn., Pakistan Students, Pan African Student Research Collective, Pilipino American Coalition, Organization of African Students, Vietnamese Fellowship Assistance, Vietnamese Students Assn.

Religious Clubs

Asian American Christian Fellowship, Baha'i Club, Baptist Student Union, Beth Sar Shalom, Campus Crusade for Christ, Catholic Newman Club, Christian Students, Eckankar Campus Society, Friendship International, Episcopalians at CSULB, Hillel, KAIROS, Korean Christian Fellowship, Latter Day Saints Student Assn., Lutheran Student Movement, Maranatha Campus Ministries, Methodist Wesley Foundation, Navigators, Network Christian Fellowship, Pauline Disciple Mission, Studies in the Old New Testaments, World Wide Students, Zeta Chi College Fellowship.

Political and Social Action

Alliance for Survival, College Republicans, Int'l Solidarity Committee, Peace Callers for the Middle East, Peace Freedom Club, Students for a Progressive Society, Young Americans for Freedom, Young Communist League, Young Democrats.

Professional and Honorary Organizations

Alpha Kappa Psi (Business Administration), Alpha Phi Omega, American Society of Interior Designers (ASID), Assoc. General Contractors, Beta Alpha Psi (Accounting) 3.2 GPA, Beta Gamma Sigma (Business Honorary), Black Business Student Assn. (BBSA), Calif. Assn. of Health, Physical Education, Recreation Dance (CAHPERD), California Teachers Assn., Eta Kappa Nu Assn. (Electrical Engr. Computer Sci.), Eta Sigma Gamma (Health Science), Golden Key National Honor Society, Hispanic Students Business Assn. (HSBA), Int'l Assn. of Students in Business Economics (AIESEC), Kappa Delta Pi (national honorary, 3.25 graduate GPA), Mortar Board, Music Educators National Conference, National Student Speech Hearing Assn., Omicron Nu (Home Economics), Phi Alpha (Social Work) 2.75/3.0 GPA, Phi Alpha Theta (History) 3.0 undergrad, 3.5 grad GPA, Phi Beta Kappa, Phi Delta Gamma, Phi Delta Kappa 3.5 grad student GPA, Phi Eta Sigma - Alpha Lambda Delta, Phi Kappa Phi, Phi Mu Alpha Sinfonia (promote music), Pi Alpha Alpha (Government) 3.7 GPA, Pi Sigma Alpha (Political Science), Pi Tau Sigma (Mechanical Engr.) 3.0 GPA, Psi Chi (Psychology) 3.4 GPA in Psych., Public Relations Student Society of America (PRSSA), Sigma Alpha Iota, Tau Beta Pi (Upper Div. Engr.) 3.0 Sr, 3.35 Jr GPA, Phi Beta Delta — Soc. for Int'l Scholars.

School Organizations

School of Applied Arts and Sciences

Applied Arts and Sciences Student Council

Departmental Associations: California Nursing Student's Assn., Criminal Justice Students Assn., Health Science Student and Faculty Assn., Industrial Education Club, Physical Education Majors Club, Physical Therapy Student Assn., Recreation Society, Student Home Economics Assn.

School of Business Administration

Associated Business Students Organization Council (ABSOC)

Departmental Associations: Accounting Society, American Marketing Assn. (AMA), Financial Management Assn. (FMA), Personnel Industrial Relations Assn. (PIRA), Quantitative Systems Student Assn. (QSSA), Society for Advancement of Management (SAM).

Graduate School of Education

Education Student Council

Departmental Associations: Assn. of Instructional Media, Educ. Psychology Student Assn., Reading Educators Student Assn., State of California Assn. of Teacher Educators.

School of Engineering

Associated Engineering Student Body (AESB)

Departmental Associations: American Institute of Chemical Engineers, American Society of Civil Engineers, American Society of Mechanical Engineers, American Society of Naval Engineers, Assn. of Engineering Industrial Technology, Biomedical Engineering Society, Institute of Electrical Electronics *Engineers (IEEE).

School of Fine Arts

Fine Arts Student Council

Departmental Associations: Dancers in Motion, Design Student Assn., Music Student Assn., Theatre Arts Assn., University Arts Assn.

School of Humanities

Humanities Student Council

Departmental Associations: Assoc. Students of Comparative Literature, German Society, Mathematics and Computer Science Student Assn., Religious Studies Student Assn., Spanish and Portuguese Student Assn., Student English Assn., Student Philosophy Assn., Student Speech Communication Assn., University Scholars Program Student Assn.

School of Natural Sciences

Natural Science Student Council

Departmental Associations: Anatomy and Physiology Student Assn., Biology Student Assn., Geology Student Assn., Microbiology, Society of Physics Students, Student Affiliates of the American Chemical Society.

School of Social and Behavioral Sciences

Social and Behavioral Science Student Council

Departmental Associations: American Studies Student Assn., Anthropology Students Assn., Asian American Student Assn., Assoc. Students of Social Work, Black Studies Student Assn., Economics Student Assn., Geography Students Assn., History Students Assn., Human Development Student Assn., Political Science Student Assn., Psychology Student Organizations, Sociology Students Assn., Women's Studies Student Assn.

School-Based Student Services

The Office of School-Based Student Services works with students and faculty in Departmental Associations and School Councils to provide programming of interest to those areas. An Associate Dean of Student Services works with each of the academic schools of the University. That individual is available to advise student clubs and organizations in the school, to refer students and faculty to the services of the University and to organize programs of interest to the academic unit. Programs include lecture series, orientation, career days, Health Faire, international, and professional and honorary societies. Individual students may be referred to existing organizations. Assistance is also provided in forming new groups. Professional staff are well versed in group dynamics, leadership training, and interpersonal skills. Contact with the appropriate Associate Dean may be made through the Central Office located in the Library East 107 or through the Office of the Academic School Dean.

Student Affairs Office

The Office of Student Affairs is located in the University Student Union, Room 212, (213) 498-4181. It provides students with general information, publications, administrative services, and advising to campus organizations and the Associated Students, Inc. Students, who for emergency reasons must be absent from classes, should call the Office for information and to have their professors notified. Students wishing interpretation of University regulations governing eligibility, posting, food sales, recognition for clubs, use of facilities and grounds, and consumption of beer and wine should also call this office.

The Student Affairs Office publishes handbooks for students, including information on policies and regulations, and brochures on publicity and scheduling group activities.

This office provides oversight for some 300 campus organizations in the following categories: recognition and honor societies, professional and academic organizations, special interest groups, political and social action organizations, service clubs, ethnic cultural groups, religious organizations, social fraternities and sororities, coordinating councils and departmental associations.

Student Government

Student government through the Associated Students is a unique opportunity for service to students by students. Students interested in management of a large corporation and in taking part in the decision-making process of the University will also find student government rewarding. Every student becomes a member of the Associated Students upon registration. Through the Associated Students, Inc., a non-profit corporation in the State of California, financial support is given to approximately 30 student activity/interest commissions, a newspaper, school councils and departmental associations, and various social, athletic, ethnic and cultural programs. Some of these programs include Greek Week, Women's Week, and various International and ethnic indentity programs.

The corporate structure of the Associated Students, Inc. includes legislative, executive, and judicial branches for the student government. Students are elected to approximately 28 positions by the student body each year to fill the executive and legislative branches. In addition, students are also elected to policy-formulating bodies of the University (i.e. Sports, Athletics and Recreation Board, the Child Development Center Board of Directors, the Forty-Niner Shops Board of Directors, and the Academic Senate). Participation in these programs and other campus activities has been a significant part of many students' University experience.

The executive branch of student government is comprised of the A.S. President, A.S. Vice President, A.S. Treasurer and A.S. Administrator. The Associated Students President is the chief executive officer of the Associated Students and acts as the representative and host of the Associated Students, Inc. to the University and the general public. The President can initiate or veto Senate legislation and is responsible for executing Associated Students policies. The President is also responsible for making all A.S. executive appointments and has the power to create committees. The President is also an ex-officio member of all A.S. executive bodies. The Associated Students Vice President chairs the Senate and is a voting member of that body as well as other campus committees. The Vice President assists the President with his or her duties and assumes the President's duties should the A.S. President leave office or become incapacitated. The Vice President is responsible for assembling the agenda for the Senate meetings.

The Associated Students Treasurer is responsible for the Associated Students finances and enforcement of the A.S. fiscal policy. This officer prepares the Associated Students budget and chairs the A.S. Board of Control. The Treasurer approves all expenditures of A.S. monies and assists clubs and organizations with budget preparation.

The Associated Students Administrator is the chief administrative officer of the Associated Students. Appointed by the A.S. President each year, the Administrator is the executive assistant to the President and is also responsible for overseeing the A.S. Commissions, activities, and services. The Administrator also represents the Associated Students and the President on several campus committees.

The Associated Students Board of Control is the fiscal advisory body to the Senate and is chaired by the A.S. Treasurer. The Board handles personnel matters and supervises the use and maintenance of the Associated Students buildings and equipment. All groups requesting Associated Students funding must go before the Board of Control for approval prior to appearing before the Senate. The Board of Control makes recommendations regarding expenditure allocations to the Senate, and the Senate has final approval in all A.S. Board of Control actions.

The Senate is the legislative branch of student government and serves as the Board of Directors to the Associated Students by steering the corporation's finances and policies. The Senate creates and revises its laws, allocates funds for old and new programs, approves presidential appointments, fills vacancies in elected offices between elections, and forms committees to study problems and proposals. The Senate also charters on-campus student groups (except fraternities and sororities), which enables these groups to request Associated Students funding for programs, use the Student Union's facilities, plus enjoy the benefits of the Associated Students' support and recognition. The Senate is comprised of 21 voting members, including the A.S. Vice President who serves as the Chair. There are two senators representing each of the eight schools at CSULB except for the School of Education, which is represented by one senator due to its relatively small size. Senators must be majoring in one of the departments within the school they represent. In addition, there are five Senators-at-large seats also chosen by the general student body.

The Associated Students Judiciary is the interpreter of Associated Students bylaws. The A. S. Judiciary is given the power to interpret the provisions of the Associated Students bylaws, codes, decisions, regulations, or any other A.S. document. When a dispute arises, the Judiciary may take disciplinary action, including suspension or revocation of charter privileges against recognized organizations on campus. The Judiciary also renders final decisions in election disputes. The decisions of the A.S. Judiciary are the final authority in Associated Students matters. Six associate justices and a chief justice are appointed yearly by the A.S. President. The A.S. President also appoints an Attorney General and a Public Defender. This court allows students the opportunity to develop legal skills and address any injustice or wrongdoing in student government.

The Recycling Center, a non-profit Associated Students function to promote environmental awareness and waste reduction, was opened in early 1977.

The Associated Students government is located on the Plaza level of the University Student Union in the West wing. For further information, please call (213) 498-5241 or write to: Associated Students Inc., 1212 Bellflower Blvd., Long Beach, 90815.

Alumni Association

The CSULB Alumni Association provides an important link between the University and its more than 115,000 graduates. With Alumni needs and interests in mind, the Association develops social, educational and recreational programs that bring alumni back to campus encouraging positive relationships and ongoing communication between former students and CSULB's faculty and staff.

All former students of at least one semester at CSULB are considered alumni and are invited to remain a part of the campus community through the Alumni Association. Graduates are automatically members of the Association; non-graduates, including employees and friends of CSULB, may join as associate members for a yearly fee.

Alumni volunteers assist on Alumni Association committees helping to plan Homecoming festivities, commencement hospitality centers, scholarship and award programs, the summer Concerts in the Grove series, and other events.

Alumni Association chapters allow former CSULB students with common interests to maintain friendships formed in college and to network with new acquaintances. Career-related chapters also provide professional advice to students and recent graduates planning to follow similar paths.

Members of the Alumni Association are entitled to a benefit package that includes library privileges at all CSU institutions, a group health insurance plan, legal services, and on-campus help at the Career Development Center and the Learning Assistance Center. Also available to members are the semi-annual Alumni Calendar of Special Events; the CSULB Review newspaper of campus activities; use of on-campus athletic facilities; University Student Union privileges; Leisure Outreach fitness and health programs; and discounts on CSULB theatre performances, local attractions and some University Bookstore merchandise.

Current CSULB students also benefit from Alumni Association programs and services created especially for them. Students involved in the newly-developed Student Alumni Council serve a prestigious role in the CSULB community as official hosts at University events and as supporters of special projects designed to promote good will and school spirit throughout the campus. The Alumni Association's emergency student loans each semester aid students who are without money at registration time.

For more information on Alumni Association services for former and current CSULB students, please call the Alumni Relations Office at (213) 498-5252.

Student Development Programs

The Office of Student Development Programs (SDP) is directed toward assisting in the admission and retention of low income and minority students who might not otherwise be enrolled in the University due to inadequate prior educational opportunities, and/or inadequate financial support. Programs currently under SDP include the Educational Opportunity Program and the federally-sponsored Student Special Services, Talent Search and Upward Bound programs.

Educational Opportunity Program (EOP)

The Educational Opportunity Program identifies potential candidates, guides them through the admissions and financial aid process, and provides academ-

ic and personal support. EOP provides orientation, academic and personal advisement, and study skills instruction to all students admitted into the program to insure the maximum opportunity for success in the University.

Student Special Services Program (SSSP)

The Student Special Services Program provides tutorial assistance and small group instruction to low income students. First year academic support is provided in the areas of Bilingual Communications, Language Skills, Reading Development Mathematics-Sciences and Social Sciences. In addition, staff assist in the testing and orientation of incoming students and a summer instructional program in basic academic skills is sponsored.

Educational Information Services/Talent Search

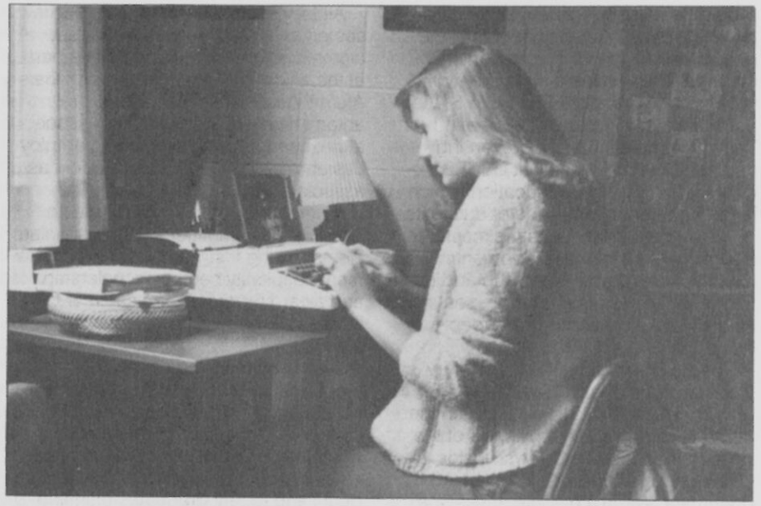
Educational Information Services/ Talent Search Program provides college advisement for low income youth residing in the Los Angeles — Orange County area. Professional and student counselors are stationed at local target high schools and community colleges to provide assistance to students in choosing an appropriate post-secondary educational institution and in applying for admission and completing financial aid application materials.

Upward Bound Program

The Upward Bound Program is a pre-college preparatory program designed to identify and assist low income and minority high-school students who demonstrate a potential to succeed in college but suffer from inadequate secondary school preparation. Summer and weekend instructional programs are held in basic subject areas with tutorial and counseling assistance given to each student. The program also facilitates the admission of these students into college through advisement and orientation.

University Outreach and School Relations

The University Outreach and School Relations Office provides information about the University and its admission policies and academic programs to educators, counselors, and prospective students. Outreach staff visit high schools and community colleges to meet with counselors and prospective students and to distribute materials about University programs and policies. The office offers student-guided tours of the campus by appointment; those interested should call (213) 498-5358.



University Outreach and School Relations also provides information about the Educational Opportunity Program to low-income students who may not meet regular admission requirements to the University. The staff supervises CSULB students who work in area high schools with high minority enrollments in order to encourage students in these schools to complete college-preparatory courses and to assist them in applying to CSULB.

The Office also provides adult re-entry counseling for admission purposes. Interested adults may call the office for appointments.

Parking

Parking at CSULB is limited. Parking permits are required and the vehicle code is enforced at all times. Please contact the Parking Office (213) 498-4146 for additional information.

Housing

University Residence Halls

The campus residence hall complex consists of 19 halls with a maximum capacity of 1,844 students. Double rooms and a very limited number of single rooms are available. The room and board rate for the academic year is approximately $4,000 for a double room.

Residence hall application forms and additional information may be obtained from the Director of Housing. Applications for the academic year are accepted after January 1 of the same year, and a very limited number of applications for spring only are accepted after September 1 of the preceding year.

Applications for available residence hall space are accepted on a first-come, first-served basis, and students are urged to submit their applications promptly.

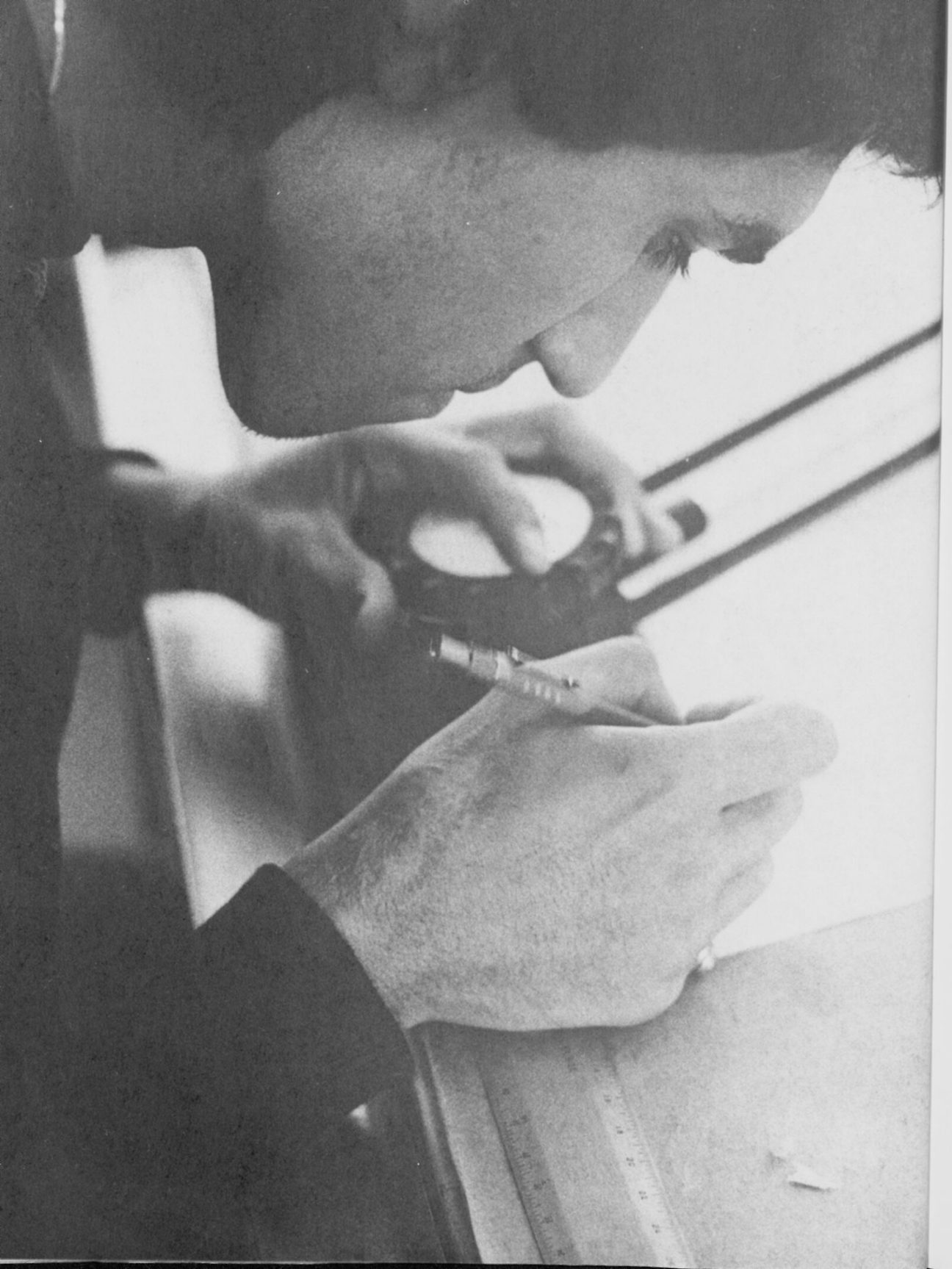
An International House complex accommodating 88 students opened in the Fall, 1987.

Off-Campus Listing Service

A bulletin board of rental listings is maintained in the Housing Office. These listings include rooms, rooms with board, rentals to share, furnished and unfurnished apartments and houses, and a limited number of work-opportunity listings for students who are interested in working for their room and board or room rent. It is suggested that prospective students visit Long Beach to make such living arrangements since information about these listings cannot be mailed. Information about summer housing is available in May.

Fraternity and Sorority Housing

Most of the fraternities and sororities own or lease homes near the campus and provide lodging and meals for their members and pledges. Students interested in affiliating with a sorority or fraternity should contact either the Panhellenic Office (for sororities) or the Interfraternity Council (for fraternities), Office of Student Affairs, University Student Union.



Admissions

Preparation and Eligibility

Subject Requirements

For admission prior to Fall 1988, The California State University requires that all undergraduate applicants complete with a C or better four years of college preparatory study in English and two years of college preparatory mathematics, or their equivalent. California secondary school courses that meet the subject requirements are listed on "Courses to Meet Requirements for Admission to the University of California," published for, and available at, each high school.

English — Regular English courses in the 9th and 10th grades that integrate reading and writing will be considered college preparatory. English courses in the 11th and 12th grades will be considered college preparatory if (1) they include writing instructions and evaluation, and require substantial amounts of writing of extensive, structured papers, expressive and analytical, demanding a high level of thinking skills; and (2) they are integrated with challenging, in-depth reading of significant literature.

Courses in speech, drama, or journalism will be considered college preparatory if they meet the criteria for 11th and 12th grade courses. Two consecutive semesters of advanced English as a Second Language may be substituted for two semesters of college preparatory English. Remedial reading and writing courses at any level will not be accepted nor will courses in beginning or intermediate English as a Second Language.

Mathematics — College preparatory courses in mathematics include algebra, geometry, trigonometry, calculus, and mathematical analysis. Most students will have taken at least algebra and geometry or two years of algebra. Business or technical mathematics, arithmetic, or pre-algebra are **not** considered college preparatory.

You may still qualify for regular admission on condition that you are missing no more than two semesters of the required courses in English and mathematics.

Most academic advisors agree that preparation for university study includes preparation in subjects beyond four years of English and two years of mathematics. Bachelor's degree curricula build upon previous study in the natural sciences, social sciences, visual and performing arts, foreign languages, and the humanities. Students planning to major in mathematics, the sciences (including computer science), engineering, pre-medicine, other science-related fields, business, or economics should complete four years of college preparatory mathematics. Students in the social sciences and pre-professional fields of study should include at least three years of mathematics in the preparatory studies. Further, all students should include English and mathematics in the final year of high school.

Please see the section later in this section on admission requirements beginning Fall 1988.

Entrance Test Requirements

SAT/ACT —
(Scholastic Aptitude Test/
American College Test)

All freshman with an entering g.p.a. below 3.1 (or 3.6 for nonresidents) and any transfer applicants who have fewer than 56 semester or 84 quarter units of transferable college work must submit scores from either the Scholastic Aptitude Test of the College Board (SAT) or the American College Test Program (ACT). You may get registration forms and the dates for either test from school or college counselors or from the CSULB Test Services. Or, you may write to:

The College Board (SAT)
Registration Unit, Box 592
Princeton, NJ 08541

American College Testing Program (ACT)
Registration Unit, P. O. Box 168
Iowa City, Iowa 52240

TOEFL —
(Test of English as a Foreign Language)

All undergraduate applicants, regardless of citizenship, whose preparatory education was principally in a language other than English must demonstrate competence in English. Those who have not attended for at least three years schools at the secondary level or above where English is the principal language of instruction must earn a minimum score of 500 on the Test of English as a Foreign Language (TOEFL) to qualify for admission to the University. Scores higher than 500 are required by some departments for admission to those majors.

Please see the end of this section for information concerning test requirements for all students.

Admissions Policies and Procedures

General

The class standing of undergraduate students at the time of admission is based on the number of units accepted. Undergraduate students who have completed fewer than 30 units are classified as freshmen; fewer than 50 units, sophomores; fewer than 90 units, juniors; 90 units or more, seniors.

Provisional

California State University, Long Beach may provisionally admit first-time freshman applicants based on their academic preparation through the junior year of high school and planned for the senior year. The campus will monitor the senior year of study to ensure that those so admitted complete their senior year of studies satisfactorily, including the required college preparatory subjects, and graduate from high school.

Auditors

Persons who have not been accepted by the University for the semester they wish to attend may request permission to audit courses only after the close of registration. Applicants must present to the Admissions Office written authorization from the instructor of the course they wish to audit, after which the Admissions Office will issue a class admission card upon payment of regular fees. Once enrolled, the student is restricted to auditor status and may not apply for credit at any time for work completed during the semester restricted to audit.

Other students who have been accepted by the University to register for credit may in addition audit courses. See the regulation under "Grades and Administrative Symbols." At the end of the semester the instructor will report audit on the grade sheet to the Records Office. However, such students may, in a later session, enroll in the course audited previously and complete it for credit. Deadline to enroll to audit is the same as to register.

Summer Session Students

Students who do not intend to become candidates for degrees or credentials at the University need not file an application for admission or transcripts of record to attend summer session. Registration for credit in the summer session is limited to graduates of accredited high schools and to persons of sufficient maturity to profit by enrollment in courses offered. Adults who do not wish to enroll for credit may register as auditors with the approval of the instructor and payment of fees. Registration in the summer session does not insure the privilege of enrolling in the fall semester. Students entering the University during the summer session who wish to re-enroll in the fall semester must file an application and the necessary official transcripts of record at the Admissions Office and receive a registration permit before the opening of the fall semester. To apply for admission to summer session courses, students should contact the Summer Session Office at 498-5551 during the spring semester.

Concurrent Enrollment

All students wishing to enroll concurrently at CSULB and one of the other 18 California State University campuses must request permission to do so from the Office of Admissions and Records. Concurrent enrollment within The California State University system is limited to students who have completed a minimum of one semester and 12 units at CSULB with a 2.0 grade point average and must have paid fees at CSULB for 12 units or more. No additional fees may be collected after the last day to add classes.

Upper division students wishing to have concurrent enrollment at CSULB and another institution outside of The California State University system must request permission from the Director of Admissions and Records.

No graduate student may register concurrently at this and any other collegiate institution without advance permission. Permission may be given for concurrent enrollment at CSULB and other institutions if recommended by the department graduate advisor and approved by the Dean of the appropriate school. Forms for concurrent enrollment may be obtained from the school office. When such permission is granted, the academic load at CSULB must be reduced accordingly.

Adjunct Enrollment

Enrollment in regular courses through the CSULB Office of Extended Education is considered adjunct enrollment. Units received through adjunct enrollment are subject to the limit of 24-units extension/continuing education course work applicable to the baccalaureate degree; this is explained in greater detail in the section on General Regulations. Enrollment is by petition only. Forms are available in the Office of Extended Education.

Visitors

The University restricts attendance in class sessions to those who have been formally registered in the course and who maintain good standing as students. Please see "Audit" and "Visitors to Classes" under General Regulations.

Applications

Requirements for admission to California State University, Long Beach are in accordance with Title 5, Chapter 1, Subchapter 3, of the California Administrative Code. If you are not sure of these requirements, you should consult a high school or community college counselor or the Admissions Office. Applications may be obtained from the Admissions Office at any of the campuses of The California State University or at any California high school or community college.

Impacted Programs

The CSU designates programs to be impacted when more applications are received in the first month of the filing period than the spaces available. Some programs are impacted at every campus where they are offered; others are impacted at some campuses but not all. You must meet supplementary admissions criteria if applying to an impacted program.

The CSU will announce before the opening of the fall filing period which programs are impacted and the supplementary criteria campuses will use. That announcement will be published in the CSU School and College Review, distributed to high school and college counselors. We will also give information about the supplementary criteria to program applicants.

You must file your application for admission to an impacted program during the first month of the filing period. Further, if you wish to be considered in impacted programs at two or more campuses, you must file an application to each. Nonresident applicants are rarely admitted to impacted programs.

Supplementary Admission Criteria

Each campus with impacted programs uses supplementary admission criteria in screening applicants. Supplementary criteria may include ranking on the freshman eligibility index, the overall transfer grade point average, and a combination of campus-developed criteria. If you are required to submit scores on either the SAT or the ACT, you should take the test no later than December if applying for fall admission.

Unlike unaccommodated applicants to locally impacted programs, who may be redirected to another campus in the same major, unaccommodated applicants to system-wide impacted programs may not be redirected in the same major but may choose an alternative major either at the first choice campus or another campus.

Importance of Filing Complete, Accurate, and Authentic Application for Admission Documents

The CSU advises prospective students that they must supply complete and accurate information on the application for admission, residence questionnaire, and financial aid forms. Further, applicants must submit authentic and official transcripts of all previous academic work attempted. Failure to file complete, accurate, and authentic application documents may result in denial of admission, cancellation of academic credit, suspension, or expulsion (Section 41301, Article 1.1, Title 5, *California Administrative Code*).

Application Filing Periods

Each campus accepts applications until capacities are reached. Most campuses accept applications up to a month prior to the opening day of the term. Some campuses will close individual programs earlier.

Term	First Accepted	Acknowledgement
Fall	November 1	December 1
Spring	August 1	September 1

Undergraduate Application Procedures

Prospective and returning students, applying for part-time or full-time programs of study, in day or evening classes, must file a complete application as described in the application booklet. The $35 (subject to change) non-refundable application fee should be in the form of a check or money order payable to The California State University and may not be transferred or used to apply to another term. Applicants need file only at their first choice campus. An alternative choice campus and major may be indicated on the application, but applicants should list as alternative campus only that campus of The California State University that they can attend. Generally, an alternative degree major will be considered at the first choice campus before an application is redirected to an alternative choice campus. Applicants will be considered automatically at the alternative choice campus if the first choice campus cannot accommodate them.

First-Time Freshmen Applicants

(for admissions in Fall 1988 see special section below)

You will qualify for regular admission as a first-time freshman if you

1. are a high school graduate
2. have a qualifiable eligibility index (see below), and
3. have completed with grades of C or better at least four years of college preparatory English and at least two years of college preparatory mathematics.

Eligibility Index — The eligibility index is the combination of your high school grade point average and your score on either the American College Test (ACT) or the Scholastic Aptitude Test (SAT). For this purpose we compute your grade point average on your final three years of high school studies, excluding physical education and military science, and use bonus points for certain honors courses. CSU may offer you early, provisional admission based on work completed through the junior year of high school and planned for your senior year.

You can calculate the index by multiplying your grade point average by 800 and adding your combined total score on the SAT. Or, if you took the ACT, multiply your grade point average by 200 and add ten times the composite score from the ACT. If you are a California high school graduate (or a legal resident of California for tuition purposes), you need a minimum index of 2994 using the SAT or 722 using the ACT; the table below shows the combinations of test scores and averages required. If you neither graduated from a California high school nor are a resident of California for tuition purposes, you need a minimum index of 3402 (SAT) or 822 (ACT).

Applicants with grade point averages above 3.10 (3.60 for nonresidents) are exempt from the test requirement.

Honors Courses

Grades in up to eight semester courses, taken in the last two years of high school, that are designated honors in approved subjects receive additional points in grade point average calculations. Each unit of A in approved courses will receive a total of 5 points; B, 4 points; C, 3 points; and none for D or F grades.

Eligibility Index Table for California High School Graduates or Residents of California — Effective Fall 1985

G.P.A.	A.C.T. Score	S.A.T. Score
(Verbal and Mathematics combined)		
Above 3.10 qualifies with any score		
3.10	11	520
3.09	11	530
3.08	11	530
3.07	11	540
3.06	11	550
3.05	12	560
3.04	12	570
3.30	12	570
3.02	12	580
3.01	12	590
3.00	13	600
2.99	13	610
2.98	13	610
2.97	13	620
2.96	13	630
2.95	14	640
2.94	14	650
2.93	14	650
2.92	14	660
2.91	14	670
2.90	15	680
2.89	15	690
2.88	15	690
2.87	15	700
2.86	15	710
2.85	16	720
2.84	16	730
2.83	14	730
2.82	16	740
2.81	16	750
2.80	17	760
2.79	17	770
2.78	17	770
2.77	17	780
2.76	17	790
2.75	18	800
2.74	18	810
2.73	18	810
2.72	18	820
2.71	18	830
2.70	19	840
2.69	19	850
2.68	19	850
2.67	19	860
2.66	19	870
2.65	20	880
2.64	20	890
2.63	20	890
2.62	20	900
2.61	20	910
2.60	21	920
2.59	21	930
2.58	21	930
2.57	21	940
2.56	21	950
2.55	22	960
2.54	22	970
2.53	22	970
2.52	22	980
2.51	22	990
2.50	23	1000
2.49	23	1010
2.48	23	1010
2.47	23	1020
2.46	23	1030
2.45	24	1040
2.44	24	1050
2.43	24	1050
2.42	24	1060
2.41	24	1070
2.40	25	1080
2.39	25	1090
2.38	25	1090
2.37	25	1100
2.36	25	1110
2.35	26	1120
2.34	26	1130
2.33	26	1130
2.32	26	1140
2.31	26	1150
2.30	27	1160
2.29	27	1170
2.28	27	1170
2.27	27	1180
2.26	27	1190
2.25	28	1200
2.24	28	1210
2.23	28	1210
2.22	28	1220
2.21	28	1230
2.20	29	1240
2.19	29	1250
2.18	29	1250
2.17	29	1260
2.16	29	1270
2.15	30	1280
2.14	30	1290
2.13	30	1290
2.12	30	1300
2.11	30	1310
2.10	31	1320
2.09	31	1330
2.08	31	1330
2.07	31	1340
2.06	31	1350
2.05	32	1360
2.04	32	1370
2.03	32	1370
2.02	32	1380
2.01	32	1390
2.00	33	1400

Below 2.00 does not qualify for regular admission

First-Time Freshmen Applicants (graduates of secondary schools, etc. in foreign countries)

An applicant who is a graduate of a secondary school in a foreign country or who has equivalent preparation in a foreign country, may be admitted as a first-time freshman if his or her preparation and ability are such that in the judgment of the appropriate campus authority, the probability of academic success at the campus is equivalent to that of eligible California high school graduates.

First-Time Freshmen Applicants (high school non-graduates)

An applicant who is over 18 years of age, but who has not graduated from high school, will be considered for admission when preparation is such that the campus believes promise of academic success is equivalent to that of eligible high school graduates.

First-Time Freshmen Applicants (admission in Fall 1988 and thereafter)

Effective for Fall 1988 semester admission and thereafter, first-time freshman applicants shall be required to include the following comprehensive pattern of college preparatory subjects in their preparatory studies.

English, 4 years (presently required)

Mathematics, 3 years (2 years presently required): algebra, geometry, and intermediate algebra.

U. S. History or U.S. History and government, 1 year.

Science, 1 year with laboratory: biology, chemistry, physics, or other acceptable laboratory science.

Foreign language, 2 years in the same language (subject to waiver for applicants demonstrating equivalent competence).

Visual and performing arts, 1 year: art, dance, drama/theater, or music. Acceptable courses will combine theory and practice and meet the State Board of Education's *Model Curriculum Standards, Grades Nine Through Twelve: Visual and Performing Arts.*

Electives, 3 years: courses selected from English, advanced mathematics, social science, history, laboratory science, foreign language, visual and performing arts, and agriculture.

Other admission criteria, in addition to the preparatory subjects, include graduation from high school (or equivalent) and a qualifiable Eligibility Index as defined.

To phase in the 1988 standards for admission, California State University will provide for the conditional admission of applicants otherwise admissible but who are missing a limited number of the required subjects. "Conditional admission" is an alternative means to establish eligibility for admission. Applicants otherwise eligible for regular admission, but missing a limited number of the preparatory subjects, will be regularly admitted on condition that they make up the missing subjects early in their baccalaureate studies. Students will not be denied admission during the phase-in period simply because they lack a limited part of the required pattern. Under the plan, the minimum number of subjects to be completed each year will be:

Fall 1988: at least 10 of the required 15 units

Fall 1989: at least 12 of the required 15 units

Fall 1990 and fall 1991: at least 14 of the required 15 units.

In each of these years, applicants will be expected to include at least 6 of the 7 units required in English and mathematics. By fall 1992, the CSU will expect all freshman applicants to have completed all required subjects.

High School Students - Young Scholars Program

High school students will be considered for enrollment in certain special University courses if recommended by the principal and the appropriate campus department chair and if preparation is equivalent to that required of eligible California high school graduates. Such admission is only for a given program and does not constitute the right to continued enrollment.

College Transfer Applicants

You will qualify for admission as a college transfer student if you have a grade point average of 2.0 (C) or better in all transferable units attempted, are in good standing at the last college or university attended, and meet the following standard:

(a) were eligible as a freshman, or
(b) were eligible as a freshman except for the college preparatory subjects in English and mathematics and have completed appropriate college courses in the missing subjects, or
(c) have completed at least 56 transferable semester (84 quarter) units and have completed appropriate college courses to make up any missing subjects in college preparatory English and mathematics. (Nonresidents must have a 2.4 grade point average or better).

For these requirements, transferable courses are those designated for that purpose by the college or university offering the courses.

Adult Students

As an alternative to regular admission criteria, applicants who are twenty-five years of age or older may be considered for admission as adult students if they meet the following conditions:

Possess a high school diploma (or has established equivalence through either the Tests of General Educational Development [GED] or the California High School Proficiency Examination).

Have not been enrolled in college as a full-time student for more than one term during the past five years.

If there has been any college attendance in the last five years, has earned a C average or better.

Are in good standing at the last school attended.

Courses taken fall 1988 or thereafter must be at a level above that of intermediate algebra in order to qualify for exemption.

Admission will be based upon a judgment as to whether the applicant is as likely to succeed as a regularly admitted freshman or transfer and will include an assessment of basic skills in the English language and mathematical computation.

Senior Citizen Education Program

California State University Long Beach, is pleased to continue the Senior Citizen Education Program on campus. This program enables eligible California residents who are 60 years of age or older to enroll as regular students at a cost of $3.00 per semester. The program, which was founded at CSULB has been in operation since 1975. Individuals are attending courses in a variety of subject areas and class levels from freshman through graduate standing.

Additional information on the Senior Citizen Education Program may be obtained by visiting the Admissions and Records Office, SSA-123 or by calling (213) 498-4141.

International (Foreign) Students

California State University uses separate requirements and application filing dates in the admission of foreign students. For these purposes, "foreign students" are residents of a country other than the United States or who hold visas as students, exchange visitors, or in other nonimmigrant classifications.

Special application forms are required of foreign student applicants. Forms and directions for their use may be obtained from the Admissions Office. Foreign students are required to submit with their application evidence of competence in the English language as indicated by a minimum TOEFL score of 500 (for all Engineering program 525, for all Business Administration programs 550), a medical certificate of health, and evidence of financial resources adequate to provide for all expenses (approximately $750 United States currency per month) during the period that they expect to be registered as a student in the University.

Among citizens of countries other than the U.S. who do not already hold status as Permanent Resident Aliens (Form 1-151), the University will admit and enroll only those applicants who, through their admission to this University, (1) will be admitted to the U.S. by the Immigration and Naturalization Service (INS) to study here or (2) are currently in valid nonimmigrant status in the U.S. or will achieve or continue such status. Enrollment in courses through Extended Education does not constitute admission to the University. For purposes of maintaining valid nonimmigrant student status (F or J visa) under immigration regulations, enrollment in courses through Extended Education will be counted as part of "a full course of study" only when approved in advance of registration by the Director, Center for International Education — International Admissions.

All foreign students for whom English is a second language are required upon arrival to take the Examination in English as a Second Language (EESL) and enroll in any necessary class in English as a second language. In some cases this will mean that students will be required to take reduced course loads in their major field until English proficiency can be demonstrated in the English classes. The requirements cannot be postponed.

Admission of foreign graduate students will involve consultation with the graduate advisor from the department or school to which the student is applying for study. Scholastically eligible foreign graduate students may be admitted, dependent upon the preparation of the student as assessed by the Director for International Education — International Admissions and the graduate advisor of the appropriate school or department. The graduate advisor of the appropriate school or department in consultation with International Admissions Officer and the Director of the American Language Program will decide the English standard to be applied to foreign students applying to that school.

Hardship Petitions

The campus has established procedures for consideration of qualified applicants who would be faced with extreme hardship if not admitted. Petitioners should write the Admissions Office regarding specific policies governing hardship admission.

Other Applicants

Applicants not admissible at this time under any of the preceding provisions are advised to enroll in another institution, such as a community college, to prepare for admissibility at a future date.

Graduate and Post-baccalaureate Application Procedures

All master's degree and post-baccalaureate applicants (e.g. second baccalaureate degree applicants, those seeking credentials, and those interested in taking courses for personal or professional growth) must file a complete application as described in the admissions booklet. Applicants who completed undergraduate degree requirements and graduated the preceding term are also required to complete and submit an application and the $35 (subject to change) non-refundable application fee. Since applicants for post-baccalaureate programs may be limited to the choice of a single campus on each application, redirection to alternative campuses or later changes of campus choice will be minimal. To be assured of initial consideration by more than one campus, it will be necessary for any applicant to submit separate applications (including fees) to each. Applications may be obtained from the Graduate Studies Office of any California State University campus in addition to the sources noted for undergraduate applicants. For further information, please see the section on Post-Baccalaureate and Graduate Studies in this catalog.

Application Acknowledgement

You may expect to receive an acknowledgement of your application from your first choice campus within two to four weeks of filing the application. A notice that space has been reserved for you will also include a request that you submit the records necessary for the campus to evaluate your qualifications. You may be assured of admission if the evaluation of your qualifications indicates that you meet admission requirements. Such a notice is not transferable to another term or to another campus.

Registration Procedures

When admission and re-admission requirements have been satisfied, the student is ready to register for classes at the University. Generally, registration involves securing the Permit to Register, final health clearance and payment of fees. Students who have been accepted for admission and re-admission should purchase the Schedule of Classes in the University Bookstore before registration. Registration dates, time and detailed instructions are included in the Schedule of Classes.

Students are not permitted to attend any class for which they have not officially registered. Deadline to register is up to the end of the fourth week of classes. Note: Admission and readmission deadlines are much earlier.

Adding Classes

Students may add classes for two weeks after classes begin. Students may add classes after the second week and no later than the end of the fourth week only with the written permission of the instructor. No request to add classes will be considered after the fourth week unless there is a technical error. (Deadline dates to add and drop classes are published each semester in the *Schedule of Classes*.

Health Screening

All new and readmitted students, born after January 1, 1957, will be notified of the requirement to present proof of measles and rubella immunizations. This is not an admissions requirement, but shall be required of students by the beginning of their second term of enrollment in CSU. Proof of measles and rubella immunizations shall also be required for certain groups of enrolled students who have increased exposure to these diseases.

Post-Admission Evaluations

Advanced Placement

California State University, Long Beach grants credit toward its undergraduate degrees for successful completion of examinations of the Advanced Placement Program of the College Board. Students who present scores of three or better will be granted six semester units (nine quarter units) of college credit.

System-wide Tests Required of Most New Students

The CSU requires new students to be tested in English and Mathematics after they are admitted. These are not admission tests, but a way to determine if you are prepared for college work and, if not, to counsel you how to strengthen your preparation. You might be exempted from one or both of the tests if you have scored well on other specified tests or completed appropriate courses.

EPT —

(English Placement Test)

The CSU English Placement Test must be completed by all new undergraduates with the exception of those who present proof of one of the following:

- a score of 3, 4, or 5 on either the Language and Composition or the Composition and Literature examination of the College Board Advanced Placement Program
- a satisfactory score on the CSU English Equivalency Examination
- a score of 510 or above on the Verbal section of the College Board Scholastic Aptitude Test (SAT-Verbal)
- a score of 23 or above on the ACT English Usage Test
- a score of 600 or above on the College Board Achievement Test in English Composition with essay
- completion of an acceptable college course in English composition of four quarter or three semester units with a grade of C or better

ELM —

(Entry Level Mathematics Test)

All new undergraduate students must take the test and pass it before enrolling in a course that satisfies the college level mathematics requirement of the General Education-Breadth program. Exemptions from the test are given only to those students who can present proof of one of the following:

- a score of 3 or above on the College Board Advanced Placement mathematics examination (AB or BC)
- a score of 530 or above on the mathematics section of the Scholastic Aptitude Test (SAT-Math)
- a score of 23 or above on the ACT Mathematics Test
- a score of 520 or above on the College Board Mathematics Achievement Test, Level 1
- a score of 540 or above on the College Board Mathematics Achievement Test, Level 2
- completion of a college course that satisfies the General Education-Breadth Requirement in Quantitative Reasoning, provided it is at the level of intermediate algebra or above with a grade of C or better.

Failure to take either of these tests, as required, at the earliest opportunity after admission may lead to administrative probation, which, according to Section 41300.1 of Title 5, California Administrative Code, and CSU Executive Order 393, may lead to disqualification from future attendance.

Information bulletins and registration materials for the EPT/ELM will be mailed to all students subject to the requirements. The materials may also be obtained from the Office of Admissions and Records or from Test Services.

Graduation Requirement in Writing Proficiency

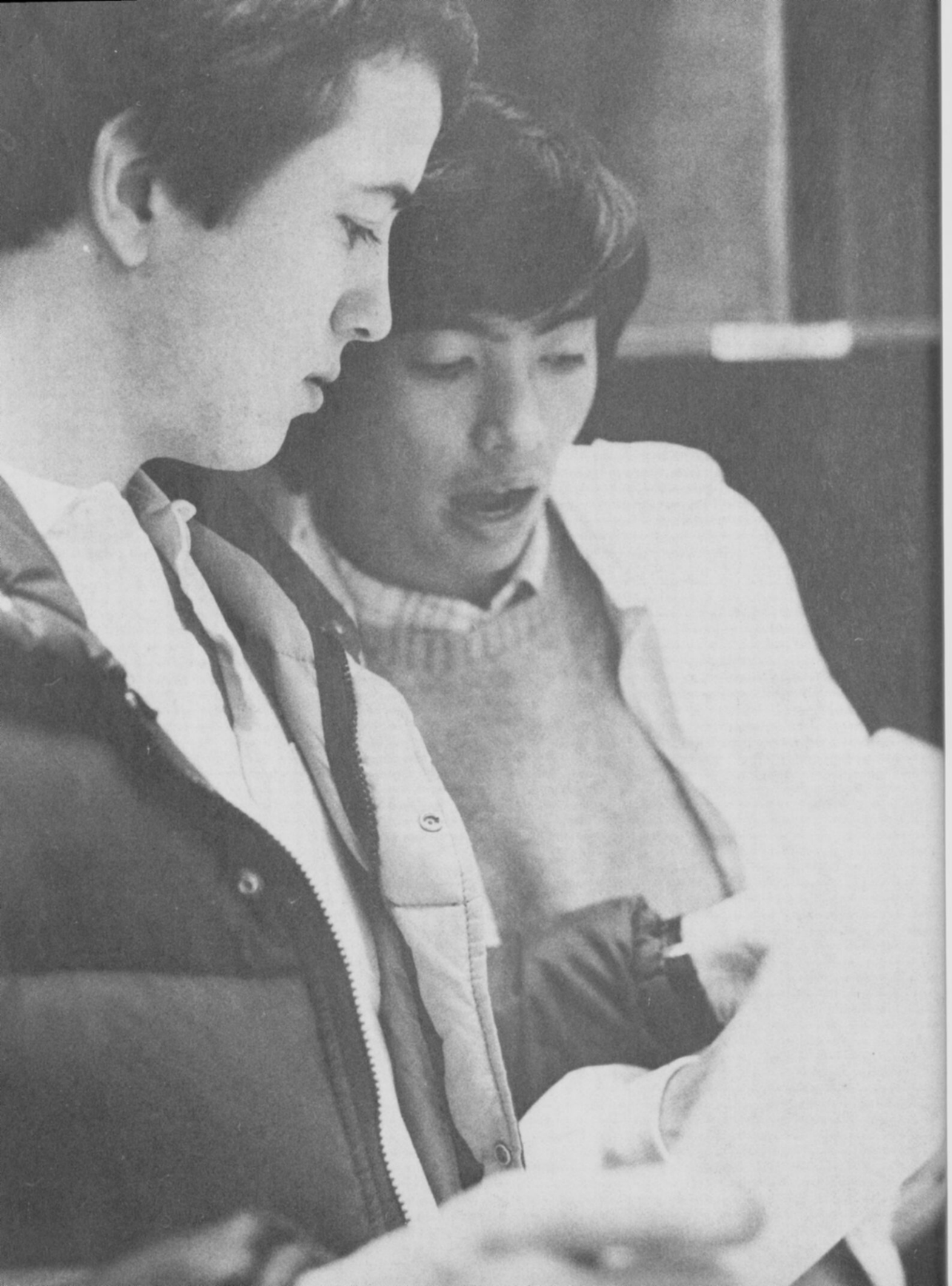
All students must demonstrate competency in writing skills as a requirement for graduation. At CSULB, every student must pass the Writing Proficiency Examination (WPE) to be certified proficient in written composition in English. Students should take the examination in the first semester of their junior year. To cover the costs of administration and scoring, a fee is charged each time a student takes the examination. Information on currently available ways to meet this graduation requirement may be obtained from the CSULB Test Services office.

Supplemental Instruction

The University offers supplemental instruction for students who have experienced difficulty with the Writing Proficiency Examination or with certain courses which require intensive writing as a part of the course requirements. Students should contact the Learning Assistance Center for permission to enroll in these classes.

S-I 050A-E. Preparation for the WPE (1) F,S

Non-baccalaureate-level course designed to prepare students for the Writing Proficiency Examination (WPE). S-I 050A is open to students who have not yet attempted the WPE. S-I 050B,C,D, and F are designed for students who have failed the WPE. Students will be assigned to two hours a week in the course appropriate to their performance level. CR/NC grading only. Each course is repeatable until the WPE is successfully passed. [Activity]



Fees, Financial Assistance

Average Annual Costs of Education and Sources of Funds Per Full-Time Equivalent Student

The 19 campuses and the Office of the Chancellor of The California State University are financed primarily through funding provided by the taxpayers of California. The total State appropriation to the CSU for 1986/87 including capital outlay and employee compensation increases, is $1,500,409,000. The total cost of education for CSU, however, is $1,649,146,315 which provides support for a projected 247,855 full-time equivalent students (FTES). A full-time equivalent student is that student who takes 15 units in a semester. If the student is attending part-time and taking only 6 units, then another student must attend taking 9 units in order for the University to receive State funding for one FTES.

The total cost of education in the CSU is defined as the expenditures for current operations, including payments made to the students in the form of financial aid, and all fully reimbursed programs contained in State appropriations, but excluding capital outlay appropriations. The average cost of education is determined by dividing the total cost by the total FTES. The average cost is further differentiated into three categories: State Support (the state appropriation, excluding capital outlay), Student Fee Support, and Support from Other Sources (including Federal Funds).

Thus, excluding costs which relate to capital outlay (i.e., building amortization), the average systemwide cost of education per FTE student in 1986/87 is $6654. Because of size, the average FTES cost of State support at CSULB is $5532. Of this amount, the average student fee support per FTE is $872 (at CSULB, that amount is $933). The calculation for this latter amount includes the amount paid by nonresident students.

Procedure for the Establishment of a Student Body Fee

The law governing The California State University provides that a student body fee may be established by student referendum with the approval of 2/3 of those students voting. The student body fee was established at CSULB by student referendum on November 19, 1952. The same fee can be abolished by a similar 2/3 approval of students voting on a referendum called for by a petition signed by 10% of the regularly enrolled students (Education Code, Section 89300). The level of the fee is set by the Chancellor. An increase in the student body fee may be approved by the Chancellor only following a referendum on the fee increase approved by a majority of students voting. Student body fees support a variety of cultural and recreational programs, child care centers, and special student support programs.

[b] This figure does not include the capital outlay appropriation of $110,562,000.

[c] The total cost of education does not include the amount derived from the lottery income and capital investments by CSU. The estimated replacement cost of all the system's permanent facilities and equipment on the 19 campuses is currently valued at $5.3 billion, excluding the cost of land.

[d] The average costs paid by the State University Fee, Application Fee, Catalog Fee and Nonresident Tuition. Amount paid by individual students may differ from the systemwide average of $872 depending on whether they are part-time, full-time, resident or nonresident students.

State University Fee

The State University Fee, established by the Board of Trustees in January 1975, is a reimbursement to the General Fund used to provide the following student support services:

Counseling: Counseling assists students in personal growth, value formation, and the resolution of personal problems which, especially in the period of early adulthood, may impede the learning process.

Experiential Learning Center: The Experiential Learning Center assists students in gaining a deeper understanding of the relationship between theory and practical application through on-the-job experience with professionals in the field. The Experiential Learning Center develops, certifies and maintains paid and volunteer internships in community organizations and companies.

Learning Assistance Center: The Learning Assistance Center provides drop-in and referral service and tutorial assistance to students who require assistance in learning skills regarding any course-related learning problems.

School-Based Programs: The School-Based Student Services exist in each of the academic schools to provide a sense of community. They identify and produce programs which bring together students, faculty members and alumni

1986/87 CSU SUPPORT BUDGET

SOURCE OF FUNDS AND AVERAGE COST PER FTE

(Projected Enrollment: Systemwide 247,855 FTE, CSULB 22,600 FTE)

	SYSTEMWIDE			CSULB		
Source of Funds	**Amount**	**Average Cost per Student (FTE)**	**%**	**Amount**	**Average Cost per Student (FTE)**	**%**
State Appropriation	$1,389,847,000 [b]	$5,607	84.3	$100,816,550	$4,461	79.5
Student Fee Support	216,047,708	872 [d]	13.1	21,076,326	933	18.0
Other Sources	43,251,607	175	2.6	4,990,064	220	3.9
TOTAL COST OF EDUCATION	$1,649,146,315 [c]	$6,654	100.0	$126,882,940	$5,614	100.0

by developing seminars, presentations, social events and all campus events. The School-Based Associate Deans in each School also serve as a student services liaison.

Disabled Student Services: The Disabled Student Services provide and develop a support service to equalize educational opportunities for students with disabilities and to maximize their educational independence. The program offers a whole host of specialized services to meet the ongoing needs of students with varied disabilities.

Testing: The Testing Office administers and interprets and, when necessary, develops tests used by Counseling, Career Planning and Placement, and other student support services. It also administers academic placement and advanced placement tests and conducts student profile surveys used in assessing the need for specific student support programs.

Career Development Center: Career planning, cooperative education/internship and placement are the major areas of service offered through this Center. Career planning service focus the student on vocational and career opportunities related to a particular field of study. The cooperative education/internship program helps students to acquire work experience related to their field of study. The placement service assists students in preparing resumes, improving interviewing techniques, and in securing employment both part-time while students and full-time employment following graduation.

Social/Cultural Development: The Social/Cultural Development Program provides both opportunities and direction for students in developing organizational skills, planning and implementing programs, developing and administering program budgets and in working effectively with others to achieve a common goal.

Health Services: The Student Health Service aids students to maintain physical and mental health to avoid health-related problems which prevent active participation in educational programs.

Financial Aid Administration: Although funds for grants and loans are provided by Federal and State governments and through private benefactors, the administrative staff required to assist students in securing needed financial support is funded through State University Fee reimbursements.

Housing Administration: Not all campuses offer on campus housing for students. Each campus, however, provides services to all students in their efforts to secure suitable housing near the campus and at a reasonable cost.

Fees

Schedule of Fees, 1987/88

Legal residents of California are not charged tuition, i.e., the direct cost of instruction. The following reflects applicable fees and nonresident tuition for both the quarter and the semester systems (CSULB operates on the semester system). Fees are subject to change without advance notice.

All students are charged the following fees each semester which will be published in the Schedule of Classes:

ALL STUDENTS:

Application Fee (nonrefundable), payable by check or money order at time application is made: ..... $35.

State University Fee for all campuses except California State University, Stanislaus:

Units	Per Semester	Per Academic Year
0-6.0 units	$183.00	$366.00
6.1 and more	$315.00	$630.00
Facilities Fee	3.00	
Instructionally Related Activities Fee	12.50	
Student Body Fee	14.50	
University Student Union Fee	25.00	
Total Per Semester .	$238.00 to 370.00	

Nonresident Students (U.S. and Foreign):

Nonresident tuition (in addition to other fees charged to all students) for all campuses:

	Semester
Charge Per Unit	$147

The total fee paid per term will be determined by the number of units taken, including those in excess of fifteen.

No fees of any kind shall be required of or collected from those individuals who qualify for such exemption under the provisions of the Alan Pattee Scholarship Act, children of deceased public law enforcement or fire suppression employees.

Summer Session

	Lecture	Activity	Lab
Fee per unit ('85 - '86) ..	$73	$77	$86

University Union fee per session . 5.00
Student Body fee per session 1.00
Other Fees or Charges
Application (and reapplication) fee (non-refundable) payable by check or money order at time application is made .... $ 35.00
Late registration fee (non-refundable) 25.00
Student identification card 1.00
Failure to meet administratively required appointment or time limit 10.00
Check Return Fee (Check returned for any cause) 10.00
Complete transcript of record 4.00
Diploma fee 6.00
Commencement fee 10.00
Organ practice, per student, per semester 10.00
Parking fee per semester for all students 33.75
Parking fee per semester for less than four-wheeled self-propelled vehicles — automotive 8.45
Residence hall room and board fee per academic year depending on type of accommodations (approximate) ..... $4,000 to $4,300
Musical instrument insurance repair 10.00

Reminder: Fees are Subject to Change Without Advance Notice

Full Payment of Registration and Activity Fees must be Made at Time of Registration

Auditors

Students enrolled as auditors, not for credit, are exempt from payment of the application fee, but pay fees appropriate to the number of units taken as auditors.

Refund of Fees

Details concerning fees which may be refunded, the circumstances under which fees may be refunded, and the appropriate procedure to be followed in seeking refunds may be obtained by consulting Section 41803 (parking fees), 41913 (nonresident tuition), 42019 (housing charges), and 41802 (all other fees) of Title 5, California Administrative Code. In all cases it is important to act quickly in applying for a refund. Information concerning any aspect of the refund of fees may be obtained from the Business Office.

State University Fees

If a student completely withdraws from the University, this fee may be partially refunded if a written application for refund is submitted to the registrar within 14 days following the start of instruction each semester; $10.00 shall be retained to cover the cost of registration. If reduction of the student's enrollment causes a reduction to a lower fee category within the first 14 days, the difference less $5.00 may be refunded to the student.

If a student is unable to continue enrollment due to a university regulation, complete disability or because of compulsory military service, the entire fee may be refunded. Application for refund under such circumstances may be made any time before any academic credit is given for the courses for which the student is registered.

Nonresident (U.S., Out-of-State, and Foreign) Tuition

If a nonresident student withdraws from the University or drops in unit load, tuition may be refunded in the following amount if a written application for refund is submitted to the registrar:

Time limit for receipt of refund application	Percent Refunded
(1) Before or during the first week of the semester	100%
(2) During the second week of the semester	90%
(3) During the third week of the semester	70%
(4) During the fourth week of the semester	50%
(5) During the fifth week of the semester	30%
(6) During the sixth week of the semester	20%
(7) Seventh week through the end of the semester	None

Parking Fee

Partial refund of the parking fee is made according to the following schedule if a written application for refund is submitted to the registrar and all relevant parking documents issued by the University, including parking permit, stickers and decals are returned. If any of these are affixed to the vehicle, their removal by a campus security officer or under the officer's direction shall constitute appropriate return. Following is the schedule for refunds which will be paid:

Period refund	Percent Refunded	Amount Refunded
1-30 days	75%	$25
31-60 days	50%	$16
61-90 days	25%	$ 8
91-end of semester ...	None	None

Fees charged for self-propelled vehicles of less than four wheels which are required to be licensed by the State Department of Motor Vehicles shall be applied at 25% of the refunds above rounded to the nearest dollar, except that there shall be no refund if such amount is less than $5.

There shall be no refund for: 1) coin operated parking meters, 2) daily permits for coin operated parking gates, 3) special events, and 4) fees paid by monthly payroll deductions.

Student Body Fees, Instructionally Related Activities Fees, and University Student Union Fees

The Student Body fee, Instructionally Related Activities fee, and the University Student Union fee are refundable in full if a student withdraws from the University within 14 days after the start of instruction and if a written application for refund is submitted to the registrar. After that date, no portion of these fees is refundable.

There is no refund of the Student Body fee, Instructionally Related Activities fee or the University Student Union fee because of a reduction in unit load from more than 6.0 units to 6.0 or less units.

Determination of Residence for Nonresident Tuition Purposes

The campus Admissions Office determines the residence status of all new and returning students for nonresident tuition purposes. Responses to items 29-45 on the Application for Admission and, if necessary, other evidence furnished by the student are used in making this determination. A student who fails to submit adequate information to establish a right to classification as a California resident will be classified as a nonresident.

The following statement of the rules regarding residency determination for nonresident tuition purposes is not a complete discussion of the law, but a summary of the principal rules and their exceptions. The law governing residence determination for tuition purposes by The California State University is found in Education Code Sections 68000-68090 68121, 68123, 68124, 89705-89707.5, and 90408 and in Title 5 of the California Administrative Code, Sections 41900-41912. A copy of the statutes and regulations is available for inspection at the campus Admissions Office.

Legal residence may be established by an adult who is physically present in the state and who, at the same time, intends to make California his or her permanent home. Steps must be taken at least one year prior to residence determination date to show an intent to make California the permanent home with concurrent relinquishment of the prior legal residence. The steps necessary to show California residency intent will vary from case to case. Included among the steps may be registering to vote and voting in elections in California; filing resident California state income tax forms on total income; ownership of residential property or continuous occupancy or renting of an apartment on a lease basis where one's permanent belongings are kept; maintaining active resident memberships in California professional or social organizations; maintaining California vehicle plates and operator's license; maintaining active savings and checking accounts in California banks; maintaining permanent military address and home of record in California if one is in the military service.

The student who is within the state for educational purposes only does not gain the status of resident regardless of the length of the student's stay in California.

In general, the unmarried minor (a person under 18 years of age) derives legal residence from the parent with whom the minor maintains or last maintained his or her place of abode. The residence of a minor cannot be changed by the minor or the minor's guardian, so long as the minor's parents are living.

A married person may establish his or her residence independent of his or her spouse.

An alien may establish his or her residence, unless precluded by the Immigration and Nationality Act from establishing domicile in the United States. An unmarried minor alien derives his or her residence from the parent with whom the minor maintains or last maintained his or her place of abode.

Nonresident students seeking reclassification are required by law to complete a supplemental questionnaire concerning financial independence.

The general rule is that a student must have been a California resident for at least one year immediately preceding the residence determination date in order to qualify as a "resident student" for tuition purposes. A residence determination date is set for each academic term and is the date from which residence is determined for that term. The residence determination dates are:

Semester Term Campuses (CSULB)

Fall	September 20
Winter(Stanislaus only)	January 5
Spring	January 25

Questions regarding the residence determination dates should be directed to the campus Admissions Office which can give you the residence determination date for the term for which you are registering.

There are exceptions from nonresident tuition including:

1. Persons below the age of 19 whose parents were residents of California but who left the state while the student, who remained, was still a minor. When the minor reaches age 18, the exception continues for one year to enable the student to qualify as a resident student.
2. Minors who have been present in California with the intent of acquiring residence for more than a year before the residence determination date, and entirely self-supporting for that period of time.
3. Persons below the age of 19 who have lived with and been under the continuous direct care and control of an adult, not a parent, for the two years immediately preceding the residence determination date. Such adult must have been a California resident for the most recent year.
4. Dependent children and spouses of persons in active military service stationed in California on the residence determination date. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year. The exception, once attained, is not affected by retirement or transfer of the military person outside the state.
5. Military personnel in active service stationed in California on the residence determination date for purposes other than education at state-supported institutions of higher education. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year.
6. Certain credentialed, full-time employees of California school districts.
7. Full-time State University employees and their children and spouses. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year.
8. Certain exchange students.
9. Children of deceased public law enforcement or fire suppression employees, who were California residents and who were killed in the course of law enforcement or fire suppression duties.

Any student wishing to appeal the Admissions Office determination may submit a request for review to the Residence Specialist, Office of Admissions and Records. All such requests must be received within the first 30 calendar days of the current semester. That request is reviewed by a campus committee. Any student, following a final campus decision on his or her residence classification, may only make a written appeal to:

The California State University
Office of General Counsel
400 Golden Shore
Long Beach, California 90802-4275

within 120 calendar days of notification of the final decision on campus of the classification. The Office of General Counsel may make a decision on the issue, or it may send the matter back to the campus for further review. Students classified incorrectly as residents or incorrectly granted an exception from nonresident tuition are subject to reclassification as nonresidents and payment of nonresident tuition in arrears. If incorrect classification results from false or concealed facts, the student is subject to discipline pursuant to Section 41301 of Title 5 of the California Administrative Code. Resident students who become nonresidents, and nonresident students qualifying for exceptions whose basis for so qualifying changes, must immediately notify the Admissions Office. Applications for a change in classification with respect to a previous term are not accepted.

The student is cautioned that this summation of rules regarding residency determination is by no means a complete explanation of their meaning. The student should also note that changes may have been made in the rate of nonresident tuition, in the statutes, and in the regulations between the time this catalog is published and the relevant residence determination date.

Debts Owed to the University

Should a student or former student fail to pay a debt owed to the institution, the institution may "withhold permission to register, to use facilities for which a fee is authorized to be charged, to receive services, materials, food or merchandise or any combination of the above from any person owing a debt" until the debt is paid (see Title 5, California Administrative Code, Sections 42380 and 42381). For example, the institution may withhold permission to receive official transcripts of grades from any person owing a debt. If a student believes that he or she does not owe all or part of an unpaid obligation, the student should contact the University Accounting Office. The Accounting Office, or another office of the University to which the student may be referred by the Accounting Office, will review the pertinent information, including information the student may wish to present, and will advise the student of its conclusions with respect to the debt.

Bad Checks — Treble Damages

Any person who makes or delivers a check or draft which is returned to the University for lack of funds or account, may be liable for damages of treble the amount of the returned check or draft, but no less than $100.00 nor more than $500.00 (See Civil Code Section 1719). For example, if a check for registration fees is not honored by the financial institution due to a lack of funds or account, the maker will have 30 days to pay the amount in cash following receipt of a certified letter from the University demanding payment. **If the cash payment is not made within 30 days, the University may initiate a court action for the amount of the bad check plus treble damages, and the student will be disenrolled from the university**.

Estimated Expenses

Students should be prepared to meet expenses for fees at the time of registration. Books should be purchased when classes begin. Other expenses are ongoing and must be anticipated monthly and included in the total cost of attendance. Expenses generally go up an average six to eight percent per year. Actual costs depend upon where the student lives and if there are dependent children. Financial aid programs are designed to help students meet standard University-related expenses during the academic year. The following budgets will assist students in planning costs for average expenses: (Costs include University fees, books and supplies, room and board, personal miscellaneous and transportation based on a standard 1986-87 CSULB budget.)

Student living at home with parents-nine month term-$3,973

Student living in a residence hall- nine month term-$6,289

Single student living off-campus (apartment, house)-twelve- month term-$10,343 (assumes shared housing).

Financial Assistance

Institutional and Financial Assistance Information

The following information concerning the cost of attending California State University, Long Beach is available from the Director, Financial Aid, SS/AD Bldg., Rm. 270, 498-4641. This information includes:.

1. Estimated costs of books and supplies;
2. Estimates of typical student room and board costs or typical commuting costs; and
3. Any additional costs of the program in which the student is enrolled or expresses a specific interest.

Information concerning fees, tuition, and the refund policy California State University, Long Beach for the return of tuition and fees or other refundable portions of costs is available from the Controller, SS/AD Bldg., Rm. 365.

The Office of Financial Aid at CSULB provides both financial and advisory assistance to enable students to pursue a quality education despite increasing costs. It administers funds made available by the federal and state governments and by private sources that are awarded to students who demonstrate a need to cover educational expenses.

Due to limited funding, deadlines are critical. Your financial aid file must be complete before your financial need can be determined. To receive maximum funding, your file must be complete by April 15.

Application

To apply for financial aid from CSULB, students must file the Student Aid Application for California (SAAC). The SAAC is a multi-purpose form that also is used to apply for California Grants from the California Student Aid Commission and for Pell Grant funds from the federal government. The SAAC must be mailed to the College Scholarship Service (CSS), the national processor designated by CSULB. New students may obtain the SAAC from high school counselors or local college financial aid offices; students currently enrolled at CSULB may pick up the SAAC from the Office of Financial Aid. Detailed information about the CSULB financial aid program is available in the Office of Financial Aid, SS/AD Bldg., Room 270, (213) 498-4641.The submission of various supportive documents is required of all financial aid applicants. They include the following: (1) verification of all taxable and nontaxable income reported on the SAAC; (2) financial aid transfer records from all colleges previously attended; and (3) other clarifying information requested by the Office of Financial Aid. Upon receipt of all documentation, the applicant's file is evaluated to determine eligibility for financial aid. A student is automatically considered for all programs for which he/she qualifies at the University by submitting the Financial Aid Form (FAF), and appropriate supporting documents. All loan, grant and work programs are available for the academic year; however, limited work study is available for summer session.

Financial Aid Eligibility

To determine eligibility, the standard need analysis system of the College Scholarship Service is used. This system allows the Office of Financial Aid to analyze family financial strength and ability to contribute toward the cost of attending CSULB. Depending upon support status, the parental contribution, the applicant's (and spouse's) earnings from employment, savings, asset contribution, and other resources are then subtracted from the student's educational expenses to arrive at financial need. As long as resources permit, a "package" consisting of various types of funds (grants, loans, work) is awarded to meet full need.

Notification of Awards

Upon determination of eligibility to receive financial aid, students will be sent award letters. A student will also be notified if determined to be ineligible.

It is the goal of CSULB to package aid that fully meets the total need of all qualified aid applicants. **However, in the event that funds are insufficient, priority will be given to students who demonstrate the highest need and complete their financial aid file by April 15, 1987.** A complete financial aid file includes the SAAC processed by College Scholarship Service (CSS) and received in the Office of Financial Aid by the April 15th deadline.

All appropriate supportive documents submitted by April 15th to the Office of Financial Aid.

Academic Responsibilities

Aid recipients are expected to complete the units for which aid is approved. This is called satisfactory academic progress and is defined as completing 24 undergraduate units, or 16 graduate units, per academic year while receiving aid as a full-time student. Unit requirements are adjusted for part-time students. If you fail to maintain satisfactory progress, financial aid may be terminated.

Aid eligibility is governed by the number of units you attempt and successfully complete with a passing grade (D or better), Most aid recipients enroll in a full-time program of study carrying 12 undergraduate units or eight graduate level units per semester. Part-time students carrying a minimum of six undergraduate units, or four graduate level units, are eligible to receive aid. However, part-time students do not receive as much aid as full-time students because employment earnings are expected to be greater. If you are a part-time student receiving or seeking financial aid, you must visit the Office of Financial Aid to inform us of your part-time status.

To be considered an eligible financial aid applicant, you cannot have earned more academic units than an established unit cap. At CSULB, the established unit cap for students seeking a bachelor's degree is 155 units and for master's degree candidates the unit cap is 37 units. This includes units earned as a recipient of financial aid as well as those while not receiving aid. It will also include any transferable units for those students who have attended college elsewhere.

Students Owing Educational Debts

Loans are not given to any student with a history of non-payment of debts. A student who defaults on any loan made by CSULB or under the federally insured or guaranteed loan program will be denied further aid. A student who owes a refund of any federal financial aid previously received will not receive funds from the University until corrective action is taken. Students are barred from discharging their educational loan debt through bankruptcy proceedings for a five-year period after leaving the University.

Appeal Procedure

All students have the option of discussing their aid award with a financial aid counselor and appealing decisions. Petitions for appeal may be obtained from the intake advisers and are acted upon by the Director of Financial Aid or designee.

Campus Financial Aid Programs

Carl D. Perkins National Direct Student Loans (NDSL)

The NDSL is a federal program providing long-term, low interest loans to both graduate and undergraduate students. Students may borrow up to a maximum of $4,500 for the first two years of undergraduate study; up to $9,000 for the bachelor's degree; and up to a cumulative total of $18,000 for undergraduate and graduate or professional study. The amount awarded will depend upon availability of funds, determined eligibility, and the number of units carried. The interest rate is 5 per cent on the unpaid principal. Repayment of loan principal and interest at a minimum of $30 per month begins nine months after graduation or withdrawal from the University and may extend over a 10 year period. Repayment is deferred as long as a student is enrolled at least half-time or serving in the U.S. Armed Forces, VISTA, or the Peace Corps. There are cancellation provisions for full-time teaching in designated low-income schools, teaching the handicapped, active duty in the Armed Services, and partial cancellation for service in VISTA or the Peace Corps. A "revolving fund" is established from the collection of NDSL which provides for the needs of future generations of students. The promissory note, signed upon receipt of NDSL money, is a legally binding contract in which the student promises to pay the debt. CSULB must follow due diligence procedures in collecting this loan, even if it means using a collection agency or going through legal proceedings to recover the loan. **Students have both a moral and legal responsibility to repay loans as agreed so the next needy person will not be denied an education for lack of money.**

The NDSL gives students the opportunity to borrow money against future income. For students who have not established credit, the NDSL provides the opportunity to establish a good credit history through prompt loan repayments.

Supplemental Educational Opportunity Grant (SEOG)

The SEOG is a federally sponsored program for undergraduate students with exceptional financial need. Awards range from $200 to $1,500 per academic year. There are no work or repayment requirements for grants.

College Work-Study (CWS)

The CWS program is a federally funded employment program to expand part-time job opportunities for students in financial need. Students awarded CWS are placed in jobs according to their skills, career and academic goals and must see the Office of Financial Aid CWS Coordinator for job referral. Positions are available on campus or with organizations off campus. Students may work an average of 20 hours per week while classes are in session or 40 hours per week during vacation periods.

California State Educational Opportunity Program Grants (EOP)

EOP grants are provided by the State of California for a designated number of undergraduate students admitted to one of The California State University campuses under the Educational Opportunity Program. Eligibility is determined by the same need criteria as federal financial aid programs. Grants range from $200 to $1,000 for a maximum of ten semesters. Students also receive special academic counseling and tutorial assistance when needed. Further information may be obtained by contacting the Educational Opportunity Program Office on campus.

Federal Nursing Student Loans (NSLP)

The loan program provides low-interest loans to undergraduate and graduate students demonstrating financial need who are enrolled in the Department of Nursing. A nursing student may be eligible to borrow up to a maximum of $2,500 for an academic year ($10,000 aggregate maximum). Repayment of the loan (plus 6 per cent interest per year) begins nine months after graduation or withdrawal from the nursing program. There is a maximum ten-year period in which to repay the loan. Under certain circumstances repayment of the loan may be deferred. For details contact the Office of Financial Aid.

University Scholarships

The Office of Financial Aid administers a limited number of small scholarships. Most scholarships are awarded on the basis of academic excellence to students already in attendance at the University Some scholarships are based on specific degree programs and are awarded directly by the department. Students may consult with their academic department or the Office of Financial Aid regarding all scholarships.

Alumni Scholars

Each year CSULB awards $1000 grants to 15 freshmen applicants who have an outstanding academic record. The awards are continued for the four undergraduate years if a 3.5 grade point average is achieved while at CSULB. Funds for this program come from the Annual Opportunities for Quality Fund drive.

Graduate Fellowships, Graduate Assistantships and Teaching Assistantships Students

Students interested in graduate fellowships, graduate assistantships and teaching assistantships should apply directly to the department of their academic major.

State Graduate Fellowships

Fellowships are competitively available only to students pursuing a recognized degree on a full-time basis and who will enter their first or second year of graduate or professional school beginning in the fall semester. Qualifications depend upon Graduate Record Examination (GRE) test scores, grade-point average and California residency. Deadlines for tests come early during the fall term prior to entry into graduate School. Application and applications materials are available in the Office of Financial Aid and the Office of Graduate Studies usually in November. Information may also be requested from the California Student Aid Commission, 1410 Fifth Street, Sacramento, CA 95814.

Winners will be selected competitively upon unusual ability, achievement and potential for success. Consideration will be given to students from disadvantaged backgrounds. Scholarships are for an amount equal to fees at CSULB. Awards differ among colleges according to their tuition and fees.

Other Student Aid Programs

The following programs are administered by other agencies and coordinated by the Office of Financial Aid:

Cal Grant A

Cal Grant A, formerly the California State Scholarship, is awarded by the State of California to entering and continuing undergraduate students who are both U.S. citizens or permanent residents and California residents. Cal Grant A awards are based on academic achievement and financial need. Grants are for fees only at any of the CSU campuses. New students applying to CSULB must indicate on the Student Aid Application for California (SAAC) that they are also applying for the Cal Grant A. Applications may be obtained from the Office of Financial Aid, high school counselors, or by contacting the California Student Aid Commission, 1410 Fifth Street, Sacramento, California 95814.

Cal Grant B

Cal Grant B is awarded by the State of California to entering undergraduate students who have not completed more than one semester of college. Applicants must be both U.S. citizens or permanent residents and California residents, and must demonstrate substantial financial need. Grants vary depending on educational costs; the maximum award for a CSU student is $1,100 for the first year. Fees, in addition to the basic award, are normally provided in the second, third, and fourth years. The grant is renewable for four years. Students applying to CSULB must indicate on the CSU Student Aid Application for California (SAAC) that they are also applying for Cal Grant B. Information regarding the grant may be obtained from the Office of Financial Aid, high school counselors, or by contacting the California Student Aid Commission, 1410 Fifth Street, Sacramento, California 95814.

Pell Grant Program

The Pell Grant Program is a federal aid program designed to provide financial assistance to undergraduate students who demonstrate financial need under the guidelines of the program. Grants range from $200 to $2300 per academic year. Once a student is determined eligible for the Pell Grant, the amount of the award is based on the cost of education at the school attended and enrollment on a half-time, three-quarter-time, or full-time basis. Eligibility is limited to U.S. citizens, permanent residents, and refugees.

After an applicant has completed the application and forwarded it to the College Scholarship Service, the applicant will be sent a Student Aid Report. The Student Aid Report must be submitted to the Office of Financial Aid to be processed.

Guaranteed Student Loan (GSL)

The Guaranteed Student Loan Program enables eligible students to obtain loans through banks, credit unions, and other lending institutions outside of the University. During the time the student is enrolled at least half-time, the federal government pays the interest on the cumulative amount borrowed.

Federal regulations allow any student to apply for the Guaranteed Student Loan providing the student: (1) is enrolled in and in good standing or has been accepted for enrollment at an eligible School; (2) is enrolled as at least a half-time student; and (3) is a citizen of the United States or is in the United States for other than a temporary purpose. The GSL is based on need. Annual loan maximums are $2625 per year for undergraduate freshmen and sophomores, $4000 for upper level undergraduates ($17,250 cumulative), and $7,500 per year maximum for graduate students ($54,750 for undergraduate and graduate studies combined). Local lender policy is available from the Office of Financial Aid.

Alan Pattee Scholarships

Children of deceased public law enforcement or fire suppression employees, who were California residents and who were killed in the course of law enforcement or fire suppression duties, are not charged fees or tuition of any kind at any California State University campus, according to the Alan Pattee Scholarship Act, Education Code Section 68121. Students qualifying for these benefits are known as Alan Pattee scholars. For further information contact the Admissions and Records Office, which determines eligibility.

Other Types of Financial Assistance

Emergency Loans

A limited number of emergency loans are available from the Office of Financial Aid on a 30 to 90 day repayment basis. The purpose of the short-term loan is to assist students with a temporary emergency situation. These loans take four days for processing and carry no interest charges. Most of these loans cannot be used to pay registration fees.

Long-term loans are available from the Isabel Patterson/Wheeler Student Loan Funds for a maximum of $250. The purpose of the Fund is to assure, to the extent that funds are available, that no qualified student is denied an opportunity to pursue a program of study at California State University, Long Beach because of financial reasons. Loan recipients are selected on the basis of realistic need and demonstrated ability to repay the loan on a monthly installment basis. For further information contact the Office of Financial Aid.

Bureau of Indian Affairs (BIA) Grants

Students who are at least one-fourth American Indian, Eskimo, or Aleut may apply for a BIA grant. The amount of the grant depends upon financial need and availability of funds. Students must complete an application for financial aid and then contact a financial aid counselor to complete a separate form.

Cooperative Education (CO-OP)

The Cooperative Education Office places students in career or academic related positions with corporations, businesses, agencies and institutions. Students are paid at normal entry-level wages. Minimum periods of employment for full-time Cooperative Education placements are one semester. For part-time placements, a minimum of 20 hours is required. Summer internships are also available. Contact the Experiential Learning Center, SS/AD 250.

Student Part-Time Employment

Listings are available and assistance is offered in the Career Planning and Placement to students interested in part-time employment.

Veteran's and Dependent's Benefits

Veterans or dependents of veterans may be eligible for benefits under the following programs: Grants, regular GI Bill for veterans, disability compensation for disabled veterans and many

other federal and state grants for eligible children, wives and widows of MIAs, deceased or disabled veterans; VA Work Study for full-time students on the GI bill who are paid the current hourly minimum wage, tax free, for employment in any VA facility; and Short Term Loans provided from a revolving loan fund by the AMVET Department of California Service Foundation.

Any student interested in veteran's benefits should contact the Veterans' Affairs Office, University Union 110, 498-5436.

Vocational Rehabilitation Services

Students who have a physical, emotional, or other disability which handicaps them vocationally may be eligible for the services of the State Department of Rehabilitation. These services include vocational counseling and guidance training (with payment of costs such as books, fees, tuition, etc.) and job placement. Under certain circumstances students may also qualify for help with medical needs, living expenses, and transportation.

Appointments may be made by contacting the State Department of Rehabilitation in Long Beach or the campus Disabled Student Services Center, Student Union, Room 202, 498-5401.

Aid to Families with Dependent Children (AFDC)

For a single parent without employment or other sources of support, there is the AFDC program administered by the County Department of Public Social Services (DPSS).

Miscellaneous

Some scholarships and fellowships are not administered by the University. Interested applicants should consult the Scholarship Information Section of the University Library or any public library.

Phi Kappa Phi Graduate Fellowships

Fellowships in support of first year graduate work, normally undertaken within the year following receipt of the baccalaureate degree, are awarded by the honor society of Phi Kappa Phi. Applications must be filed with the secretary of the campus chapter by the established deadline (normally February 1) on special forms available from the office of the chapter secretary. (Call 498-4206 for information.)

Federal/State Regulations

The information contained in this publication accurately reflects regulations and policies at the time of printing. Be aware that Federal and State regulations governing financial aid processing and eligibility are subject to change at any time.

General Regulations and Procedures

Changes in Rules and Policies

Although every effort has been made to assure the accuracy of the information in this catalog, students and others who use this catalog should note that laws, rules, and policies change from time to time and that these changes may alter the information contained in this publication. Changes may come in the form of statutes enacted by the Legislature, rules and policies adopted by the Board of Trustees of The California State University, by the Chancellor or designee of The California State University, or by the President or CSULB designee. Further, it is not possible in a publication of this size to include all of the rules, policies and other information which pertain to the student, the institution, and The California State University. More current or complete information may be obtained from the appropriate department, School, or administrative office.

Nothing in this catalog shall be construed, operate as, or have the effect of an abridgement or a limitation of any rights, powers, or privileges of the Board of Trustees of The California State University, the Chancellor of The California State University, or the President of the campus. The Trustees, the Chancellor, and the President are authorized by law to adopt, amend, or repeal rules and policies which apply to students. This catalog does not constitute a contract or the terms and conditions of a contract between the student and CSULB or The California State University. The relationship of the student to the institution is one governed by statute, rules, and policy adopted by the Legislature, the Trustees, the Chancellor, the President, and their duly authorized designees.

Election of Regulations for Degree Requirements

Undergraduate students acquire "catalog rights" with respect to the requirements for a degree program by maintaining "attendance" continuously. This means that, if continuous attendance is maintained and the degree objective is not changed, they may choose to graduate under the requirements for the degree in effect (1) at the time they began the study in a California Community College or another campus of The California State University, (2) at the time they entered CSULB or (3) at the time of graduation from CSULB. Substitutions for discontinued courses may be authorized or required by the Dean of the cognizant School. Students who change their major, including changing from "undeclared" status to a defined degree objective and changing from one degree option to another, are governed by the degree major requirements in effect at the time of the change of major.

The term "attendance" means, literally, attendance in a course for at least one semester (or quarter unit) credit in at least one semester (or two quarters) in a calendar year, culminating in the assignment of one of the following grades or their equivalents: A, B, C, D, F, CR, NC, AU, or SP, but excluding W or U. The course must be at the baccalaureate or graduate level and provided by an accredited institution of higher education.

Once "catalog rights" are established, absence related to an approved medical, military or academic leave of absence or for attendance at another accredited institution of higher education shall not be considered an interruption of attendance, provided that the absence does not exceed two years. Please see Educational Leave later in this section.

For all students, a failure to remain in continuous attendance will mean that the student must meet the regulations current at the time of resuming the degree program, or those applicable at the time of graduation. In addition, for graduate students, a failure to maintain continuous attendance means the automatic revocation of "candidacy" for the degree (advancement to candidacy) and of "catalog rights." Academic Calendar

Fall and Spring Semesters — California State University, Long Beach operates on the semester system. Normally, the Fall Semester begins immediately following Labor Day in September, preceded by a week of registration. The last day of instruction usually comes about midway in December; this allows for a week of final examinations prior to the Winter Recess, which begins about the 23rd or 24th of December. The Spring Semester usually begins in the last week of January and ends in mid-May in time for a five-day final examination period and a week of commencement exercises prior to Memorial Day. The two regular semesters are the only periods during which a student may establish residency in the University.

Summer, Winter, and Extended Education Sessions — Summer Session courses are offered during three subsessions extending through the months of June, July, and August. These courses normally count as regular academic credit. Instruction is also provided through the Office of Extension Services in concentrated formats through extension courses in Winter Session, and the Fall and Spring Sessions and in Special Sessions. Student Load

Students who carry 12 units or more in a fall or spring semester are classified as full-time students. Those who carry less than 12 units are part-time students.

Maximum suggested unit load:

Graduates	16
First Semester Freshmen	17
Students on Academic Probation	17
All Other Students	18
Summer and Winter Sessions per week of attendance	1 unit

Exceptions to these limits may be made only on the basis of proven academic ability and the feasibility of the student's schedule. Permission must be obtained (prior to registration) from appropriate authorities: in the regular semester, from the student's major department, in summer and winter sessions, from the School Dean who governs the student's major. (Unclassified majors must consult the Academic Advising Center.)

Students whose outside employment could be expected to interfere with the normal unit load should reduce their academic program accordingly.

In general, students enrolled in teacher education should not register for more than 14 units of course work during the semester of student teaching, including the units for student teaching.

Veterans should inquire at the Veteran's Affairs Office (USU-110) about unit load requirements for state and federal benefits.

For graduate student load, see regulations governing Master's Degrees in this Bulletin.

Undergraduate international students on non-immigrant visas must carry and complete a minimum of 12 units per semester unless a reduced load is authorized by the student's advisor and the International Center. Reduced unit loads may be granted for substantial academic reason or compelling personal reasons beyond the control of the student. Failure to secure such authorization results in violation of student status under Immigration and Naturalization Service (INS) and State Department regulations, warranting discontinuance of enrollment.

Class Attendance

Students are expected to attend classes regularly because classroom work is one of the necessary and important means of learning and of attaining the educational objectives of the institution.

Students should not miss classes except for valid reasons, such as illness, accidents or participation in officially approved University activities. When students are absent from classes, it is their responsibility to inform instructors of the reason for the absence and to arrange to make up missed assignments and class work insofar as this is possible.

Students who expect to be absent from the University for two weeks or more for any valid reason, and who have found it difficult to inform their instructors, should notify the academic department office and the Office of the Vice President for Student Services. The department office will notify the student's instructors of the nature and duration of the extended absence. It remains the responsibility of the student to arrange with instructors to make up any academic work missed.

Visitors to Classes

Only students registered for the class either as regular students or as auditors, the instructor, and invited guests of the instructor may attend classes at CSULB. Persons wishing to become guests of the instructor should seek the instructor's permission prior to the scheduled beginning of the class session.

Course Listings

Courses are listed in this catalog by department, the departments and programs being arranged alphabetically in the Schools in which they are administered. Each listing gives the course number, title, semester units in parentheses, semester or session offered, faculty normally assigned to the course, and the course description, which includes prerequisites and other restrictions.

An asterisk (*) preceding the course title indicates that the course is acceptable as elective credit for the master's degree.

Course Numbers

Courses with a first digit of zero do not confer degree credit. Lower-division courses are numbered from 100 through 299. These courses are designed primarily for Freshmen and Sophomores. They provide breadth of understanding and the foundation for the more specialized work in upper-division, advanced courses. Approved General Education courses are listed in the *Schedule of Classes* and are offered at both the lower-division and upper-division levels; no upper-division General Education course may be used in a graduate degree program. Lower-division courses are open to Junior, Senior, and Graduate students; however, lower-division courses may not be applied to any graduate degree program.

Upper-division courses are numbered from 300 through 499. These courses are open to students who have completed the prerequisites to the course, if any, stated in the course description and other departmental regulations given in this catalog. A "Prerequisite" is a completed course or other measure of academic preparation which provides a foundation for the more advanced course.

> Freshmen and Sophomores wishing to enroll in upper-division courses which indicate no prerequisites should consult with the course instructor or other knowledgeable advisor prior to enrollment. These courses are presented to meet the expectations of academically advanced students. Freshmen and Sophomores should not attempt courses with numbers preceded by an asterisk.

Certain 400-level courses are doubled numbered with 500-level courses. In these courses the expectations of graduate students, who must enroll in the 500-level course, are greater than the expectations of undergraduates. Grading scales are different for the 500-level course and additional work is required of graduate students. A student may not earn credit for both the 400- and 500-level versions of a course.

Graduate level courses are numbered from 500 to 700. Courses numbered 500-599 may be opened to second semester Senior students on favorable petition. Courses numbered from 600 to 700 are open only to Graduate students.

Included with some of the course numbers is a supplementary letter, or suffix, such as L for "laboratory" or A and B for a year-long sequence. "A-B" means that the courses must be taken in alphabetical sequence; "A,B" designates related courses which need not be taken in sequence. The student is given degree credit for each part of the sequence satisfactorily completed, whether or not the remaining part of the sequence is completed. The "semester or session offered" information is presented as a long range planning guide. Funding, student demand, and instruction availability may require that a course be offered in a different semester or session or be postponed until a later academic year. F indicates Fall Semester, S indicates Spring Semester, W indicates Winter Session, and SS indicates Summer Session. The *Schedule of Classes* appropriate to the semester or session in question should be consulted for actual course scheduling information. Courses offered only in alternate years are so designated. Many of the courses offered during the fall and spring semesters are also offered during the summer session.

The University reserves the right to make changes in course offerings without notice.

Courses offered through Extended Education conferring Continuing Education Unit credit (CEU) also carry no degree credit. Courses in Extended Education with numbers beginning with an "X" followed by a number in the 100-series through the 600-series do confer degree credit, subject to the limitations on transfer credit (see below).

Academic Credit

Course Credit Units

Each course has a specific credit unit value which is indicated in parentheses following the course title. In typical lecture and discussion classes, the number of course credit units is equal to the number of class hours per week. Thus, in a typical fifteen-week semester a one-unit class meets for a total of fifteen hours during the fifteen weeks while a three unit class will meet forty-five hours during the same period. A typical lecture class may be scheduled to meet once, twice, or three times a week.

In other types of instruction, principally laboratories and activities of other kinds, the number of class hours per week is greater than the number of course credit units, depending on the mode of instruction. Courses with variant or mixed modes of instruction are noted in the course description and the *Schedule of Classes*. Summer Session classes require the same total amount of class time, but compressed into a six week session.

The instructional "hour" is fifty minutes long, allowing for transit between classes and rest breaks within multi-hour classes. In most classes the student is expected to allow two hours per week of study time beyond class time for each unit of credit. Thus, a three-unit lecture discussion course normally demands a commitment of nine hours per week averaged over the semester.

Credit for Activity Courses

Activity courses provide practice in areas such as dance, journalism, music, speech, theatre arts, and physical education. Students may apply to the degree no more than eight units of activity course credit in any one area, and no more than 20 units of activity credit in all areas. For purposes of defining areas Physical Education (P ED) and Sports, Athletics, and Recreation (SAR) are counted as one area and a total of twelve units are allowed, eight in P ED and four in SAR.

Independent Study Courses

Each student enrolled in a supervised independent study, research, or reading course (excludes thesis courses) must have an agreement on file in the department office where the course is offered. The agreement is to be made between the student and the instructor at the beginning of the course and must include the following: a description of the work to be accomplished, specific information on the tasks required, the nature of the final report, and the basis for determining the final grade. The agreement must be signed by both the instructor and the student.

Credit for Cross-Listed Courses

Certain interdisciplinary courses are listed in this catalog under more than one department. Normally, students will receive credit for such a cross-listed course in the department under which they register for it. They may, however, have the Registrar indicate that this course may be credited to a different department which also lists it, provided that they make this request no later than the end of the semester preceding anticipated graduation.

Repeatable Courses

A student may repeat for additional units or credit toward a baccalaureate or graduate degree any course specified as repeatable in the catalog up to the limits specified. Each department determines the unit limits and any other limitations for courses that may be repeated. In general, except for activity courses, a student may not repeat a course having the same content as the one for which credit was initially received.

Repetition of Courses for Satisfactory Grade

With the permission of the Chair of the department in which the course is offered and when the request is filed in the Office of Admissions and Records during the first four weeks of instruction, an undergraduate student who has received a grade of D, F, U, or NC in a course taken at CSULB may petition once to repeat the course and have the second grade substituted for the first in the computation of units attempted and grade points earned, provided that the second grade assigned is an A, B, C, or CR. A second or subsequent grade of D, F, U, or NC will not be substituted for the first but will be computed in units attempted and grade points earned; however, the extra units earned will not be counted toward graduation. A graduate student who has been assigned a grade of D, F, U, or NC on a course required for the degree must repeat the course for a satisfactory grade, but the second or subsequent units may not be substituted for the first and the additional units cannot be applied toward the unit requirements of the degree. All grades received will remain on record. The course must be repeated at this campus in a regular semester or summer session. A student who receives a CR or a C or better in a course may not repeat the course for credit toward a degree, except as provided for above under "Repeatable Courses."

Departments, with the approval of the School Dean, may adopt a policy that prohibits the substitution of grades provided for above if such policy includes provisions for exceptional cases.

Transfer Credit

Students who were in good standing at another accredited institution may transfer credit for baccalaureate or graduate degree course work. Course equivalency for major requirements must be evaluated, and students are cautioned that the University is under no obligation to accept transferred courses for subject credit in addition to unit credit for admission. Normally, however, there is a probability that courses in the accepted core of a discipline will be exchangeable between universities. Policy regarding transfer of courses from California community colleges differs in some respects.

Transfer of Undergraduate Credit From Accredited Community Colleges

A maximum of 70 semester units earned in a California community college may be applied toward the degree, with the following limitations and stipulations:

(a) No upper-division credit may be allowed for courses taken in a community college.
(b) No credit may be allowed for professional courses in education taken in a community college, other than introduction to education courses.
(c) Individual program regulations for specific transfer limitations should be consulted.

Extension Credit

A maximum of 24 semester units of extension and correspondence credit may be accepted toward the baccalaureate degree. Such credit must be accepted for degree purposes by the institution in which the work was taken. Extension credit may not be used to fulfill the minimum residence requirement.

Credit for Noncollegiate Instruction

CSULB grants undergraduate degree credit for successful completion of noncollegiate instruction, either military or civilian, appropriate to the baccalaureate, that has been recommended by the Commission on Educational Credit and Credentials of the American Council on Education. The number of units allowed are those recommended in the *Guide to the Evaluation of Educational Experience in the Armed Service* and the *National Guide to Educational Credit for Training Programs*. Students must provide acceptable documentation of the training to the Office of Admissions and Records.

International Program Credit

Course credits earned in universities abroad may be accepted for degree credit at CSULB subject to evaluation by the cognizant department or program upon admission of the student to the University. **CSULB students who desire, subsequently, to take courses at a foreign university for degree credit must have each such course approved in advance in writing by the Chair of the appropriate department or program.**

The Center for International Education administers many international education and exchange programs. Students fully accepted into one of these programs may, in most cases, continue CSULB residency while studying in the approved foreign institution. Some courses taken through these programs do not have to be approved in advance.

Acceleration of University Studies

The University provides several means by which students may accelerate their studies; these are discussed below. Each of the following options may be subject to restrictions and regulations within individual academic programs. Therefore, students interested in any of these options should consult with the Chair of the concerned department.

Advanced Placement

The University grants credit toward its undergraduate degrees for successful completion of examinations of the Advanced Placement Program of the College Entrance Examination Board. Students who present scores of three or better will be granted up to six semester units of college credit.

Unit Credit by Examination

California State University, Long Beach grants credit to those students who pass examinations that have been approved for credit system-wide. These are: the CSU English Equivalency Examination; the College Level Entrance Program (C.L.E.P.) general examination in Mathematics; the C.L.E.P. Subject Examinations in College Algebra-Trigonometry, in Calculus and Analytic Geometry, in Statistics, in General Chemistry, and in German; the College Entrance Examination Board (C.E.E.B.) Advanced Placement examinations; and the American Chemical Society Cooperative Examination.

Students may also challenge some courses by taking examinations developed at the campus. Credit shall be awarded to those who pass them successfully. Unit credits earned in this manner will be recorded as "CR" (credit) on the student's transcript and will be counted toward the total number of units required for the degree although they will not be included in the calculation of the grade point average. If a student fails the examination, no notation will appear on his or her record. Credit by examination may not be used to fulfill the minimum residence requirement. To cover costs of administration and scoring, a fee will be charged for each application filed to challenge a course for unit credit by examination.

The University sets no maximum on the number of credits a student may receive by examination. However, not all courses are available for credit by examination. Information about courses for which credit by examination is not permitted is available in the Department Office, in the School Office, and the Office of Admissions and Records. A student may NOT receive unit credit by examination:

a. for an activity course,
b. for any course which is a prerequisite to one for which credit has been received, (see Department for possibility of course waiver),
c. to remove a grade of "F," "U," or "NC,"
d. to satisfy the courses required for a major in a master's degree, or
e. for any course in which the content or methodology is such that one examination does not appropriately measure competence.

Application forms to apply for credit by examination are available in the Office of Admissions and Records. Procedures and criteria for requesting unit credit by examination in a given course are available in the appropriate department office.

Substitution of Courses

Students who believe that a course they have taken (or intend to take) may be appropriate to their program and that this course could substitute for a specified course requirement may request a Substitution of Courses form available in the department office. Course substitutions are normally limited to cases where the required course cannot be offered or where the student has taken a similar but not identical course elsewhere.

Waiver of Course Requirement

In addition, students who believe that previous training has sufficiently prepared them in a certain area may request a waiver of a specific course requirement (subject credit only.) The Waiver of Course Requirements form is available in the department office. The student will be required to justify the request in a way acceptable to the department. A waiver of specific course requirements does not reduce the total number of credits required for the major or the degree, but it does allow students to take additional courses suited to their backgrounds, interests, and needs.

Graduate Credit Earned as a Second-Semester Senior

Graduate credit usually may not be earned in advance of the baccalaureate degree. However, based upon faculty recommendation, academic performance (in general a grade point average of 2.75 overall and a 3.0 (B) in the major), and promise of academic achievement in post-graduate study, second semester seniors may be granted approval to earn a maximum of six units of course work designated as acceptable for graduate credit taken at this university towards their prospective graduate program, subject to the following conditions: (a) the course work must be in addition to that required by the department or School for the undergraduate major; (b) the undergraduate student must have a "Petition to Earn Graduate Credit in the Senior Year" approved by the departmental graduate advisor and the Dean or the Associate Dean for Graduate Studies of the School involved.

In those areas in which graduate credit is for a credential only, the petition must be submitted to the Associate Dean for Graduate Studies and Research, School of Education.

Neither of these policies is intended to permit transfer of excess credits from the baccalaureate to the post-baccalaureate or graduate program. Petitions submitted after completion of the course will not be approved.

Senior Enrollment in Graduate Courses for Undergraduate Credit

Under special conditions, second semester seniors who have an overall 3.0 grade point average or better and who have adequate undergraduate preparation in the subject may enroll in a course in the 500-599 series to fulfill the elective requirements of the bachelor's degree only. The course work may not be applied to the units of 500-600 level course work required by the department or School for the master's degree. The student must have a "Petition to Earn Credit Toward a Bachelor's Degree for a 500 Level Course Taken in the Senior Year" approved by the instructor, department, and School Dean before registration in the class(es) is permitted.

Grades and Grading Procedures

Definitions

The following definitions apply to grades assigned in all undergraduate and graduate courses.

A — Performance of the student has been at the highest level, showing sustained excellence in meeting all course requirements and exhibiting an unusual degree of intellectual initiative.

B — Performance of the student has been at a high level, showing consistent and effective achievement in meeting course requirements.

C — Performance of the student has been at an adequate level, meeting the basic requirements of the course.

D — Performance of the student has been less than adequate, meeting only the minimum course requirements.

F — Performance of the student has been such that minimal course requirements have not been met. A final grade of "F" may be assigned as the result of cheating or plagiarism. (See Cheating and Plagiarism later in this section.)

Grade Point Computation

A receives 4 points per unit
B receives 3 points per unit
C receives 2 points per unit
D receives 1 point per unit
F receives 0 points per unit
U receives 0 points per unit

CR/NC — In addition to the standard grades, the University permits students to select evaluation on a "Credit" or "No Credit" basis. These grades are defined as follows:

> For undergraduate students, a CR is equivalent to an A, B, or C; an NC is equivalent to a D, F, or U.
>
> For graduate students, a CR is equivalent to an A, B, or C in courses at the 100- and 200-levels, and an NC equivalent to a D, F, or U, as above, but for 300-, 400-, 500-, and 600-level courses, the CR is equivalent to an A or B only; a NC grade is equivalent to a C, D, F, or U.

Course Grading Option Policy

The faculty determine in advance which courses may be taken for traditional (A-F) grade only, CR/NC only, or either. Any undergraduate course may be designated for or closed to the option of CR/NC grading whether or not the course be a requirement for an undergraduate degree major, minor, certificate, credential or concentration.

No course in which a grade of CR has been assigned may be used to fulfill the requirements for a master's degree, except that the grade of CR may be permitted for master's theses or projects (to a maximum of six units) when the individual department has specifically designated CR/NC grading for the thesis/project course in the department, and for fieldwork, practicum, and/or internship courses (also to a maximum of six units). The option of CR/NC grading for graduate students on undergraduate courses is subject to specific regulations of the individual departments regarding their graduate students and regarding the authorization for this option intrinsic to the approved course. Otherwise, no limitation exists as to the number of courses taken by graduate students under this policy.

An undergraduate student may elect CR/NC grading in no more than a total of 24 units, of which no more than 12 may be upper-division units. No more than eight units per semester may be taken for CR/NC grades. Courses graded CR/NC taken at another institution, course credit earned by examination, and courses in which CR/NC grading is the only form of grading are exempt from these limitations.

Administrative Symbols

The symbols AU (Audit), SP (Satisfactory Progress), RD (Report Delayed), I (Incomplete), and U (Unauthorized Incomplete), and W (Withdrawal), discussed below, are not used in computing the grade point average.

AU — Audit. Enrollment as an auditor is subject to permission of the instructor. Enrollment in a course as an auditor shall be permitted only after students otherwise eligible to enroll on a credit basis have had an opportunity to do so. Auditors are subject to the same fee structure as credit students and regular class attendance is expected. Once enrolled as an auditor, a student may not change to credit status unless such a change is requested prior to the last day to add classes. **A student who is enrolled for credit may not change to audit after the third week of instruction.** To establish auditor status in a course students must file an Audit Card in the Office of Admissions and Records.

SP — Satisfactory progress. This symbol is used in connection with courses requiring multiple enrollment, i.e., that extend beyond one academic term. It indicates that work is in progress and has been evaluated and found to be satisfactory to date, but that assignment of a final grade must await completion of all units required. Cumulative enrollment in units attempted may not exceed the total number applicable to the student's educational objective. Work is to be completed within one year except for graduate degree theses.

RD — Report Delayed. This symbol is used exclusively by the Registrar to permit processing of all final grades when the grades for an entire class section have not been reported by the instructor. The symbol does not imply any academic evaluation.

If an instructor fails to report a grade for an individual student, the Registrar will assume that an "I" could not be assigned and so will enter a symbol "U," discussed below.

I — Incomplete. The symbol "I" indicates that a portion of required course work (normally not more than one third) has not been completed and evaluated in the prescribed time period due to unforeseen, but fully justified, reasons and that there is still a possibility of earning credit. It is the responsibility of the student to bring pertinent information to the attention of the instructor and to determine from the instructor the remaining course requirements which must be satisfied to remove the Incomplete. A final grade is assigned when that work has been completed and evaluated.

An "I" must normally be made up within one calendar year immediately following the end of the term during which it was assigned, whether or not the student maintains continuous enrollment. Failure to complete the assigned work will result in an "I" being counted as a failing grade for grade point average and progress point computation, (except as noted in item 3 immediately below.)

An extension of time may be granted for contingencies such as military service or documented, serious health or personal problems.

The conditions for removal of the Incomplete shall be reduced to writing by the instructor on a "Requirements for Assigning an Incomplete Grade" form. This form shall include a statement of

1) all work completed in the course, the grades assigned for that work, and the percentages of the final grade accounted for by each item;
2) the work not completed and the percentage that each uncompleted assignment will count toward the final grade; and
3) the final grade the instructor will assign if the course requirements are not completed within one calendar year (or a shorter period as specified on the form) immediately following the term in which the "I" was assigned, without respect to continuous enrollment of the student during this period.

A copy of the agreement is to be given to the student, a copy is to be retained in the department office, and a copy is to be filed with the Office of Admissions and Records at the time final grades are submitted. Normally, the student should sign the "Incomplete form." If the student is eligible for an Incomplete, a faculty member may assign an "I" even when the student cannot be present to sign the form. In such a case, the instructor will forward to the student a copy of the form via the department office. When the work agreed upon has been completed and evaluated, a final grade will be assigned by an instructor.

U — Unauthorized Incomplete. The symbol "U" indicates that an enrolled student did not withdraw from the course but failed to complete course requirements. It is used when, in the opinion of the instructor, completed assignments or course activities or both were insufficient to make normal evaluation of academic performance possible (letter grades A-F or an Incomplete). For purposes of grade point average and progress point computation this symbol is equivalent to an "F." In courses which are graded Credit/No Credit or in cases where the student has elected Credit/No Credit evaluation, use of the symbol "U" is inappropriate and "NC" will be used instead.

W — Withdrawal. The symbol "W" indicates that the student was permitted to drop a course after the third week of instruction with the approval of the instructor and appropriate campus official. It carries no connotation of quality of student performance and is not used in calculating grade point average.

Students are held responsible for completion of every course in which they register or for withdrawing during the first three weeks of classes from courses which they do not intend to complete. Students must file an official application for withdrawal from the University or from a class at the Office of Admissions and Records whether they have ever attended the class or not; otherwise, the student will receive a grade of "U" (unauthorized incomplete) in the course. Application for withdrawal is made at Admissions and Records. (See also The California State University policy on "Return of Fees.")

1. Withdrawals during the first three weeks of instruction: Students may withdraw during this period and the course will not appear on their permanent records. To do this, a student must file a *Complete Withdrawal Application Form* to drop all classes or a *Change of Program Form* for a specific class or classes. Fees are not refundable after the second week of classes.
2. Withdrawals after the third week of instruction and prior to the final three weeks of instruction: Withdrawals during this period are permissible only for serious and compelling reasons. The procedure for withdrawals during this period is the same as in item 1 except that the approval signatures of the instructor and department chair are required. The request and approvals will state the reasons for the withdrawal. Students should be aware that the definition of "serious and compelling reasons" as applied by faculty and administrators may become narrower as the semester progresses. Copies of such approvals are kept on file in the Office of Admissions and Records.
3. Withdrawals during the final three weeks of instruction: Withdrawals during the final three weeks of instruction are not permitted except in cases such as accident or serious illness where the circumstances causing the withdrawal are clearly beyond the student's control and the assignment of an Incomplete is not practical. Ordinarily, withdrawals in this category will involve total withdrawal from the campus except that a Credit/No Credit grade or an Incomplete may be assigned for courses in which sufficient work has been completed to permit an evaluation to be made. Request for permission to withdraw under these circumstances must be made in writing on forms available at the Admissions and Records Office. The requests and approvals shall state the reasons for the withdrawal. These requests must be approved by the instructor, department chair, and Dean of the School. Copies of such approvals are kept on file in Admissions and Records.
4. Medical withdrawals: A student who becomes seriously ill or injured, or is hospitalized and hence is unable to complete the academic term may withdraw without academic penalty. A *Physician's Statement for Medical Withdrawal*, obtainable from the Student Health Service, must be completed by the student's attending physician and submitted to the Medical Director. Additional evaluation by the Director of Financial Aid may be required for those students receiving financial aid. The Student Health Service, upon approval of such a request, will forward its recommendation to Admissions and Records.
5. Instructor Withdrawals: An instructor may withdraw a student who has never attended a class by completing an *Instructor Drop Card* and submitting it to the Office of Admissions and Records along with the Enrollment Verification List at the end of the third week of classes. Students should not rely on the instructor to drop them from classes they have never attended. Students should officially withdraw from classes themselves to avoid assignment of a "U" in the course. An instructor may also withdraw a student who has enrolled in a course requiring "permission of the instructor" or completion of prerequisites if the student has not properly secured this permission or satisfactorily completed the prerequisites before enrolling.

An instructor may exclude from the class as many students as necessary to bring enrollment to within the limits authorized by the Dean of the School. These limits are usually set by State policy or national accreditation standards for the particular field.

Assignment and Change of Grades

General

1. University policy requires that final grades shall be based on at least three, and preferably four or more, demonstrations of competence by the student. Students should be aware, however, that instructors may have a policy that a single instance of cheating or plagiarism may result in a failing grade in the class. (See the section on Cheating and Plagiarism later in this section.)
2. In no case shall the grade on the final examination count for more than one-third of the course grade.
3. Instructors are expected to keep a record of students' scores on each of the demonstrations of competence on which the final grade is based.
4. Students have a right to be informed promptly of their scores and to review each of their demonstrations of competence with their instructors.
5. Instructors are expected to provide students with an opportunity for demonstration of competence, relevant to the determination of their final grade in the course, as early as is reasonable and no later than the mid-point of the semester or summer session.
6. Instructors are further expected to make clear to their students during the first week of instruction what grading policies and practices will be employed in the class and what rules will apply to withdrawals.
7. If materials submitted for a demonstration of competence are not returned these materials will be retained for one semester by the instructor or, should the instructor be absent during that term, retained in the department office. A qualified instructor may be appointed by the chair, in the absence of the original instructor, to review the demonstration of competence with the student.

Final Examinations

It is the policy in most courses to have several examinations during the semester and a final examination. Final examinations are required in all courses for all students, except in certain activity courses or when the Dean of the School authorizes an exception. The schedule of final examinations is given in the *Schedule of Classes*. Permission to take a final examination at a time other than that regularly scheduled must be secured at least one week in advance of any change. **The instructor may not change the scheduled time for the final examination without authorization from the Dean of the School.**

Final Grade Reports

Reports of final grades are mailed to each student at the end of each semester or session.

Student Grade Record

Record is kept and grade or administrative symbol notation are indicated for all enrollments beyond the fourth week of instruction. The Registrar will eradicate originally awarded grades from official transcripts when the following grade changes are made:

1. Grade change due to a clerical error on the part of the instructor of record.
2. Grade change due to a favorable grade appeal.
3. Grade change due to a resolution of RD (report delayed) grade.

The Registrar will not eradicate original grades from student transcripts when the following situations occur:

1. Resolution (make-up) of an incomplete.
2. Repetition of a course.

The Registrar will indicate some grade or administrative symbol for any student enrolled in a course beyond the fourth week.

Change of Grade

Grades reported to the Office of Admissions and Records are considered to be official and final grades. **Changes to final grades can be made only on the authority of the instructor and only on the basis of**

1. **a computational or recording error, or**
2. **the evaluation of additional assignments or examinations ONLY when an Incomplete has been previously recorded, except**
3. **when the Dean of the School acts on behalf of the chair of a School level grade appeal committee as the result of a grade appeal. (See the separate policy statement on Grade Appeals.)**

Except for changes of grades resulting from grade appeals processes, all changes of grades must be filed within one year from the date of the filing of the first grade, without respect to continuous enrollment of the student. Only as the result of a grade appeal will a grade be changed after the award of a degree or credential.

All requests for change of grade shall carry the recommendation of the instructor (except as provided for in the *Grade Appeals Procedures*), the department chair, and the approval of the Dean of the School.

Grade Appeals

Students have the right to formally appeal the final grade, but only the final grade, in a course. Appeals are limited to situations in which the student believes the grade was "prejudicially," "capriciously," or "arbitrarily" assigned. The appeal must be initiated within the first regular semester after assignment of the grade. It must first be directed to the instructor of the course, orally or in writing. If further action is necessary, the student should appeal in writing to the department chair or to the designated department representative who deals with grade appeal matters. If the issue continues to remain unresolved, the written appeal can be directed to the Grade Appeals Committee of the School in which the course was taken. Information about School grade appeals committees and the University Policy Statement (P.S. 86-05) can be obtained from the office of the School Dean.

Educational Leave

Any registered student, undergraduate or graduate, in good academic standing may request an Educational Leave. Students requesting an Educational Leave must complete an *Educational Leave Form*, **IN ADVANCE**, including an explanation of their reasons for seeking the leave and a statement of when they intend to resume academic work. The completed form is to be submitted for approval to the student's department chair (undergraduate) or graduate advisor.

The minimum initial leave will be one full semester; the maximum will be one calendar year. A student may request, in writing, in advance, an extension of leave. Under no circumstances will the total number of approved educational leaves exceed two, nor will the duration of approved educational leaves extend beyond two calendar years.

Students returning from an approved educational leave are required to submit an application form but will not be required to pay another application fee. Students returning from an absence for which an educational leave was appropriate but not approved in advance must pay the reapplication fee.

Graduate students who plan to enroll for credit at another institution of higher education during the leave period must obtain prior approval for the transfer of course credit to the student's program from the department graduate advisor, department chair, and the School Dean or designee.

The period of an educational leave is counted in the calculation of elapsed time under the regulations governing the maximum period for completion of degree requirements. (See Baccalaureate and Graduate sections of this catalog).

For the period of an educational leave the student's rights under the "Election of Regulation" rule are preserved, maintaining the right of the student to elect regulations as if he or she had maintained continuous attendance.

An educational leave presupposes no expenditure of University resources or faculty and staff time in the behalf of the student during the period of the leave. In addition, no computer facilities, no library privileges, and no student services are available to a student on educational leave.

Change of Major or other Objective

The evaluation of credits transferred to the University is based in part upon the objective indicated on the application for admission. Students who are candidates for a certificate program must also file an application card. Students who wish to change their degree or credential objective must file a change of objective form with the Office of Admissions and Records. (See Election of Regulations.)

Graduation Check

Senior and Graduate students who expect to receive degrees at the end of any semester or summer session must complete the *Graduation Application* card and/or *Credential Application* card well in advance. The appropriate application for Spring or Summer candidates must be filed by the preceding September 15; for December and summer session graduates, by the preceding February 1 at the Office of Admissions and Records. Students must file by March 1 in order to have their names appear in the once-a-year printing of the *Commencement Program*. Credential students should apply in the Credential Processing Office, located in the Graduate School of Education, or the Office of Admissions and Records by February 1 for December completion and by October 1 for Spring and Summer sessions.

Graduation with Honors

The following criteria are used to identify students eligible for honors:

a. Students with GPA between 3.75 and 4.00 will be graduated *with great distinction*.
b. Those between 3.50 and 3.74 will be graduated *with distinction*.

A student may be considered eligible for honors at graduation provided that a minimum of 45 units are earned at California State University, Long Beach. The GPA will be determined from units earned at CSULB plus transferred units.

With the approval of the Dean of the School, departments may elect to honor as many as three of their graduates according to criteria other than GPA.

University honors will be noted on the transcript and the degree and transcript. Department honors will be noted on the transcript.

Honor Lists

Undergraduate students exhibiting outstanding scholastic achievement are honored by being included on the President's or Deans' Honor List.

President's List

Students will be placed on the President's List to honor them for academic achievement each semester in which they complete 12 or more graded course units with a semester grade point average of 3.75 - 4.0. A certificate will be issued for each semester in which the student receives this honor.

Deans' List

Students will be placed on the Deans' List to honor them for academic achievement each semester in which they complete 12 or more graded course units with a semester grade point average of 3.5 - 3.74. A certificate will be issued for each semester in which the student receives this honor.

Scholastic Probation and Disqualification

Academic Probation

Undergraduate students are placed on academic probation if at any time their cumulative grade point average in all college work attempted for their cumulative grade point average at California State University, Long Beach falls below 2.0 (C). Graduate students are placed on academic probation when their cumulative grade point average falls below 3.0.

Undergraduate students shall be removed from academic probation when their cumulative grade point average in all college work attempted and their cumulative grade point average at California State University, Long Beach is 2.0 (C) or higher.

Administrative-Academic Probation

An undergraduate or graduate student may be placed on administrative-academic probation by action of appropriate campus officials for any of the following reasons:

A. Withdrawal from all or a substantial portion of a program of studies in two successive semesters or in any three semesters.
B. Repeated failure to progress toward the stated degree objective or other program objective (when such failure appears to be due to circumstances within the control of the student).
C. Failure to comply, after due notice, with an academic requirement or regulation which is routine for all students or a defined group of students (example: failure to take placement tests, failure to complete a required practicum).

Academic Disqualification

Undergraduate students on academic probation are subject to academic disqualification:.

A. As lower-division students (less than 60 semester hours of college work completed), if they fall 15 or more grade points below a 2.0 (C average) on all units attempted or on all units attempted at California State University, Long Beach.
B. As juniors (60-89 semester hours of college work completed), if they fall nine or more grade points below a 2.0 (C average) on all units attempted or on all units attempted at California State University, Long Beach.
C. As seniors (90 or more semester hours of college work completed), if they fall six or more grade points below a 2.0 (C) average on all units attempted or on all units attempted at California State University, Long Beach.

In addition to the above disqualification standards applicable to students on probation, individuals not on probation may be disqualified when the following circumstances exist:

A. At the end of any semester the student has fewer cumulative grade points than cumulative units attempted, and
B. The cumulative grade point deficiency is so great that in view of the student's overall educational record it seems unlikely that the deficiency will be removed within a reasonable period.

Disqualification — Impacted Programs

Students who fail to maintain an overall Grade Point Average of 2.0 will be immediately removed from an impacted major, placed in the undeclared category (Major Code 0000), or in a general category appropriate to the discipline, e.g., Graphic Arts to General Art (5850) and disenrolled from courses in the impacted program. To be reinstated as majors in the impacted program, they must reapply at the time when change of major requests are normally accepted.

Administrative-Academic Disqualification

Student who have been placed on administrative-academic probation may be disqualified from further attendance if:

A. The conditions for removal of administrative-academic probation are not met within the period specified.
B. The students become subject to academic probation while on administrative-academic probation.
C. The students become subject to administrative-academic probation for the same or similar reason for which they have been placed on administrative-academic probation previously, although not currently in such status.

For students who subsequently become eligible for Reinstatement (see below), disqualification under the provisions of the proceding paragraphs constitutes a break in "continuous enrollment" within a degree major program and, therefore, students disqualified may not elect regulations in effect prior to disqualification.

Reinstatement

In order to be considered for reinstatement to the University, a disqualified student must demonstrate academic ability. This demonstration can be achieved by: (1) completing courses through the Continuing Education and/or Summer Session programs at CSULB and earning grades that reduce the student's grade point deficiency by one-half (see example, below); or (2) completing classes at other academic institutions, earning grades that would, if computed with the CSULB academic record, reduce the grade point deficiency by one-half. All classes taken, at CSULB or other academic institutions, must be applicable for degree credit. Grades earned at other institutions are not calculated with CSULB to reduce the CSULB grade point deficiency or change the CSULB grade point average. Grades earned elsewhere are only indicators of academic ability.

After reducing the grade point deficiency by one-half and/or demonstrating academic ability at other institutions (see example, below), the student may petition the Academic Appeals Committee for reinstatement.

Petition forms are available at the Office of Admissions and Records and must be filed no later than one month prior to the beginning of instruction in the semester the student wishes to attend. Petitions received after that date will be held and considered for the following semester.

Example: A Student deficient twelve (12) grade points at the time of the disqualification must earn at least six (6) excess grade points in classes taken after disqualification. All transferable college courses completed after disqualification at all institutions are averaged to determine excess grade points earned and reinstatement eligibility. Only grades of A and B earn excess grade points. Grades of A earn two (2) excess grade points per unit of class; grades of B earn one (1) excess grade point per unit of class. Grades of C do not earn excess grade points and do not contribute to reinstatement. Grades of D and F reduce the number of excess grade points earned by A and B grades at the rate of one (1) grade point per unit of D and two (2) grade points per unit of F.

Academic Renewal

A student may petition to have all grades and units received during one or two semesters of undergraduate work disregarded in the computation of grade point average and academic standing. The work so disregarded may have been taken at any collegiate-level institution but no work taken during the disregarded terms, even if satisfactory, may apply toward baccalaureate requirements. All grades and units attempted will remain on record. At least five calendar years must have elapsed since the work in question was completed and the student must have subsequently completed 15 semester units with a 3.0 grade point average (or 30 semester units with a 2.5 or 45 semester units with a 2.0) at this University before filing a request for disregarding the course work.

Petitions for disregarding course work must be submitted to the Office of Admissions and Records. Final determination will be made by the Vice President for Academic Affairs in consultation with the University Scholastic Standards Committee. The petitioning student must certify that the work to be disregarded was not reflective of his or her present level of academic performance. This certification must include a statement explaining the extenuating circumstances causing the substandard performance during the term in question. The student must also provide evidence that it would be necessary to complete additional units or semesters in order to qualify for the baccalaureate degree if the request were not approved.

Cheating and Plagiarism

Definition of Plagiarism

Plagiarism is defined as the act of using the ideas or work of another person or persons as if they were one's own, without giving credit to the source. Such an act is not plagiarism if it is ascertained that the ideas were arrived at through independent reasoning or logic or where the thought or idea is common knowledge.

Acknowledgment of an original author or source must be made through appropriate references, i.e., quotation marks, footnotes, or commentary. Examples of plagiarism include, but are not limited to, the following: the submission of a work, either in part or in whole, completed by another; failure to give credit for ideas, statements, facts or conclusions which rightfully belong to another; in written work, failure to use quotation marks when quoting directly from another, whether it be a paragraph, a sentence, or even a part thereof; close and lengthy paraphrasing of another's writing or programming. A student who is in doubt about the extent of acceptable paraphrasing should consult the instructor.

Students are cautioned that, in conducting their research, they should prepare their notes by (a) either quoting material exactly (using quotation marks) at the time they take notes from a source; or (b) departing *completely* from the language used in the source, putting the material into their own words. In this way, when the material is used in the paper or project, the student can avoid plagiarism resulting from verbatim use of notes. Both quoted and paraphrased materials must be given proper citations.

Definition of Cheating

Cheating is defined as the act of obtaining or attempting to obtain or aiding another to obtain academic credit for work by the use of any dishonest, deceptive or fraudulent means. Examples of cheating during an examination include, but are not limited to the following: copying, either in part or in whole, from another's test or examination; discussion of answers or ideas relating to the answers on an examination or test unless such discussion is specifically authorized by the instructor; giving or receiving copies of an examination without the permission of the instructor; using or displaying notes, "cheat sheets," or other information or devices inappropriate to the prescribed test conditions, as when the test of competence includes a test of unassisted recall of information, skill, or procedure; allowing someone other than the officially enrolled student to represent the same. Also included are plagiarism as defined and altering or interfering with the grading procedures.

It is often appropriate for students to study together or to work in teams on projects. However, such students should be careful to avoid the use of unauthorized assistance, and to avoid any implication of cheating, by such means as sitting apart from one another in examinations, presenting the work in a manner which clearly indicates the effort of each individual, or such other method as is appropriate to the particular course.

Faculty Responsibilities

In cases where a student is suspected of cheating or plagiarism, the faculty member should arrange for an informal office conference with the student as soon as possible. The purpose of the informal conference is to bring the persons involved together to discuss the issues informally and to discuss courses of action. At the conference the student shall be notified by the faculty member of the charge and supporting evidence. For an incident which occurs during or as a part of a final examination see below for administration of an Incomplete grade.

In cases where there is more than one individual suspected of cheating or plagiarism, the faculty member may decide to call the students to confer jointly as a group, or as individuals, or both. If the faculty member should decide to confer with the students as a group, the students will have the option to also confer with the instructor separately as individuals.

The faculty member will inform the student(s) that both students and faculty have the right to submit a request to the Academic Integrity Committee (discussed below) for a written opinion on whether the accusation is supported by the evidence. All notes and discussions between the student and the faculty member are confidential, except as may be relevant to the Academic Integrity Committee or in subsequent campus disciplinary proceedings. Neither the faculty member nor the student should discuss a specific charge of cheating or plagiarism or any violations with reference to individuals in the classroom before other members of the class.

When the student cannot be contacted and therefore the informal conference cannot be held, as is sometimes the case after final examinations, a grade of "I" (Incomplete) may be assigned, but only if the instructor wishes an additional test of competence (see 4.1, above). The instructor will have the agreement form for assigning an "Incomplete" sent to the last known address of the student. The agreement form will state the following in the format indicated:

> Under the provisions of the CSULB *Policy Statement on Cheating and Plagiarism*, an additional test of competency related to the [syllabus name of suspect demonstration, e.g., Final Examination] is requested. [Explain what additional test of competency.] You may decline to do so. Please contact the instructor, the department office, or the Office of Judicial Affairs for information regarding the University policy on cheating and plagiarism.

The instructor will indicate on the agreement form the grade which will be assigned, normally 120 calendar days following mailing of the Incomplete Agreement, if the student does not respond or, responding, the student does not agree to an additional test of competence.

Charges of cheating or plagiarism cannot be brought against a student more than 120 calendar days after discovery that the work in question may have been plagiarized or that cheating may have taken place.

Notes and evidence will be kept by the department chair or program director for a minimum of five years after the case is settled.

Academic Integrity Committee

The Chair of the Academic Senate and the Vice President for Academic Affairs jointly appoint an Academic Integrity Committee for the University. This Committee consists of one member from the student body, chosen by the Associated Students Government for a one year term of office; three members of the full-time, tenured or tenure-track faculty, and one member of the Office of Academic Affairs, who will be Chair, voting only in case of ties.

The primary charge of the Committee is to receive the requests of students accused of cheating or plagiarism or the requests of faculty accusing specified student(s) of cheating or plagiarism. Following its review of the evidence, the Committee will report its opinion to the student(s) and to the faculty member involved on whether the accusation is supported by the evidence. This opinion may not be appealed. However, when new evidence appears to so warrant, a faculty member or student may ask, in writing, the Vice President for Academic Affairs or the Chair of the Academic Senate to request the Committee to reconsider a case.

The Academic Integrity Committee has readily available the rules and procedures governing its operations.

In all cases, a Report of the Committee is advisory to the student, with whom rests the presumption of innocence, and the faculty member, to whom the decision on the evidence and academic action is reserved.

A faculty member or student who requests a review of the evidence in a case of alleged cheating or plagiarism must make such a request to the Academic Integrity Committee in writing no later than 14 calendar days following the date of first notification of the student by the faculty member of the allegation. Except under extenuating circumstances, the student and faculty member will have no more than 14 additional calendar days to provide evidence to the Committee.

To preserve the rights of privacy, the Committee meetings are closed. The Committee may request additional information as may be appropriate to the development of its Report. The Committee is to provide a final Report within 21 calendar days of the submission of a request to it. Should additional time be required, the reasons are communicated to the Vice President for Academic Affairs and the Chair of the Academic Senate as well as the student(s) and faculty members involved.

Academic Actions

One or more of the following academic actions are available to the faculty member who finds a student has been cheating or plagiarizing. These options may be taken by the faculty member to the extent that the faculty member considers the cheating or plagiarism to manifest the student's lack of scholarship or to reflect on the student's lack of academic performance in the course. These actions may be taken without a request for or before the receipt of a Report from the Academic Integrity Committee.

A. Review — no action.
B. An oral reprimand with emphasis on counseling toward prevention of further occurrences;
C. A requirement that the work be repeated;
D. Assignment of a score of zero (0) for the specific demonstration of competence, resulting in the proportional reduction of final course grade;
E. Assignment of a failing final grade;
F. Referral to the Office of Judicial Affairs for possible probation, suspension, or expulsion.

A student may appeal a final course grade, the computation of which included an examination or other test of competence in which a score of zero was assigned for cheating or plagiarism, but **only** on the grounds permitted in the *University Policy Statement on Grade Appeals*.

An appeal of the final grade may include as written testimony the Report of the Academic Integrity Committee.

Student Discipline

Inappropriate conduct by students or by applicants for admission is subject to discipline as provided in Sections 41301 through 41304 of Title 5, *California Administrative Code*. These sections are as follows:

> **Article 1.1, Title 5,** *California Administrative Code* **41301. Expulsion, Suspension and Probation of students.**

Following procedures consonant with due process established pursuant to Section 41304, any student of a campus may be expelled, suspended, placed on probation or given a lesser sanction for one or more of the following causes which must be campus related:

(a) Cheating or plagiarism in connection with an academic program at a campus.
(b) Forgery, alteration or misuse of campus documents, records, or identification or knowingly furnishing false information to a campus.
(c) Misrepresentation of oneself or of an organization to be an agent of a campus.
(d) Obstruction or disruption, on or off university property, of the campus educational process, administrative process, or other campus function.
(e) Physical abuse on or off campus property of the person or property of any member of the campus community or of members of his or her family or the threat of such physical abuse.
(f) Theft of, or non-accidental damage to, campus property; or property in the possession of, or owned by, a member of the campus community.
(g) Unauthorized entry into, unauthorized use of, or misuse of campus property.
(h) On campus property, the sale or knowing possession of dangerous drugs, restricted dangerous drugs, or narcotics as those terms are used in California statutes, except when lawfully prescribed pursuant to medical or dental care, or when lawfully permitted for the purpose of research, instruction or analysis.
(i) Knowing possession or use of explosives, dangerous chemicals or deadly weapons on campus property or at a campus function without prior authorization of the campus president.
(j) Engaging in lewd, indecent, or obscene behavior on campus property or at a campus function.
(k) Abusive behavior directed toward, or hazing of, a member of the campus community.
(l) Violation of any order of a campus president, notice of which had been given prior to such violation and during the academic term in which the violation occurs, either by publication in the campus newspaper, or by posting on an official bulletin board designated for this purpose, and which order is not inconsistent with any of the other provisions of this Section.
(m) Soliciting or assisting another to do any act which would subject a student to expulsion, suspension or probation pursuant to this Section.
(n) For purposes of this Article, the following terms are defined;
  (1) The term "member of the campus community" is defined as meaning California State University Trustees, academic, nonacademic and administrative personnel, students, and other persons while such other persons are on campus property or at a campus function.
  (2) The term "campus property" includes:
    (A) real or personal property in the possession of, or under the control of the Board of Trustees of The California State University, and
    (B) all campus feeding, retail, or residence facilities whether operated by a campus or by a campus auxiliary organization.

(3) The term "deadly weapons" includes any instrument or weapon of the kind commonly known as a blackjack, sling shot, billy, sand-club, sandbag, metal knuckles, any dirk, dagger, switchblade knife, pistol, revolver, or any other firearm, any knife having a blade longer than five inches, any razor with an unguarded blade, and any metal pipe or bar used or intended to be used as a club.
(4) The term "behavior" includes conduct and expression.
(5) The term "hazing" means any method of initiation into a student organization or any pastime or amusement engaged in with regard to such an organization which causes, or is likely to cause, bodily danger, or physical or emotional harm, to any member of the campus community; but the term "hazing" does not include customary athletic events or other similar contests or competitions.

(o) This Section is not adopted pursuant to *Education Code* Section 89031.
(p) Notwithstanding any amendment or repeal pursuant to the resolution by which any provision of this Article is amended, all acts and omissions occurring prior to that effective date shall be subject to the provisions of this Article as in effect immediately prior to such effective date.

41302. Disposition of Fees; Campus Emergency; Interim Suspension

The President of the campus may place on probation, suspend or expel students for one or more of the enumerated in Section 41301. No fees or tuition paid by for such students for the semester, quarter, or summer in which they are suspended or expelled shall be refunded. If the students are readmitted before the close of the quarter, or summer session in which they are suspended, no additional tuition or fees shall be required of student on account of the suspension.

During periods of campus emergency, as determined by the President of the individual campus, the President may, after consultation with the Chancellor, place into immediate effect emergency regulations, procedures, or measures deemed necessary or appropriate to meet the emergency, to safeguard persons and property, and to maintain educational activities.

The President may immediately impose an interim suspension in all cases in which there is reasonable cause to believe that such an immediate suspension is required in order to protect lives or property and to insure the maintenance of order. A student so placed on interim suspension shall be given prompt notice of charges and the opportunity for a hearing within ten days of the imposition of interim suspension. During the period of interim suspension, the student shall not, without prior written permission of the President or designated representative, enter any campus of The California State University other than to attend the hearing. Violation of any condition of interim suspension shall be grounds for expulsion.

41303. Conduct by Applicants for Admission.

Notwithstanding any provision in this Chapter 1 to the contrary, admission or readmission may be qualified or denied to any persons who, while not enrolled as students, commit acts which, were they enrolled as students, would be the basis for disciplinary proceedings pursuant to Sections 41301 or 41302. Admission or readmission may be qualified or denied to any persons who, while students, commit acts which are subject to disciplinary action pursuant to Section 41301 or Section 41302. Qualified admission or denial of admission in such cases shall be determined under procedures adopted pursuant to Section 41304.

41304. Student Disciplinary Procedures for The California State University.

The Chancellor shall prescribe, and may from to time revise, a code of student disciplinary procedures for The California State University. Subject to other applicable law, this code shall provide for determinations of fact and to be applied for conduct which is a ground of under Sections 41301 or 41302, and for qualified or denial of admission under Section 41303; the authority of the campus President in such matters; conduct determinations on financial aid eligibility and termination; alternative kinds of proceedings, including proceedings conducted by a Hearing Officer; time limitations; notice; conduct of hearings, including provisions governing evidence, a record, and review; and such other related matters as may be appropriate. The Chancellor shall report such actions taken under this section to the Board of Trustees.

The current University regulation on alcoholic beverages is stated in the *CSULB Policies, Information and Regulations Handbook* published by the Office of Student Affairs.

Additional detailed information relating to student discipline is available in the Office of Student Affairs, and from the Office of the Vice President for Student Services.

Administrative Action

Procedures and sanctions of the Office of Judicial Affairs are under the administration of the Vice President for Student Services and are conducted pursuant to the authority provided in Section 41301 of Title 5 of the *California Administrative Code*. Copies of Section 41301 of Title 5 may be found in the *University Bulletin* and the *Campus Regulations* available in the Office of Judicial Affairs. Copies of Chancellor's Executive Order 148, "Student Disciplinary Procedures for the California State University" are also available upon request.

Opportunities for appeal regarding the sanctions applied by the Vice President for Student Services are provided for students involved in the proceedings as outlined by Executive Order 148.

The Vice President for Student Services shall report annually to the President and the Chair of the Academic Senate a summary of the charges concerning cheating and plagiarism brought before the Office of Judicial Affairs.

Judicial Affairs (SS/A, Room 281)

The Office of Judicial Affairs provides assistance with the interpretation and enforcement of campus regulations. Complete copies of the *CSULB Policies, Information and Regulations Handbook*, including a listing of infractions which may result in student disciplinary action under Title 5, Section 41301, of the *California Administrative Code*, "Probation, Suspension and Expulsion of Students," are available in this office; also available are copies of Executive Order 148, "Student Disciplinary Procedures for The California State University." General assistance and aid in directing individuals to the proper procedures, departments and personnel may be obtained in this office.

Alleged violations are investigated primarily through informal office conferences with the involved students. The conferences which are held as a result of impending disciplinary action are: (1) to clarify the referral, the charges or the circumstances involved; (2) to prevent the incidence of, or further occurrences of violations; and (3) to educate as a preventive experience, and to indicate the possible consequences as a result of committing a violation. Discussion is centered on the cause/effect relationship of various courses of action and, when possible, alternate paths or solutions are explored.

Student Rights

Policy on Nondiscrimination on the Basis of Sex

The California State University does not discriminate on the basis of sex in the educational programs or activities it conducts. Title IX of the Education Amendments of 1972, as amended, and the administrative regulations adopted thereunder prohibit discrimination on the basis of sex in education programs and activities operated by CSULB. Such programs and activities include admission of students and employment. Inquiries concerning the application of Title IX to programs and activities of CSULB may be referred to the office of the Coordinator of Affirmative Action, SS/AD 370, 498-5571, the campus officer assigned the administrative responsibility of reviewing such matters or to the Regional Director of the Office of Civil Rights, Region 9, 1275 Market Street, 14th Floor, San Francisco, California 94103.

Policy on Nondiscrimination on the Basis of Physical Handicap

The California State University does not discriminate on the basis of handicap in admission or access to, or treatment or employment in, its programs and activities. Section 504 of the Rehabilitation Act of 1973, as amended, and the regulations adopted thereunder prohibit such discrimination.

Vice President for Student Services John W. Shainline, 498-5587, has been designated to coordinate the efforts of CSULB to comply with the Act and its implementing regulations. Inquiries concerning compliance may be addressed to Vice President Shainline at Student Services Administration Building 303, CSULB, 1250 Bellflower Blvd., Long Beach, California 90840, (213) 498-5587.

Policy on Nondiscrimination on the Basis of Race, Color, or National Origin

The California State University complies with the requirements of Title VI of the Civil Rights Act of 1964 and the regulations adopted thereunder. No person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination under any program of The California State University.

Privacy Rights of Students in Education Records

The federal Family Educational Rights and Privacy Act of 1974(20 U.S.C. 1232 g) and regulations adopted thereunder (34 C.F.R. 99) and California Education Code Section 67100 et seq., set out requirements designed to protect the privacy of students concerning their records maintained by the campus. Specifically, the statute and regulations govern access to student records maintained by the campus, and the release of such records. In brief, the law provides that the campus must provide students access to records directly related to the student and an opportunity for a hearing to challenge such records on the grounds that they are inaccurate, misleading or otherwise inappropriate. The right to a hearing under the law does not include any right to challenge the appropriateness of a grade as determined by the instructor. The law generally requires that written consent of the student be received before releasing personally identifiable data about the student from records to other than a specified list of exceptions. The institution has adopted a set of policies and procedures concerning implementation of the statutes and the regulations on the campus. Copies of these policies and procedures may be obtained at the Office of Admissions and Records.

Among the types of information included in the campus statement of policies and procedures are: 1) the types of student records and the information contained therein; 2) the official responsible for the maintenance of each type of record; 3) the location of access lists which indicate persons requesting or receiving information from the record;4) policies for reviewing and expunging records; 5) the access rights of students; 6) the procedures for challenging the content of student records; 7) the cost which will be charged for reproducing copies of records; and 8) the right of the student to file a complaint with the Department of Education. An office and review board have been established by the Department to investigate and adjudicate violations and complaints. The office designated for this purpose is: The Family Educational Rights and Privacy Act Office (FERPA), Department of Education, 330 "C" Street, Room 4511, Washington, D.C. 20202.

The campus is authorized under the Act to release "directory information" concerning students. "Directory information" includes the student's name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. **Currently, CSULB offices may release only the following types of information: name, major, dates of attendance, and degrees or awards received.** The Director of Athletics may, in addition, provide information concerning participation of students in athletic events, including the height and weight of athletes. The above designated information is subject to release by the campus at any time unless the campus has received prior written notification from the student specifying information which the student requests not be be released. Written notifications should be sent to the Director of Admissions and Records.

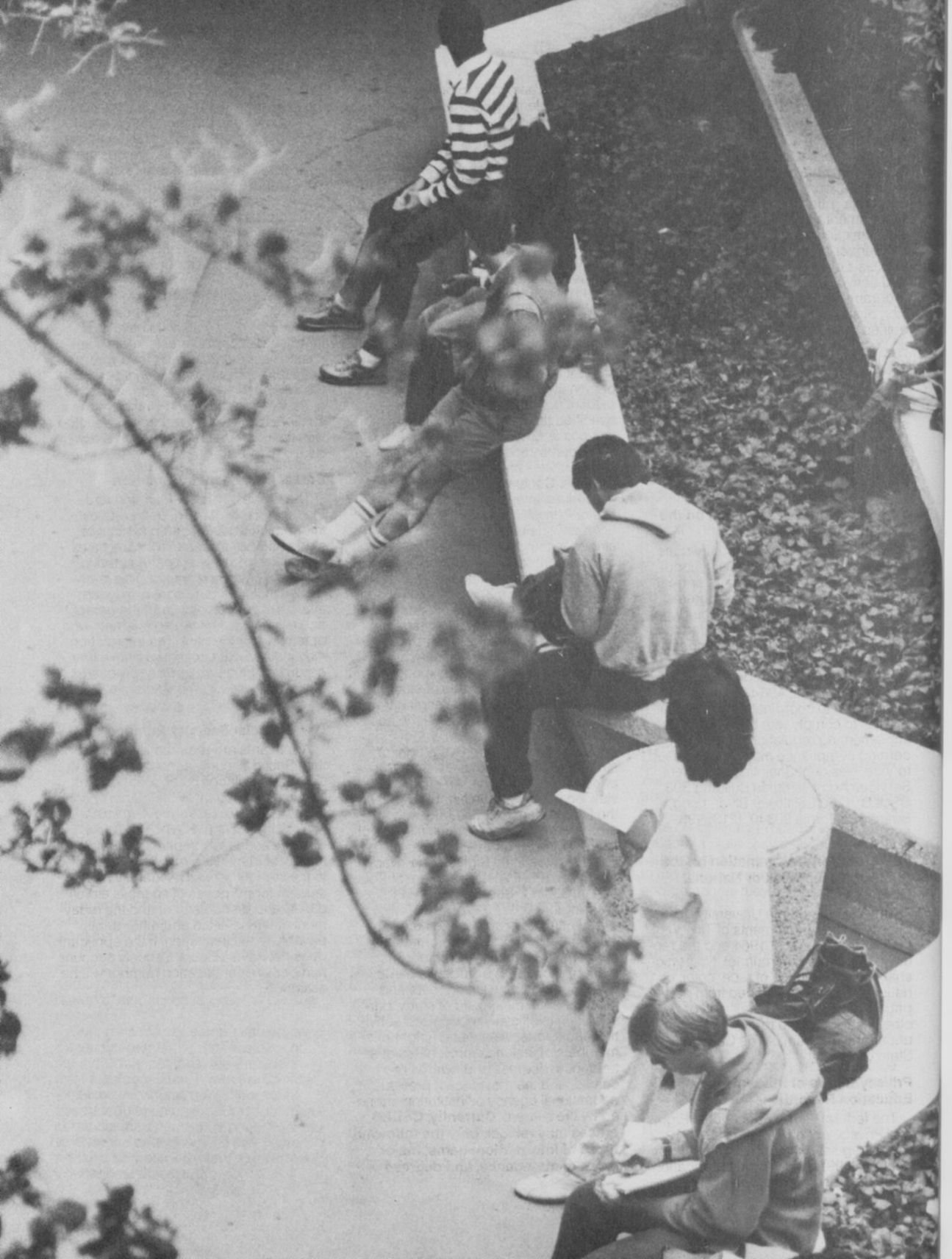
The campus is authorized to provide access to student records to campus officials and employees who have legitimate educational interests in such access. These persons are those who have responsibilities in connection with the campus's academic, administrative, or service functions and who have reason for using student records connected with their campus or other related academic responsibilities.

Career Placement Information

The Office of Career Planning and Placement may furnish, upon request, information about the employment of students who graduate from programs or courses of study preparing students for a particular career field. This information includes data concerning the average starting salary and the percentage of previously enrolled students who obtained employment. The information may include data collected from either graduates of the campus or graduates of all campuses in The California State University.

Use of Social Security Number

Applicants are required to include their Social Security account number in designated places on applications for admission pursuant to the authority contained in Title 5. *California Administrative Code*, Section 41201. The Social Security account number is used as a means of identifying records pertaining to the student as well as identifying the student for purposes of financial aid eligibility and disbursement and the repayment of financial aid and other debts payable to the institution. If the applicant does not have a Social Security account number, an identification number will be assigned.



Baccalaureate Degrees and Certificate Programs

Degrees

The Bachelor of Arts and the Bachelor of Science degree programs are constructed of three interrelated areas: the breadth component, called the General Education Program, which provides the basis for the baccalaureate degree because it offers training in general skills, methodologies, and habits of thought; the depth component, or major, which establishes an understanding of the breadth of a body of knowledge, competence in the fundamental skills and methodologies of the discipline and understanding and skill at an appropriate depth in one or more facets of the discipline; and the elective component that provides the possibility for personal enhancement and development that can complement the rest of the degree program.

California State University, Long Beach offers the following Baccalaureate Degree Programs:

Bachelor of Arts Degree in:

American Studies
Anthropology
Art
Asian Studies
Biology
Black Studies
Chemistry
Communicative Disorders
Comparative Literature
Dance
Economics
English
Entomology
French
Geography
German
History
Home Economics
Human Development
Industrial Arts
Journalism
Liberal Studies
Mathematics
Mexican American Studies
Music
Philosophy
Physical Education
Physics
Political Science
Psychology
Radio-Television
Recreation
Religious Studies
Social Work
Sociology
Spanish
Special Major
Speech Communication
Theatre Arts

Bachelor of Fine Arts Degree in Art

Bachelor of Music Degree

Bachelor of Science Degree in:

Biochemistry
Business Administration
Botany
Chemistry
Chemical Engineering
Computer Sciences
Civil Engineering
Dietetics and Food Service Administration
Criminal Justice
Earth Science
Engineering
Electrical Engineering
Health Care Administration
Geology
Industrial Design
Health Science
Marine Biology
Industrial Technology
Microbiology
Mechanical Engineering
Physical Therapy
Nursing
Vocational Education
Physics
Zoology

Bachelor of Vocational Education Degree

Refer to specific departments in the courses of study section for detailed descriptions of each program.

Certificate Programs

California State University offers 51 academic programs leading to the award of a Certificate. Certificate programs normally require completion of 24 to 27 units of course work. Certificate programs differ from baccalaureate minors and degree programs in the special overall emphasis given in them to practical and applied uses of knowledge in a specific area of human enterprise. Certificates may be earned only concurrently or following award of the baccalaureate degree. Courses taken to fulfill the requirements for the baccalaureate may also be applied to Certificate requirements; only fifteen units may be so applied from graduate degree programs.

If you wish to pursue a Certificate program you should review the course requirements given in the departmental course listing of this catalog. You are to notify the relevant department of your intention to pursue the course of study as soon as possible so as to receive early advisement on the program.

Certificates:

Administration of Outdoor Recreational Resources Administration of Volunteer Services American Indian Studies
Asian American Studies Asian Studies
Automotive Supervision Biomedical Art
Black Studies
Career Guidance
Cartography
Child Development
Community Physical Fitness
Computer Applications in the Liberal Arts
Energy Conversion and Power Systems Engineering
Environmental Studies
Facilities Operations
Food Service Systems Administration
Gerontology
Graphic Arts Supervision
Health Care Administration
Industrial Plastics Processing and Design
Instructional Media
International Business
Japanese
Legal Studies in the Liberal Arts
Liberal Studies
Medieval and Renaissance Studies
Mediterranean Studies
Mexican-American Studies
Museum Studies
Music Therapy
Nurse Practitioner
Outdoor Studies
Pre-Athletic Training
Pre-Corrective Therapy
Psychomotor Therapy
Public Sector Analytic and Administrative Skills
Public Sector Employer-Employee Relations and Personnel Management Public Sector Financial Management
Quantitative Systems
Religious Studies
Russian and East-European Studies Safety Operations Solid Waste Management
Teaching English as a Second Language
Technical and Professional Writing
Therapeutic Recreation Transportation
Transportation Policy and Planning
Travel and Tourism Urban and Regional Studies
Urban Executive Management

Double Major

You may complete two baccalaureate programs concurrently; however for both to appear on the diploma both programs must be under the same degree designation, i.e., Bachelor of Arts or Bachelor of Science. Only one degree will be conferred and only one diploma issued. The fact that the requirements of another program have been completed will be noted on the transcript.

Additional Baccalaureate Degree

A graduated student who wishes to pursue an additional baccalaureate degree and maintain undergraduate status may do so by completing a minimum of 30 units after graduation, of which 24 units must be upper division courses and 12 units must be in the major.

A second semester senior, with advance approval of the Academic Appeals Committee, may earn a maximum of six units toward the additional degree. Any courses to be applied to the additional degree must be specified and taken in addition to those needed to satisfy the requirements of the previous degree.

Minors

A minor consists of a minimum of 18 units at least nine of which must be upper division. No courses in the major department may be counted toward the minor. Courses outside the major department may count both toward the minor and toward requirements for the major. You should refer to the requirements of the department and School of your major to see whether a minor is required with that major. Even if a minor is not required, you may elect to complete one or more minors from those available and have that so noted on your transcript.

Credential Programs for Public School Service

Candidates for public school service credentials at the University are advised to familiarize themselves with the requirements for these programs. Descriptions of credential programs appear in a separate section of this Bulletin. Specific information and applications to individual programs are available in program offices of the School of Education and departmental offices through which they are offered. Application for student teaching and for field work in credential programs must be filed by October 1 for spring semester and March 1 for summer session and fall semester.

General Requirements for the Baccalaureate Degree:

- Completion of an appropriate number and distribution of units for the degree.
- Completion of 30 units in residence at CSULB of which 24 must be upper division, and 12in the major.
- Meet minimal scholarship requirements including an overall grade point average of 2.0.
- Writing skills evaluations: EPT and WPE. Mathematical skills evaluation: ELM.
- Completion of University 100, The University and Your Future.
- Completion of the General Education program including requirements in United States History, Constitution and American ideals and English Composition.
- Completion of requirements for major (refer to specific departments).
- Formal approval by the faculty of the University.

These requirements and related information are described below:

Units

A total of 124 units is required for the Bachelor of Arts and the Bachelor of Vocational Education degrees. Each must include a minimum of 40 units of upper division work (courses numbered 30O to 499).

The Bachelor of Science degree, which requires from 124 to 132 units (132 to 140 for engineering programs), is designed for curricula where a more intensive major field of study is considered a requisite background for professional competence. The total number of units and individual subjects required to satisfy specific majors are described in the departmental sections of this Bulletin. In every instance, a minimum of 40 units of upper division work (courses numbered 300 to 499) must be included.

Ten-Year Rule

To assure that a student's preparation in the major is coherent and current, all upper-division courses required for a major must be completed within the ten-year period preceding award of the baccalaureate degree. Courses completed prior to this ten-year period can be revalidated by such demonstrations of competence or knowledge of the subject as may be prescribed by the department offering the course.

Residence

A residence requirement states that a certain number of units must be taken on the campus from which the student expects to receive a degree. To fulfill the residence requirement at CSULB, you must earn a minimum of 30 semester units at CSULB. Twenty-four of these units shall be earned in upper division courses and 12 of the units shall be in the major. Units earned in Extended Education cannot be counted toward fulfillment of the residence requirement.

Scholarship

In order to qualify for graduation with a bachelor's degree from California State University, Long Beach, you must demonstrate a 2.0 (C) grade point average in all of the below:

1. Your entire college record.
2. All units attempted at CSULB
3. All courses in the major.
4. All courses in the major completed at CSULB.
5. All upper division courses in the major completed at CSULB.

A 2.75 overall grade point average is required for admission to teacher credential programs.

Faculty Approval

Proficiency of a student in any and all parts of a curriculum is properly ascertained by the faculty of the University. A favorable vote of the faculty is required for a student to be eligible to receive a degree.

Writing skills evaluations

Lower Division — English Placement Test (EPT)

So that information will be available to help in the selection of appropriate course work in writing skills and to prepare for meeting the upper division requirement, all undergraduate students who will graduate from a CSU campus under the degree requirements of 1978-79 or a subsequent Bulletin are required to take the English Placement Test (EPT), with the exception of students who present any one of the following:

1. Satisfactory scores on the CSU English Equivalency Examination.
2. Scores of 3, 4, or 5 on the English Composition Examination of the College Board Advanced Placement Program.
3. A score of 600 or above on the College Board Achievement Test in English Composition with Essay.
4. A score of 510 or above on the verbal section of the College Board Scholastic Aptitude Test (SAT, Verbal).
5. A score of 23 or above on the ACT English Usage Test.
6. Completion of an acceptable college course in English composition of 4 quarter or 3 semester units with a " C" or better.

You must take the test at the first test administration available after admission. EPT registration does not require a fee. Failure to take the English Placement Test at the earliest opportunity after admission will lead to administrative probation which, according to Section 41300.1 of Title 5, California Administrative Code and CSU Executive Order 186, may lead to disqualification from further attendance. The results of the EPT will not affect admission eligibility. Information regarding the EPT can be obtained from the Department of English, McIntosh Humanities Office Building, Room 419 or the Testing Office SS/AD 216, 498-4006.

Writing Proficiency Examination (WPE)

To qualify for a degree, every student under the 1977-78 or subsequent Bulletin must pass the Writing Proficiency Examination (WPE) to be certified proficient in written composition in English. You should take the examination during the first semester of your junior year. The responsibility for acquiring the skills necessary to pass the examination is yours. Regular and special courses in writing are available in the University or through Extended Education. Counseling and other assistance are available through the Learning Assistance Center, LIB E-112, and Academic Advisers in your major department. The examination may be retaken as many times as necessary. information regarding the administration of this examination may be obtained from the Testing Office (SSA 216). To cover the costs of administration and scoring, a fee will be charged each time you take the examination.

Entry-Level Mathematics (ELM) Examination

All undergraduate students entering CSU in the Fall 1983 or subsequent term must demonstrate basic competence in mathematics. New freshmen must demonstrate competence by successful completion of the CSU Entry-Level Mathematics (ELM) Examination. Transfer students must demonstrate competence either by successful completion (with a grade of C or better) of a mathematics course certified for General Education or by successful completion of the CSU ELM Examination.

Students required to take this examination should do so as soon as possible after admission. (The results of this examination do not affect admission.) Failure to take the Examination before the end of the first term in residence may lead to probation and disqualification according to Section 41300.1 of Title 5, California Administrative Code and CSU Executive Order 338.

If you cannot demonstrate basic competence on the examination you are required to take steps to overcome deficiencies early in your enrollment. (You must pass the Examination prior to enrollment in any course to meet the General Education, Category B.2, Quantitative Reasoning course requirement.) Courses taken to acquire the entry-level competence (or to qualify for enrollment in General Education courses) may not be applied to the baccalaureate degree.

Information bulletins and registration materials for the ELM Examination will be mailed to all who are subject to the requirement, or they may be obtained from the Office of Admissions and Records. Further information regarding the Examination may be obtained from the University Test Office, SSA 216, 498-4005.

Special Course Requirement — University 100

All students who enter the university with fewer than 60 transferable units must take University 100 during their first year on campus. Students who fail to take the course during this period will not be allowed to register for a third semester.

University 100 is a one-unit course on the history and mission of higher education, the career planning process, and the use of university libraries. The course is offered at various times during the semester. Please consult the Schedule of Classes under "University 100" for information on class scheduling.

General Education

General Education is an important aspect of the baccalaureate degree and of your personal development. It is that part of your university program which encourages you to develop or improve such basic life skills as creativity, critical thinking, self-motivation, independence, an understanding of values, and a general philosophy by which to make decisions throughout life. Possession of these skills makes possible your continued personal growth and the further development of your creative and adaptive capabilities — qualities necessary for you to adjust to and influence a rapidly changing world. It is the basis for lifelong learning, and it can increase your ability to be self-directing.

At California State University, Long Beach, courses approved for General Education credit provide — Information: the raw material for thinking, analysis, reflection, and discourse

— Methods of inquiry: direction and practice in methodologies of the several disciplines

— Basic Skills: the ability to analyze ideas and data, to relate these to other materials, to develop arguments both logical and cogent, to reach conclusions, and to present the results of these processes with clarity and style

— Qualities of Mind: a respect for data and unpleasant facts; an appreciation of the arts; tolerance, commitment, a taste for learning; creativity, perpetual curiosity, and a sensitivity to ethical considerations.

The present policy of the Board of Trustees of The California State University is that students graduating from a CSU campus must fulfill certain breadth requirements (Section 40405, Title 5, *California Administrative Code*). Of these, a minimum of 9 semester units must be upper-division courses taken at the campus conferring the degree. Partial credit may be transferred from another institution; a participating, regionally-accredited institution may certify completion of 39 semester units.

Each campus in the CSU system may define which of its courses satisfy its General Education Requirements and determine which courses are transferable from other institutions (except where a maximum of 39 units are certified). The campus may add requirements and enact other regulations.

California State University, Long Beach, General Education (GE) Requirements

Each California State University, Long Beach, baccalaureate graduate must have completed at least 51 semester units of General Education courses. Only courses specifically approved for General Education and so listed in the Schedule of Classes may be used to fulfill General Education requirements. At least nine of the 51 General Education units must be units taken at CSULB and after you achieve upper-division standing (completion of 60 semester units). Of the nine upper-division units, at least six units must be from among approved interdisciplinary courses (IC) in two of the categories specified below.

The 51 units of General Education course work include three units of work in U.S. History and three units in U.S. Constitution and American Ideals, required by Section 40404, Title 5, *California Administrative Code*. (See Category D. below.). Title 5 provides that each student shall demonstrate competence by completing a course in these fields or by passing a comprehensive examination in them. These examinations are provided by the Departments of History and Political Science, respectively.

No course in your major department may be used to satisfy G.E. requirements. Exceptions have been made for all courses in category A, for life science majors in category B.1., for mathematics majors in category B.2., for history majors in category D.1.a., for political science majors in category D.1.b., and for all interdisciplinary courses for all majors.

General Education units must be distributed as follows:

Category A:

Communication in the English Language and Critical Thinking

9 units to include:

1. One approved course in written English.
2. One approved course in oral communication or a combination of oral and written communication, to include an understanding of the process of communication and experience in communication.
3. One approved course in critical thinking, designed to develop the ability to reason clearly and logically and to analyze the thinking of others.

Category B:

Physical Universe

12 units to include:

1. At least six units of inquiry into the physical universe and its life forms to include one approved course in the life sciences and one approved course in the physical sciences; both must involve laboratory experience.
2. At least three units of study in mathematical concepts and quantitative reasoning; approved courses foster an understanding of mathematical concepts rather than merely providing instruction in basic computational skills.
3. Another three units as necessary, selected from approved courses, to achieve a minimum of 12 units.

Category C:

Humanities and the Arts

12 units to include:

1. At least three units from approved fine arts courses.
2. At least six units from approved courses to include courses in at least two of the following areas:
   a) literature,
   b) philosophy, and
   c) foreign languages.
3. Another three units as necessary, selected from approved courses to achieve a minimum of 12 units.

Category D:

Social and Behavioral Sciences and Their Historical Backgrounds

15 units to include:

1. Citizenship
   a. Three (3) units selected from courses in U.S. History.
   b. Three (3) units selected from courses in U.S. Constitution and Ideals (formerly Category F.)
2. Social and Behavioral Science: At least nine (9) units from approved courses in at least two disciplines.
   a. At least three (3) units selected from approved courses which concern world societies and cultures in an international context.
   b. The remaining units are to be selected from the general list of approved social and behavioral science courses (categories D.1.a, D.1.b, D.2.a, and D.2.b).

Category E:

Self-Integration

3 units:

At least three units selected from approved courses which facilitate understanding of the human being as an integrated physiological, psychological, and social organism.

Approved General Education Courses

The list of courses approved for General Education is published in both the Fall and Spring *Schedule of Classes*. It is also available in all academic department and program offices as well as the Academic Advising Center. From time to time, additions and deletions are made. A course will count for General Education credit only if it is on the list in the semester in which the student completes the course.

Credential Programs

Public School teaching and service credentials in the State of California are regulated by the State Legislature and administered by the Commission on Teacher Credentialing. Credential programs offered at CSULB have been developed to meet current requirements which are complex and continually being reviewed and changed by legislative action. Candidates for all credentials must meet legal requirements in effect when completing credential programs. It is the responsibility of the student, not only to be familiar with the program requirements contained in this catalog but also to obtain current information from Education Departments offering individual programs. For information on credentialing, pending changes and new legislation, as well as information regarding admission, academic requirements, and field work contact the specific credential program coordinator or the Graduate School of Education Credential Programs Office, ED-1, Room 6.

There are two types of basic teaching credentials. The Single Subject Credential (usually for Secondary Schools) authorizes one to teach within a specified subject-matter category. A teacher authorized for single subject instruction may be assigned to teach this subject at any grade level — pre-school, kindergarten, grades 1 through 12, or in classes for adults. In practice, most teachers with a single-subject authorization teach in junior and senior high Schools. The Multiple Subjects Credential (usually for Elementary Schools) authorizes the holder to teach all subjects in a self-contained classroom. Instruction in this situation occurs most frequently in elementary and early childhood education. A teacher authorized for multiple subjects instruction may be assigned to teach in any self-contained classroom — preschool, kindergarten, grades 1 through 12, or in classes for adults.

Basic Credential Programs Offered by CSULB:

Multiple Subjects Teaching Credential
Multiple Subjects Program — Liberal Studies
Multiple Subjects — Bilingual — Cross/ Cultural Emphasis in Spanish Vietnamese
Single Subject Teaching Credential
Single Subject Teaching Internship Credential
Single Subject — Bilingual — Cross/ Cultural Emphasis in Spanish Vietnamese

Single Subject Programs:

Art, English, Foreign Language (French, German, Spanish), Government, Health Science, History, Home Economics, Industrial Arts, Life Science, Mathematics, Music, Physical Education (Adapted PE, Coaching, Developmental Dance, Elementary School, Secondary School), Physical Science, Social Science, Anthropology, Economics, Geography, History, Political Science, Psychology, Sociology

Specialist Teaching Credentials:

Bilingual- Cross/Cultural (English/ Spanish), Early Childhood, Reading, Special Education, Learning Handicapped Severely Handicapped, Gifted, Communication Handicapped, Resource Specialist Certificate of Competence

Services Credentials:

Administrative Services, Library Services, Clinical Rehabilitative Services, Pupil Personnel, School Psychology

Other Credentials and Authorizations:

Designated Subjects (Adult, Vocational, Driver Education, Driver Training, ROTC)

Designated Subjects Supervision:

Adapted Physical Education Emphasis,

International Student Teacher Exchange Program:

The Department of Teacher Education has a unique program for a select group of student teachers each fall semester. These students have an opportunity to spend a semester abroad through a one-to-one exchange program with students from England and Wales. The CSULB students complete their student teaching in either elementary or secondary Schools in Winchester, England or Caerleon, Cumbran, Wales. This is an opportunity for CSULB students in the Multiple Subjects and Single Subject Credential Programs to live and to work in another culture and to receive full credit for student teaching. Each student pays the registration, student fees, and residence hall fees at CSULB and remains a registered student at CSULB. Additional costs include air fare and personal expense money. For further information, contact the Chair of the Department of Teacher Education.

Additional Authorizations for Elementary and Secondary Teachers:

Elementary and Secondary Teachers wishing to diversify their teaching authorizations may do so by fulfilling certain requirements to qualify for add-on and/or supplementary authorizations. Further information may be obtained from coordinators of the credential programs or the Credential Programs Office, ED-1, Room 6.

Community College Teacher Education:

The community college specialization is designed to prepare the candidate to teach at the community college level. The community college credential does not require professional education courses nor student teaching, but these experiences are offered for those who feel their opportunities for placement would be enhanced. A program of professional education courses, including student teaching in a community college, is available as an elective for students who desire this experience. For information contact the University Coordinator. Single Subject Credential Program (ED 1-Room 54).

Obtaining a Credential

The current credentialing law provides for a two-step program for the Basic Teaching Credential — Preliminary and Clear. The preliminary credential is issued when the candidate has met University requirements:

1. A baccalaureate or higher degree in any subject, except professional education, completed in an accredited institution;
2. A program of professional preparation approved by the Commission on Teacher Credentialing;

3. Passing the subject matter examination(s) of the National Teachers Examination (NTE) or waiving the NTE by completion of an approved credential major program or its equivalent in the B.A. in Liberal Studies program. (At CSULB the single subject candidate must complete a credential major [waiver] program);
4. Passing the California Basic Education Skills Test (CBEST) (in reading, writing and arithmetic); and
5. Passing a college level course or examination on the U.S. Constitution.

The clear credential is granted when the candidate has completed all remaining requirements which must be done within five years after the preliminary is issued. A clear credential requires 30 semester units beyond the baccalaureate degree in an approved fifth-year program, which must include a course in health/drug abuse education and special education. The clear credential cannot be acquired by direct application, but must be recommended by the University. To obtain this institution's recommendation for the clear credential, the candidate must meet the requirements or equivalent of its approved credential program and complete a minimum of 15 of the 30 units of the fifth-year program at CSULB. The life credential is granted by the Commission on Teacher Credentialing on receipt of an application with verification of two years of full-time teaching or other certificated service in California for which the credential was required. This may include experience in a private School if the teaching satisfies the state School compulsory attendance law. Students may begin credential programs at three different levels:

1. Junior Level — With a carefully planned program, initial education courses may be taken at the junior level with completion of the professional education program within the four-year degree program, culminating with a preliminary five-year credential. This permits the teacher a maximum of five years to complete the fifth-year approved program for the clear credential.
2. Senior Level — Part of the credential program may be taken as an undergraduate to complete electives toward degree requirements and the remaining requirements then completed at the post-baccalaureate level. The preliminary five-year credential is issued after completion of the professional program.

   Post-Baccalaureate Credential Credit in Senior Year

   Up to six units of coursework taken in the final undergraduate semester not needed to meet major or degree requirements may be counted as postgraduate credit toward fulfillment of the fifth-year program by petition only. The petition must be filed prior to graduation. Criteria and petition forms are available in the Credential Programs Office, ED-1, room 6.
3. Graduate Level — The entire credential program may be completed at the post-baccalaureate level, thus fulfilling requirements for the clear credential.

Appeal Process

A student has the right to address an appeal to the appropriate committee with reference to any policy related to admission and continuation in a basic teacher preparation program that would result in any undue hardship. Petition forms and assistance are available through the credential program coordinator or the department office.

For further information on Multiple Subjects Credentials refer to the Graduate School of Education — Department of Teacher Education section of this catalog.

For further information on Single Subject Credentials refer to the Graduate School of Education section of this catalog.

For information concerning Specialist and Service credentials refer to the appropriate department section.

Post-Baccalaureate Studies and Graduate Degrees

Post-Baccalaureate Studies

Students with a baccalaureate degree who wish to continue their education for personal enrichment or to meet professional needs may do so at CSULB either as a post-baccalaureate student or as a graduate student. For administrative purposes, a post-baccalaureate student is one who has not declared a master's degree as an objective but who is nevertheless attending class and participating in academic work at the University. A graduate student is one who has requested and received formal admission to a specific program of study that will lead to a master's degree in one of the many disciplines available at CSULB.

Candidates for public school service credentials at the University are advised to familiarize themselves with the requirements for these programs. Descriptions of credential programs appear in the credential section of this Bulletin.

Graduate Studies

Graduate study is primarily designed to inspire independence of mind and originality in the quest for knowledge, truth, and useful application. Candidates for a master's degree are required to demonstrate mastery in their chosen field of study either through independent research culminating in an acceptable thesis and/or through successfully passing a final comprehensive examination.

Graduate curriculum is designed to provide the student advanced study in a discipline. All courses listed in a master's degree program, including those outside the major field, must be graduate or upper division courses approved by the student's graduate committee and department graduate advisor.

Proficiency of a student in any and all parts of a curriculum is properly ascertained by the faculty of the University. A favorable vote of the faculty is required for a student to receive a master's degree.

A student who plans to become a candidate for a master's degree must hold a bachelor's degree from an accredited institution or have completed equivalent academic preparation as determined by the appropriate department and/or school. The student must have completed undergraduate course work substantially equivalent to that required at California State University, Long Beach in the discipline of intended graduate study, or must be prepared to undertake additional work to make up any deficiency. Most graduate programs are based upon preparation in the discipline at the undergraduate level. Undergraduate preparation is considered adequate if a candidate has met the upper division requirements of this University for a bachelor's degree in the subject matter area of the master's degree program.

Graduate Degrees Offered:

Civil Engineer Degree

Master of Arts Degrees:

- Anthropology
- Art
- Asian Studies
- Biology
- Communicative Disorders
- Economics
- Education
- English
- French
- Geography
- German
- History
- Home Economics
- Industrial Arts
- Linguistics
- Mathematics
- Music
- Philosophy
- Physical Education
- Physics
- Political Science
- Psychology
- Spanish
- Special Major (Interdisciplinary Studies)
- Speech Communication
- Theatre Arts
- Vocational Education

Master of Business Administration

Master of Fine Arts in Art

Master of Fine Arts in Theatre Arts

Master of Public Administration

Master of Public Health

Master of Science Degrees:

- Biochemistry
- Business Administration
- Chemistry
- Civil Engineering
- Criminal Justice
- Counseling
- Electrical Engineering
- Engineering
- Geological Sciences
- Health Science
- Mechanical Engineering
- Microbiology
- Nursing
- Nutritional Science
- Physics
- Psychology
- Recreation Administration
- Special Education
- Special Major

Master of Social Work

Refer to specific departments in the Courses of Study section of the catalog for detailed requirements of each program.

Certificate Programs and Graduate Study

Students, whether graduates of CSULB or another accredited institution, may complete requirements for and be awarded certificates while in graduate standing.

When certificate programs so provide, 500/600 level courses (except 698) may be used toward the requirements of such certificates. Prerequisites for these courses must be completed prior to registration in 500/600 level courses.

Courses used to meet requirements for the master's degree may also be used to meet certificate requirements when the certificate programs so permit, but such overlap shall not exceed 15 units. Any certificate program that requires or permits graduate courses must receive approval of the University Graduate Council.

Requirements for Admission

Admission to the University

In order to be admitted to CSULB as either a Post-Baccalaureate Unclassified student or as a Graduate student, the applicant must meet the following requirements:

1. Have a baccalaureate degree from an accredited university or college.
2. Have been in good standing at the last institution attended.
3. Have at least a 2.5 grade point average in the last 60 semester units attempted, independent of when the baccalaureate was granted. The entire semester or quarter in which the 60 units began will be used in this calculation. Lower division courses or courses taken in extension (except in concurrent enrollment at CSULB in the upper division), after obtaining the bachelor's degree, will be excluded from the calculation.

Students wishing to enroll in the University will follow the instructions supplied by the Office of Admissions and Records in the Admissions section of this catalog. Once applications are received, they will be evaluated at appropriate offices, and students will be advised whether or not they have been accepted into the University.

The student must request all institutions of higher learning attended to send an official copy of transcripts directly to the Office of Admissions and Records and Department advisor of graduate studies. Transcripts presented to the Admissions Office by the student are not acceptable. Graduates of California State University, Long Beach must follow these same procedures when making application to a graduate program.

Post-baccalaureate Standing. Unclassified.

For admission to unclassified post-baccalaureate standing, a student must: (a) hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or have completed equivalent academic preparation as determined by an appropriate campus authority; (b) have attained a grade point of at least 2.5 (A = 4.0) in the last 60 semester (90 quarter) units attempted; and (c) have been in good standing at the last college attended. Admission to a California State University or College with post-baccalaureate unclassified standing does not constitute admission to graduate degree curricula.

Post-baccalaureate Standing. Classified.

A student who is eligible for admission to a California State University campus in unclassified standing may be admitted to classified post-baccalaureate standing for the purpose of enrolling in a particular post-baccalaureate credential or certificate program, provided that such additional professional, personal, scholastic, and other standards, including qualifying examinations, as may be prescribed for the particular program by the appropriate campus authority, are satisfied.

Graduate Standing. Conditionally Classified.

A student eligible for admission to a California State University campus under the unclassified standard, above, but who has deficiencies in prerequisite preparation which in the opinion of the appropriate campus authority can be met by specified additional preparation, including qualifying examinations, may be admitted to an authorized graduate degree curriculum with conditionally classified graduate standing.

Graduate Standing. Classified.

A student eligible for admission to a California State University campus in unclassified or conditionally classified standing may be admitted to an authorized graduate degree curriculum of the campus as a classified graduate student if he or she satisfactorily meets the professional, personal, scholastic, or other standards for admission to the graduate degree curriculum including qualifying examinations, as the appropriate campus authority may prescribe. Only those applicants who show promise of success and fitness will be admitted to graduate degree curricula, and only those who continue to demonstrate a satisfactory level of scholastic competence and fitness shall be eligible to proceed in such curricula.

Admission to a Department as a Graduate Student

Students who have been admitted to the university at the post-baccalaureate level are considered unclassified. In order to pursue a credential or master's degree they must be accepted by the department or school offering the program. in some instances (see specific department listing) this process may require a separate application being made to the department or school. Following review the department or school will determine whether or not the student meets its requirements for admission to its program. Those students who meet all departmental and University requirements will be admitted as Classified graduate students in that program.

Students who do not meet all requirements may, nevertheless, be accepted by the department as a Conditionally Classified graduate student, subject to meeting various University, school, and departmental requirements for Classified status.

Special Action

An applicant who does not qualify for admission under the previous provisions may be admitted by special action if in the judgment of the appropriate faculty of the department/school concerned there exists acceptable evidence that the applicant possesses sufficient academic, professional and other potential pertinent to her/his educational objectives to merit such action, as shown through aptitude scores, recent academic performance and experiential background. For declared majors, departmental and school standards for special action will apply.

University Regulations Governing the Master's Degree

General

The following regulations apply to all graduate degree programs. Specific academic and curricular requirements of individual degree programs are given in the departmental listings of this catalog.

All regulations involving a calculation of grade point average subsequent to admission to the University as a post-baccalaureate and/or graduate student shall be based on the following common practices and standards.

"Overall Graduate Grade Point Average" shall be calculated on all upper-division and graduate-level coursework attempted by a student at this University after completion of a baccalaureate degree.

Grade point average standards calculated on the basis of a smaller range, grouping or set of upper-division and graduate- level courses, for example, "courses in the major" or "courses taken since admission to the program," presuppose that the student has met the minimum standard for any larger range, group or set, including the Overall Graduate Grade Point Average.

1. A student pursuing the master's degree must maintain an Overall Graduate Grade Point Average of 3.0 (B). Exceptions to the 3.0 (B) Overall Graduate Grade Point Average may be made only on the recommendation of the departmental faculty offering the degree, the school dean or designee and approval by the University Graduate Council.
2. At least a 3.0 (B) average must be maintained in the major.
3. No course with a grade lower than C may be applied toward the fulfillment of degree requirements.
4. The student program for the master's degree must contain a minimum of 30 units in upper division and graduate courses.

   Some programs require additional units. Please consult individual program requirements.

   A minimum of sixty percent of the units required for the degree shall be in the 500 and/or 500 level series and these shall be completed at this University, consistent with departmental requirements. Student teaching cannot be included in any master's degree program. All upper division courses marked with an asterisk may be included in the master's degree programs of the department listing the course. With permission of the student's department graduate advisor, asterisk-marked courses may also be used on other graduate programs, when appropriate. Normally, other non-marked courses are not used.
5. A thesis and/or final comprehensive examination must be completed. A minimum of four and a maximum of six semester units shall be allowed for a thesis. Failure of the comprehensive examination or thesis requirement is failure of both options. Thus, a student failing the comprehensive examination may not proceed to the thesis option or vice versa. Once a student has completed a semester of enrollment towards fulfillment of either the comprehensive examination or thesis option, the student may not change from one option to the other without the approval of the faculty concerned, the department chair and the appropriate dean or designee.
6. Not less than 24 semester units shall be completed in residence at the University. The Dean of Graduate Studies may authorize department/school approved substitution of credit earned by alternate means for a part of the residence requirement. All units, including continuing education or extension, accepted by transfer for application toward the minimum 30/38 units required for a master's degree cannot be used to fulfill the minimum unit requirements in the 500/600 series. This 500/600 unit requirement must be completed in the major discipline and in residence at this University.
7. All requirements of the degree program must be completed within seven years of the date the program was initiated. An extension of time beyond the limit may be granted by the Dean of Graduate Studies if warranted by individual circumstances and if the outdated work is validated by comprehensive examination in the relevant course or subject field work, or such other demonstration of competence as may be prescribed by the department and/or school.
8. A graduate student who expects to receive a degree at the end of any semester or summer session must be enrolled during that semester or session and must complete the Graduation Application Card within the first three weeks of classes of the prior semester. Students completing their degrees in May or in the following summer sessions should file the application by the preceding October 1. Students completing their degrees in January should file by the preceding February 15 at the Admissions and Records Office. Note: Graduate Studies 700 may be used to fulfill the enrollment requirement if the applicant has completed all degree program coursework prior to the semester of graduation.
9. Proficiency of a student in all parts of a curriculum is determined by the faculty of the University. A favorable vote of the faculty is required for a student to receive the degree.

The Program

A student must consult with the graduate advisor of the department or school to prepare a tentative degree program. After completing prerequisites and other requirements, the student must formulate an official program and apply for advancement to candidacy.

The department will assign the student a faculty advisor who must be consulted about preparing a degree program. The advisor should have an official evaluation of the student's previous work from the Office of Admissions and Records, although transcripts provided by the student may be used to develop a tentative program and discuss degree requirements. When the Admissions Office's evaluation and the results of tests are available, the faculty advisor can assist each student in drawing up a master's degree program. This program must be approved by the student's faculty advisor, the departmental graduate advisor, and school dean or director of graduate studies or, for Special Major, the Dean of Graduate Studies. The program must list the following:

1. Courses required for removal of undergraduate deficiencies
2. All courses taken prior to advancement to candidacy which are to apply toward the 30 unit minimum
3. Required courses
4. Elective courses

The official degree program as approved serves as a basis for the Records Office's graduation check which is required before the degree can be granted. Students who have not been advanced to candidacy are subject to all changes as published in the Bulletin, Policy Statements and certifications.

Graduate degree programs may be revised as the student advances toward the degree. Such revisions must be recommended by the faculty advisor and approved by the departmental graduate advisor and the school dean or director of graduate studies or, for Special Major, the Dean of Graduate Studies.

Advancement to Candidacy

Advancement to Candidacy is the next step after achieving Classified Status and signifies approval of a plan of study by the student's major department and school or, for Special Major, the Dean of Graduate Studies. The prerequisites to advancement to candidacy are:

1. Classified status.
2. Satisfactory completion of the CSULB Writing Proficiency Examination. Information is available in the Testing Office (SS/A-216).
3. A minimum 3.0 overall grade point average and a 3.0 grade point average in all units undertaken for the program (at least 6 units).
4. Completed all qualifying examinations.
5. Be enrolled in regular session.

Advancement to candidacy is to occur at least one semester or summer session prior to the semester (session) in which the student expects to graduate.

An approved graduate degree program remains in effect as long as a candidate is making satisfactory progress. To insure minimum satisfactory progress toward the degree objective, the student must enroll in at least one session during any 12 month period and complete all degree requirements within seven years of initiating the program. The student may not change the graduate major without filing a new degree program.

A student entering military service after having been advanced to candidacy will not be considered as having withdrawn from candidacy, provided that the student is inducted, enlisted or called to active duty during a semester in which he is enrolled or not more than one semester thereafter, and provided that the student enrolls for work toward a degree within one calendar year of the date of release from service.

Students who have been advanced to candidacy and absent themselves from the University on Educational Leave will be considered as not having withdrawn from candidacy for an advanced degree provided the terms of the educational leave are fulfilled. Such students must reapply when returning to the university, but the application fee will be waived.

A department or school recommends a student for advancement to candidacy by forwarding a graduate degree program for approval to the school dean or director of graduate studies or the Dean of Graduate Studies. After the student's degree program has been processed and approved, a copy of the completed program and a letter advancing the student to candidacy will be mailed to the candidate, with copies filed with the department or school and the Records Office.

A student must be enrolled in the semester or summer session in which advancement to candidacy takes place, and this must occur no later than one semester or summer session prior to completion of course requirements. Normally, a student is eligible and should file for advancement to candidacy after completing six units of graduate coursework for the graduate degree program with a 3.0 average.

Election of Regulations

Graduate students advanced to candidacy will be held responsible for the regulations governing master's degrees in effect at the time of advancement or at the time the last requirement for the degree is met, whichever is more conducive to the student's course of study. A change in master's degree objective or readmission to a graduate program following withdrawal requires that a new degree program be filed under the current graduate policies as published in the latest edition of the Bulletin.

Educational Leave

Any registered student, undergraduate or graduate, in good academic standing may request an Educational Leave. The student requesting an Educational Leave shall complete an Educational Leave Form, IN ADVANCE, including an explanation of his or her reasons for seeking the leave and a statement of when he or she intends to resume academic work. The completed form is to be submitted for approval to the student's department chair (undergraduate) or graduate advisor.

The minimum initial leave will be one full semester; the maximum will be one calendar year. A student may request, in writing, in advance, an extension of leave. Under no circumstances shall the total number of approved educational leaves exceed two, nor shall the duration of approved educational leaves extend beyond two calendar years.

Students returning from an approved educational leave are required to submit an application form but will not be required to pay another application fee. Students returning from an absence for which an educational leave was appropriate but not approved, in advance, must pay the reapplication fee.

Graduate students who plan to enroll for credit at another institution of higher education during the leave period must obtain prior approval for the transfer of course credit to the student's program from the department graduate advisor, department chair, and the school Dean or designee.

The period of an educational leave is counted in the calculation of elapsed time under the regulations governing the maximum period for completion of degree requirements (seven years for graduate students).

For the period of an educational leave the student's rights under the Election of Regulations rule are preserved, maintaining the right of the student to elect regulations as if he or she had maintained continuous attendance.

Students who fail to enroll in two or more consecutive semesters place themselves in jeopardy under the continuous enrollment provisions of the election of regulations rules. This includes the automatic loss of "advanced to candidacy (candidate)" status. Moreover, students who break residency and lose candidate status do not have a presumptive right to "reinstatement" of their candidacy. These students should be required to go through the process of "readvancement."

An educational leave presupposes no expenditure of University resources or faculty and staff time in the behalf of the student during the period of the leave. In addition, no computer facilities, no library privileges, and no student services are available to a student on educational leave.

Second Master's Degree

A graduate student who holds a master's degree from this or any other accredited institution but desires to become a candidate for a second master's degree in a field from this University is subject to the following regulations:

1. All admission requirements of the University/School/Department must be met (all general regulations listed in the Bulletin apply to the second master's degree).
2. Enrollment and approval of candidacy for the second degree will be granted only after the first degree has been completed and awarded.
3. All requirements for the new degree must be completed.
4. After awarding of the first master's degree, a minimum of 24 units of graduate residence credit must be earned at this University including the minimum of 500/600 series units mandated by the major department in which the student is earning the second master's degree.
5. No more than six units earned on the first degree may be applied to a second master's degree program.
6. Prerequisites for an advanced course must be completed prior to enrollment in the advanced course. An instructor may disenroll a student who does not provide evidence of adequate preparation.
7. All prerequisites must be completed prior to application for candidacy.
8. Two master's degrees cannot be awarded concurrently.
9. The area or discipline in which the second degree is earned shall be designated on the transcript and a second diploma awarded.

Graduate Study in the International Programs

Students planning to participate and receive unit credit toward a master's degree in an International Program should consult with the graduate advisor in the department of their major and school dean or director of graduate studies before entering the program.

Graduate students who have not been admitted to candidacy for a master's degree and who participate in the International Programs may, upon their return to California State University, Long Beach, petition to have six units earned as resident credit in the International Programs included on their official program for the master's degree. In no case may excess grade points earned in the International Programs be used to bring a grade point deficiency at California State University, Long Beach to the required 3.0 (B) average.

Students admitted to candidacy for a master's degree who plan to participate in the International Program of Studies must obtain permission, prior to beginning their study abroad, to have units earned abroad applied toward satisfaction of their degree requirements. A candidate's petition to apply units earned abroad must be reviewed and recommended by the department offering the degree. The specific courses to be taken on the foreign campus, thesis research which is to be done abroad, or any other requirements such as examinations to be taken upon the student's return must be listed on the official master's degree program. Usually no more than six units of credit may be transferred to apply toward the minimum 30 units for an advanced degree as a result of participation in the International Program of Studies, but a maximum of 12 units may be allowed by the Dean of Graduate Studies in consultation with the University Graduate Council in a special case.

A copy of the candidate's graduate degree program must be forwarded to the Resident Director, who must certify that any credit earned abroad is appropriate to meet graduate degree requirements.

Pending the faculty's evaluation of the student's work, a Report Delayed (RD) grade will be assigned all courses in which work was completed abroad and which are offered to satisfy requirements toward an advanced degree.

Comprehensive Examination

Each department or school requiring a final comprehensive examination determines the content of the examination. Such examinations may be written or oral or both. A faculty committee shall represent the department in preparing questions, administering, and reading the examination. Through the comprehensive examination, the faculty provides an opportunity for the master's degree candidate to demonstrate knowledge of the discipline and analytic ability. Working with the department chair or dean of the school and the appropriate committee, the departmental graduate advisor usually assumes responsibility for scheduling the examinations and for selecting the other faculty members to participate.

Students may not enroll for courses in preparation for the comprehensive examination or take the comprehensive examination unless they have been advanced to candidacy for the master's degree or unless advancement to candidacy will occur in the semester in which the enrollment takes place.

During the first semester of residence, the graduate student should ascertain from the faculty advisor what preparation will be expected. Early in the final semester of study for the degree, the candidate should contact the departmental graduate advisor to make arrangements for taking the examination. The department or school will notify the Records Office whether the student has passed or failed the final comprehensive examination. A candidate who has failed will usually be allowed to take the final comprehensive examination a second time, and the departmental graduate advisor should be contacted for specific procedures for the second attempt. To award a candidate the master's degree for a particular semester, the results of the comprehensive examination must be reported to the Records Office prior to the end of the semester.

Theses and Projects

A student may enroll for Thesis (course 698 or 699) only when that student has been advanced to candidacy for the degree or when advancement to candidacy will occur in the semester of initial enrollment in Thesis.

Theses and projects submitted in partial fulfillment of the requirements for a graduate degree at this University shall meet the following definitions quoted from the amendment to Section 40510, Title 5.

A thesis is a written product of the systematic study of a significant problem. It clearly identifies the problem, states the major assumptions, explains the significance of the undertaking, sets forth the sources for and methods of gathering information, analyzes the data, and offers a conclusion or recommendation. The finished product evidences originality, critical and independent thinking, appropriate organization and format, and thorough documentation. Normally, an oral defense of the thesis will be required.

A project is a significant undertaking appropriate to the fine and applied arts or to professional fields. It evidences originality and independent thinking, appropriate form and organization, and a rationale. It is described and summarized in a written abstract that includes the project's significance, objectives, methodology, and a conclusion or recommendation. An oral defense of the project may be required.

Students are responsible for understanding the definition of a graduate thesis as outlined above and must follow the format guidelines prescribed by the department in which the thesis is completed.

Thesis Committees

A student's thesis committee shall consist of at least three members qualified in the areas relating to the thesis. At least two shall be full-time faculty members at CSULB, one of whom must be tenured or tenure track. The chair of the thesis committee, including the chair of a committee for a special major, must be tenured or tenure track from a department authorized to offer a graduate degree. Normally the chair of the committee also serves as thesis director, but this is not necessarily so. The thesis director must be a person qualified in the specific area of the thesis, but need not be a tenured or tenure-track faculty member. The committee shall be responsible for the guidance of the student throughout the thesis effort. Any change in the composition of the committee requires justification and must be approved by the appropriate department graduate advisor and school dean or director of graduate studies.

Before agreeing to serve on a thesis committee, the prospective members shall review the thesis topic and determine that they possess the requisite expertise to serve on such a committee, and that sufficient resources and materials exist and are reasonably available to the student to support such a study.

Thesis committee members shall review the research competence of the thesis student before approving a thesis proposal.

Thesis committee members shall advise and direct students in their thesis work and ensure that the thesis meets the standards and definition of a thesis specified above.

Thesis committee members shall determine the grade to be awarded for completion of the thesis; and by signing the thesis signature page, thesis committee members certify that they have determined that the thesis meets required standards of scholarship, format, and style of the discipline.

When the thesis committee includes a thesis director who is not the chair of the committee, this person may be identified on the thesis approval page as "Thesis Director."

Thesis Committee Chairs

Thesis committee chairs shall determine that the student has the proper preparation in terms of course work and research skills to pursue the proposed thesis.

In departments where this function is not carried out by graduate advisors, thesis committee chairs shall advise the student in the selection of other members for the thesis committee, ensuring that the other members are appropriate to the proposed thesis effort.

Thesis committee chairs shall be the major contact point with the student and shall oversee the other committee members' work with the student.

Thesis committee chairs shall assume that the editorial and format standards appropriate to the mechanical preparation of a thesis are followed.

Thesis committee chairs shall establish guidelines for the student and timetables to be followed to ensure completion of the thesis in a reasonable time.

Thesis committee chairs shall arrange for the oral defense of the thesis when required.

The thesis committee chair is responsible for canvassing the committee and reporting the grade agreed upon by its members. After the completed thesis has been reviewed by the University thesis reviewer for conformance with prescribed format criteria and the approval page has been signed by the committee and by the dean, the final grade shall be submitted.

Thesis Reviewer

Students shall consult a University thesis reviewer for information, advice, and assistance on the mechanics of preparing a completed thesis. The thesis reviewer shall verify that each thesis meets the format criteria prescribed by the department or program and by the University, and that it meets all procedural requirements for theses of the University.

All theses must be acceptable for deposit in the University Library.

Academic Probation and Disqualification

Graduate Students

For purposes of determining eligibility to remain at the University, both quality of performance and progress toward the student's objective will be considered. Eligibility will be determined by use of grade points and grade point average.

Students who are enrolled in a graduate degree program in conditionally classified or classified standing will be subject to academic probation if they fail to maintain an overall grade point average of at least 3.0 in all units attempted subsequent to admission to the program.

Every graduate student who has been advanced to candidacy must maintain an overall grade point average of 3.0 and a grade point average of 3.0 in all courses applicable to the degree. Candidacy for an advanced degree may be revoked if a student's overall grade-point average falls below 3.0 at any time. Students who become subject to dismissal from an advanced degree program will be notified of the action taken by the school director of graduate studies or the Dean of Graduate Studies.

Graduate or post-baccalaureate students will be subject to disqualification if while on probation they fail to earn sufficient grade points to be removed from probationary status. Disqualification may be either from further registration in a particular program or from further enrollment at the campus as determined by the appropriate department and/or school.

Other Post-baccalaurate Students

An unclassified student who fails to maintain a cumulative grade-point average of 2.5 on all units attempted at the University will be placed on probation.

A student on probation who, prior to the beginning of the next fall term, fails to attain a cumulative grade-point average of 2.5 on all units attempted at the University will be disqualified. A student who at any time is reported to the Scholastic Standards Committee as deficient in scholastic achievement is subject to disqualification.

A student who is disqualified because of scholastic deficiency may petition the Scholastic Standards Committee for readmission only after an absence of two semesters or upon successful completion of summer session courses which remove the grade-point deficiency.

Petitions for readmission must indicate the reason for requesting readmission and must include a statement of any academic work successfully completed since disqualification or of any other activity which gives evidence in support of the petitioner's belief for readmittance. An application for admission and required transcripts, as well as the petition, must be submitted to the Office or Admissions before the dates established by the University for filing applications.

Grievance Procedures

The steps required in a grievance are available from the Office of Graduate Studies (SS/A 333).

Academic Credit

Credit/No Credit Grading

A graduate student may take courses at the 100/200/300/400 levels under the Credit/No Credit grading policy; however, no course in which a grade of "CR" has been assigned may be used to fulfill the requirements for a master's degree, except the grade of "CR" may be permitted for master's theses or projects to a maximum of six units when the individual department has specifically designated Credit/No Credit grading for the thesis/project course in the department and for field work, practicum, and/or internships courses (maximum of six units).

For graduate students, courses at the 30 D/400/500/600 levels require a "B" level proficiency to merit award of the "CR" grade; at the 100/200 levels a "C" level proficiency or better is required for award of the "CR" grade.

The option of Credit/No Credit grading for graduate students on 100/200/300/400 level courses is subject to specific regulations of the individual departments regarding their graduate students and regarding the authorization for this option intrinsic to the approved course. Otherwise, no limitation exists as to the number of courses taken under this policy.

Waiver of Course Requirement and Credit by Examination

No waiver of course requirements or credit by examination may be used to satisfy master's degree requirements. However, the following rules govern course waivers or credit by examination in satisfying prerequisites for admission to candidacy in any master's degree program.

Any candidate for a master's degree who believes that previous training has provided adequate preparation in a certain area may request a waiver by examination of a specific course prerequisite. Request for such waivers must be made to the department concerned and all such examinations must be approved by the department chair and graduate advisor.

A candidate may also apply for course credit by examination. Such course credit applies only to prerequisite courses and may not be used to satisfy any of the requirements for the master's degree. Requests for such examinations must be made to the department concerned and approved by the department chair. No more than 15 semester units of credit by examination will normally be permitted to satisfy such prerequisites.

All course credit by examination will be recorded as P (Pass) and will not be included in calculation of grade point averages; such credit may not be used to remove a grade of D or F in a course already attempted, nor may course credit by examination be granted for any course which is a prerequisite to one for which credit has been received. The grade of F will be included in the record of any student who requests an examination for course credit and then fails the examination. This grade may not be removed by subsequent examination for credit, and the course must be registered for and successfully completed if required as a prerequisite.

Examinations are interpreted broadly to include whatever activity, test or demonstration the instructor deems appropriate for evaluating understanding, skills, or knowledge required by the objectives of the course. Instructors currently teaching the course shall evaluate and ascribe credit. In semesters when the course is not offered, an instructor who has previously taught the course will assume this responsibility. A score of B or better is necessary to receive a P (Pass) grade, and all examinations for credit or waiver of a specific course prerequisite must be filed in the department or school and available to authorized personnel.

Credit by examination is restricted to courses published in the Bulletin.

Extension/Continuing Education and Correspondence Courses

At the option of the school or department offering an advanced degree a total of six units of approved extension/continuing education or transfer credit is acceptable on master's degree programs. Extension courses completed at campuses including California State University, Long Beach shall be acceptable within the six-unit transfer limit provided the work can be properly evaluated and the course is acceptable as graduate work for an equivalent graduate degree on the campus where taught. Extension/continuing education and transfer course material shall be evaluated and approved by CSULB faculty teaching in the topic area in conjunction with the department graduate advisor and school dean or director of graduate studies. Final approval/disapproval shall be the responsibility of the Dean of Graduate Studies.

Extension/continuing education credit may not be used to reduce the minimum units required in a discipline for a master's degree, nor may excess grade points earned in extension classes be used to offset a grade point shortage in the total graduate record.

Grades earned at another institution may not be used to offset grade point deficiencies in courses taken at this University. However, grades of C earned at another institution in courses transferred to satisfy subject matter requirements for an advanced degree at this institution must be balanced by grades of A at this University to meet the required 3.0 (B) overall average.

Credit earned by correspondence or by examination cannot be used to satisfy master's degree requirements.

Graduate Studies 700

Registration in Graduate Studies 700 (XGS-700) is restricted to graduate students who have completed all other course work and who have been advanced to candidacy, have departmental and school approval and require additional utilization of University facilities to complete their thesis or comprehensive examination. Although no unit credit is added to the student's degree program or transcript, the course is considered as one unit of concurrent enrollment credit for fee payment purposes. A student may not normally register for a third consecutive semester of XGS-700. Application forms are available from and must be signed by department graduate coordinators. Students must be familiar with the rules governing residency (see previous section on Advancement to Candidacy).

Academic Load

Twelve units per semester is a normal academic load for a full-time graduate student engaged in study toward a master's degree. If a candidate wishes to exceed this limit, it should be discussed with the departmental graduate advisor. The maximum load for graduate students working toward a master's degree is 16 units per semester. Students who are employed full-time should not exceed six units per semester.

Graduate students who wish to register for more than one unit of credit per week of attendance during the summer session must secure advance approval from the school dean or director of graduate studies. Petition forms and information may be obtained in the school offices.

Change of Objective

Evaluation of credits transferred to the University is based in part upon the objective indicated on the application for admission. Candidates desiring a change in graduate objective from that indicated on the original application must follow these procedures:

(1) obtain a Petition to Change Objective form in the Records Office;
(2) obtain the signatures of the faculty advisor, the graduate advisor and/or the chair of the department or dean of the school or designee in which registration will occur, and
(3) submit a graduate program in the new discipline.

Withdrawal from the Degree Program

Students who have been admitted to candidacy for an advanced degree and who complete no courses at this University within a calendar year will be withdrawn from the graduate program.

If a student wishes to resume graduate study after withdrawal, a petition for readmission to the graduate degree program must be filed in the department or school and be approved by the Dean of Graduate Studies.

The Graduate Dean's List of University Scholars and Artists

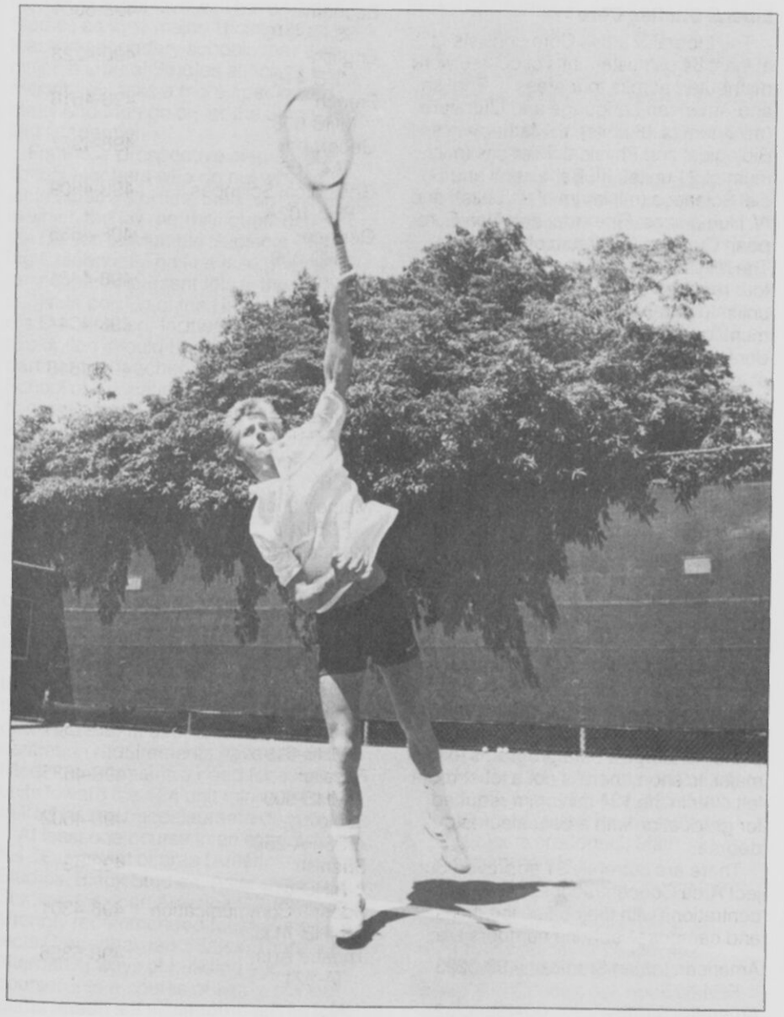
The Graduate Dean's List provides for University recognition of its most outstanding graduate students. Candidates for this honor will normally have completed the coursework applicable to their graduate programs at the University. The annual list is limited to one percent of the University's graduate enrollment. Those honored will be named in the Commencement Program and will receive a certificate from the Dean of Graduate Studies.

Departmental Graduate Student Honors

In recognition of outstanding graduate student achievements, departments may honor graduating master's degree candidates by special recognition in the annual commencement ceremonies. Departmental graduate student honors are reserved throughout the University to two students (or a maximum of ten percent) from a department. Departmental honors are noted on the students' transcripts. Departmental graduate student honors are usually restricted to students not otherwise recognized by University or school awards. These honors are normally conferred for excellence in and contributions to the discipline, including outstanding seminar papers, artistic exhibitions, special achievements in field work and in University committees and functions, as well as participation in scholarly and professional organizations resulting from student research.

University Programs

Office of the Associate Vice President for Academic Affairs



Acting Associate Vice President:
Keith Ian Polakoff
Assist to the Vice President:
Eunice M. Wood

University Programs is the administrative division of the University which contains academic programs that are interdisciplinary in nature. The Associate Vice President functions as Dean for these programs. These programs are:

The Liberal Studies Program, a broad program of liberal education appropriate for students wishing to teach in the primary schools or to expand their breadth of knowledge over many liberal arts and sciences disciplines.

The University Scholars Program which provides enriched instruction for students who wish to pursue studies leading to the General Honors Certificate, or Honors in the major as they complete the baccalaureate;

The Special Major Program which offers students an opportunity to devise unique bachelor's or master's degree programs in areas not specifically addressed by the regular departments and programs;

The Southern California Ocean Studies Consortium which coordinates teaching, research and community service in ocean studies.

The Experiential Learning Program, an academically related program of paid and volunteer internships and other work experiences off campus.

The Sports, Athletics, and Recreation Program provides opportunities for students to participate in major sports competition as well as in intermural athletic activities.

Liberal Studies

Director: Richard E. Porter
Program Office:
Library East, Room 106
Telephone: 498-4837

The Liberal Studies Degree Program at California State University, Long Beach has been designed for students who desire a broad, multi-dimensional college education. This liberal Education prepares one for life through an encounter with the challenging ideas and rich experiences which provide the skills, the wisdom, and the understanding to live well. This wisdom and understanding necessarily comes through a knowledge of the heritage of the modern world, through the study of its history, through an encounter with its art, literature, and sciences, and through the discovery of the ideas, values, and beliefs that have actuated human beings in the past and shaped the future.

Wisdom and understanding also require a familiarity with cultures and traditions different from one's own and the ability to perceive the world from perspectives wider than one's own. A liberal education also leads to a recognition of the myriad systems of social, political, and economic relationships that influence all humanity in the modern world. And, perhaps most importantly, a liberal education provides an inherent understanding of the moral and ethical dimensions of human life, the development of character, and ultimately an ability to make the difficult choices and decisions such understanding and character demand.

In addition to providing a broad liberal education, the Liberal Studies Program prepares one for a wider range of career opportunities, for entry into professional training, and for teaching or various other fields of public service. The program satisfies the State of California requirements for the Multiple Subjects (elementary school) Teaching Credential. This preparation is commonly referred to as the "Waiver Program" because it substitutes for the multiple subjects portion of the National Teachers Examination.

Bachelor of Arts in Liberal Studies

The Liberal Studies Major consists of two elements: The Liberal Studies Core and an approved Subject Area Concentration.

Liberal Studies Core

The Liberal Studies Core consists of at least 84 semester units of course work distributed across four areas: I. English and American Language and Literature (minimum of 18 units); II. Mathematics, Biological and Physical Sciences (minimum of 21 units); III. Behavioral and Social Sciences (minimum of 21 units); and IV. Humanities, Fine Arts, and Non-European Cultures (minimum of 21 units). The minimum requirements across the four required areas of study total 81 units. In order to meet the 84 unit minimum for the Liberal Studies Core, students must exceed the unit minimum in at least one of the four areas to obtain the necessary 84 units.

Subject Area Concentration

A Subject Area Concentration consists of at least 24 semester units of course work in one of the approved Liberal Studies disciplines. Of the Concentration, 15 units must be upper division course work, and no more than 12 units of the Concentration may overlap and be applied to the Liberal Studies Core. This means that Liberal Studies majors have to take from 12 to 24 units over and above the 84 unit core requirement to satisfy their major, and it means that they have to devote from 96 to 108 units of their undergraduate programs to their major. In short, there is not a lot of room left over in the 124 minimum required for graduation with a baccalaureate degree.

There are currently 31 approved Subject Area Concentrations. These Concentrations with their office locations and campus telephone numbers are:

American Indian Studies FO4-175	498-5293
American Studies FO2-207	498-4262
Anthropology PSY-145	498-5171
Art FA4-106	498-4376
Asian American Studies FO4-163	498-4821
Bilingual Spanish/English FO4-275	498-4644
Biology PH1-109	498-4806
Black Studies PSY-123	498-4624
Comparative Literature MHB-517	498-4239
Economics SS/PA-316	498-5061
English MHB-418	498-4223
French MHB-608	498-4618
Geography LA4-106	498-4977
Geological Sciences PH3-102A	498-4809
German MHB-809	498-4635
History FO2-104	498-4431
Human Development FO4-277	498-4344
Italian MHB-608	498-4618
Japanese FO4-163	498-4821
Latin American Studies PSY-141	498-5241
Mathematics FO5-205	498-4721
Mexican American Studies FO4-275	498-4644
Music MUC-306	498-4781
Philosophy MHB-917	498-4331
Psychology PSY-100	498-5001
Religious Studies MHB-619	498-5341
Russian MHB-809	498-4635
Sociology SS/PA-258	498-4602
Spanish MHB-819	498-4317
Speech Communication MHB-717	498-4301
Theatre Arts TA-221	498-5356

Not all departments in the liberal arts disciplines have worked out concentrations for Liberal Studies. Students interested in a field for which no concentration is presently offered may take the somewhat longer route of completing a major in that field of interest (usually requiring at least 30 units) as well as the 84 unit Liberal Studies Core. This would lead to graduation with a bachelor's degree in that department and a Liberal Studies Certificate. A second alternative would be to complete a Liberal Studies major with an approved Concentration and use elective units to take courses in the area of particular interest, perhaps completing a minor in that department.

NOTES FOR PROSPECTIVE ELEMENTARY SCHOOL TEACHERS

The program in Liberal Studies fulfills the State of California mandated nonprofessional, undergraduate preparation for the Multiple Subjects (elementary school) Teaching Credential. Most students planning to teach at the elementary school level will have Liberal Studies as their major. Those planning to teach in secondary schools may also major in Liberal Studies although the majority will take a more specialized major and then go on for the Single Subject Credential.

For those prospective elementary school teachers who do not wish to major in Liberal Studies, there are two ways in which the law permits qualification for the California Multiple Subjects Teaching Credential. The first is to pass an examination. At present this is the multiple subjects portion of the National Teachers Examination. Inquiries concerning this option should be made at the Department of Teacher Education in the School of Education. The second way is to complete the Liberal Studies Core on top of the requirements of the major. This will satisfy the requirements for the Liberal Studies Certificate which is recognized as the "Waiver Program" and which substitutes for the multiple subject portion of the National Teachers Examination.

Multiple Subjects Credential candidates should realize that the teaching methods courses required in their professional program will count as upper division courses if taken prior to graduation. It is recommended, however, that these courses be taken as an undergraduate only if, after all core and concentration requirements have been fulfilled, there remains a need for elective units toward the 124 unit minimum required for the baccalaureate degree.

At least one course in an ethnic studies department or area (American Indian Studies, Black Studies, Asian American Studies, Mexican American Studies) is strongly recommended for Multiple Subjects Credential candidates. There are alternative ways of building such courses into a course of study, but students should note that some ethnic studies courses are in effect social science courses and fit only in Area III; other ethnic studies courses are in effect art, drama, literature, or language courses and fit only in Area IV or Area I.

Multiple Subjects Credential candidates should also be aware that Speech Communication 335 and 352 may be used to satisfy the speech proficiency test prerequisite for acceptance into the Teacher Education Program. These courses can also satisfy the Liberal Studies Core requirements in Area 1, Group 2 and Group 4. Students taking one of these courses to satisfy the speech proficiency requirement must inform the instructor that they are doing so during the first week of the course. The speech proficiency requirements may also be met by signing up for a speech proficiency test at the University Testing Office. This route is recommended for students who have already taken a speech class in which speech proficiency testing is done and for students who have satisfied the General Education Requirement in oral communication.

Requirements for the Bachelor of Arts in Liberal Studies

CORE: A total of 84 units distributed as specified in Areas I, II, III and IV.

Area I: English and American Language and Literature (18-21 units)
- Group 1. ENGL 100 and ENGL 180 or 184
- Group 2. Choose at least one course from: B/ST 450; ENGL 101, 205, 206, 300, 310, 317, 405, 406, 407, 481, 482; SPCH 352
- Group 3. Choose at least one course from: ENGL 320 or 325*; ANTH 170; ENGL 420, 421, 423, 426; SPCH 448; COMM DIS 361; HUM 363IC
- *Credential candidates should take ENGL 320 or 325
- Group 4. Choose at least one course from: SPCH 130, 132, 210, 331, or 335.
- Group 5. Choose at least one course from: AIS 340, B/ST 140, ENGL 250A, 250B, 363, 370A, 370B, 385, 386, MEXA 205, R/ST 425IC, THEA 353.

Area II: Science and Mathematics (21-24 units)
- Group 1. Choose two courses from: MATH 103, 110*, 111, 112, 114, 115S, 116, 117, 122, 123. Math 110 is required for the multiple subjects credential; Math 111 is recommended.
- Group 2. a) Choose one course from: BIOL 200, 206, 212, 216
  b) Choose a second BIOL or MICR course, or GEOG 442; HUM 302IC; MICR 302IC
- Group 3.a) Choose one course from: CHEM 100, 111A, 200, GEOL 102 with 104 or 105, or GEOL 103 with 104 or 105, PHYS 100A, 104.
  b) Choose a second CHEM, PHYS, ASTR, or GEOL course; or GEOG 140, 440, 444; or NSCI 376IC
- Group 4. Remaining units toward the minimum of 21 selected from Biology, Chemistry, Geology, Mathematics, Astronomy, Microbiology, Physics, PHIL 270; SBS 250; ANTH 302; HDEV 250; C/ST 210; PSY 210; SOC 255; NSCI 381IC; PHYS 400 IC or HIST 400IC

Area III: Behavioral and Social Science (21-24 units)
- Group 1. Choose one course from: HIST 172, 173, 174, 300, or both 162A and 162B
- Group 2. Choose one course from: POSC 100, 391, (PSCI 326 is required of students who took their American Government course out-of-state).
- Group 3. Choose three courses, representing at least two departments, from: ANTH 100, 120; ECON 200, 201, 300, 368; GEOG 100, 160; POSC 201, 215; PSY 100, 150; SOC 100, 142
- Group 4. Choose one course from: HIST 131, 132, 151, 152, 162A, 162B
- Group 5. Remaining units toward the minimum of 21 selected from Anthropology, Economics, Geography, History, Political Science, Psychology, Sociology, or appropriate courses in Ethnic Studies areas, Human Development, Urban Studies, and Women's Studies or American Studies 350IC; or any other course approved for Category D.2 of General Education.

Area IV: Humanities, Fine Arts, and Non-European Cultures (21-24 units)
- Group 1. Choose one course from: ENGLE 200, HIST 201, PHIL 170, PSY 230, SPCH 131.
- Group 2. a) Art: Choose one course from Art 100, 110, 112A, 112B, 300, 302.
  b) Choose one course from: FREN 101A, 101B, 201A, 201B; GERM 101A, 101B, 201A, 201B; GK 221, 222; ITAL 101A, 101B, 201A, 201B; LAT 221, 222; RUSS 101A, 101B, 201A, 201B; SPAN 101A, 101B, 201A, 201B; ASAM 380; CLSC 370IC; PHIL 100, 110, 160, 203, 204, 305, 330, 351, 352, 360, 361, 381; R/ST 110, 331IC, 485
- Group 3. Choose two courses from: AIS 100, 101, 320; ANTH 321, 322, 323, 324, 331, 332, 336; ART 113A, 113B; A/ST 300IC, 495IC; B/ST 140, 160, 200, 337, 343; CHIN 370; C/LT 124, 234, 325, 403; HIST 180, 182, 382A, 382B, 383A, 383B, 385A, 385B, 491; MEXA 380, 420; MUS 490; PHIL 306, 307; R/ST 152, 331IC, 341, 343, 351; HIST-R/ST 481
- Group 4. Remaining units toward the minimum of 21 from ART, C/LT, MUS, PHIL, R/ST, Foreign Language, THEA, DANC; HIST 310IC

University Scholars Program

Director: Dr. Roberta Markman
Office: Library (East) Room 106
Phone: (213) 498-4706

The University Scholars Program exists to provide a selected group of qualified students with a unique educational experience. It unites the committed student and faculty member in a learning relationship in which each has the highest expectations of the other. The Program seeks to accomplish these goals in two ways: first, it broadens students' intellectual horizons by encouraging them to explore areas of thought not closely related to their major fields of study; and second, it allows students to work in their major fields in greater depth than would be possible in a conventional course pattern. The work of the first two years satisfies, in part, the University's General Education Requirements and is directed toward the first objective. The work of the Junior and Senior years, which includes independent study experiences and a senior thesis, is directed toward the second objective.

The University Scholars Program is designed so that students will not only master a substantial amount of knowledge, but will also develop the capacity for balanced intellectual judgment and the powers of abstraction and conceptualization. Students will be immersed in the learning process and therefore must have both the ability and willingness to do intense and often self-directed intellectual work as well as a desire to make the most of the opportunities available in the University.

Students who successfully complete the requirements of the University Scholars Program will receive a Certificate which marks the graduate as a person of intellectual accomplishment, one who has demonstrated a disciplined curiosity and dedication to the pursuit of knowledge.

Available within the University Scholars Program are three alternatives designed to meet the varying needs of students.

1. General Honors
2. Honors in the Major or in a Special (Interdisciplinary) Major.
3. A combination of the above for which both the course work prescribed for General Honors and the departmental requirements for Honors in the Major are successfully satisfied.

General Honors

General Honors is a special approach to the General Education Requirements of the University which enhances and builds on them. It is a program of carefully-selected courses and specially-designed, multi-disciplinary seminars from which a student chooses a minimum of 30 units, most of which are applied toward the 51 units of General Education courses required for graduation of all students. Those courses designated for General Honors credit encourage student participation on an academic level not generally possible in the usual curricular offering.

The objectives of General Honors within the University Scholars Program are:

to provide highly motivated students an exceptional educational opportunity to challenge and expand their intellectual capacities especially in terms of increased breadth and depth;

to deepen the students' intellectual experiences by stimulating and guiding their own curiosity;

to encourage freedom of initiative;

to provide an academic and cultural environment that inspires creative activity through close working relationships with distinguished faculty;

to advise students in their academic planning to meet the University's General Education requirements through a cohesive and unified program of study;

to prepare students to write an Honors Thesis which is a genuine contribution to human knowledge, a preparation for advanced study, and a demonstration that the student has acquired the intellectual confidence and academic independence that are indicative of the maturely educated person.

Admission Requirements for General Honors

There are three ways a student may qualify for General Honors in the University Scholars Program:.

By invitation: incoming students are invited to participate in General Honors on the basis of high School class standings, ACT composite score, and/or SAT scores. Normally, students should be in the upper ten percent of their high School classes, and have a composite ACT score of 26 or better, an SAT score of 1100, and a grade point average of 3.3 or better. However, if not all of these criteria are met, a combination of them may be evaluated in addition to a letter of recommendation and a personal interview with the Scholars Program Director.

By university achievement: Any student who maintains a 3.0 or better overall grade point average at California State University, Long Beach in 18 or more units of coursework is eligible to participate in General Honors with a letter of recommendation from one of her/his instructors and a personal interview with the Scholars Program Director. Students with a grade point average of 3 for above in 18 or more units at California State University, Long Beach normally, will be granted automatic acceptance into the Program upon application.

By petition: Students not meeting the designated criteria may petition for admission to General Honors. Students are required to submit letters of recommendation from two instructors familiar with their work (or in the case of incoming freshmen, from two high School teachers of their senior year). These exceptional cases will be reviewed by the Director and the University Scholars Council. Students are encouraged to petition if they have a good explanation for not meeting the basic requirements and/or a strong motivation to participate in the Program.

General Information

Transfer students may enter General Honors in any of these three ways provided they have a minimum equivalent of a 3.0 average of all course work at the accredited institution from which they are transferring. If a student is transferring with fewer than 18 college units, the high School record must also be submitted for evaluation.

Qualified students may enter General Honors as late as the junior year. A waiver of some of the required Honors credits (not more than 6) may be granted by the Director and the University Scholars Council.

Requirements for the Certificate in General Honors in the University Scholars Program

Every student electing General Honors in the University Scholars Program must complete all university-wide graduation requirements, and the requirements for a major. General Honors is itself not a major. A student becomes a University Scholar by fulfilling the following specified requirements:

a student must be enrolled as a member of the University Scholars Program for a minimum of four consecutive semesters and a minimum of 30 units taken specifically for Honors credit.

A student must maintain an overall GPA of 3.00 or better in Honors and in all University courses attempted.

Freshmen may earn not less than 2.5 their first semester, and must meet the 3.0 average by the end of their second semester to remain in the program.

Students will normally be withdrawn from General Honors who have failed to enroll in courses for Honors credit for two consecutive semesters.

A University Scholar who withdraws from the University during any semester will also be withdrawn from the program. The student may apply for readmission at the beginning of any semester he/she plans to enroll.

Students who attain a minimum GPA of 3.54 will graduate with "Distinction in the University Scholars Program."

A University Scholar who chooses General Honors would normally complete 30 units in the Program's offerings distributed as follows: 15 units of University Scholars Program courses which will serve partially to fulfill the University's General Education requirements. (These will be listed in the Schedule of Classes bulletin each semester under USP offerings.) In addition: USP 100 Angles of Vision (3); USP 200 Fireside Forum (1,1,1); USP 499 Synthesis (3); and at least one independent learning experience i.e. USP 496 Undergraduate Research Participation (3) or USP 497 Directed Studies (3) and USP Senior Thesis (3).

Honors in the Major

A few departments at California State University, Long Beach offer Honors programs for outstanding majors. These programs are designed for students admitted to the University Scholars Program who have indicated a particular desire to pursue Honors in the Major.

In consultation with a Departmental Honors Faculty Advisor, a University Scholar can plan an enriched course of study in an academic major. This opportunity for program flexibility makes it possible for a University Scholar to elect the most relevant, exciting and enriched experiences offered by the department. Although students will construct programs which satisfy standard requirements for the major, they also may choose alternative courses especially suited to their interests, needs and abilities. Such flexibility is as valuable to professional and pre-professional students as it is to those primarily interested in a liberal arts degree.

Program styles and requirements may vary; usually they entail independent study, seminar courses, high levels of performance, senior projects or theses culminating in a broad knowledge of subject matter. information concerning Honors in the Major is available in the University Scholars Program Office and in participating departmental offices.

Admission Requirements

Please contact the department office or the University Scholars Program Office for information regarding admission. Normally, a student must be a declared major with at least a sophomore (30 units) standing.

Requirements for the Certificate of Honors in the Major

1. Completion of the requirements for the major. (The approval of the department chair and the Departmental Faculty Honors Advisor must be obtained to change any of the general major requirements.)
2. Completion of 15 hours of courses in the major for which Honors credit has been designated, including: 12 units which may include 3 units of Honors Research participation or 3 units of Honors independent Study and 3 units of work for an Honors Project or Thesis or its equivalent.
3. Completion of the 3-unit capstone colloquium USP-499 Synthesis, as partial fulfillment of the University's requirement of 6 upper division interdisciplinary units (IC).
4. A minimum overall grade point average of 3.0 and of 3.3 in the major at graduation. Check with individual departments for special variations.
5. Students who have failed to enroll in courses for Honors credit for two consecutive semesters will normally be withdrawn from the program.
6. A University Scholar who withdraws from the University during any semester will also be withdrawn from the program. A student may apply for readmission at the beginning of any semester he/she plans to enroll.

Interdisciplinary Honors Majors

This alternative within Honors in the Major is open to students who have been admitted to full-time status in the University Scholars Program before their junior year. Course sequence leading to a major not routinely offered in the University may be arranged through the Special Majors Program. In some cases the student may design an interdisciplinary combination of courses to define a major area which could be unified by a chronological, geographical, or thematic rationale, or any other logical, pedagogically sound, and cohesive program of study.

A proposal for an interdisciplinary Honors Major should give careful consideration to adequate coverage of the modes of inquiry, methods, theoretical perspectives, research and literature, etc., from the disciplines within which the interdisciplinary theme is broadly cast. The interdisciplinary major is not a mechanism to achieve a double major.

After consultation with the Special Major Advisor and faculty willing to sponsor an interdisciplinary honors program, interested students should submit a written proposal to the Scholars Program Director at least two months before the pre-registration period for the second semester of the junior year. This will ensure that all proposals will be acted on in time for pre-registration. The proposal must contain the following five items:

1. The title of the interdisciplinary Honors Major,
2. A two- or three-page statement which includes:
   a) a definition of intended major and explanation of how it brings together the resources of two or more departments into a unified course of study.
   b) explanation for the validity of proposed major.
   c) description of the kind of synthesizing senior project under consideration.
   d) description of possible future plans once the major is completed.
3. A tentative list of all courses planned for completion of major.
4. A copy of all University transcripts.
5. Statements signed by advisors from two different departments in which they state they have read and approved the Special Major proposal. Final approval of interdisciplinary honors major resides with the university Scholars Program director and University Scholars Council.

Graduation Requirements

The General Education Requirements for the interdisciplinary Honors Major are the same as for the other major programs; however, in satisfying General Education Requirements, the student should whenever possible, choose those courses that are most appropriate as background for the courses in the major concentration. The grade point average and other requirements for the interdisciplinary Honors Major are the same as those for "Honors in the Major."

Combination General Honors and Honors in the Major

Students who qualify for General Honors and who enjoy the challenge of attending classes with other highly qualified and motivated students may wish to continue this unique experience into their work in the major field by applying for admission to Honors in the Major.

Courses (USP):

100. Angles of Vision (3) F,S

This course emphasizes the kind of analytical and critical approaches that lead to original and creative thinking. The course concentrates on the development of seminar skills: the open exchange of viewpoints in discussion, close reading of major texts, preparation of analytical essays and oral presentations, extensive examination of explicit models and techniques of reasoning, conceptualization of research problems, and writing a documented paper. This course will be taught by at least two instructors from two separate disciplines. The course will confer credit in General Education Category A.3. This course is required of all USP students.

200. Fireside Forum (1) F,S

Students in the program must take this course for a total of three units. Students meet with guests who lecture and lead discussion on topics of special interest. The course will confer credit in General Education Category E.

300. Junior Colloquium (3) F,S

Studies of selected interdisciplinary topics, problems or issues with a view toward integration of the areas of study involved in lower division courses.

496. Undergraduate Research Participation (3) ARR

Prerequisite: Permission of the Director of the program and the supervising faculty member. Students assist faculty in the conduct of research projects, participating in the development of experimental design and the accumulation and verification of evidence.

497. Directed Studies (3) ARR

Prerequisite: Permission of the Director of the program and the supervising faculty member. independent study under the supervision of a faculty member.

498. Senior Thesis (3) ARR

Prerequisite: Permission of the Director of the program. Presentation of a thesis proposal to the USP Governing Committee and, upon approval, writing and presentation of the thesis.

499. Synthesis (3) F,S

Prerequisite: Permission of the Director of the program. This "capstone" course is required of all USP students and is normally taken after completion of all other General Education requirements. The course is interdisciplinary and is concerned with the shaping of the modern mind. Consideration is given to how each of the participating disciplines impinges on an evolving conception of human nature and of the place of human beings in the universe. The course explores the sources of modern mentality in literature, philosophy, political science, as well as social economic, psychological, biological, and physical sciences. The course will confer General Education credit as one of the two required interdisciplinary Courses (IC) for USP students only. Credit may be taken in General Education Categories B., C., or D.2.

Special Major

(Interdisciplinary Studies)

Director: Kristi S. Jones
Office: Library (East) 106
Phone: 498-4837

Special Major for the Bachelor of Arts Degree (code 2-0405)

The special major for the bachelor of arts degree allows selected students to engage in an individualized baccalaureate program when legitimate academic and/or professional goals cannot be accommodated by existing academic programs or combinations of such programs (i.e. majors, minors, certificates). The special major consists of a closely correlated program of study in two or more departments developed in conference with faculty members from the respective departments who have the academic and professional expertise necessary to support the individualized course of study.

The special major is not a means of bypassing normal graduation requirements nor a means by which students may seek to graduate who have failed to gain admission to impacted programs or to complete a degree major in which they are currently enrolled. Consequently, a candidate must apply for approval of a special major when:

1) At least one full year of academic work (30 units) remains to be completed to meet minimum graduation requirements;
2) At least 2/3 of the upper division (300-400) units in the proposed course of study remain to be completed at the time the application is submitted for approval.

A special major program must be justified by legitimate career, academic and/or professional goals commensurate with the broader mission of the University in baccalaureate education. Special majors are considered on a case by case basis. Approval is determined on the basis of the academic merit of the proposed course of study, the proposal rationale, the applicant's potential for successful completion of the program and on the ability of the University to support the proposed program. Students should be aware that while this unique major may suit individual goals and be personally valuable and enriching, the special major degree may not be acceptable as preparation for higher degrees nor as adequate preparation for various professions and careers. Goals should be carefully reviewed before proceeding with a special major.

Procedures

1. Prepare a written statement:
   a. Identifying the kind of interdisciplinary course of study you seek and your reasons for seeking it in terms of your academic and professional goals;
   b. Explaining why these cannot be met through an existing major combined with other academic programs such as minors and/or certificate programs,and
   c. Listing the courses at CSULB appropriate to your goals.
2. Present your written statement for initial review to the Special Major Director from whom guidelines, recommendations and forms necessary for the following steps may be obtained if the proposal is determined to be promising.
3. Seek out a faculty advisor from each discipline in which substantive course work will be undertaken. These faculty must have the expertise appropriate to the interdisciplinary study you propose, must find merit in your proposal, must agree to meet together with you and all other faculty advisors to develop a program of study and must agree to continue to act as your program advisors.
4. Arrange a meeting of the faculty advisors for the purpose of developing the list of specific courses that will constitute the special major degree program. Any modification of this program after it has been officially approved by the Special Major Director requires the concurrence of all faculty advisors and must be the result of consultation with them, usually at an advisory meeting. Faculty advisors sign the official Special Major Program form and any subsequent Program Addendum forms.
5. Submit the Special Major Program, signed by the faculty advisors, to the departmental chairs of each department in which substantive work is projected. Their signatures on your program form indicate they have reviewed its contents, approved the proposed program and are granting you the same priority status for enrollment in courses in their departments as that accorded departmental majors.
6. Return your program with all signatures to the Special Major Director along with your typed special major proposal and transcripts from all Schools attended, including a current set of transcripts from CSULB. Completed programs must be approved by the Special Major Director and will be filed in the Academic Advising Center and the Records Office. Be advised that pending final approval of your special major program you proceed with projected course work at your own risk.

Requirements

1. A special major consists of a maximum of 12 units of 100-200 level courses (lower division) and a minimum of 24 units of 300-400 (upper division) courses. The interdisciplinary nature of the special major, however, usually requires a total of 48 units, with 36 units at the upper division.
2. A minimum of 12 upper division units shall be taken in each of two disciplines (departments) of the interdisciplinary program. Exceptions to this requirement may be made only in cases where an interdisciplinary program is based on a thematically cohesive core of classes involving significant work in more than two disciplines. A rationale for such exceptions must accompany the program and be signed by the faculty advisors when the program is submitted to the Special Major Director for approval.
3. Courses taken to satisfy General Education requirements, while they may relate to the special major program, may not be used to meet special major unit requirements.

Master of Arts Degree (code 5-0405) and Master of Science Degree (code 6-0405) in a Special Major

The Master of Arts or Master of Science degree in a Special Major permits students to earn an interdisciplinary master's degree when their special

needs or interests cannot substantially be met by any existing CSULB graduate degree program. The special major master's degree is not a degree divided between or among disciplines, but is a cohesive program of studies which integrates the methodologies, perspectives and content of two or more disciplines. A special major master's degree must be justified by legitimate academic goals.

Acceptance of an applicant to a special major master's program is based on the academic merit and rationale of the proposed course of study, the applicant's potential for successful completion of a master's program and the ability of the University to support the proposed study with faculty, curricula and facilities. Applicants should be aware that a master's degree in a special major, although personally valuable, may not be acceptable as a preparation for a higher degree nor as adequate preparation for various professions and careers. Candidates should carefully assess goals before proceeding with this degree. The degree program is administered by the Dean of Graduate Studies through the office of the Special Major Director, Academic Advising Center, Library East-106.

Prerequisites

1. A bachelor's degree from an accredited college or university.
2. A minimum of 24 upper division units (i.e., CSULB 300-400 courses or their equivalent at another institution) of preparatory course work related to the disciplines in which graduate program work is projected. An interdisciplinary master's program requires demonstration of potential for success in each of the disciplines relevant to the proposed degree work. The purpose of prerequisites course work is, therefore, both to prepare applicants for advanced study and to demonstrate their aptitude for it.

   Applicants should be aware that 24 units is a minimum and that the individual's graduate advisory committee may determine that additional preparatory work in one or more disciplines is necessary to support the advanced degree proposal. An individual's graduate advisory committee determines the appropriate prerequisite courses: these are listed on the Prerequisite Sheet that accompanies the Application for a Master's Degree in a Special Major.
3. A 3.0 grade point average (on a 4 point system) in the last 60 units of upper division and/or graduate course work completed at an accredited college or university and a 3.0 grade point average in all prerequisite course work listed on the Prerequisite Sheet (see item 2 above).
4. No more than 9 units of program course work completed at the time the program and attendant application materials are submitted to the Special Major Director for approval.

Acceptance to the Program

Those students who meet all program and University prerequisites for graduate study and whose special major master's programs have been approved by the Special Major Director will be admitted as Classified graduate students in the Special Major program. Students who have not met all program and University prerequisites but who demonstrate potential for their immediate and successful completion may be accepted as Conditionally Classified graduate students in the Special Major program. Conditionally Classified graduate students will be closely monitored and those making no progress toward completion of prerequisites will be declassified.

Procedures

1. Prepare a typewritten Statement of Purpose:
   a) Clearly identifying the interdisciplinary program of study in which you wish to engage by title (i.e., Special Master's Degree in [30 space limit]) and description;
   b) explaining why this course of study cannot be pursued within one department with electives from other departments;
   c) explaining how this program relates to your educational and career goals;
   d) indicating your background, both academic and experiential, for undertaking this study; and
   e) listing the CSULB courses appropriate to your goals,
2. Make an appointment to meet with the Special Major Director in the Academic Advising Center, Library East-106; bring your Statement of Purpose for initial review and consultation. If the proposal is found promising and University facilities can support the proposed program of study, the Special Major Director will provide you with the forms and guidelines necessary to proceed with application to the program as outlined in item 3 below. Additional procedures are identified in a Handbook for the Special Major Master of Arts and Master of Science Degrees, available from the Special Major Director.
3. To complete your application for acceptance to a Special Major Master's program:
   a) Secure the agreement of faculty in the disciplines related to your proposed special program to serve as members of your Special Major Graduate Committee. This committee must consist of no less than three tenured/tenure track, full-time faculty members at CSULB. The chair of the committee must be a member of a department approved to grant a graduate degree.
   b) Convene a meeting of your Special Major Graduate Committee. At this meeting your committee will: review your documents (i.e., transcripts from all institutions attended, your Statement of Purpose, etc.); identify the appropriate preparatory course work, completed or to be completed (see item 2. under Prerequisites above), to list on the Prerequisite Check Sheet for the Master's Degree in a Special Major; apprise you of any unique guidelines or requirements of the degree-issuing department; and develop with you the academically sound program of graduate study related to your Statement of Purpose and to be identified on the Student Program for the Master's Degree in a Special Major.
   c) Secure signatures on your Student Program for the Master's Degree in a Special Major from the following: your Special Major Graduate Committee; the Graduate Advisor or Chair of the committee chair's department; the Dean or designee (i.e. the Director of Graduate Studies or the Associate Dean) of the committee chair's School.
   d) Submit the Statement of Purpose, the Prerequisite Check Sheet for the Master's Degree in a Special Major, the Student Program for the Master's Degree in a Special Major and copies of transcripts from all institutions attended, including a current transcript from CSULB, to the Special Major Director. These materials constitute the Application for a Master's Degree in a Special Major. These materials are reviewed by the Special Major Director whose signature on the Student Program for the Master's Degree in a Special Major signals acceptance of an applicant to the program in either a Classified or Conditionally Classified capacity. Subsequent modification of an approved Student Program requires approval of the Special Major Graduate Committee and the Special Major Director on an official Change of Program form to be obtained from the Special Major Director.

Advancement to Candidacy

Advancement to candidacy comes with the approval of the Dean of Graduate Studies of the Student Program for the Master's Degree in a Special Major. Graduate students are apprised of their advancement or failure to be advanced by the Dean of Graduate Studies. Any modifications to the Student Program after advancement to candidacy requires the approval of the Special Major Graduate Committee, the Special Major Director and the Dean of Graduate Studies on an official Change of Program form to be obtained from the Special Major Director.

The Special Major Director will submit a Special Major graduate student's program for advancement to candidacy when the following conditions apply:

1. Classified status (i.e., prior acceptance to the Special Major Program).
2. Successful completion of the University Writing Proficiency Exam (WPE).
3. Satisfactory completion of all prerequisite course work with a minimum 3.0 grade point average (see item 3 in Prerequisites above) as well as any additional prerequisites (i.e., departmental qualifying exams).
4. Completion of a minimum of six units of graduate level (500-600) program work with a 3.0 grade point average.
5. Approval by the Special Major Director of the completed Application for Thesis and Committee Form for thesis option programs.
6. Resolution of all incomplete grades (I) on the record.
7. A cumulative 3.0 grade point average in all completed program work.
8. Current enrollment in University course work.

Requirements for the Master of Arts

Requirements for the Master of Arts in a Special Major are as follows:

1. No less than 30 units of graduate (500-600) and upper division undergraduate (300-400) course work. (The unique nature of an interdisciplinary program of study may require more than the minimum number of course units in order to assure academic integrity. Special Major Master's degree programs frequently total 38 or more units.)
   a) No less than 18 units shall be at the 500-600 level. These must be done in residence at CSULB Extension 500- 600 level courses are not acceptable on the Special Major graduate program .
   b) No less than 15 units shall be completed within a primary department. The primary department is normally the degree-issuing department.
   c) No more than six units in any one or combination of:
      1) Approved CSULB extension. (No extension class credit earned at another institution may be used to satisfy degree requirements nor may extension credit be used to offset a grade point deficiency in the graduate program.);
      2) Transfer credit. (Transfer credit units may not be used to fulfill the requirement for 18 units at the 500- 600-level.)
   d) No more than three units of independent study in addition to Thesis on a minimum 30 unit program . Exceptions to this regulation are as follows:
      1) Up to six units of independent study in addition to Thesis may be permitted in a minimum 30 unit program when the projected studies are not to be taken in the same department; when the focus of each projected independent study is clearly distinct from the other (as evidenced on the independent Study Agreement Forms to be submitted with all other materials constituting the Application for a Master's Degree in a Special Major, see item 3 under Acceptance Procedures above), and when each independent study is justified by the student's graduate committee as programmatically essential.
      2) In excess of six units of independent study in addition to Thesis may be permitted only in cases when a Special Major graduate program exceeds the minimum 30 units; when the focus of each projected study is clearly distinct from any others (as evidenced on the independent Study Forms as identified in 1.d. [1] above); and when each study is justified by the student's graduate committee as programmatically essential. Programs with more than six units of independent study will be referred to the Special Major Advisory Board for final approval.
2. Successful completion of a Thesis or Comprehensive Exam. The selection of the Thesis or Comprehensive option will be made by the Special Major Graduate Committee in consultation with the student at the time the program is developed (see item 3 under Acceptance Procedures above). Students electing to write a thesis must enroll for thesis credit in the department of the Graduate Committee Chair.
3. All requirements of the degree program must be completed within seven years of the date when the program was initiated (i.e., no course on the program at the time of graduation may be more than seven years old).
4. A favorable vote of the faculty of the primary department, the Thesis or Comprehensive Chair, and the Graduate Advisors in the departments represented on the student's Special Major Graduate Committee.

Requirements for the Master of Science

The requirements for the Master of Science in a Special Major shall be the same as the Master of Arts degree in a Special Major with the following exception: a thesis in the primary department is required.

The Southern California Ocean Studies Consortium

Director: Dr. Murray D.Dailey
Location: SCOSC, Peterson Hall 1, Room 217
Telephone: 498-5343

The Southern California Ocean Studies Consortium was created in 1972 to coordinate teaching, research and community service in ocean studies on member campuses. Members include Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, and Pomona. The Consortium does not offer degrees, but it serves as an administrative liaison to facilitate degree programs offered on member campuses.

The Consortium operates an 80' research vessel for teaching and research purposes, obtains research grants and contracts, performs research and is responsible for curriculum planning and facilities acquisition. Presently the Consortium serves 14 departments across six campuses.

The courses and research in which the Consortium is active reflect the broad applied approach of interdisciplinary, mission oriented projects in harbors and the coastal zone.

Courses (OSS): Upper Division

412. Ocean Science Workshop (3) SS Faculty

The physical, chemical and geological properties, the biological and engineering characteristics and problems involved in the Southern California Bight with emphasis on the Santa Monica and San Pedro basins. May be repeated for credit to a maximum of six units. (Lecture 2 hours, laboratory 3 hours.)

490. Special Topics in Ocean Studies (1-3) F,S,SS,EXED Faculty

Prerequisite: Consent of instructor. Topics from selected areas of Ocean Studies. Course content will vary from section to section. May be repeated for credit with the consent of instructor. Maximum credit for OSS 490 and/or 490L limited to six units. Topics to be announced in the Schedule of Classis. (Lecture.)

490L. Laboratory in Special Topics in Ocean Studies (1-3) F,S,SS,EXED Faculty

Prerequisite: Consent of instructor. Topics from selected areas of Ocean Studies. Course content will vary from section to section. May be repeated for credit with the consent of instructor. Maximum credit for OSS 490 and/or 490L limited to six units. Topics to be announced in the Schedule of Classes. (Laboratory 3-9 hours.)

496. Special Problems in Ocean Studies (1-3) F,S,SS Faculty

Prerequisite: Consent of director. Research in a specific aspect of biology, water quality, geology, microbiology or ocean engineering. This course is designed to allow students working on specific topics access to additional material through utilization of the research vessel Nautilus. Individuals using the vessel would do so as a guest of the crew's leader on a regularly scheduled trip. May be repeated to a maximum of three units.

Experiential Learning

Director: Wade Hawley
Assistant Director: Ruby Leavell-Hartley
Office: Union 110
Phone: (213) 498-5395

Experiential Learning Center

The Experiential Learning Center serves as the link between the University's academic programs and those public and private agencies interested in the Educational Participation in Communities (EPIC) program, the Cooperative Education program, and the Summer internship program. These programs have been designed to offer currently enrolled students academic credit for participating in certain volunteer or paid supervised work experiences. Department based internships are also available in selected academic majors. The interaction between the academic environment and work environment assists students in the application of theoretical principles and practices to the work setting, self- assessment of the capabilities, clarification of values and the exploration of career goals.

The four programs offered in the Experiential Learning Center (ELC) are designed to assist students in gaining a deeper understanding of the relationship between theory and practical application through on-the job experience with professionals in the field. The programs provide an organized plan utilizing seminars and carefully selected internships which together enhance the total education of students. Learning contracts are required in all ELC programs to insure systematic planning, thorough preparation and careful documentation of all internships. Students who take the initiative by designing their own field experience placements may qualify for enrollment in an internship program with prior approval through the ELC.

A complementary pair of advisory boards, one representing professional persons from the community and the other composed of faculty members, provide guidance and recommendations for the design and implementation of the ELC programs.

Educational Participation in Communities (EPLC)

The Educational Participation in Communities (EPIC) program provides volunteer opportunities for students who wish to participate in career related field experiences which are complementary to their classroom study. Students may volunteer from three to nine hours per week for at least one semester in areas such as: Medicine, Law, Government, Probation, Education, Recreation. Both lower and upper division experience courses are available.

Cooperative Education (CO-OP)

The Cooperative Education program (CO-OP) offers students a paid work experience in vocational, educational, or cultural activities with successful professionals in the field. Students may choose from two Cooperative Education plans. In one plan, the student alternates full time work experience with full time study; on the other, the student works part-time and attends the University part-time, simultaneously. Both lower and upper division experience courses are available.

International Cooperative Education

The international Cooperative Education program offers students the opportunity to work overseas. Depending upon the country of choice, knowledge of a foreign language may be required.

Summer Internships

The Summer internship program offers students the opportunity to gain career or academic related experience during the summer period. Summer placements are paid, full-time positions and are available locally or nationally to all majors.

Curriculum (ELC):

Lower Division

297. ELC Field Experience (l-3) F,S Faculty

Prerequisites: Minimum of sophomore standing and consent of instructor. Students qualifying are placed in agencies and organizations to engage in volunteer or paid work while enrolled in this seminar course focused on development of: (1) values, (2) skills, (3) knowledge, and (4) critical thinking. Through a series of seminars, selected learning objectives will be formulated and written reports will be assigned to foster integration of university course work and community experience. Three hours volunteer or ten hours paid experience per week will be required for one unit of credit.) May be repeated to a maximum of six (8) units.

Upper Division

492A. EPIC Field Experience (1-3) F,S Faculty

Prerequisites: Upper division standing and consent of instructor. Students qualifying can be placed in a major or career-related volunteer assignment in private industry or public agencies. An organized plan utilizing a series of seminars and learning agreements is required, accompanied by selected assignments. CR/NC only. (Three hours volunteer experience per week, per semester for one unit of credit.) May be repeated to a maximum of six units.

492B. CO-OP Field Experience (1-3) F,S Faculty

Prerequisites: Upper division standing and consent of instructor. Students who qualify can be placed in a major or career-related, community-based, pre-professional experience as an employee in private industry or in public agencies. An organized plan utilizing a series of seminars and learning agreements is required, accompanied by selected assignments. CR/NC only. Ten hours paid experience per week, per semester for one unit of credit.) May be repeated to a maximum of eight units.

The 492A/B courses are offered in the Schools of Humanities, Natural Sciences, and Education. Check the Schedule of Classes for other 492A/B. School or department offerings.

Sports, Athletics and Recreation

The University sponsors a complete athletic program. The Department of Sports, Athletics and Recreation is the administrative unit responsible for the intercollegiate athletic programs, the intramural program, the supervision of club sport activities, and physical recreation for students, faculty and staff.

The department sponsors a diverse program of intercollegiate athletics for men and women. Both programs compete under the rules of the N.C.A.A. (National Collegiate Athletic Association) and the P.C.A.A. (Pacific Coast Athletic Association), maintaining membership in both organizations. Women's varsity sports are basketball, golf, cross country, gymnastics, swimming and diving, tennis, track and field, volleyball, soccer and softball. Men's varsity sports are football, basketball, baseball, track and field, cross country, water polo, swimming and diving, volleyball, golf and tennis.

The intramural program offers all students the opportunity to play in a wide range of sports and activities. The program includes 45 different activities. The participants may select one or more of the activities offered from the regular schedule.

Team activities are scheduled at varied times. League competition is available in 16 of the activities for men, women and coeducational participation at the advanced, intermediate and novice skill levels. An increase in coeducational activities has been a major accomplishment of the department.

Students may participate in 12 club sport activities sponsored by the Associated Students and administered through the S.A.R. department. These sports are crew, rugby, archery, badminton, fencing, men's gymnastics, sailing, kodahan judo, men's soccer, snow ski, surfing and water ski.

Students may apply as many as eight semester units of lower-division SAR courses toward the baccalaureate degree within the 20 unit maximum on activity units generally, except that the combined total of lower-division SAR and P ED activity units must not exceed 12 units.

Courses (SAR):

200. Intramural Activities (1) F,S Faculty

Enrollment open to all students. Participation in competitive intramural activities. A minimum of 30 hours of participation per semester is required to receive credit. May be repeated for credit.

201. Intercollegiate Team Sports (1) F,S Faculty

Enrollment subject to approval of the coach of the sport in season. Athletes enrolled in SAR 201 for credit who fail to qualify for the squad must withdraw from the course. (a) baseball, (b) basketball, (f) football, (j) swimming, (m) track and field, (n) volleyball, (s) softball.

202. Intercollegiate Sports (1) F,S Faculty

Variety of team, individual and dual sports are offered. Enrollment subject to the approval of the coach of the sport in season. Athletes enrolled in SAR 202 for credit who fail to qualify for the squad must withdraw from the course. (b) basketball, (c) crew, (d) cross country, (g) golf, (h) gymnastics, (i) spring football, (j) swimming, (k) tennis, (m) track and field, (n) volleyball, (o) water polo, (q) soccer, (s) softball.

203. Coeducational Intercollegiate Sports (1) F,S Faculty

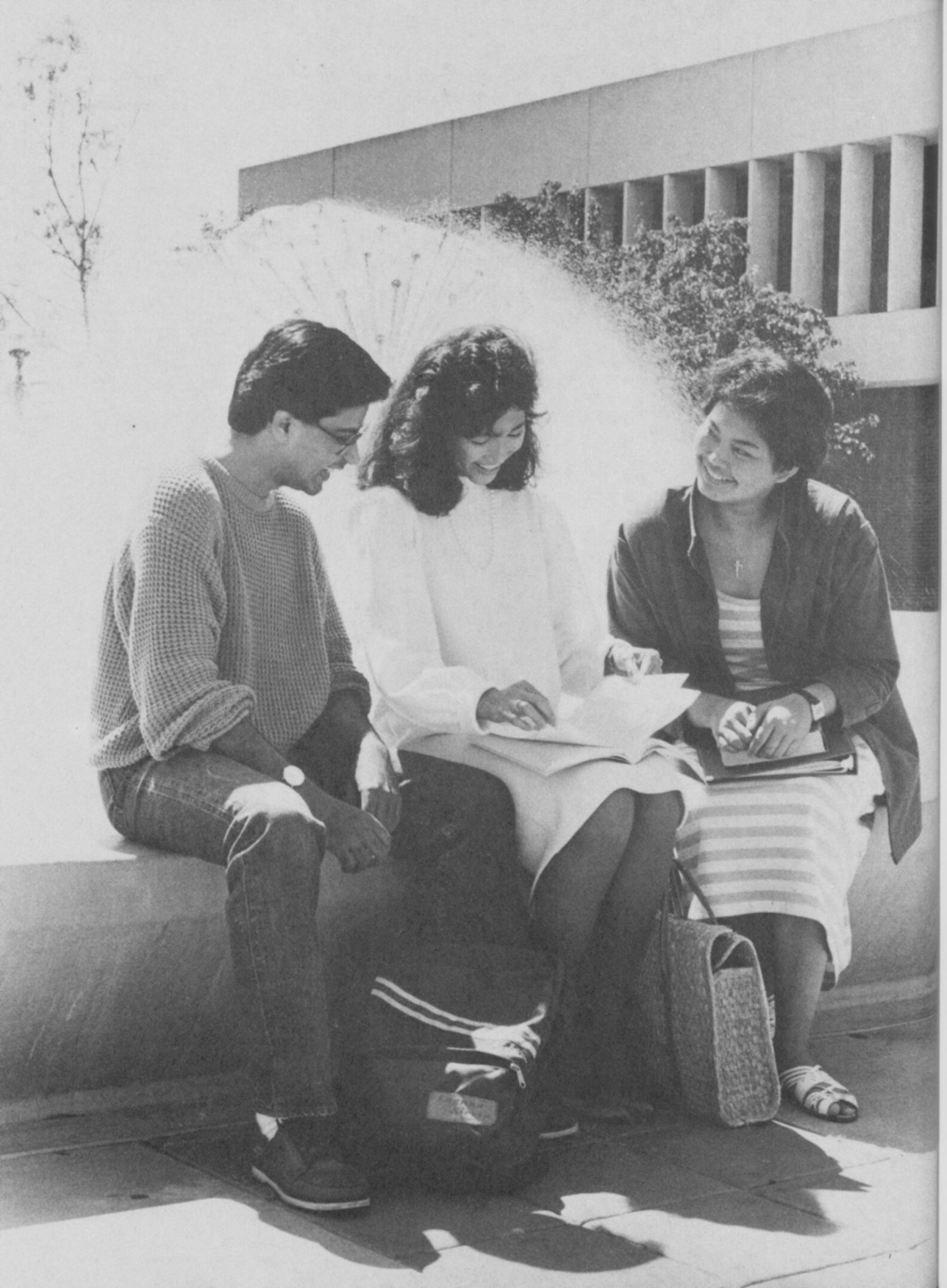
Variety of individual and dual sports are offered. Enrollment is subject to the approval of the faculty member coaching the sport. (a) archery, (b) badminton, (c) fencing.

318. Theory and Practice of Intercollegiate Major Sports (3) F,S Coaching Staff

Prerequisites: Two years of competition at the college level, approval of the coach of the major sport in season. Concentrated study in the field of interest with emphasis on skill, strategy, tactics, rules, officiating and organizational and administrative procedures. A student may not repeat this course in the same intercollegiate sport but may repeat the course in a different intercollegiate major sport. Student may not be enrolled in SAR 201 concurrently. Those enrolled in SAR 318 who fail to qualify for the squad must withdraw from the course. Men's major intercollegiate sports include baseball, basketball, football, track and field. Women's major intercollegiate sports include basketball, track and field, softball and volleyball.

319. Theory and Practice of Intercollegiate Minor Sports (2) F,S Coaching Staff

Prerequisites: Two years of competition at the college level, approval of the coach of the minor sport in season. Concentrated study in the field of interest with emphasis on skill, strategy, tactics, rules, officiating and organization and administrative procedures. A student may not repeat this course in the same intercollegiate minor sport, but may repeat the course in a different intercollegiate sport. Student may not be enrolled in SAR 202 concurrently. Those enrolled in SAR 319 who fail to qualify for the squad must withdraw from the course. Men's intercollegiate minor sports include cross country, golf, swimming and diving, tennis, volleyball and water polo. Women's intercollegiate minor sports include golf, tennis, gymnastics, swimming and diving, soccer and cross country. Coed intercollegiate minor sports include fencing.



Center for International Education

Dean: Maurice Harari
Director — International Student Services and Study Abroad: Edward Blankenship
Director — International Admissions: George LaDue
Director — American Language Institute: Karen Fox
Associate Director for Student Abroad Services: Larry Pitman
Coordinator, Global Education Program: Elaine Haglund
Administrative Officer: Ken Schilling
Assistant to the Dean: Denysia P. Watilo
Editorial Assistant: Karen V. Hay

Mission and Program

The Center for International Education is a division of Academic Affairs. Its mission is to stimulate, develop and administer programs and services in the international area. These programs are designed to extend and deepen the international training, research and public service functions of CSULB.

The program priorities of the Center for International Education are as follows:

to strengthen the internationalization of the curriculum, involving the participation of all the University's schools. Interdisciplinary courses have been developed to further this goal. The infusion of existing courses with comparative approaches and non-western materials is being encouraged as well as the introduction of a number of issue- oriented international courses and several international studies majors;

to render all services relating to the admission, counseling, academic life and success of international students attending CSULB;

to develop selective international educational linkages with institutions in other countries;

to cooperate with the Long Beach community, especially the local schools and the Long Beach business community;

to administer a high quality American Language Institute;

to assist CSULB students and faculty in participating in overseas opportunities;

to administer a Pacific Rim Institute in conjunction with the Long Beach business community and the local schools.

International Admissions

The International Admissions component of the Center for International Education assists academically eligible international students to apply for admission to the University, and advises them of CSULB's financial, immigration and English language requirements. Throughout the students' attendance, International Admissions is involved in their registration, evaluation of transfer credit, changes of majors, and graduation checks. Students are also counseled regarding their field of study requirements, which vary at both the undergraduate and graduate levels. International Admissions coordinates closely with the American Language Institute, International Student Services, Student Abroad Services, administrators, and faculty to support students in pursuing their educational objectives.

International Student Services

Over 1,700 non-immigrant students, representing some 110 countries, attend CSULB. The primary mission of International Student Services (ISS), a component of the Center for International Education, is to assist these students with their academic, personal and cultural growth and development during their years at CSULB. This mission is accomplished through professional counseling and advising; assistance with Immigration and Naturalization Service (INS) regulations, paperwork processing, and documentation; student orientations; and registration and clearance. The ISS staff also serves as the University liaison with consulates, embassies, businesses, foundations, and community organizations concerning international students and faculty at CSULB.

In addition, the ISS staff works with international students, faculty, and members of the community to design international programs. International students are encouraged to participate in all University and community programs. During the academic year, ISS staff work with the International Students Commission and the International Community Council of Long Beach to plan and organize cross-cultural events such as the Annual International Dinner and Culture Show, International Faire, and other major events. ISS staff also serve as faculty liaisons with student nationality clubs on campus. These organizations add a special dimension to student life on campus by hosting various cultural events and providing leadership training opportunities for their members.

International Student Courses

The Center for International Education encourages visa-bearing international students to enroll in special courses in American culture and institutions, designed especially those with no prior background in these subjects. Foreign Students 205A-B meet the University's general education requirements in United States history, government and Constitution. Permission to register for these courses is granted by the History and Political Science Departments.

For admission requirements, including Test of English as a Foreign Language (TOEFL), see section on admission.

205A. Introduction to America: Its History and People (3) Fall
(Limited to international students visa students intending to return to their homeland upon graduation.) Examination of the people, institutions, circumstances and events in American history that have shaped contemporary conditions in the U.S.

205B. Introduction to America: Its Constitution and Government (3) Spring
(Limited to international visa students intending to return to their homeland upon graduation.) Examination of the United States Constitution and of the political institutions and processes that have developed under it.

Student Abroad Services

In addition to the CSU International Programs, the campus has developed exchange programs with outstanding universities in many parts of the world through through Center for International Education cooperative linkage agreements. These agreements allow students to study at universities in a number of countries including Australia, Egypt, France, Germany, Jordan, Korea, Mexico, People's Republic of China, Switzerland, Taiwan, and Thailand.

Overseas Study Program — CSU System

The California State University (CSU) International Programs offers students the opportunity to continue their studies overseas for a full academic year while they remain enrolled at their home CSU campus. The International Programs' primary purposes are to enable selected students to gain a firsthand understanding of other areas of the world and to advance their knowledge and skills within specific aademic disciplines in pursuit of established degree objectives.

A wide variety of academic majors may be accommodated by the 25 foreign universities cooperating with the International Programs in 15 countries around the globe. The affiliated institutions are: the University of Sao Paulo (Brazil); the Universities of the Province of Quebec (Canada); the University of Copenhagen (through Denmark's International Students Committee's Study Division) the University of Provence (France); the Universities of Hamburg, Heidelberg, and Tubingen (Germany); the Hebrew University of Jerusalem (Israel); the University of Florence (Italy); Waseda University (Japan); the Iberoamericana University (Mexico); Massey University and Lincoln University College (New Zealand); the Catholic University of Lima (Peru); National Chengchi University, Taiwan, Republic of China; the Universities of Granada and Madrid (Spain); the University of Uppsala (Sweden); and Bradford and Bristol Universities (the United Kingdom). Information on academic course offerings is available in the International Programs Bulletin which may obtained from the Office of Student Abroad Services, Center for International Education.

Eligibility for application is limited to those students who will have upper division or graduate standing at a CSU campus by the time of departure, who possess a cumulative grade point average of 2.75 or 3.00, depending on the program, for all college level work completed at the time of application, and who will have completed required language or other preparatory study where applicable. Selection is competitive and is based on home campus recommendations and the applicant's academic record. Final selection is made by the CSU Office of International Progams in consultation with a statewide faculty selection committee.

The CSU International Programs supports all tuition and administrative costs overseas for each of its participants to the same extent that such funds would be expended to support similar costs in California. Students assume responsibility for all personal costs, such as transportation, room and board, and living expenses, as well as for home campus fees. Because they remain enrolled at their home CSU campus while studying overseas, International Programs students earn full residence credit for all academic work completed while abroad and remain eligible to receive any form of financial aid (other than work study) for which they can individually qualify.

Curriculum:

INTL 200. Lower-Division Coursework Taken at a Foreign University (1-4)

Beginning college level coursework completed at a foreign university under the auspices of a CSULB exchange program. Course content is planned in cooperation with CSULB faculty.

INTL 400. Upper-Division Coursework Taken at a Foreign University (1-4)

Advanced college level coursework completed at a foreign university under the auspices of a CSULB exchange program. Course content is planned in cooperation with CSULB faculty.

INTL 500. Graduate Level Coursework Taken at a Foreign University (1-4)

Graduate college level coursework completed at a foreign university under the auspices of a CSULB exchange program. Course content is planned in cooperation with CSULB faculty.

Information and application materials may be obtained from the Center for International Education, (213) 498-4106. Applications for the 1988-89 academic year must be submitted by February 1, 1988 to the Center for International Education.

American Language Institute

The mission of the American Language Institute (ALI) is to provide quality English as a Second Language instruction to students whose first language is not English. The ALI serves both visa-bearing international students and permanently resettled refugees, immigrants, and citizens at both the undergraduate and graduate levels and provides a steppingstone into the University for qualified pre-university students from abroad.

The overall goals of the ALI is to develop students' proficiency in oral and written English. The pre-university component of the ALI offers the incoming student with little or no prior exposure to English up to a full year of intensive (25 hours per week) English followed by an academic year of semi-intensive (12 hours per week) coursework. Pre-university ALI students attend classes on campus and enjoy all the campus facilities.

The ALI also provides academic English support classes to regularly enrolled students. All students admitted to CSULB whose native language is not English and who have not lived in the United States for at least 10 years must take the American Language placement examination, the Examination in English as a Second Langauge (EESL), during their first semester on campus. The EESL results place students in English as a Second Language courses in the American Language Institute or equivalent courses in the American Language Program. These courses are required for graduation and must be taken in sequence at the earliest opportunity; courseloads may need to be adjusted accordingly. American Language requirements can be modified only be proving proficiency within the class or by appeal to the American Language Petitions Committee; classes or exams taken elsewhere cannot be substituted for American Language requirements.

Curriculum

024. American English Pronunciation (3) F Faculty

Prerequisites: Appropriate EESL score. Spoken English skills development emphasizing the sound system of American English, including accurate perception, production, and prediction of speech sounds in context and increased oral fluency. Individual language laboratory work required. Four class hours per week. (No credit for students with credit in ALP 124A,B.) [Lecture - Activity] Grading: CR/NC only. Repeatable to a maximum of 6 units.

025A,B. American Language — Introductory I (non-credit) F,W,S,SS Faculty

No prerequisites. Intensive English as a Second Language, including basic reading, writing, speaking, and listening skills. Emphasizes oral communication and cultural orientation. Twenty-five hours per week.

030A,B. American Language — Introductory II (noncredit) F,P,W,S,SS Faculty

Prerequisite: Appropriate American Language Institute (ALI) Placement Test score or successful completion of ALI 025B. Intensive academic English as a Second Language, focusing on development of speaking, listening, reading, and writing skills. Preparation for university-level English, including study skills, language functions, and vocabulary necessary for academic coursework. Twenty-five hours per week.

035. American Language — Intermediate I (6) F,S Faculty

Prerequisite: Appropriate placement test score or successful completion of ALI 030B. Semi-intensive academic study of English as a Second Language, integrating reading, writing, speaking (including pronunciation) and listening comprehension skills development in context of current interest topics. Emphasizes basic expression of ideas and relationships. Not open to students with credit in ALP 135. Twelve class hours per week.

040. American Language — Intermediate II (6) F,S Faculty

Prerequisites: Appropriate EESL score or successful completion of ALP/ALI 035 with a grade of "C" or better. Semi-intensive academic ESL integrating reading, writing, speaking (including pronunciation) and listening comprehension skills development presented in context of current interest topics. Emphasizes process of paragraph development. Not open to students with credit in ALP/ALI 140 or ALP 121. Twelve class hours per week.

126. ALP Cross-Cultural Communication Skills (3) F Faculty

Prerequisites: Appropriate EESL score and successful completion of ALP/ALI 040. Spoken English skills development emphasizing cross-cultural communication, including American communicative expectations, barriers to intercultural understanding, and inter-personal oral communication skills in a variety of contexts, particularly instructor-student interactions at the college level. This course is designed to help students understand cultural differences in communicative style and behavior. Four hours per week. (No credit for students with credit in ALP/ALI 125.)

127. ALP Public Speaking (3) S Faculty

Prerequisites: Appropriate EESL score and successful completion of ALP/ALI 040. Spoken English skills development emphasizing public speaking, including effective oral presentation techniques, audience analysis, and speech organization. Students learn to prepare, present, and critique academic speeches and understand culturally appropriate speech styles for an academic setting. Four class hours per week. (No credit for students with credit in ALP/ALI 125.)

128. ALP Employment Communication Skills (3) F Faculty

Prerequisites: Appropriate EESL score and successful completion of ALP/ALI 040. Spoken English skills development emphasizing pre-employment communication, including interviewing, conflict resolution, and negotiation techniques for the non-native English speaker in the workplace. The course focuses on the skills necessary for successful interpersonal and professional communication for career entry and mobility. Four class hours per week. (No credit for students with credit in ALP/ALI 125.)

145. American Language — Advanced I (3) F,S Faculty

Prerequisites: Appropriate EESL score or successful completion of ALP/ALI 040 with a grade of "C" or better. University-level ESL including inferential reading comprehension and vocabulary development and essentials of paragraph and short essay organization. Not open to students with credit in ALP 122/ 123. Three class hours per week.

150. American Language — Advanced II (3) F,S Faculty

Prerequisites: Appropriate EESL score or successful completion of ALP/ALI 145 with a grade of "C" or better. University-level ESL including critical/analytical reading and expository writing, with emphasis on longer essays. Analysis and practice of standard rhetorical modes of essay development. Three class hours per week.

Graduate Center for Public Policy and Administration

Dean: Melchior Powell
Coordinator, Student Affairs: Ruth Ross
Coordinator, Faculty Affairs: Peter Shaw
Telephone: 498-4177
Assistant to the Dean: William Manes
Secretary to the Dean: Janice Drake

Public administrators today are becoming increasingly aware of the fact that government is, indeed, the peoples' business. They are challenged to be both effective and efficient. They believe that people tend to support what they help to create. Working with citizens, they have brought the practice of public management to its highest level without giving up the desire to constantly change and improve. The difference is that today's public servants are recognized and rewarded in personal and material ways, making the study of public policy and administration a highly desirable career option.

The Graduate Center for Public Policy and Administration offers the Master of Public Administration degree; an Option in Urban Affairs; and graduate certificate programs in Urban Executive Management, Public Sector Analytical and Administrative Skills, Employer-Employee Relations and Personnel Management, Public Sector Financial Management, Transportation Policy and Planning, and Law Office Administration. The Center's graduate level programs are designed with a professional emphasis and a recognized need to provide coursework that will increase the student's competency and perspective of the public administrative processes and analysis. The Center's curriculum is also designed to emphasize the student's ability to apply new knowledge, skills, and leadership techniques to the solution of public problems.

Admission applications are encouraged from persons with successful government service who wish to pursue, part-time or full-time, a graduate program designed to prepare them for new opportunities in public service or to expand or extend their capacities in a present position. The Center provides education in public policy and administration to professional persons in such fields as public works, social services, public health, community development, criminal justice, educational administration, recreation administration, finance, personnel, policy analysis, urban and regional planning, systems analysis and urban administration.

A detailed summary of requirements, current course offerings and procedures for the Master of Public Administration degree program, the Option in Urban Affairs, and the graduate certificate programs are contained in student handbooks available from the Graduate Center for Public Policy and Administration.

Program Standards and Requirements

Admission:

Students seeking admission to one of the Center's programs should have an undergraduate degree in public administration, or equivalent preparation for graduate study in public administration. A student must have an undergraduate grade point average of 2.75 or better. A student whose overall undergraduate average is less than 2.75, but who presents acceptable evidence of professional potential shown through recent academic performance and experiential background, may be admitted by special action of the Center.

Following admission to the University and acceptance in one of the graduate programs, each student should formulate a Program Prospectus, or learning plan, in conjunction with a Center faculty advisor. The objective of the prospectus is to assist the student in developing an effective course of study to meet individual career needs and goals. The faculty advisor will provide advice to the student on program course requirements and elective opportunities, and counsel the student in the chosen elective area.

Advancement to Candidacy:

The following are requirements for the degree and certificate programs:

1. Satisfaction of the general University requirements for advancement to candidacy.
2. Completion of all degree or program prerequisites.
3. Approval of the candidate's program by a faculty advisor and the Dean, Graduate Center for Public Policy and Administration.
4. Completion of six units of course work at this University toward the degree or program objective.
5. Earned a minimum grade point average of 3.0 in all graduate work completed at this University, or transferred from other sources, to meet degree or program requirements.

Transfer of Credit

Students who have completed a graduate certificate program in Public Sector Analytical and Administrative Skills, Employer-Employee Relations and Personnel Management, Public Sector Financial Management, Transportation Policy and Planning, or Law Office Administration may transfer up to 15 units of credit earned in the certificate program to be applied to the Center's Master of Public Administration degree program. The student must apply to the Center for admission as a degree candidate.

Students who have completed the academic requirements for the Master of Public Administration degree, prior to applying for admission to a graduate certificate program in the Center, may apply up to 6 units of credit earned in the MPA program for the required or elective courses in a certificate program.

Master of Public Administration Degree (code 7-9550)

The Center offers an innovative professional graduate program of studies leading to the degree of Master of Public Administration. The 36-unit program is designed with a professional emphasis and a recognized need to provide students with an increased competency and perspective of the analytical and administrative processes of government. The MPA degree is sufficiently flexible that students may select a program of elective courses oriented toward a generalist program of studies, place emphasis on a staff specialization such as personnel, or permit a focus on a specific public program field such as criminal justice administration. In all cases, a common grounding in the core areas of public policy and administration is required; but beyond this, considerable freedom of choice enables students to select subjects which fit their particular backgrounds or career objectives.

Requirements for the Master of Public Administration

1. A minimum of 36 course units in graduate course work with a minimum of 21 units of 500/600 level courses in public policy and administration.
2. Satisfactory completion of PPA 500, 510, 650, 660, 670 and 696.
3. Completion of approved internship program (PPA 585 or 586) as required course work beyond the 36 unit minimum, or waiver of the internship requirement based on professional experience.
4. Additional elective course work in elective fields to meet the 36-unit minimum.
5. Successful completion of a written Comprehensive Examination, and PPA 697 -Directed Research. (Students advanced to candidacy prior to the fall 1986 semester have the option of completing PPA 698 - Thesis and an oral examination on the thesis instead of the Comprehensive Examination and Directed Research project.)

University Courses Acceptable for Master of Public Administration

Graduate course descriptions are found in the departmental listings in which they are offered. Graduate courses applicable for the degree are ART 611, 690A; C E 506, 522, 560, 564, 565; CRIM 512, 541, 551, 581, 621, 622, 623, 624, 640, 641, 690; ECON 500, 510, 511, 636, 650, 670, 686; EDAD 541, 544, 580, 647, 648, 649, 651, 680; ED P 615; FIN 533; GEOG 666; H SC 501, 508, 626, 627, 628; H EC 523, 541; H RM 500, 556, 652, 665, 657; MGMT 542, 641, 642, 645A, 646A, 647A; MKTG 664; P ED 521; POSC 630; PSY 515, 527, 581, 586, 681; PPA 515, 520, 522, 525, 630, 535, 540, 547, 549, 550, 555, 565, 570, 575, 580, 590, 597, 615, 680; QS 500, 520, 522; REC 521, 525, 571, 575, 595; V E 501, 502, 503, 504.

Master of Public Administration with an Option in Urban Affairs (code 7-9551)

The purpose of the Option in Urban Affairs within the Master of Public Administration degree is to provide students who have particular interests in urban problems and processes with the opportunity to expand their knowledge and awareness in the field. In this broadly based interdisciplinary program, students can develop an understanding of the systemic nature of the urban environment and the interrelatedness of many urban problems. The program is designed to provide urban managers with ideas and techniques for dealing with various urban situations.

Requirements for the Master of Public Administration Degree Option in Urban Affairs (code 7-9551).

1. A minimum of 36 semester units in graduate course work with a minimum of 24 units of 500/600 level courses in public policy and administration.
2. Satisfactory completion of PPA 500, 510, 610, 650, 660, 670 and 696.
3. Completion of an approved internship program (PPA 585 or 586) as required work beyond the 36 unit minimum, or waiver of the internship requirement based on professional experience.
4. Completion of 12 units of elective course work selected from: PPA 512, 517, 520, 522, 523, 525, 527, 530, 540, 545, 547, 548, 549, 550, 555, 565, 567, 575, 577, 580, 590, 615, 680; ANTH 516; C E 506; CRIM 512, 551, 581, 621, 622, 623, 624, 630, 640, 641, 650, 690; ECON 536, 537, 636, 650; EDAD 541, 544, 649, ED P 520, 530, 536, 540, 555, 574, 575, 576, 582, 615; GEOG 567, 600, 650, 652, 666; HCA 630; HIST 510, 568, 673; NRSG 557, 558, 559; POSC 640, 660; Q S 500, 570, 571; REC 502, 521, 571.
5. Successful completion of a written Comprehensive Examination and PPA 697 - Directed Research.

Graduate Certificate in Urban Executive Management

This program is designed to serve the post-graduate executive development needs of men and women in aspiring to top level positions in city and county governments. The goal of this program is to provide urban executives with a comprehensive knowledge of strategic planning processes; dynamics of human relations; strategies for implementing policies; consensus building techniques; and economic and financial forces impacting on local governments.

Prerequisite: In addition to the general admission requirements, applicants for the graduate certificate in Urban Executive Management should have significant upper level management experience in Public Administration, or a Masters Degree in Public Administration and a minimum of 10 years of progressively responsible management experience in government.

Requirements for the Certificate in Urban Executive Management

1. A minimum of 18 units in graduate course work, including 3 required and 3 elective courses.
2. Satisfactory completion of PPA 535, 565 and 680.
3. Satisfactory completion of 3 elective courses selected from 525, 530, 545, 550, 575 and the 590 (Urban Executive Management).

Graduate Certificate in Public Sector Analytical and Administrative Skills

This program is designed for men and women who work or desire to work in budgeting, policy formulation, financial management or program evaluation offices of government agencies. The program prepares candidates with such skills as defining a problem; conducting cost benefit analysis; utilizing basic statistical techniques; conducting behavioral/political analysis; preparing and presenting reports; learning the ability to blend qualitative, behavioral and political skills necessary for success as an analyst in government.

Prerequisite: In addition to the general admission requirements, students should be employed in public service or related activities, or have a goal of public service-related activities.

Requirements for the Certificate in Public Sector Analytical and Administrative Skills

1. A minimum of 18 units in graduate course work, including 3 required and 3 elective courses.
2. Satisfactory completion of PPA 515, 517 and 520.
3. Satisfactory completion of 3 elective courses selected from PPA 540, 555, and the 696-series.

Graduate Certificate in Public Sector Employer-Employee Relations and Personnel Management

This program is designed for public sector managers and those aspiring to enter public service who need the knowledge, skills, and abilities required to deal effectively with the critical area of public sector employee relations and personnel management. The primary goal of this program is to provide the necessary training for public managers to effectively utilize human resources to their greatest potential in conjunction with the needs of the public organization.

Requirements for the Certificate in Public Sector Employer-Employee Relations and Personnel Management

1. A minimum of 18 units in graduate course work,including 3 required and 3 elective courses.
2. Satisfactory completion of PPA 510, 575 and 577.
3. Satisfactory completion of 3 elective courses selected from PPA 527, 530, 565, 570, 580, 590 and 680.

Graduate Certificate in Public Sector Financial Management

The Public Sector Financial Management Certificate Program is designed for public managers and others interested in obtaining an understanding of governmental financial management concepts, functions, techniques, and issues. The program is designed to familiarize students with financial management problems and the techniques available for solving them. An emphasis is placed on how to recognize, evaluate, and utilize financial information in decision making.

Requirements for the Certificate in Public Sector Financial Management

1. A minimum of 18 units in graduate course work,including 3 required and 3 elective courses.
2. Satisfactory completion of PPA 555, 565 and 567.
3. Satisfactory completion of 3 elective courses selected from PPA 520, 522, 527, 540, 560 and 590 (Contracting Out . . .).

Graduate Certificate in Transportation Policy and Planning

The purpose of this certificate program is to provide instruction in the skills and knowledge appropriate to professional activity in transportation policy and planning for urban transportation. Key support areas include urban planning, policy analysis, environmental policy, intergovernmental policy, personnel policy, and grants administration.

Requirements for the Certificate in Transportation Policy and Planning

A total of six courses (18 semester units) is required in the Certificate program as follows:

Required courses: (three) PPA 550, 551 and either 552 or 563; Elective courses: (three selected from the following) PPA 535, 540, 545, 575, 590, 670; CE 506, 520, 521, 522; ECON 636, 690; MGMT 541; MKTG 664.

Graduate Certificate Program in Law Office Management

The Graduate Certificate in Law Office Administration is a six-course program concentrating on the subject areas necessary for the qualification of administrators in the field of law office administration. The program is especially designed for mature, mid-career professionals who have already achieved a measure of success in the practice of law office administration. Particular areas of knowledge will be developed in such subjects as management organization, financial management strategies, budget planning and forecasting, personnel management, and data processing and word processing systems.

Requirements for the Certificate in Law Office Administration

A total of six courses (18 semester units) is required as follows:

PPA 501, 502, 503, 504, and 505. Students must also complete either 596 (for preservice students) or 597 (for students currently employed as law office administrators.

Courses (PPA):

500. Foundations of Public Policy and Administration (3) F,S Shaw

Concepts of the discipline; fundamentals of public organization theory, policy formulation and analysis, and administrative and management processes; management of the public interest; and ethics in government.

501. Administration of the Law Office (3) F,S Faculty

An examination of the nature, organization and functioning of a law office. Techniques of operation on a general office management level as they apply specially to law offices, including organization and methods of operation, timekeeping, billing and collection, functioning of legal libraries, space planning and utilization, and management of work flow.

502. Financial Management for Law Offices (3) F,S Faculty

Fundamental skills and understanding for financial management of the law office. Application of skills to a financial model of a law office. The course will include accounting systems for law offices.

503. Personnel Administration in the Law Office (3) F,S Faculty

This course covers all general aspects of personnel administration, including employment, training, effective discipline, motivation, compensation and benefits. The course also discusses general principles of management such as planning, organizing, decision making, staffing and controlling as they relate specifically to law office management.

504. Art of Supervision in Law Offices (3) F,S Faculty

Examination of the human organization, leadership and organizational management as applied to the law office. Specific techniques include understanding of an individual's behavior, motivation of that individual, management styles, communication, and management by objectives. The course will focus on how to transfer organizational management knowledge to the law office environment.

505. Electronic Age in the Law Office (3) F,S Faculty

Examination of the recent electronic equipment advances in office products and their application to production of the law office product. Specific attention will be directed at word processing, text editing, data processing, time sharing systems, telephone systems, electronic mail and administrative communications.

510. Public Administrative/ Management Processes (3) F,S

Analysis of public administrative/management processes from the perspective of the public executive, public finance and budgeting, public personnel systems, standards of efficiency and effectiveness in the conduct of the public's business, and the role and use of organizations and administrative processes to achieve public objections.

512. Urban Executive Management (3) F,S Faculty

Students will be provided an overview of the various types of problems confronting today's urban administrator and the possible means of solving some of these pressing problems. Subjects to be included are public policy in a changing society; new strategies for managing local government; new frontiers in planning and controlling financial resources; the dynamics of personnel and labor relations.

515. Administrative Report Writing (3) F,S Faculty

Preparation of written documents required of public administrators. Not open to students with credit in PPA 590 — Administrative Report Writing.

517. Analytical Skills Development (3) F,S Faculty

This course is designed to develop or improve the skills needed to perform analytical work in the public sector. There will be a dual emphasis wherein both quantitative and behavioral/political aspects of analysis in government are explored. Cost-benefit analysis, and report preparation and presentation will be covered.

520. Governmental Administrative Services Analysis (3) F,S Faculty

An examination of the nature, purposes, uses and techniques of governmental administrative analysis.

522. Automating Government Administration (3) F,S Ross

An examination of the use of computers to assist government management, with special emphasis on the automation of services such as finance, police and library departments The course will provide an introductory background in computers and their applications to government systems and files for non-computer specialists.

523. Urban Information Systems for Public Management (3) F,S Faculty

A seminar for public administrators in urban systems methodology, computer technology for urban systems, and the analysis of the subsystems and components that make up the municipal information system. System planning, management and control, as well as system measurement and evaluation, will be covered. Cost benefits and cost effective systems will be discussed.

525. Human Services Administration (3) F,S Faculty

Examination of social services agencies in the public sector and the unique administrative practices, policies and problems associated therein.

527. Productivity in Local Government (3) F,S Faculty

This course will identify and develop a concept of productivity for the government executive. The various approaches to management of organizations will be examined to determine their relationship to productivity. The application of behavioral science to productivity will be considered to determine its significance. Finally, management techniques and methods will be reviewed to provide some knowledge of substantive approaches to the increases of productivity.

530. Manpower Planning for Public Sector Organizations (3) F,S Barber

Examination of manpower programs and practices in the public sector with emphasis on federally subsidized programs and their inplementation through local governments. Analysis of the functions of the manpower planner as they pertain to local market information; program monitoring and evaluation; and the human service delivery system.

535. Intergovernmental Administration and Management (3) F,S Faculty

Concepts and perspectives of the field; fundamentals of interorganizational theory and practice; policy making and implementation issues; intergovernmental administrative and fiscal relations.

540. Grants Administration and Management (3) F,S Barber

Study of the various types of financial and technical assistance to local public and quasi-public agencies; the strategies for locating and obtaining grant programs support; and the development of effective project systems for externally funded projects. Not open to students with credit in PPA 590 — Grants Administration and Management.

545. Urban Planning Policies Processes and Techniques (3) F,S Faculty

Historical development of urban planning concepts and practices; general plan formulation; general plan housing and conservation elements; general plan open space and seismic safety elements; general plan noise and scenic highway elements; general plan safety and optional elements; public participation; environmental impact analysis; development of Southern California's infrastructure; governmental programs influencing Southern California planning (Federal, State); governmental planning in Southern California.

547. Local Government Economic Development Processes (3) F,S Faculty

A detailed discussion of the nature, goals and processes of locally based economic development programs. Definition of governmental incentives designed to maximize private investment. A thorough explanation of property-related revenues from both the public and private perspectives.

548. Housing Problems and the Urban Administrator (3) F,S Blumberg

An overview of housing problems in contemporary urban society. This course will increase the public administrator's awareness of the interrelationships between local government administration and housing problems, and facilitate the public administrator's ability to deal with these problems.

549. The Municipal Community Development Process (3) F,S Faculty

An overview of the municipal community development process with particular emphasis on the integration of municipal planning, zoning, housing, social service, and redevelopment functions. The course will explore basic concepts of each function, their interrelationships and administrative practices. Emphasis will be given to the impact of federal community development block grants and the local process.

550. Urban Transportation Policy and Planning (3) F,S Shaw

Examines the status of urban transportation activities and needs today and discusses the near and long-term options for the future. Analyzes local, state, federal policy and intergovernmental system; Los Angeles urban transportation development, transit proposals and new policies and activities.

551. Transportation Regulatory Public Policy (3) F,S Shaw

Transportation regulatory public policy, management and planning; fundamental knowledge of intermodal services in international, national and Southern California context; special emphasis upon deregulation movement since 1980.

552. Airport Policy and Management (3) F,S Shaw

Airport management, policy and planning; key management and staff tasks for commercial and general aviation operations, including ground access and facility management; specialized functions addressed include forecasting demand capital facility design, construction, operation and funding, continuing planning, board management, operations, licensing, safety, environment; interrelationship with other transportation modes, passenger and freight.

553. Seaport Policy and Management (3) F,S Shaw

Seaport management, policy and planning; key management and staff tasks for cargo handling, storing, intermodal transfer, facility operation, planning and construction, funding; specialized functions include forecasting demand, capital facility design, construction, operation and funding; coordination with public and private agencies, licensing, safety, environment and inter-relationships with other transportation modes.

555. Local Government Budget Skills (3) F,S Faculty

Detailed exploration of the various budget systems available to local governments. Stress will be on building detailed knowledge and skills in techniques of relating revenues to expenditures, program budget design and analysis, and relating budgeting to the political process. Methods of balancing citizen demands with revenue limitations within a consumer-oriented society also will be considered, as will traditional and behaviorally-oriented budget controls.

560. Public Financial Management Techniques and Issues (3) F,S Faculty

The course will provide an understanding of current governmental financial management techniques and issues. Financial problems confronted by a number of government organizations has stimulated considerable interest in financial management and a record for improved methods of managing fiscal affairs. This course will provide an introduction to important financial management issues and to new analytical techniques which are being used to improve financial decision making.

565. Local Government Finance Skills (3) F,S Faculty

Detailed examination of the local government finance function, and development of specific skills to be applied by the executive or middle management person in local government. Specific subjects will include accounting and its use; cash and debt management; public debt instruments; operating and capital budgeting; administration of property; sales, income, business and excise taxes; enterprise and miscellaneous revenue sources, control devices, systems and techniques; and state supervision of local finance.

567. Basic Governmental (Fund) Accounting (3) F,S Faculty

The course provides a basic introduction to the unique characteristics of governmental and commercial accounting. Differences between governmental and commercial accounting are explained. Governmental accounting terminology basic and principles are discussed. Information is provided on the structure and types of funds and methods of classifying and recording accounting information. Types of financial reports and interpretation of financial statements are discussed. Particular emphasis is focused on the relationship between accounting and budgeting, financial reporting, auditing and other financial management activities for governmental and non-profit agencies.

570. Negotiating Dynamics: Strategies and Skills (3) F,S Faculty

Examination of negotiating strategies and skills based on the tested use of power and psychological principles in negotiations. Different strategies -and skills are examined for negotiating under varying levels of cooperation and conflict.

575. Public Sector Employer-Employee Relations (3) F,S Faculty

This course will emphasize and analyze the economic, political, and organizational impact generated by collective bargaining practices in the public sector. The course also familiarizes the student with the responsibilities of employee relations administration including techniques of the negotiating process.

577. Public Sector Personnel Administration (3) F,S Faculty

The historical development of the civil service/merit system and how this impacts public personnel systems; laws which affect the operation of a personnel system; analysis of the various components of a personnel system; impact of labor negotiations on personnel systems; importance of written policies and procedures; and role of the personnel system as a change agent.

580. Affirmative Action (3) F,S Faculty

Analysis of the historical, social and legal bases for equal employment opportunity and affirmative action laws and programs. Course will review the impact of Civil Rights legislation and its enforcement by compliance agencies and the courts. Attention will be given to basic data collection and analysis for planning and reporting, affirmative action program planning and implementation, developing and evaluating a model affirmative action plan, discrimination complaint handling, monitoring and evaluating an affirmative action program. Institutionalizing equal employment opportunity into the personnel process as well as current and future issues in equal employment opportunity and affirmative action will be covered.

585. Public Policy and Administration Internship (3) F,S Barber

Prerequisite: Consent of instructor. A learning experience designed to provide an exposure to and an understanding of the governmental environment. Restricted to students who do not have previous work experience in the public sector. May be repeated for up to six units of credit.

586. City Management Internship Program (3) F,S Ross, Barber

Prerequisites: Completion of all other academic course work and requirements for the master of public administration degree; consent of instructor. Intensive six-months' internship designed to provide student with a learning experience under the direct supervision of a professional city manager. Course is designed to prepare students for a career as a city manager. May be repeated for up to six units of credit.

590. Special Topics in Public Policy and Administration (3) F,S

An investigation of a special problem as defined by the instructor that is of current interest to the field of public policy and administration. May be repeated up to nine units.

596. Practical Training for Legal Administrators (3) F,S Faculty

Practical training and experience in the law office environment. Students will be required to demonstrate skills in fields of financial management, personnel management, leadership and organizational management.

597. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent study in public policy and administration.

610. Seminar in Urban Affairs (3) F,S Faculty

Prerequisite: none. A broadly based interdisciplinary course which will give students an opportunity to develop expanded awareness of the interrelationships between various urban problems in the urban systemic environment.

615. Seminar in the Evaluation of Public Programs (3) F,S Ross

Prerequisites: PPA 500 and consent of instructor. Examination of alternative views, goals, methods and problems involved in developing objective measurement and evaluation of the effectiveness of programs of governmental agencies. Emphasizes designing a plan evaluating a public program or activity and execution of a pilot study.

622. Comparative and International Public Administration (3) F,S Faculty

Prerequisite: none. Concepts and perspectives of the field of comparative and international public administration, with emphasis on administrative styles and their utility in responding to differing social and economic conditions. Students will compare and contrast the interactions between governments and their populations, and interpret the relevant relationships between administrative and management styles in various international settings.

624. Development Policy Management and Planning (3) F,S

Prerequisite: none. A seminar approaching the problems of development from the perspective of formulation and implementation of public policy, with special emphasis on the bureaucratic process in terms of its relationship to differing governmental structures.

650. Seminar on Issues in Contemporary Public Administration (3) F,S Barber, Blumberg, Ross

Survey of various issues and topics critical to effective public administration in the contemporary United States including the social and political context of contemporary public administration (e.g., increasing diversity of public demands of public agencies, increasing complexity of the intergovernmental network, etc.), responsibilities and obligations of public servants in contemporary governments and selected issues of public management.

660. Seminar in Organization Theory and Behavior (3) F,S Shaw, Blumberg, Barber

Organizational change, effectiveness and allocation processes in public agencies. Theoretical models of open systems, rationalist, conflict, coalition and decision-making theories will be investigated with the aim of presenting a unified set of propositions about organizations. Leadership and small group theory.

670. Seminar in Public Policy Analysis (3) F,S Barber, Ross, Shaw

Problems of formulating and evaluating public policy. Examination of how officials have dealt with policy questions in various governmental contexts and the strategic environment of such analysis. Critical survey of various prescriptions for improving public policy and public policy analysis, focusing in particular on the implications of reform for government expenditures.

680. Seminar in Urban Administration (3) F,S Faculty

Intensive study on the functions of the urban executive within the context of the urban environment. Focus is upon the role of the urban public executive in the decision process as it relates to organizational theory and structure, ethics, delivery of services, motivation and productivity, management monitoring and auditing. Students present term projects relating to current urban government, public and quasi-public agency issues.

696. Research Methods in Public Administration (3) F,S Ross, Shaw, Barber

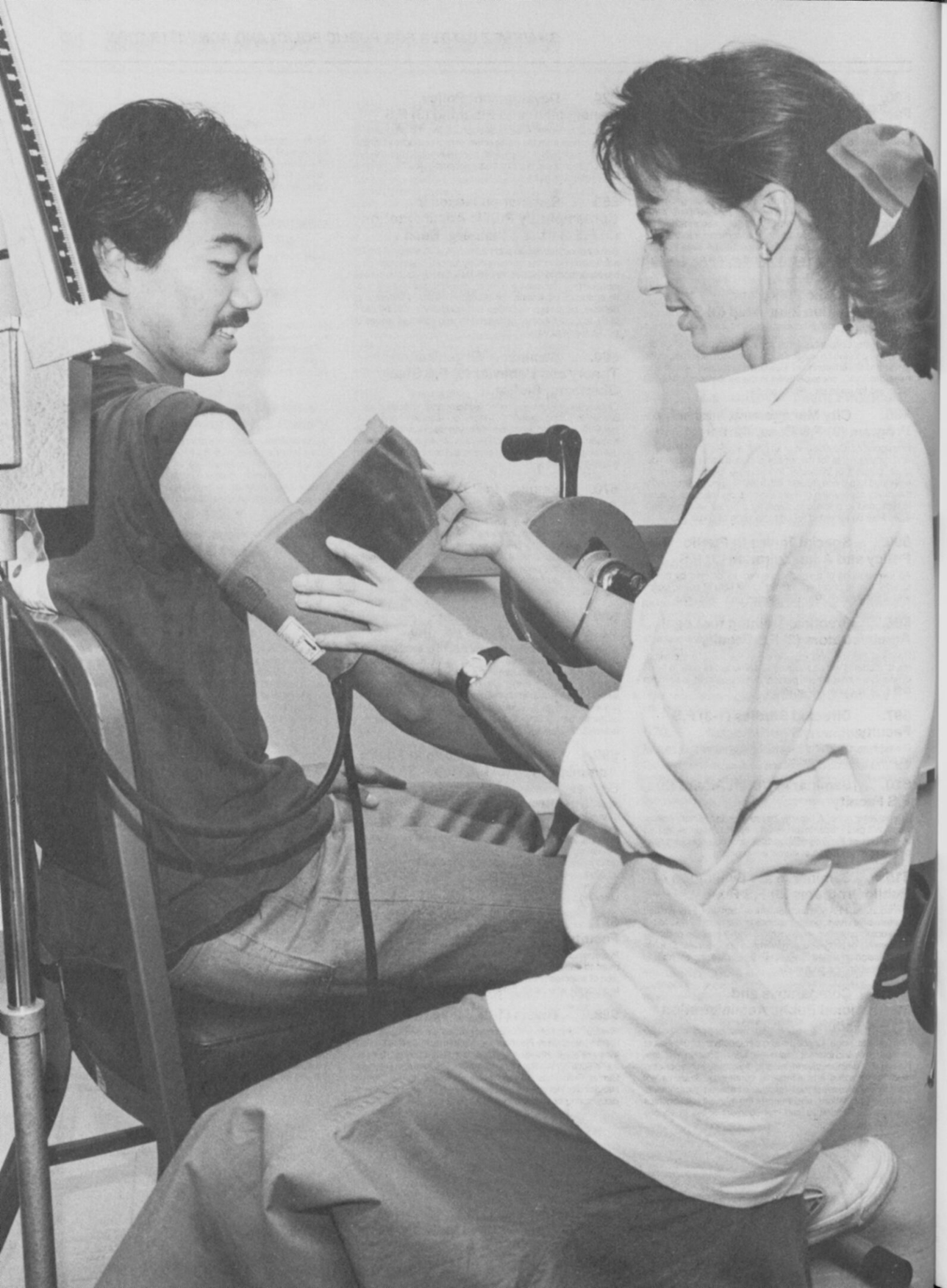
Application of relevant research techniques to the problems of public sector management and policy formulation. Topics include legal research methods, the development of legislative proposals, elemental benefit-cost analysis, techniques of evaluating programs, and general application of the above skills to policy formation and administrative problems of public organizations. Examination of methods to critically evaluate research designs, research evidence, sampling procedures and statistical data.

697. Directed Research (1-3) F,S Faculty

Prerequisites: Consent of Center graduate adviser, advancement to candidacy. The definition, presentation and discussion of selected problems in public administration (restricted to students who select the final comprehensive option).

698. Thesis (1-4) F,S Faculty

Prerequisites: Consent of Center graduate adviser, advancement to candidacy. Planning, preparation and completion of a thesis related to the field of public administration (a thesis on the official MPA degree program will carry four units, see Center Guidelines for the Thesis contained in the Student Handbook). Not open to students who are advanced to candidacy during or after the Fall 1983 semester.



Applied Arts and Sciences

Dean: Dr. Donald P. Lauda
Associate Dean, Academic Affairs: Dr. William A. Sinclair
Associate Dean, Graduate Studies, Research and Faculty Affairs: Dr. Peter A. Cortese
School Office: Industrial Technology Building, Room 200
Telephone: 498-4691
Administrative Assistant: Ms. Susan Thompson
Facilities Coordinator: Ms. Stephanie Giordano
Dean's Secretary:
Associate Deans' Secretaries:
Ms. R. Anne Elder
Ms. Marian F. Spencer

The School of Applied Arts and Sciences offers a wide range of programs at the undergraduate and graduate levels. Included within the School are eight diverse departments and five separate programs:

Departments:
Criminal Justice
Health Science
Home Economics
Industrial Education
Nursing
Physical Education
Physical Therapy
Recreation and Leisure Studies

Programs:
Aerospace Studies
Gerontology
Health Care Administration
Military Science
Vocational Education

Centers:
Center for Criminal Justice Research Training
Center for Career Studies
Center for Health and Behavior Studies

Objectives:

The School of Applied Arts and Sciences, as a professionally oriented School, is united by the following purposes:

The academic and professional preparation of students for careers in their chosen field of specialization, — The development and maintenance of high standards of academic achievement for students,

The encouragement of critical thinking through rigorous academic and professional preparation,

The conduct of ongoing research, training, and community involvement by School faculty and students.

To achieve these objectives, the School seeks to create an environment at both the undergraduate and graduate levels that encourages student growth by providing:

A broad educational experience in the liberal arts;

Specialized instruction leading to professional development and competence; and

Integration of academic and professional course work to develop the whole person.

Degrees Offered:

Bachelor of Arts
Home Economics
Industrial Arts
Physical Education
Recreation

Bachelor of Science
Criminal Justice
Dietetics and Food Administration
Health Care Administration
Health Science
Nursing
Physical Therapy
Vocational Education

Bachelor of Vocational Education

Master of Arts
Home Economics
Industrial Arts
Physical Education
Vocational Education

Master of Science
Criminal Justice
Health Science
Nursing
Nutritional Science
Recreation Administration

Master of Public Health (Option)

Certificates:

Administration of Outdoor Recreation Resources
Administration of Volunteer Services
Automotive Supervision
Cartography
Child Development
Community Physical Fitness
Food-Service System Administration
Gerontology
Graphic Arts Supervision
Health Care Administration
Industrial Plastics Processing Design
Leisure Counseling (Graduate Certificate)
Nurse Practitioner
Pre-Athletic Training
Pre-Corrective Therapy
Therapeutic Recreation
Travel and Tourism
Wilderness Studies

School Facilities:

The facilities in which the School departments and programs function are excellent. The Nursing Department is housed in a new building with modern classrooms, laboratories, multi-media study carrels, and faculty offices. The Home Economics Department has its offices and all academic activities in a new modern building. The facilities occupied by the Physical Education Department likewise reflect forward planning for students and faculty. All other departments and programs in the School occupy modern facilities that are centrally located close to instructional areas, and easily accessible to students and members of the community.

Professional Accreditation

Programs in the School have been accredited by the following state and national accrediting agencies:

Foundation for Interior Design Education Research, American Home Economics Association, American Physical Therapy Association, California State Board of Registered Nursing, National League for Nursing, California Council on Parks and Recreation, National Recreation and Park Association Council on Accreditation

The School maintains an active involvement in the following organizations:

Special Interest Clubs

Air Force ROTC, Archers, Army ROTC, Arnold Air Society, Child and Family Association Student (CAFAS/ Home Economics), Eta Sigma Gamma, Student Council of Consumer Interests (Home Economics), Student Dietetic Association (Home Economics), Student Faculty Council (Home Economics), Student Home Economists in Business (Home Economics)

Professional and Honorary Organizations

American Society of Interior Designers (ASID), California Association of Health, Physical Ed., Recreation Dance (CAHPERD), Epsilon Pi Tau (Industrial Education), Eta Sigma Gamma (Health Science), Omicron Nu (Home Economics)

School and Departmental Organizations

Applied Arts and Sciences Student Council, California Nursing Student's Association, Criminal Justice Students Association, Health Science Student and Faculty Association, Industrial Education Club, Physical Education Majors Club, Physical Therapy Student Association, Recreation Society, Student Home Economics Association

School-Based Courses (AAS):

292. Career Exploration (1-3) F,S Faculty

Prerequisites: Consent of the instructor and a minimum GPA of 2.0. Provides a student with a career-related experience by allowing the student to work in the field or profession related to his or her major. Students qualifying may work in either a major or career-related volunteer or paid assignment in private industry, a non-profit agency, or a public agency. In addition to the practical experience, students will attend a series of seminars designed to complement this field experience by focusing on common issues to the work setting.

Aerospace Studies

Air Force ROTC

School of Applied Arts and Sciences
Lieutenant Colonel Smith, Professor, Aerospace Studies

Advisory Board: Mr. Tom Bennett, Vice President, The Garrett Corporation; Dr. Howard W. Boehmer, Vice President, Hughes Aircraft; Lieutenant Colonel Leon R. Busby, Pilot, Western Airlines; Colonel Phillips E. Copeland, U.S. Air Force (retired); Dr. George Donohue, Associate Director, Security and Defense, Rand Corporation; Colonel Roy C. Eckard, Employee Communications Specialist, Northrop; Mr. Edward Elko, President, Aerojet Ordnance Company; Colonel Jack L. Fisher, Vice President, California Air Force Association; Mr. David Graham, President, California Air Force Association; MG Daniel Helix, Commander, 63rd U.S. Army Reserve Command; MG William Jefferds, Commander, 40th Infantry Division (Mech); Mr. A.U. Lamkins, Jr., Defense Electronics Operations, Rockwell International; Dr. Dawn Marie Patterson, Dean, Continuing Education, California State University, Los Angeles; Mr. Ronald K. Ressler, Director, Defense Group Marketing, Ford Aerospace Communications Corporation, Dr. Eleanor Wynne, Supervisor, Teacher Education.

Academic Members: Dr. John R. Beljan, Vice President, Academic Affairs; Dr. Ben Cunningham, Chair, Academic Senate; Dr. John Herrman, Associate Professor, Management Department; Dr. Stephen Horn, President; Dr. Donald P. Lauda, Dean, School of Applied Arts and Sciences; LtCol. Jeffery House, PMS, Military Science; LtCol. Kent Smith, PAS; Aerospace Studies; Nancy Sheley, Director, Special Projects, Development; Dr. Barry Steiner, Associate Professor, Political Science Department.

The Program

The two- and four-year Air Force Reserve Officer Training programs develop officer candidates who have broad understanding and high growth potential. Cadets develop leadership and managerial skills through dialogues, problem solving, and other planning activities. All course work is done on campus except Field Training (conducted at an active Air Force base) and the Flight Screening Program (conducted at Hondo Field, Texas). All students attend either a four- or six-week Field Training camp during the summer between the sophomore and junior years. Field Training emphasizes military orientation for the officer candidate as well as aircraft and aircrew familiarization. Cadets receive physical training and participate in competitive team sports. They are trained in drill and ceremonies, and observe selected Air Force units performing day-to-day operations.

Upon completing the ROTC program and obtaining a bachelor's degree, cadets are commissioned as second lieutenants in the Air Force and serve a minimum of four years full-time active duty. Flight-qualified candidates attend flight training after graduation. Other graduates begin active duty in a specialty consistent with their academic major, their desires, and existing Air Force needs. Graduates may request a delay from entry on active duty to continue their education or may apply for Air Force-sponsored graduate study to begin immediately upon starting active duty.

Applying for Admission to the Program

CSULB students enroll in Aerospace Studies by signing up for courses in the same manner as other university classes. Students in other Cal State Schools use the concurrent enrollment system. Students who are not enrolled in any Cal State School enroll through the CSULB Extended Education Office. Freshman and sophomore classes (AS 100/200) do not require advance application. Candidates pursuing an Air Force commission must compete for enrollment in the AS 300/400 classes. This competition, which normally occurs in the fall of the sophomore year, includes the Air Force Officer Qualifying Test, a physical examination, and a personal interview.

Supplemental Courses Program

The AFROTC Supplemental Courses Program enhances the value and performance of persons commissioned through AFROTC. The program consists of required and recommended college/ university courses. All contract cadets (ROTC scholarship and AS 300/400 cadets) must successfully complete, or demonstrate proficiency in, the required supplemental courses in addition to all Aerospace Studies courses. Each contract cadet completes one semester of college-level math. Cadets on AFROTC scholarship also complete one semester of college-level English composition and one academic year of a foreign language. All students are encouraged to complete a speech class.

Courses (A S):

Lower Division

100. The Air Force Today I (1) F Faculty

Introduction to the U.S. Military and the U.S. Air Force (USAF) organization and functions; human rights issues, the Soviet threat; Strategic Air Comm and (SAC) organization, command, control, and weapons systems; introduction to North American Air Defense Command (NORAD). (Lecture 1 hour; Laboratory 1 hour - required only of AFROTC students.)

101. The Air Force Today II (1) S Faculty

Examines the Navy, U.S. Army; tactical air, airlift systems; logistics, air training, and communication commands; Reserves, National Guard and separate operating agencies; and the nature of warfare. (Lecture 1 hour; Laboratory 1 hour - required only of AFROTC students.)

200. The Development of Air Power I (1) F Faculty

Developing of aerospace power in the United States through World War II. (Lecture 1 hour; Laboratory 1 hour -required only of AFROTC students.)

201. The Development of Air Power II (1) S Faculty

Post World War II development of aerospace power; emphasis on international confrontations involving the U.S. including Cuba and Vietnam. (Lecture 1 hour; Laboratory 1 hour- required only of AFROTC students.)

Upper Division

300. Air Force Management and Leadership I (3) F Faculty

Examines motivation, behavior processes and group dynamics in an Air Force environment; will address the planning, organizing and coordination functions of the manager as well as concepts and techniques for decision making. (Lecture 3 hours; Laboratory 1 hour - required only of AFROTC students.)

301. Leadership and Management (3) S Faculty

Prerequisites: None. Examines current leadership theories and models and their applicability for junior military officers. Emphasizes specific interpersonal skills: counseling, oral and written communications, supervision, coordination and decision-making. Traditional grading only. Same as M S 301.(Lab required of AFROTC Cadets only).[Lecture - Discussion]

400. National Security Forces in Contemporary American Society I (3) F Faculty

Examines armed forces as an integral element of society; military image and profession in today's society; civil-military values and socialization process; factors influencing the formulation and implementation of national strategy. (Lecture 3 hours; Laboratory 1 hour - required only of AFROTC students.)

401. National Security Forces in Contemporary American Society II (3) S Faculty

Examines basic concepts and U.S. evolution of U.S. strategy; contemporary and future strategic issues; military justice system. (Lecture 3 hours; Laboratory 1 hour - required only of AFROTC students.)

Criminal Justice

School of Applied Arts and Sciences

Department Chair: Judith H. Kaci
Department Office: Social Science Public Affairs Building (SS/PA), Room 162
Telephone: 498-4738
Faculty: Professors: Harold K. Becker, A. C. Germann, John P. Kenney, Paul M. Whisenand; Associate Professors: Michael W. Agopian, Lee Roy Black, Judith H. Kaci, George E. Rush.
Emeritus Faculty: John H. Good, C. Robert Guthrie
Department Secretary: Earis Corman

Criminal Justice Advisory Council: Robert Albright, Manager of Security, The Rand Corporation, Bernice Armould, Director, Hoffman House; James Bales, Chief of Police, City of Whittier; Jack R. Brick, Director of Security, The Aerospace Corp.; Patrick Connolly, Chief of Police, UCLA Police Department; Minot B. Dodson, Executive Vice President Operations and Training, California Plant Protection, Inc.; Sidney I. Dwoskin, Director, Central Juvenile Hall, Los Angeles County Probation Department; George T. Felkenes, Department Chair-Criminal Justice, Claremont Graduate School; Brad Gates, Orange County Sheriff/Coroner; Daryl Gates, Chief of Police, City of Los Angeles; Ronald Hazard, Chief of Security, Rohr Industries; Deborah M. Jacob, Vice President-Security, Security Pacific Bank; Denny F. Pace, Professor, Administration of Justice, Long Beach City College; Leo Peart, Chief of Police, City of Irvine; The Rand Corporation; Richard Rison, Warden, Terminal Island Federal Correctional Institution; Michael Schumacher, Chief Probation Officer, County of Orange; Paul J. Schwegler, Vice President, TRW-Administration Services Division; Phil Thompson, Chief, South District Clerk, Superior Court of County of Los Angeles; Norman Traub, Management Consultant; William Wilson, Director of Corporate Security, Bergen Brunswig Corporation.

Students desiring information should contact the department office for referral to one of the faculty advisors.

The program in criminal justice offers the bachelor of science degree to the man or woman seeking a comprehensive education enroute to a professional career. The program is designed to accommodate the needs of the continuing student, the transfer student and the experienced criminal justice practitioner.

Four options are available: administration, corrections, law enforcement and security administration.

Note: Students Intending to Transfer from Community College

Students intending to transfer from community colleges to this University to continue work for a bachelor of science degree in criminal justice are advised to complete general education requirements while attending the community college. A maximum of 24 units of lower division criminal justice (police science) courses are acceptable for transfer. Twelve units will be accepted for Criminal Justice 101, 151, 155 and 157 if equivalent subject matter has been completed at a community college. It should be understood that these will not satisfy upper division major requirements.

Note: Students Not Currently Employed in the Field

Students hopeful of entering the criminal justice field should ascertain the requirements for any particular agency. Specific requirements and candidate screening are not available through the Criminal Justice Department.

Bachelor of Science in Criminal Justice

Option in Law Enforcement (code 3-1036)

Upper Division: Complete a minimum of 36 units consisting of CRIM 301, 351, 353, 404,480, 495 (students currently working for a law enforcement agency will be required to substitute three units of CRIM 490, Independent Study, for 495); six units selected from CRIM 303, 315, 376, 424, 481, 482, 487, 490, 493, 499; 12 units selected from CRIM 325, 361, 405, 421, 422, 483, 485.

Supporting Courses: Complete a minimum of 12 units of upper division social science courses (taken outside the Department of Criminal Justice) supporting major objectives. Courses are to be selected in consultation with a criminal justice adviser.

Option in Corrections (code 3-1032)

Upper Division: Complete a minimum of 36 units consisting of CRIM 301, 356, 404, 468, 477, 480, 495 (students currently working in a correctional setting will be required to substitute three units of CRIM 490, Independent Study, for 495); six units selected from CRIM 303, 315, 376, 481, 482, 487, 490, 493, 499; nine units selected from CRIM 369, 405, 470, 475.

Supporting Courses: Complete a minimum of 12 units of upper division social science courses (taken outside the Department of Criminal Justice) supporting major objectives. Courses are to be selected in consultation with a criminal justice adviser.

Option in Security Administration (code 3-1038)

Upper Division: Complete a minimum of 36 units consisting of CRIM 301, 331, 332, 336, 404, 431, 435, 437, 480, 495 (students currently employed in the area of security administration will be required to substitute three units of CRIM 490, Independent Study, for 495); three units selected from CRIM 325, 361, 405, 421, 422, 424, 482, 485, 490, 493, 499; and three units selected from CRIM 351, 353, 358.

Supporting Courses: Complete a minimum of l2 units of upper division social science courses (taken outside the Department of Criminal Justice) supporting major objectives. Courses are to be selected in consultation with a criminal justice adviser.

Option in Administration (code 3-1355)

Upper Division: Complete a minimum of 36 units consisting of CRIM 301, 404, 480, 495(students currently employed in the area of administration will be required to substitute three units of CRIM 490, Independent Study, for 495); nine units selected from CRIM 303, 315, 376, 424, 481, 487, 490, 493, 499; and l5 units selected from CRIM 325, 405, 421, 422, 482, 485.

Supporting Courses: Complete a minimum of 12 units of upper division social science courses (taken outside the Department of Criminal Justice) supporting major objectives. Other courses are to be selected in consultation with a criminal justice adviser.

Minor in Criminal Justice (code 0-1013)

A minimum of 18 units which must include:

Upper Division: CRIM 301, 404.

Supporting Courses: Complete an additional nine units selected from CRIM 359, 421, 482, 483, 485, 487, 499; and three units selected from 351,353.

Master of Science in Criminal Justice

Graduate study in criminal justice provides the opportunity for men and women to meet (1) the need for adequately prepared personnel to fill college and university positions in the broad field of criminal justice, (2) the need for highly skilled and broadly educated persons to engage in research, (3) the need for persons planning professional careers in the administration of criminal justice, and (4) the need for persons with advanced education to engage in the administration of programs of corrections, policing and security.

The master of science degree in criminal justice will expand and increase individual competency, develop and mature thought processes, aid in gaining insights into professional leadership and knowledge to assure leadership positions and permit an exchange of student-faculty ideas to further the spirit of research and scholarship to enhance professional and personal capabilities.

In addition to being admitted by the Office of Admissions and Records, applicants also must be accepted for admission by the Criminal Justice Department before their program for a master's degree can be formulated. The following factors are considered:

1. Scholastic achievement as represented by official transcripts of all college course work. Each applicant should request that a copy of the official transcript be sent to the graduate adviser in the Criminal Justice Department, in addition to the copies required by the Office of Admissions and Records.
2. Resume and statement of goals.
3. Three letters of recommendation.

Prerequisites

1. A bachelor's degree with a major in criminal justice or a combination of 18 units of upper-division course work in the social sciences, law, the humanities, public or business administration, and the physical or biological sciences which reflect a basic understanding of the field of criminal justice. Adequate undergraduate preparation shall be determined by the Department Graduate Council, with experience in a criminal agency given significant consideration on a case-by-case basis.
2. A student must have an undergraduate upper-division average of 3.0 (B) or better, unless an exception is made by the Department Graduate Council.

Advancement to Candidacy

1. Student must satisfy the general University requirements for advancement to candidacy, as specified in this bulletin and must complete the specific requirements set forth in the Bulletin and in the School of Applied Arts and Sciences Handbook in effect during the semester of advancement to candidacy.
2. The graduate program must be approved by the department graduate adviser and Director of Graduate Studies and Research, School of Applied Arts and Sciences.
3. Students must complete six graduate units prior to advancement to candidacy.

Requirements for the Master of Science in Criminal Justice (code 6-1031)

Completion of 30 units of approved upper division and graduate courses, of which 24 units must be in criminal justice. Included in the 30 units are the following required core courses (10 units): CRIM 581,696; and a thesis 698 (four units) or CRIM 699.

Courses (CRIM):

Lower Division

101. The Criminal Justice System in Society (3) F,S Faculty

Prerequisites: None. History and philosophy of the criminal justice system; survey of theories of crime, punishment and rehabilitation; study of ethical issues in social control. The functions and role expectations of the criminal justice system will be explored. Interaction between the citizen and the components of the system will be examined. Approved G.E.: D.2B.

151. Basic Concepts of Criminal Law (3)

Historical development, philosophy of law and constitutional provisions; definitions, classification of crime and their application to the system of administration of justice; legal research study of case law, methodology and concepts of law as a social force.

155. Basic Concepts of Evidence (3) Faculty

Origin, development, philosophy and constitutional basis of evidence; constitutional and procedural considerations affecting arrest, search and seizure; kinds and degrees of evidence and rules governing admissibility; judicial decisions interpreting individual rights and case studies.

157. Principles and Procedures of the Justice System (3) Faculty

In-depth study of the role and responsibilities of each segment within the administration of justice system: law enforcement, judicial, corrections. A past, present and future exposure to each subsystem procedure from initial entry to final disposition and the relationship each segment maintains with its system members.

Upper Division

General

301. Contemporary Issues in Criminal Justice (3) F,S Germann, Rush

Prerequisite: CRIM 101. Criminal justice studied as a total interacting system: police, corrections, parole, probation and the judiciary. Special emphasis is placed on current issues and problems.

303. Basic Statistics in Criminal Justice (3) F,S Becker

Description and analysis of research methods used in law enforcement, courts, probation and parole, and correctional institutions. Calculation, interpretation and applicability of special techniques to the fields of criminal justice.

315. Organizational Behavior in Criminal Justice Systems (3) F Becker, Rush, Whisenand

Theoretical, analytical, and practical coverage of the reasons and consequences pertaining to behavior of employees in criminal justice organizations; methods for increasing worker satisfaction and organizational productivity; means for improving individual, group and organizational performance; shaping and building the worker growth potential.

376. Planning and Evaluation in the Criminal Justice System (3) F,S Becker, Kaci, Rush, Whisenand

Theoretical, analytical and practical review of the concepts and uses of long range planning and program evaluation in criminal justice systems; planning techniques and program research methods; options for increasing the service efficiency and output of organizations. Not available to students with credit in CRIM 473.

404. Theories of Crime Causation, Prevention and Control (3) F,S Becker

Explores social, political, economic, religious, and emotional characteristics of criminal justice problems; historical perspectives; objectives and methods of social control by individuals and institutions; and psychological characteristics of offenders and the types of problems they encounter. Not available to students with credit in CRIM 403.

405. Job Stress and the Criminal Justice System (3) F,S Faculty

Theoretical foundations of stress based on current research findings with emphasis in individual assessment, signs and symptoms, and causes and effects. In addition, specific stress management skills such as relaxation, meditation, self hypnosis, pain control, biofeedback, nutrition, and exercise will be covered. Not available to students with credit in CRIM 499: Job Stress and the Criminal Justice System.

421. Contemporary Issues in Law Enforcement (3) F,S Becker

Policy and procedure in specialized situations; labor-management disputes; minority group relations; crowd, public gathering, mob and riot control; mental cases; subversives; civil defense and disaster planning. Special problems involved in licensing, inspections, animal regulation, ambulance service and other specially assigned police activities. Integration of public safety functions. Problems of organized crime.

*424. Management of Human Resources in Criminal Justice Systems (3) F Whisenand

Concepts, issues and applications of management styles and strategies within an organizational setting; leadership approaches; goal setting; career development and selection; motivation; communications and change; efficiency and effectiveness in measuring individual and group performance.

*480. Introduction to Research Methods in Criminal Justice (3) F,S Whisenand

Prerequisite: Any basic course in statistics. Introduction to basic techniques in criminal justice research including library research, report writing, research design models, sampling techniques, questionnaire construction, interview techniques and participant observation.

487. Juvenile Justice Systems (3) F,S Kenney, Whisenand

Juvenile justice prevention and control programs; delinquency theories; police, court and correctional agencies' roles and responsibilities.

490. Independent Study (1-3) F,S Faculty

Prerequisite: Consent of instructor. Individual research and study approved by major professor. May be repeated for credit not to exceed a total of 3units.

*491. Political Terrorism (3) F,S Becker

Prerequisites: None. Comprehensive description of international political terrorism and the relationship to similar characteristics in the United States. The course will consist of lectures, class discussion and individual research on national and international terrorism, role of police and military, national and political violence, historical and current trends, and recommended criminal justice responses. Emphasis will be placed on criminal justice methods to deal with terrorism. Traditional grading only. [Seminar]

493. Computer Applications in Criminal Justice (3) F,S Germann

Prerequisites: CRIM 101 or 301. Computer technology and its application to criminal justice. Use of data processing in training, research, field operations, supervision, and administration. Federal, state, local and private application programs. Civil liberties, data bank security and related problems, alternatives, and policy options. Not available to students with credit in CRIM 499: Computer Applications in Criminal Justice.

*495. Internship (3) F,S Faculty

Prerequisite: Consent of instructor. Supervised work experience in criminal justice agency in the immediate area. May be repeated for a maximum of six units. (Not open to employed criminal justice officials.)

496. Internship (6) F,S Faculty

Prerequisite: Consent of instructor. Supervised work experience in criminal justice agency in the immediate area. (Not open to employed criminal justice officials nor students with credit in CRIM 495.)

499. Special Topics in Criminal Justice (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in the field of criminal justice selected for intensive development. Topics are announced in the Schedule of Classes. May be repeated for a maximum of nine units with change of topic.

Law Enforcement

325. Police Management (3) F,S Kenney, Whisenand

Prerequisite: CRIM 315. Program approach to the study of police administration. Overview of administration of the police function in the United States. Organization, management and operation of policing agencies.

361. Forensic Science and Investigative Techniques (3) F,S Rush

The study of basic principles of all types of investigations utilized in criminal and non-criminal matters. Analysis of current investigative procedures necessary for handling crime scenes, interviews, evidence, surveillance, follow-up, technical resources and case principles. Exploration of theories, philosophies and concepts related to prevention, apprehension, suppression of crime and crisis intervention utilizing both reactive and proactive patrol procedures.

422. Comparative Criminal Justice Systems (3) F,S Becker

Survey of nationwide and worldwide criminal justice philosophy and technique. Evaluation of current major hypotheses; review of recent developments and contributions by agencies and academic institutions; review of current literature in the field.

481. Community Relations in Criminal Justice (3) F,S Germann, Rush

Individual and group study of relationships between criminal justice agencies and the public. Exploration of areas of conflict and cooperation.

*482. Crime, Criminal Justice Systems and the Political Process (3) F Germann

Crimino-political power; relationships between specific organized crimes and political entities; political functions of criminal groups; the police as a political instrumentality.

483. Enforcement Systems (3) F,S Becker, Rush, Whisenand

A study of the foundations of police development and present organizational philosophy, environment, and community interaction. The role of the police, organization and personnel in a democratic society, crime control, and community participation will be examined.

485. The Role of Police in Society (3) S Germann, Rush

Historical development of the police as an institution for social control; policing in urban and rural areas; political and socioeconomic factors affecting the changing role of police in modern society.

Legal

351. Advanced Criminal Law (3) F,S Kaci

Prerequisite: CRIM l5l. Jurisprudential philosophy and case study of common law and statutory crimes; includes functions and development of substantive criminal law; elements of criminal liability; specific crimes and defenses.

353. Advanced Criminal Procedure and Evidence (3) F,S Kaci

Prerequisites: CRIM 155, 157. A study of criminal procedures mandated by the U.S. Constitution with emphasis on search and seizure, confessions, and the right to counsel. Course also includes coverage of evidentiary rules necessary for the introduction of testimony and physical evidence in a court proceeding. Not available for students with credit in CRIM 357.

358. Legal Aspects of Security Systems (3) S Kaci

A study of legal problems facing the security manager including: employment, discrimination, affirmative action, privacy of records, special requirements of government contracts, etc. Attention will also be given to the role of security in the corporate structure.

359. Drug Abuse and the Law (3) S Faculty

Various drug abuses from an historical, sociological, psychological and legal perspective. The legal relationship of drug abuse to law enforcement and the criminal justice system with legal sanctions is explored; implications of and alternatives to the criminal sanctions are developed.

Corrections

356. Legal Aspects of Corrections (3) S Kaci

Emerging rights of the convicted offender are explored with focus upon constitutional guarantees, appellate courts' decisions and their impact upon administration. Statutory laws with constitutional interpretations as they affect and implement the specialized areas of probation, parole and correctional institutions will be explored. Not available to students with credit in CRIM 354.

369. Correctional Environments (3) S Black

Forces and stress produced by correctional environments will be examined from a total institution perspective. Field trips to both adult and juvenile institutions will be required. Not available to students with credit in CRIM 469.

468. Correctional Systems (3) F,S Agopian

Historical, sociological and philosophical development of societal reactions to law violators. Theories of punishment, traditional and innovative treatment methods, and correctional models will be examined. Attention will also be focused on the correctional institution as a complex organization and on issues relevant to administrative problems. Not available to students with credit in CRIM 340 or CRIM 365.

*470. Alternatives to Incarceration (3) F Agopian

Historical and philosophical overview of the theories behind diversion from the criminal justice system; the legal framework; critical appraisal of impact of alternative community treatment programs; analysis and evaluation upon the correctional process.

475. Contemporary Issues in Corrections (3) S Agopian

Prerequisite: CRIM 468. Issues relating to recent changes in correctional theory and practices which affect convicted offenders and correctional staff will be discussed. These include violence in prisons, prison gangs, rape in prison, homosexuality, special problems of women and minorities in prison, concerns of parolees and probationers, as well as correctional staff. Special problems such as child abuse and spouse beating will be discussed.

477. Correctional Counseling (3) F,S Faculty

Theories and techniques of counseling useful to the corrections counselor. Includes abnormal reactions with appropriate responses, crisis intervention, community mental health and the use of mental health reports. Not available to students with credit in CRIM 383.

Security Administration

331. Security Systems (3) F Faculty

Historical, philosophical and legal basis of security; role of security in modern industrial society; administrative, personnel and physical aspects of the security field.

332. Risk Management (3) S Faculty

Overview of the functional operations of those specialized areas of security management relating to loss prevention and risk management. Includes areas of theft control, security surveys and financial aspects, including insurance and consumer credit programs.

336. Government Security (3) F Faculty

Historical, philosophical and legal basis of government security programs. The role of government agencies relating to security and intelligence in modern U.S. society. The structure of the organization and a survey of checks and balances within the system.

431. Industrial Security Administration (3) S Faculty

Organization and management of industrial security and plant protection units. Security, police, administrative, legal and technical problems. Special problems of government contract security. Specialized programs in retail security, insurance and credit investigation, transportation security, private guard and alarm services.

*435. Theories of Physical Security (3) S Faculty

Protection of industrial, business and governmental facilities. Physical security requirements and standards.

*437. Contemporary Issues in Security Systems (3) F

Theft control, shoplifting, document control, subversion and sabotage, civil disturbances, business espionage, labor problems, white-collar crime and natural disasters. Legal aspects and illegal political activities will be explored.

Graduate Division

512. Problems in Urban Criminal Justice (3) S Germann, Rush

Control and prevention of crime in urban settings; interagency relationships; the changing law enforcement processes.

541. Correctional Counseling and Case Management (3) F Black

Issues, problems and situations confronting the correctional counselor/caseworker with suggestions for counselor strategies and reactions. The personal counseling or treatment role of the counselor/caseworker in the correctional milieu is emphasized. Referral strategies and suggestions for effective use of correctional resources in program design are included.

551. Criminal Justice Legal Systems (3) F Kaci

Prerequisite: One upper division law course. Study of areas of the legal system affecting criminal justice agencies, criminal courts, juvenile courts, mental health commitments, civil courts and the role of the U.S. Constitution. State and federal court systems will be explored.

581. Theories of Crime Causation and Prevention (3) F Becker, Rush

Relationship and interaction between social structure and crime. Investigation into the classical and behavioral theories of crime and crime prevention.

590. Independent Study (1-3) F,S Faculty

Prerequisite: Consent of instructor. Individual research and study approved by graduate advisor. May be repeated for credit not to exceed a total of three units.

599. Special Topics in Criminal Justice (3) F,S Faculty

Group investigation of selected topics in criminal justice. Topics to be announced in the Schedule of Classes. May be repeated for a maximum of six units.

621. Seminar in Criminal Justice Administration (3) S Kenney

Criminal justice policy development and implementation; administrative organization theories; examination of current issues and changes taking place.

622. Seminar in Administration of Criminal Justice Information Systems (3) S Faculty

Special study and original research in automatic data processing applications in the administration of criminal justice; technological and other developments; equipment and methods; staff studies and potentialities.

623. Seminar in Comparative Criminal Justice Administration (3) F Becker, Kenney

Advanced study of the theories, philosophies and techniques of criminal justice worldwide and nationwide. Intensive review of the literature, recent developments and individual research.

624. Seminar in Criminal Justice Problems (3) S Germann, Rush

Intensive study and individual research of the problem areas in the broad spectrum of criminal justice.

630. Seminar on Organized Crime (3) S Faculty

Historical development of organized crime; its criminology; various techniques used against it and detailed consideration of the political, social and economic conditions of its evolution. Not available to students with credit in CRIM 599 on the topic "Organized Crime."

640. Seminar in Police Administration (3) S Kenney, Whisenand

Theories, concepts and issues related to the administration, organization and management of the police function. Research into changes and modification taking place.

641. Seminar in Correctional Administration (3) S Agopian, Black

Theories, concepts and issues related to the administration, organization and management of probation, parole and institutional programs. Research into changes and modifications taking place.

650. Seminar in Juvenile Justice (3) F Kenney, Whisenand

Study of juvenile justice programs administered by the police, court and correctional agencies; analysis of theories of delinquency causation and prevention; current issues.

690. Seminar in Criminal Justice Program Evaluation (3) S Whisenand

Application of the social scientific research methods to determine effectiveness of operational criminal justice programs. Analysis of reports of evaluative research. Preparation of reports.

696. Research Methodology (3) F Faculty

Prerequisite: Undergraduate course in statistics and undergraduate course in research methodology comparable to CRIM 480. Scientific method of research; variations in research design and methodology; application of research findings to problem solution.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Advancement to candidacy. Independent research into criminal justice problems; issues and theories.

698. Thesis (1-4) F,S Faculty

Prerequisites: CRIM 696, advancement to candidacy. Planning, preparation and completion of a thesis.

699. Integrated Analysis of Criminal Justice (3) F Germann, Kenney

Prerequisites: CRIM 697, classified M.S. status and within six units of completion of the 30-unit minimum graduate program. A comprehensive course which serves as the required terminal examination for Criminal Justice Department candidates. A project is required. A principal requirement will be the integration and synthesis of concepts and issues covered in the core course of the curriculum. CRIM 697 may not be taken concurrently.

Gerontology

School of Applied Arts and Sciences

Director: Dorothy L. Fornia
Department Office: Home Economics Room, 128
Telephone: 498-4056
Faculty: Professors: William E. Buckner, Dorothy L. Fornia, James Kelly, Byron C. Kluss, Ruth Lindsey, Wanda Pentecost, Vivian M. Sucher; **Associate Professor:** Marsha S. Harman; **Assistant Professor:** Tammy Hinkle
Department Secretary: Linda Burns
Community Advisory Committee: In addition to faculty representatives from the departments of Economics, Educational Psychology, Health Care Administration, Health Science, Home Economics, Nursing, Physical Education, Recreation, Sociology, Social Work, Teacher Education, and a representative from the Adult Reentry Center, the following are members of the community advisory committee:

Eleanor Daly, Management Information Systems Officer, NRTA/AARP; Betty Davenport, Department of Recreation Human Services, City of Long Beach; Marjorie Davies, Director, Meals on Wheels; William Fitch, Medical Director, Seal Beach Leisure World; Margaret Ganssle, RSPP, Long Beach; Joe Kocon, Senior Care Action Network; Jayne Alnes Lastusky, American Cancer Society; Lila Maples, Outreach Program, Long Beach Community Hospital; Gerald Miller, Private Industry Council, City of Long Beach; Charlotte Salerno, Long Beach Stroke Activity Center; Judy Schultz, Long Beach Jewish Community Center; Iris Schutz, Long Beach Public Health Department; Roberta Stabbart, Interfaith Action for Aging; Mary Thoits, Senior Studies, Long Beach Community College; Janice McDonald Williams, Counselor Geriatric Alcoholism, Long Beach Memorial Hospital Medical Center.

Students desiring information should contact the department office for referral to one of the faculty advisors.

Certificate Program in Gerontology

Gerontology is the scientific study of the processes and phenomena of aging which includes biological, psychological, and sociological dimensions. Resources from many departments of the University focus upon education and training programs at the baccalaureate, graduate and continuing education levels. Purpose of the multidisciplinary program is to train individuals as specialists in gerontology within a major area of study to serve in community programs, health service organizations, governmental agencies and private programs in gerontology.

Areas currently offering courses in gerontology are Anthropology, Communicative Disorders, Educational Psychology, Finance, Health Care Administration, Health Science, Home Economics, Marketing, Nursing, Physical Education, Physical Therapy, Political Science, Psychology, Recreation, Social Work and Sociology.

The Certificate in Gerontology may be earned in conjunction with a baccalaureate or awarded subsequent to earning a bachelor's degree. Courses offered for the certificate may be the same ones used to satisfy, where applicable, major, minor, or credential requirements.

Requirements for the Certificate in Gerontology

1. A bachelor's or master's degree
2. 24 units distributed as follows: Required courses (12 units): GERN 400IC, BIOL 4O1, PSY 365or H DEV 357, SOC 464.
3. A minimum of six units chosen in consultation with the director from a list of supporting courses.
4. Independent study on a topic related to gerontology (three units).
5. Approved field experience in adult service setting (three units).
6. Consultation and approval of the program with the director for gerontology.

Certification of successful completion of the Certificate in Gerontology will be recommended by the director.

Interested students should apply to Dr. Dorothy L. Fornia, Home Economics 128, 498-4056.

400IC. Perspectives on Gerontology (3) F,S Kelly (D.2,E)

Multidisciplinary presentation of the scientific and social issues in aging. (A) biophysical, (B) psychological perspectives, and (C) sociological concepts. (Not open to students in the Gerontology Certificate program or with credit in GERN 400.)

***423. Personal Finance for the Aging (3) F,S Faculty**

Provides an understanding of the operations of personal finance as applied to the aging population. Topics covered include public and private sources of income, living expense, public and private sources of assistance, personal budget systems, financial planning, legal rights of the aging affecting their personal finances, and financial counseling for the aging.

***424. Independent Living for the Disabled and Elderly (3) F,S Hinkle**

Prerequisite: H EC 321 or consent of instructor. Home management concepts as related to the physically disabled and the elderly in the near environment. Rehabilitation procedures for independent living. Emphasis on research findings in regard to functioning in the home and family. (Lecture-discussion 3hours.)

***425. Gerokinesiatrics (3) F,S Lindsey**

Prerequisites: A/P 202, 207, GERN 400, or consent of instructor. The rationale,organization and conduct of exercise programs for the older adult. (Lecture-laboratory.)

***439. Nutrition and Aging (3) F Faculty**

Prerequisites: H EC 232 or 331 or BIOL 401. Nutritional needs as related to physiological changes that occur during aging. Factors that influence food intake and nutritional status of the elderly. Diet adaptation for chronic diseases commonly found in older people. (Lecture-discussion 3hours.)

***482. Physical Assessment and Aging (3) F,S Sucher**

Prerequisite: Upper-division standing. The physical, emotional and social changes which accompany aging. Theory and practice in the assessment of these factors. Course is designed to prepare the average lay person and those in the helping professions to work with the aged and deal with own aging.

***485. Aging and Mental Health (3) F,S Kelly**

Intervention strategies, preventive and supportive, using in working with independent older persons. Social aspects and clinical research related to gero-psychiatry.

***499. Special Studies (1-3) F,S Faculty**

Group investigation of topics of current interest in gerontology. Topics to be announced in the Schedule of Classes. May be repeated for a maximum of six units of credit with change of topic.

Health Care Administration

School of Applied Arts and Sciences

Director: Robert E. Tumelty
Department Office: Social Sciences/ Public Affairs Building, Rooms 130 and 154.
Telephone: 498-5304; 498-5394
Advisory Committee: Donald A. Beegle, Professor of Health Science; Joseph P.Magaddino, Professor of Economics; Ronald J. Schmidt, Professor of Political Science; Martha A. Siegel, Professor of Nursing; Peggy I. Smith, Professor of Sociology; Robert J. Smith, Professor of Management.

Students desiring information should contact the department office for referral to one of the faculty advisors.

The Health Care Administration program has four major objectives: (1) to provide course work and related experience in order to prepare generalist administrators, skilled in the application of organizational and managerial techniques, for the health care system; (2) to provide continuing education for health administrators in practice as well as others in administrative and leadership positions in the administration of the delivery of health services; (3) to consult and to participate in community service activities which complement the instructional and research functions of the faculty and provide appropriate learning experiences for students; and (4) to conduct studies in the administration and operation of the health care delivery system which will contribute to development of faculty teaching abilities and overall professional growth.

The program is designed for the professional administrator or those who wish to become administrators within organizations which deliver personal health care services. Three patterns of preparation are offered:

1. Bachelor of Science in Health Care Administration, an external degree offered through the Consortium of the California State University.
2. Master of Science in Health Care Administration, an external degree offered through the Consortium of the California State University.
3. Certificate in Health Care Administration.

The external degree programs of the Consortium of The California State University are designed for adult Californians whose geographic location, personal circumstances, or work schedule limit their ability to enroll at one of the campuses of the system. Classes are block-scheduled for late afternoons, evenings or intensive weekends to accommodate the work hours of the student and are particularly designed for the part-time student. For a concise general description of the Consortium see the front section of this Bulletin and the following: The Consortium: the most recent catalog of the Consortium, or Class Schedules, which are distributed three times a year.

The Consortium of the California State University was established in 1973 to enable adult Californians who were unable to attend regular on-campus classes to earn bachelor's and master's degrees. The programs are offered by the Consortium itself or in cooperation with an individual state university campus. The degrees are granted by the Board of Trustees of the California State University. The Consortium is accredited by the Western Association of Schools and Colleges. The undergraduate program holds associate membership in the Association of University Programs in Health Administration (AUPHA).

Admission to the program requires a separate application which is available on campus or from the Office of Admissions and Records, Consortium of the California State University, 6300 State University Drive, Long Beach, California 90815. Inside the Long Beach/Los Angeles area, call (213) 498-4119. California residents outside this area may use the toll free number: 1-800-352-7517.

Class enrollment through the Consortium requires a special form which varies from that of the University. See the Program Director for details.

As Consortium courses are in the self-support mode, course fees are different than the University. The current per unit fee is $150, subject to change.

Certificate in Health Care Administration

The Certificate Program in Health Care Administration is interdisciplinary and is comparable to a minor of 24 semester units and with prerequisite course work, may require a maximum of 30 semester units for completion. It has four components: The forms of organization and operation of health care systems, administration and management of these systems, social and environmental factors in health and disease, analysis and evaluation. The certificate program may be combined with major programs from a variety of fields to include natural and behavioral sciences, humanities, health fields, business, and public administration. Health care administrators are usually prepared at the master's degree level for job entry and such persons are employed in organizations such as acute and long-term care hospitals, health departments, health maintenance organizations, health planning and coordinating agencies, and the like. The intent of the Certificate Program is to introduce students to the professional field and to provide enrichment and preliminary course work for those who desire to pursue the requisite academic preparation for the health care administration field. In addition, students in related fields like business, public administration, or clinicians such as nurses, physical therapists, and social workers may wish to add the Certificate to their basic academic preparation.

Requirements for the Certificate in Health Care Administration.

1. A bachelor's degree.
2. Consultation with the Director of the program.
3. Twenty-four units and with prerequisite course work may require a maximum of 30 units. Substitutions may be made with the consent of the Director.

a) Forms of Organization and Operation (three units) HCA 400.
b) Administration and Management (twelve units) HCA 410, ACCT 205, ECON 445, MGMT 300.
c) Social and Environmental Factors in Health and Disease (six units) MICR 429, ANTH 353, or SOC 462

d) Analysis and Evaluation (three units) HCA 465.

CSU Consortium Bachelor of Science in Health Care Administration (code 3-1205)

A student must complete a total of 124 semester units to be eligible for the B.S. degree in Health Care Administration. A total of 45 units of core course work at the upper division level is required of all students.

In addition, all remaining units necessary for graduation will be considered general electives. The number of elective units may be reduced if the student needs prerequisite or support coursework.

To be admitted to this upper division program, a student must have completed a minimum of 56 semester units (84 quarter units), or the equivalent in transferable credit from an accredited institution, with a grade point average of 2.0 or higher.

Preparation for the major includes 18 semester units which may be taken at any level of post-secondary education and must include: accounting, statistics, and introductory course work in psychology, sociology, information systems and economics (micro-economics or fundamentals).

Requirements for the Bachelor of Science:

Courses offered through the Consortium are shown in parentheses.

Upper Division: A minimum of 45 units: HCA 340, 400 (420), 410, 411 (422), (412), (414), (416), (440), (442), 445 (450), 450 (426), 465 (452), 495; SOC 462, and in consultation with adviser, three upper division units from the social and behavioral sciences (456).

CSU Consortium Master of Science in Health Care Administration (code 6-1205)

Prerequisites

1. A bachelor's degree from a regionally accredited institution.
2. A minimum grade point average of 2.5 in the last 60 semester (90 quarter) units attempted.
3. Administrative experience in a health care setting is desirable.
4. Preparation for the major includes 18 semester units at any level of postsecondary education and must include; accounting, managerial accounting, economics, information systems, statistics and health care systems.

Requirements for the Master of Science

1. Advancement to candidacy at least one semester prior to the graduation date.
2. The successful completion of 30 units as: HCA (500), (505), (510), (515), (524), (530), (535), (685), (690), (695).
3. Recommendation of the Program Director, through the Academic Program Committee in Health Care Administration. Courses offered through the Consortium shown in parentheses.

Courses (HCA):

Courses offered through the Consortium are shown in parentheses.

Upper Division

312. Health Personnel Management (3) S Tumelty

Prerequisites: None. The management of human resources in health care settings. Content includes principles and methods of personnel work such as employee recruitment, selection, retention, training, evaluation, wage and salary administration, and labor-management relations. [Lecture] Grading: Student Option.

314. Leadership and Development in Health Services (3) S Tumelty

Prerequisites: None. Concepts of leadership essential to interacting effectively with individuals, groups and organizations, as well as the application of these concepts to the management functions of the health care professional. Principles of behavioral sciences, group dynamics, organizational behavior, approaches to conflict resolution, and the planning and implementation of change. [Lecture] Grading: Student Option.

320. Operations Management in Health Administration (3) S Tumelty

Prerequisites HCA 4l6 and statistics. The application of the concepts and methods of operations management to the health care organizational setting. Emphasis on planning and control in the management process.

340. Legal Aspects of Health Administration (3) F Faculty

Focus on the nature, perspective and objects of the legal and legislative process. Provides skill in understanding legal terminology, legal reasoning and the tools of the law, with practical application of these principles and concepts to health care management and health policy decisions.

341. Financial Management of Health Care Institutions (3) S Tumelty

Prerequisite: Accounting 201 Application of the concepts of financial management within health care organizations, to include financial planning principles, reimbursement procedures, governmental regulation, and legal restraints. [Lecture] Grading: Student Option.

342. Budgeting for Health Care (3) S Tumelty

Prerequisite: HCA 341. Focus is on the budgetary process, to include the development, management and control of budgets. Budgeting tools will be reviewed and emerging techniques will be examined. [Lecture] Grading: Student Option.

353. Marketing for Health Services Organizations (3) S Tumelty

Prerequisite: Economics 201 or 300 The course focuses on the development of formulated programs based on analysis, planning, implementation, and control whose purpose is to bring about voluntary exchanges of values with target markets to meet the organizational goals of health institutions Design of services to include pricing, communication, distribution, motivation and service. [Lecture] Grading: Student Option.

400. (420) The Health Care System (3) F,S

Prerequisites: None. The course focuses on the contemporary health care system to include its historical beginnings and the underlying social and biological forces which influence its organizational forms, financing and manpower requirements; issues and concerns molding its future such as the assurance of the quality of patient care and the regulation and control of the system. [Lecture]

410. (410) Health Management and Organization (3) F Tumelty

Prerequisites: None. Concepts of organizing activities to achieve the goals of health care institutions Effects of environment, technology, and human behavior on organizational design Managerial processes including planning, decision-making, influencing, and controlling required to operate and change health care organizations. [Lecture]

411. (422) Problems and Issues in the Health Care System (3) S

Prerequisite: HCA 400 or consent of instructor Introduces broad-based issues and concerns within the field Brings the student into active dialogue and discussion with leaders and representatives of health-related organizations and agencies.

(412). Health Personnel Management (3) S Faculty

An introduction to human resources management in a health care setting Content includes principles and methods of personnel work, such as employee recruitment, selection, retention, training, evaluation, wage and salary administration, and labor-management relations.

(414). Leadership and Development in Health Services (3) S

Identification of styles of leadership in individual, group, and organizational settings; analysis of behavior, use of role theory; solution of role conflicts; analysis of employee-employer relations.

(416.) Management and Information Systems (3) F Tumelty

Prerequisite: C/ST 200 Evaluation of concepts, analysis and design of management information systems; management decision models, strategies for implementing system changes. [Lecture] Grading: Student Option

(440). Financial Management of Health Care Institutions (3) S

Prerequisite: Accounting Application of the concepts of financial management within the health care organizations to include financial planning principles, reimbursement procedures, governmental regulation, and legal restraints.

(442). Budgeting for Health Care (3) S Faculty

Prerequisite: HCA 440 The course focuses on the budgetary processes which include the development, management, and control of budgets Budgeting tools will be reviewed and emerging techniques will be examined.

445. (450) Health Planning (3) F Faculty

Contemporary approaches to the administration of community-wide health planning (macro) and the administration of in-house facility health planning (micro) to include the development of the institutional plan.

450. (426) Quality Assurance of Health Care (3) S Faculty

Designed for the health care professional or administrator who is involved in or concerned about assurance of quality in health care Course includes historical beginnings, state-of-the-art, voluntary and governmental effort and proposed means to quality assurance.

465. (452) Analysis and Evaluation of Health Care Services (3) F

Prerequisites: Introductory course in statistics, consent of instructor Techniques of analysis and evaluation applied to health services with respect to organizing, staffing, financing and utilization Emphasis on the analytic process, program evaluation and report of findings.

480. Internship in Health Care Administration (3) F,S Tumelty

Prerequisites: HCA 400, 411 or consent of instructor A supervised internship in an approved health care organization or related agency under the joint supervision of university and institutional personnel May be repeated once to a maximum of six units.

490. (490) Special Topics in Health Care Administration (1-3) F,S

Topics of special interest in health care administration selected for intensive study Topics will be announced in the Schedule of Classes May be repeated with different topics to a maximum of six units.

495. (495.) Integrative Seminar (3) F Tumelty

Prerequisite: Completion of all other required major courses. Integrative experience focusing on the student's ability to apply the concepts of health care administration as demonstrated by the development and defense of a research paper Traditional grading only. [Seminar]

499. (499) Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor Independent study of special topics under supervision of a faculty member May be repeated to a maximum of four units In exceptional cases, may be repeated to a maximum of six units when approved by the Director of Health Care Administration Program.

Graduate Division

Courses offered through the Consortium are shown in parentheses.

(500). Administrative Behavior and Leadership in the Health Care System (3) S

The goal of this course is to develop skills in analyzing administrative problems; evaluation and improvement of organization management in health care institutions with special emphasis on concepts of leadership, group dynamics, communications techniques and processes, motivation and performance appraisal techniques.

(505). Organization and Systems of Health Care (3) F

The goal of this course is to gain a working familiarity with the major theories or organization design and management concepts This includes the major Schools of organization theory, their major contributors and the application of their concepts to health care institutions.

(510). Human Resources Management in Health Care (3) S

Management of human resources in the health care system including human resource planning and staffing, training and development, performance appraisal, job design and analysis, and compensation.

(515). Advanced Financial Management of Health Care (3) F

Prerequisite: HCA (440), (442) Examination of the principles and practices of managing financial resources in health institutions Evaluation of trends in the financing of health care and the influence of third party payers on the financial decisions of health care administrators.

(524). Advanced Legal Aspects of Health Administration (3) S

Examination of the federal and state regulations of health care facilities and their personnel, patients, and programs Identification of the legal rights, privileges, and duties of the health care facility to its employees and the patients There will be special emphasis on malpractice, government control, infection control, liability, contracts, informed consent, medical records, planning, reporting and the health practitioner as an expert witness Current case laws are reviewed as appropriate.

(530). Strategic Planning and Marketing in the Health Care System (3) S Faculty

The purpose of this course is to convey a basic understanding of strategic planning and marketing concepts and methods applicable to the organization and delivery of health care services It is expected that students will gain an appreciation of the strategy-oriented management planning process, achieve knowledge of basic approaches and methodologies employed in strategic planning and health care marketing, and attain sensitivity to those economic and political forces which give form and shape to the health care marketplace.

(535). Quantitative Methods for Health Administration (3) F

Prerequisite: An approved course in statistics To identify and apply appropriate quantitative and operations research techniques to problems in health care settings Students will receive intensive exposure to decision theory and control systems and have practical experience solving problems in resource allocation, procedural decisions, scheduling, forecasting, measurement and cybernetic control.

(599). Directed Study (1-3) F,S Tumelty

Directed study of a selected topic.

630. Seminar in Health Care Administration (3) F,S Tumelty

Prerequisite: Consent of instructor Advanced study and exploration of selected aspects in the organization and administration of the health care system through in-depth analysis of contemporary health care administrative theory and practice.

(685). Residency (3) F,S

Prerequisites: all 500-level courses, and consent of instructor The purpose of the course is to provide candidates f or the master's degree an opportunity to observe and participate in the operations of a health care institution The student will also study in-depth the organizational structure, philosophy, problems, and personnel relationships of the institution under the guidance of an approved on-site preceptor and a faculty advisor.

(690). Project (3) F,S

Prerequisite: HCA (685) The student will research a major problem identified within the health care institution of the student's residency, research it in accordance with an accepted methodology, consider the characteristics of the organization, and recommend potential courses of action for the organization to take.

(695). Integrative Seminar: Critical Analysis of the Health System (3) S

Prerequisites: HCA (685), (690) The health care system will be critically analyzed within its organizational, financial and personnel components to include the socioeconomic and political forces which bind the system A systematic, ecological approach will be employed with emphasis on an advanced and critical analysis of the U.S system Special consideration will be given to the public policy determinations which have influenced the development of the system to include emphasis on the relevant problems and issues surrounding such systems.

(700.) Project Continuation Course (0)

Student who have not completed their HCA 690 project by the end of the term should enroll the following term in this course.

Health Science

School Of Applied Arts and Sciences

Department Chair: Alan C. Henderson
Department Office: Applied Arts Sciences (AA/S), Room 215
Telephone: 498-4057
Faculty: Professors: Donald A. Beegle, Associate Professors: Linda Burhansstipanov, Charles E. Campbell, Richard R. Lussier
Emeritus Faculty: Cathern Irwin, Marion B. Pollock, Alan R. Probst, John A. Torney
Department Secretary: Linda A. Watson

Students desiring information should contact the department office for referral to one of the faculty advisors: Graduate Advisor, Undergraduate Advisor, Community Health Education Coordinator, School Health/Credential Coordinator.

Health education is concerned with the promotion of health and the prevention of disease and disability. Its focus is on the quality of life. Health education recognizes that actions are based upon physical, social, mental-emotional and spiritual dimensions, all of which are interrelated and interdependent. Health is the goal, and education is the process. Health education's purpose is to bridge scientific knowledge and the application of that knowledge. The health educator works with others to take what is known about health and transforms it into desirable behavioral practices.

The focus of health education is upon decision-making. Individuals are encouraged to take responsibility for their own health and to assume some responsibility for the health of their family and community. Society is ever changing. Similarly, society's health problems are changing. It is increasingly apparent that future health advances will not come so much in the form of new technology. Instead, positive differences will occur primarily as a result of individual actions. Incidence and prevalence of disease and disability will depend largely upon the nature and quality of life one leads.

An Undergraduate Handbook and a Graduate Handbook are available for majors, prospective majors and master's candidates. Brochures describing the Undergraduate program, Credential program and the Master's program in Health Science are also available at the Health Science Department office.

Courses are designed to satisfy health science requirements for (1) general education, (2) the baccalaureate degree major, (3) Single Subject Credential in Health Science (4) Master of Science Degree with a Major in Health Science, and (5) Master of Public Health Degree in Community Health Education.

All Health Science majors and minors are responsible for requirements specified in the University Bulletin. Students are encouraged to sign up with a faculty advisor by contacting the Graduate or Undergraduate Advisor. The faculty advisors will discuss and review the students' academic programs with them. Students who encounter difficulty with their programs should contact their advisor. Students also have the responsibility of keeping track of unit totals required for graduation and insuring that these unit requirements are met.

Bachelor of Science in Health Science

The basic requirements for graduation with a B.S. Degree in Health Science consist of (1) completion of General Education requirements, (2) completion of degree major requirements, (3) completion of a minimum of 124 units, at least 40 units of which must be upper division. Upper division courses are numbered 300 to 499.

Major Core Requirements: All Health Science majors must complete the required core. The core of the Health Science program contains five areas of competencies: Statistics, Program Development, Professionalism, Health Organization and Health Promotion. All majors must complete at least one course from each competency area. Courses must be selected in consultation with an Advisor.

Requirements for the Bachelor of Science:

Required Core: 15 units.

A. Statistics H SC 4O3 or ED P 419
B. Program Development - H SC 430 or 460
C. Professionalism - H SC 301 or 451
D. Health Organization - H SC 401, 409, 420IC or 450
E. Health Promotion -H SC 435

The School Health option is designed for persons who desire to pursue a professional preparation program leading to qualification as a Health Science teacher in the secondary schools.

Opt'on in School Health (code 3-1215)

Lower Division:

AP 207 or 342; BIO 200 or 216; CHEM 200; MICR 100 or BIO 350; MICR 101; PSY 100; SPAN 101A or language equivalent approved by Department adviser.

Upper Division:

HSC 301, 401, 403, 405, 421, 422, 423, 425, 427, 430, 435, 440; HEC 232 or 430; PSY 351 or SOC 335; SPCH 332 or 335; SOC 336.

The Community Health Education option is designed for persons whose occupational objective is to serve as a community health educator with an official, voluntary or corporate health agency.

Option in Community Health Education (code 3-1213)

Lower Division:

AP 107, BIO 200, CHEM 200; MICR 100, 101; SPAN 101A or language equivalent approved by Department adviser.

Upper Division:

HSC 301, 400, 401, 402, 403, 405, 421, 430, 435, 440, 485; Three courses selected from the following: HSC 406, 409, 420IC, 422, 423, 425, 427, 429, 490, 499; HEC 232 or 430; one course selected from the following: PSY 351 or SOC 335; one course selected from the following: SOC 320, 336, 445, 462, 464; and one course selected from the following: SPCH 332, 334, 335.

The Option in Health Care is designed for those individuals who have received certification and/or license from an approved allied health/health care program and desire a Bachelor of Science degree. The focus of this option is upon the development of professional skills for people whose major goal is: (a) providing service, or (b) instructing in the health care setting.

Requirements for Admission to Health Care Program

Once admitted to the University, students are required to do the following prior to acceptance into the Health Care Option:

1. Obtain certification and/or license from an allied health/health care program from an institution that has been accredited by either a Committee on Post- secondary Accreditation (COPA) approved accreditation agency or the Committee on Allied Health Education and Accreditation (CAHEA). Those individuals who do not have appropriate certification will be counseled by the Department of Health Science regarding where to obtain an appropriate accredited program, and, when possible, concurrent enrollment may be utilized.
2. Earn a minimum grade point average of 2.0.

Requirements for the Option in Health Care (code 3-1216)

Lower Division:

Completion of general education requirements. to include: ENGL 100; one of the following: ANTH 120, SOC 100 or PSY 100; and a minimum of 12 units in Natural Sciences approved by department advisor equivalent to: BIOL 107, Human Body-Structure and Function; BIOL 200, General Biology; CHEM 200, Introduction to General and Organic Chemistry; MICR 100, Microbiology; MICR 101, Man and Disease.

Upper Division:

(39 units): Required Core: 15 units (one course from each area); courses must be selected in consultation with an option advisor: (a) Statistics — H SC 403, ED P 419; (b) Program Development — H SC 430, 460; (c) Professionalism — H SC 301, 451; (d) Health Organization — H SC 401, 409, 42WC, 450; (e) Health Promotion — H SC 435; additional coursework: HCA 411, 440; HSC 452; one of the following: ANTH 353, HEC 430, H SC 40D, or SOC 462; one of the following: C/ST 200, JOUR 270, PPOL 350, or ECON 300; An emphasis in either (a) Providing Service (12 units): HCA 41D, 465, ED P 434 or NRSG 202,202L, and one of the following ANTH 319, GERN 482, NRSG 253, or NRSG 482; or (b) Instructing in Health Care Setting (12 units): POSC 331, HSC 462A, 492, and one of the following ED P 434, N RSG 202, 202L, IM 300,301.

Minor in Health Science (code 0-1211)

Twenty-four units as follows: H SC 301, 401, 430, 435, 440, and three courses from: H SC 400, 409, 4201C, 421, 422, 423, 4251C,427.

Single Subject Credential in School Health

The Single Subject Credential in School Health prepares one to teach at the secondary level. Requirements include a bachelor of science degree in health science (School health option) plus the required professional education courses. See the School Health/Credential Coordinator Advisor.

Master of Science in Health Science (code 6-1211)

The master of science program is designed to provide students with (1) intensive study of health education concepts, theories and processes; and (2) research methodology appropriate to the solution of specific individual and community health problems. The graduate is also prepared for a leadership role in a school or community setting and for admission to doctoral programs at other colleges and universities. Graduate students in need of counseling should contact the Graduate Advisor.

Each applicant should request a copy of the official transcript(s) of all work be sent to the Graduate Advisor in the Health Science Department in addition to the copies required by the Office of Admissions and Records.

Prerequisites

1. A bachelor's degree with a major in Health Science from an accredited college or university; or
2. A bachelor's degree with a minimum of 24 units of upper division courses comparable to those required of a Health Science major at this University.
3. Students deficient in undergraduate preparation must take courses to remove these deficiencies at the discretion of the department Graduate Advisor.
4. An overall undergraduate grade point average of 3.0.

Advancement to Candidacy

1. Satisfy the general University requirements for advancement to candidacy.
   a. Pass the Writing Proficiency Exam
   b. Have at least a 3.0 average for all course work attempted as a graduate student.
   c. Completed at least 6 units of graduate study in the major.
2. Approval of the department Graduate Advisor and the Director of Graduate Studies and Research, School of Applied Arts and Sciences.

Requirements for the Master of Science

1. A minimum of 31 units of approved upper division and graduate courses.
2. A minimum of 22 units of Health Science courses of which 18 units must include H SC 508, 570, 581 and 696; and at least two of the following: H SC 501, 516, 525, 528, 624 and 626.
3. A thesis H SC 698, and an oral examination over the thesis.

Master of Public Health — Option in Community Health Education (code 7-1213)

The Master of Public Health option in Community Health provides the opportunity for students to specialize in community health education, to qualify for membership in professional organizations, to increase competence in subject matter relevant to community health education in preparation for serving in various health agencies, prepare for teaching at the college and university levels and for administrative positions in public and private health agencies.

Each applicant must request that a copy of the official transcript(s) for all prior college course work be sent to the Graduate Advisor in the Department of Health Science in addition to the copies required by the Office of Admissions and Records.

Prerequisites

1. A bachelor's degree with a major in health education which articulates with the course requirements for the same degree at California State University, Long Beach; or A bachelor's degree in a related discipline with a minimum of 24 units of upper-division course work comparable to those required of the health science major at this University; or A bachelor's degree in a related discipline and willingness to make up any deficiencies in prerequisite health science courses.

2. An overall undergraduate GPA of at least 3.0. Students with less than a 3.0 GPA on the last 60 units of undergraduate units attempted, but show promise in all other aspects, may be given special consideration after petitioning for conditional admission into the program through the Department Graduate Advisor.
3. At least one year's full-time (or equivalent) paid or volunteer experience in Community Health Education or a closely related health role. Preference will be given to those with greater experience and ability.
4. Three letters of recommendation from persons with whom the candidate has worked and who have direct knowledge of the person's qualifications and potential as a community health educator.
5. Prerequisites for all courses carrying graduate credit must have been completed within seven years of taking the graduate courses. If any prerequisite is outdated, it may be repeated or credit obtained by (1) written examination on the subject matter or (2) providing documented evidence of currency in the subject area.
6. Acceptance by the University as a student with graduate standing.

Advancement to Candidacy

1. Satisfy the general University requirements for advancement to candidacy.
   a. Pass the Writing Proficiency Examination.
   b. Have at least a 3.0 average for all course work attempted as a graduate student.
   c. Completed at least six units of graduate study in the proposed major.
2. Approval of the Department Graduate Advisor and the Associate Dean of Graduate Studies, Research and Faculty Affairs — School of Applied Arts and Sciences.

Requirements for the Master of Public Health in Community Health Education

1. Completion of 34 units of approved upper-division and graduate-level courses including:
   a. Core — HCA 400, BIOL 562, MICR 429,and H SC 528;
   b. H SC 585, a supervised field-work experience, 6 units;
   c. At least 12 additional units of 500/600 level courses in Health Science including HSC 501, 525, 570, 624, 698.
2. Successful completion of a comprehensive written examination.

Courses (H/SC):

Lower Division

210. Contemporary Health Problems (3) F,S Faculty

Development of modern health knowledge, attitudes and behavior; includes family life-sex education, drug use and abuse, mental health, medical quackery and health frauds, common diseases such as venereal disease, heart disease and cancer.

Upper Division

301. Orientation to Health Science (3) F,S Lussier

Overview of the philosophy of the Health Science Department. Orientation to the degree requirements, career opportunities, and the theoretical and practical issues of health education as a profession. Must betaken prior to H SC 401 and 430.

***400. Disease Prevalence and Distribution (3) F**

Prerequisite: H SC 403. Application of epidemiologic procedures to the understanding of the occurrence and control of infectious and chronic diseases, mental illness, environmental health hazards, accidents and geriatric problems.

***401. Community Health Education — (3) F,S Koser, Torney**

Prerequisite: H SC 301 and H SC 43 D. Concepts of community health education with emphasis on community organization; application of these concepts to health education activities of official, voluntary and professional health agencies.

***402. Applied Concepts of Community Health Education (3) F,S Koser, Torney**

Prerequisites: HSC 30l, HSC 430, HSC 435. Identification and application of concepts unique to community health education; includes examination of theoretical foundations, marketing and promotion techniques, and the application of health education strategies.

***403. Community Health Statistics (3) F,S Faculty**

Concepts and procedures of statistical analysis in community health. Not open to students with credit in H SC 300. (Lecture 2 hours, laboratory 2 hours.)

405. Measurement of Health Status (3) F Faculty

Introduction of non-physiological variables relevant to one's health status. Fundamental psychometric considerations in the assessment of cognitive, affective, and psychomotor variables related to health.

406. Developing Competencies in Health Science Topics (3) F

Prerequisite: none. Intensive preparatory training on health related topics: includes weight reduction, stress management, smoking cessation, breast and testicular self-examination, family planning. Inservice training will be available in such areas as substance abuse, blood pressure screening and self-esteem instruction. In addition, professionalism and rapport-developing skills will be examined.

***409. Community Health Problems (3) F,S Faculty**

Community aspects of pertinent health problems and the organization of health resources; emphasis on philosophy, services, administration and interrelationships of public, private and voluntary health agencies as they function in the community. Not open to students with credit in H SC 320.

411A. Health Science for Elementary Teachers

411B. Health Science for Secondary Teachers (3) F,S Burhansstipanov, Koser

Prerequisite: Upper division students only. Contemporary teaching of health education in elementary and secondary Schools; emphasizes drug use and abuse, human sexuality, community and human ecology (meets state credential requirement for health education). Not open to health science majors or minors.

420IC. International Health (3) F,S Campbell, Forouzesh, Koser [E]

Analysis of current health problems in the world; examination of contributing social, psychological, physical, legal and cultural factors; international programs for the improvement of world health; structure and functions of world health agencies and organizations.

***421. Health Behavior (3) F,S Lussier (3)**

A survey of contemporary research on the health effects of human behavior. Special emphasis is given to current issues of health behavior, decision-making in contemporary society, values clarification and contemporary theories of behavior change (e.g., health belief model).

422. Environmental Health (3) F,S Lussier

An examination of the reciprocal relationship existing between man and his environment, with the emphasis directed toward the health related consequences of man's actions in the environment. Not open to students with credit in H SC322.

423. Consumer Health (3) F,S Campbell, Koser [E]

Effective selection of health information, products and services; medical quackery and fraudulent health practices; laws and agencies protecting the consumer; health care delivery systems; and influences of corporate control on the consumer movement in contemporary society. Not open to students with credit in H SC 321.

425IC. Human Sexuality and Sex Education (3) F,S Burhansstipanov, Koser [E]

Biomedical, sociological, and psychological aspects of human sexuality, the communication of sexual information, the implementation, content and evaluation of family life and sex education in the Schools. Not open to students with credit in HSC 325.

427. Drugs and Health (3) F,S Burhansstipanov, Campbell, Torney (E)

Study of psychoactive drugs with primary attention to alcohol, nicotine, caffein, cannabis, hallucinogens, narcotics and other drugs; examination of trends, philosophical issues and behavioral practices associated with drug use and dependence. Includes physiological psycho-social, legal, historical, philosophical and political aspects; treatment- rehabilitation activities and programs; and drug abuse prevention education. Not open to students with credit in H SC 327.

429. Stress Reduction (3) F,S Faculty

Recognition of stress and its causes. Physical and mental symptoms of stress. Influences which reduce or create stress; methods of coping.

***430. School Health Program (3) F,S Burhansstipanov**

Prerequisite: H SC 301. Intensive analysis of the philosophy, organization and legal aspects of the school health program includes school and community coordination for a team approach to health education for the school age individual.

433. Addictive Unhealthful Behaviors: Intervention and Change (3) S Faculty

Prerequisite: none. Analysis of the human characteristics and traits associated with addictive health behaviors and the addictive process. Includes examination of the phases of eating disorders, chemical dependencies and compulsive family behaviors. Early recognition of addictive health behaviors through skilled observation; an assessment of addictive cues and antecedents; intervention strategies; family's role in preventing or contributing to the development of addictive health behaviors; current treatment and rehabilitation strategies effective in positively impacting life style.

435. Health Promotion Risk Reduction (3) F,S Faculty

Introduction to health promotion/risk reduction program content, development and implementation for use in corporate, hospital and public settings. Intended primarily for the health science major.

437. Professionalism in Health Education (3) F,S

Professionalism in the school/community environment; practical skills and concepts in being a health professional: values clarification, decision making, self esteem, etc.

439. Health Science in the Work Place (3) Faculy

A survey of the range of roles and work settings filled by community health educators in Los Angeles and Orange Counties. There will be site visitations, observations of community health educators int the work setting and extensive discussion with health educators who fill a wide range of roles in the community.

***440. Applied Concepts of Health Science (4) F,S Burhansstipanov**

Prerequisite: Health Science 430. Identification application of the concepts and modes of inquiry unique to the discipline of health science; development of appropriate curriculum based upon an analysis of individual, school and community needs and interests. (Lecture 3 hours; laboratory 3 hours) Traditional grading only. *450. The Health Care Professional in the United States (3) F Identification of the role and function of the health care professional; legal aspects of health care delivery; factors influencing the quality of health care, problems from consumers' viewpoints; cultural influences; governmental involvement and current issues in health care; examination of health care in the United States.

***451. Ethics Professionalism in Health Care (3) S Faculty**

Examination of professionalism and bioethics, and the process of making moral decisions; ethical issues; professional oaths and codes of ethics; health care ethics and the law.

***452. Research Design for the Health Care Professional (3) S**

Analyses of current research designs applicable for the health care professional, including experimental and non- experimental design; interpretation of statistics; determination of validity and reliability; sampling and developing a research proposal.

***460. Health Care Program Development (3) F Faculty**

Examination of the process of health care, program development, identification of contemporary health care philosophy, needs, legal aspects, objectives and community involvement as related to program development; process of conducting a needs assessment; factors affecting development; regionalization; grantsmanship.

***462A,B. Teaching the Health Care Professional (3,3) F,S Burhansstipanov, Koser**

Prerequisite: H SC 462 A is a requisite for 4628. Identification and application of curriculum theory unique to (a) teaching the health care professional, and/or (b) teaching in the health care setting (in-service); instructional design and development including instructional objectives, teaching strategies and assessment techniques.

***485. Field Experience in Community Health Education (3) F,S Koser**

Prerequisites: H SC 401 and consent of instructor. Supervised observation and field experience in community health education as conducted by official, voluntary and professional health organizations.

490. Independent Studies in Health Science (1-3) F,S

Prerequisite: Consent of instructor. Students will conduct independent library or laboratory research under the supervision of a faculty member and write a report of the investigation. May be repeated for a maximum of six units. Grading: Student Option.

***492A,B. Internship in Health Care (1-3) F,S Burhansstipanov, Koser**

Prerequisite: H SC 462 A,8. Students will be responsible to prepare and teach in-service education programs, prospective health care professionals, and/or patients/clients in a health care setting. (Minimum of 80 hours in-service.)

***499. Special Studies (1-3) F,S Faculty**

Group investigation of selected topics. Topics to be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with change of topic.

Graduate Division

501. Public Health Organization (3) F Faculty

Prerequisite: Undergraduate major in health science or related field. Analysis of the components of public health from a historical, organizational and administrative perspective. Topics to include organization of health care delivery, financing health care, health care planning, evaluation of health care systems and analysis of contemporary public health issues.

508. Administrative Relationships in Health Education Programs (3) F Faculty

Prerequisite: Undergraduate major in health science or related field. Introduction to administrative theory; investigation of administrative responsibilities and functions implicit in School health or other health education programs.

516. Patient Health Education (3) S Faculty

Prerequisite: Undergraduate major in health science or related field. Process involved in planning and implementing patient health education programs in both outpatient departments and clinics as well as with patients in hospitals and long-term care facilities.

525. Advanced Community Health Education (3) F,S Faculty

Prerequisites: H SC 401 and 485; or consent of instructor. Advanced study of educational and related theory applicable to the conduct of health education programs in community and other settings. Methods of promoting change; role as program and staff director and evaluation techniques.

528. Advanced Environmental Health (3) F,S Faculty

Prerequisite: H SC 422 or consent of instructor. Organization and methods for promoting human health by controlling environmental factors.

570. Theoretical Concepts and Issues in Health Science (3) F

Identification and analysis of current trends, philosophies and issues in health science.

581. Program Planning and Evaluation in Health Education (3) S

Prerequisites: H SC 430, 440. Principles of curriculum development; selection and evaluation of resource materials; theory and practice in measurement in health education.

585. Practicum in Community Health Education (6) F,S Faculty

Prerequisite: Consent of instructor. Extended fieldwork experience under guidance of faculty and field supervisors in an approved community health education program of an official or voluntary health agency. (12 consecutive weeks - 480 hours.)

590. Independent Study (1-3) F,S,SS Lussier

Prerequisites: None. Independent research conducted under the supervision of a full-time faculty member resulting in a written report of the investigation. [Independent Study] Grading: Traditional only. Repeatable to a maximum of 6 units with different topics.

624. Seminar in Community Analysis and Program Planning (3) S

Prerequisites: H SC 525 or consent of instructor. Progress and techniques of community analysis and program planning.

626. Seminar in Preventive Medicine and Public Health (3) F

Prerequisite: H SC 409. Identification and critical analysis of current research and practices in selected areas of preventive medicine and public health.

696. Research Methods (3) F,S Faculty

Prerequisites: Undergraduate major in Health Science or related field; undergraduate course in statistics. Introduction to research methodology in the area of Health Science.

697. Directed Studies (1-3) F,S Lussier

Prerequisite: Advancement to candidacy. Independent investigation of research problems in health education.

698. Thesis (1-3) F,S Lussier

Prerequisites: H SC 696, advancement to candidacy. Planning, preparation and completion of an approved thesis.

Home Economics

School of Applied Arts and Sciences

Department Chair: Bonnie J. Rader
Department Office: Home Economics Building, Room 001
Telephone: 498-4484 **Faculty: Professors:** William E. Buckner, Grace E. Dinerstein, Joan T. Hoff-Templeton, Mary F. Kefgen, Joan H. Lare, Bonnie J. Rader, Mildred S. Rodriguez, Ramses B. Toma; Associate Professors: Mary Jacob, James E. Koval, Lydia E. Sondhi; Assistant Professors: M. Sue Stanley, Richard V. Tuveson
Emeritus Faculty: Dorothy W. Baker, Zelpha Bates, Arlene A. Hamilton, Talma B. Hupfield, Maxine K. Keenan, Mabel S. Moore, Merna A. Samples, Marilyn Vanderwarf, Marion A. Wharton
Graduate Advisor: Dorothy L. Fornia
Department Secretary:
Department of Home Economics Advisory Council: Mary Knoll Bloss, Director, Quality Assurance, Taco Bell; Rosanne Bye, V.P. R D, Denny's Inc.; John Campbell, Food and Beverage Director, Warner Center Marriott Hotel; G. Margee Carroll, Interior Designer, Bickham-Esmenan; Nick Christy, Vice Chairman, Atlas-Horn Food Service; Roger A. Clemens, Manager of Nutrition Research, Calreco Inc.; Bettey M. Cox, Dietitian, Southern California Gas Co.; Margaret Dennis, Director of Product Development, Van DeKamp's Frozen Foods; Jerry Di Vecchio, Food and Wine Editor, Sunset Magazine-Lane Pub. Co.; Treesa Drury, Advertising Standards Manager, AARP; Judy Dugas, Veteran's Administration, Seaside Child Development Center; Carole Eichen, President, Carole Eichen Interiors, Inc.; Donna Fong, Executive Director, Consumer Credit Counselors of L. A.; Frederick J. Gaylord, President, McClelland, Cruz, Gaylord Assoc.; Gayle Ham, Consultant; Claudia Harden, Executive Director, Cedar House; Dublene Hayes, Vice President and Director of Design, Pacific Design Center; Marc Hoffman, Director of Food and Beverage, Anaheim Marriott Hotel; Charlene Holabird, Home Economist, Food Sales West; Diane Howison, Nutrition Consultant, Dairy Council of California; Florence D. Kirk, Staff Dietitian, California Milk Advisory Board; Beverly Kloehn, Consumer Affairs Manager, Pepsi-Cola; Walter F. Kough, V.P. Tech. Director, MCP Foods, Inc.; Diane Kuriyama, Ass't. Costumer, Disneyland, Walt Disney Productions; Patricia M. Londre, President, The Londre Co; Edgar Loney, Vice President, Lawrey's Foods, Inc.; Charles Macaluso, Assistant Vice President, United States Testing Company; Carl Martin, Director, Long Beach Children's Centers, Long Beach Unified School Dist.; Shirley McGillicuddy, Owner, Shirley McGillicuddy and Assoc.; Michael Mendizza, Mendizza and Associates, Media Development and Design; Jack D. Miller, Division Sales Manager, Investors Diversified Services, Division of IDS/American Express; Jay L. Moore, General Manager, PYA Monarch, Inc., Division of Consolidated Foods Corp.; Marilyn G. Nachtrieb-Smith, Senior Research Home Economist, U. S. Borax; Lori Nadler, Owner, Cecelia Sportswear; Nancy Quenzer, Senior Food Technologist, Beatrice Foods; G. V. Reddy, Director of Technical Services, Fishking Processors, Inc.; Nicole Roberts, Carole Eichen Interiors, Inc.; Shirley Roberts, Manager, U. S. Toy, Constructive Playthings; Jonda Rourke, Director of Executive Training, Buffum's Inc.; Iris Schutz, WIC Coordinator, City of Long Beach, Department of Public Health; Rayne Sherman, IBD, President, The Sherman Design Group; Anita Siverly, Director, Food and Nutritional Care, Memorial Hosp. Medical Center; Sharon S. Smith, Director of Educational Research, To-Sew, Inc.; Mary Solow, President, Consumer Federation of California; Patricia Stanley, Spec. Voc. Ed., California Community Colleges, Office of the Chancellor; Faye W. Walcher, Faye W. Walcher and Associates, Conservators of Fine Fabrics; Pat Porter Walker, President, Home Arts Distribution; Mary Weir, Couturiere, Mary Me Bridal and Formalwear; Don Westerland, Executive Director, Family Services of Long Beach; Diana Wiggins, President, The Food Management Group; Jack E. Witmer, President, Glencoe Publishing.

General:

Students desiring information should contact the department office for referral to one of the faculty advisors: Child Development and Family Studies; Dietetics and Food Administration; Education; Interiors: Environmental Factors; Consumer Affairs; Textiles, Clothing, and Fashion Merchandising.

The faculty of the Department of Home Economics seeks to prepare both women and men at undergraduate and graduate levels to enter professions concerned with enhancing the quality of individual and family life in the context of environment. The following objectives have been articulated:

To prepare men and women to the highest standards for professions in home economics and related fields requiring a bachelor's and master's degree.

To prepare students to function within the diversity of human relations while enhancing their own physical, psychological and emotional development through the lifespan.

To provide continuing education and post-master's study in professional fields of Home Economics.

To provide information to a diverse student population and the community about current services and career opportunities as well as the potential for emerging professional careers in a changing society.

To employ the most effective methodology and useful resources on the university campus and in the surrounding communities. Provide the best quality program within the structure of the CSU system.

To continue creative and scholarly research for the future growth of the profession.

To apply knowledge gained from research and study to serve the needs identified in the university and surrounding community.

Accreditation:

The Department of Home Economics is accredited by the American Home Economics Association. The Interiors: Environmental Factors program is accredited by the Foundation for Interior Design Education Research (FIDER). The Dietetics program is a Plan IV program approved by the American Dietetics Association (ADA).

The Department of Home Economics offers programs of study leading to the bachelor of arts, bachelor of science, master of arts, and master of science degrees.

Curricula are designed to provide a liberal education through study in the social and natural sciences, the humanities and the arts and to offer specialized instruction based on these disciplines which will lead to professional careers in home economics and related fields.

Programs of study cover various aspects of the field--child development and family studies; interiors: environmental factors; consumer affairs, food and nutrition; textiles, clothing, and fashion merchandising. Requirements for the teaching credential, eligibility for membership in the American Dietetic Association, and American Society of Interior Designers, preparation for careers in home economics cooperative extension service, business and home economics in community service may be met.

The department serves the needs of students completing majors in other fields who find that certain aspects of home economics are important to their professional objectives or personal interest.

Students may prepare for careers in business, human services, cooperative extension, education and community service aspects of home economics. Listed below are some career possibilities:

Consumer Affairs:

consumer credit counselor
consumer education consultant
energy conservation specialist
financial counselor
merchandising manager
marketing consultant
sales representative

Child Development and Family Studies:

hospital/child life specialist
marriage and family counselor
maternal and child health director
preschool teacher
senior citizens specialist

Dietetics and Food Administration:

clinical dietitian, consultant
communication (newspapers, TV, radio) specialist
community nutritionist
consumer education consultant
food-service systems manager in hospitals, schools, universities, airlines, and business
researcher in food industry and nutrition

Interiors: Environmental Factors:

color consultant
interior designer: commercial and residential
kitchen designer
manufacturer's representative
space planning specialist
store planning specialist

Textiles, Clothing and Fashion Merchandising:

buyer-retailing
manufacturer's representative
product designer-pattern making
store operations manager
stylist-fashion director
textiles (testing and evaluation) specialist

Home Economics - General:

adult and child care education program consultant
business communication services consultant
cooperative extension service educator
government and community agency services consultant

Home Economics Teacher Education:

consumer education specialist in business
education in cooperative extension
education program coordinator in food related business
teacher in adult or vocational education
teacher in child care program
teacher in junior or senior high school

Bachelor of Arts in Home Economics

Requirements for all majors include a minimum of 124 units for the bachelor of arts degree. In addition to general education requirements, a minimum of 40 units in home economics must be completed, 24 of which must be upper division. Students transferring from another college or university will receive transfer credit in required courses if the course is equivalent to the course at this University. In addition, for design course work to be considered for transfer in the area of Interiors, a portfolio must be presented to an Interior faculty advisor for review.

Requirements for the Bachelor of Arts (code 2-1020)

Lower Division:

A/P 107 OR 207; CHEM 111A or 200; ECON 200, 201; ENGL 100, 101; SOC 100 or ANTH 120;

Upper Division:

ECON 300 (if 200 and 201 were not taken); ENGL 300 or 317 (if 101 was not taken).

Students shall select a program of study in consultation with a faculty advisor and with departmental approval. Advisement materials are available in the Home Economics Department office. Programs of study and additional course requirements are:

General Home Economics:

A/P 207; Chem 111A or 200, 300 or 327 and 327L; Econ 201 and 202, or 300; ENGL 100, 101 or 300 or 317; PSY 100; SOC 100 or ANTH 120; HEC 111 and 111L, 232, 235, 241, 251, 254 and 254L, 323, 327, 342, 353, 412 or 413, and 486; plus approved electives.

Child Development and Family Studies:

A/P 107 or 207; PSY 100; SOC 100 or ANTH 120; HEC 111, 111L, 211, 214, 232, 311 or 314, 411, 412 or 413, 414 or 415. The student must select 15 units from HEC 323, 342, 416A, 416B, 418, 419, 433 or courses not taken above; plus approved electives.

Home Economics in Business:

Appliance and Home Furnishing Merchandising: ACCT 201 or 205; H EC 143, 232, 241, 323, 327, 353, 427, 486; MKTG 300; MIS 240; plus approved electives.

Consumer Affairs:

ECONn 201 and 202, or 300; ENGL 100, 101 or 300 or 317; PSY 100; CHEM 100 or 111A or 200; ACCT 201 or 205; HEC 232, 241, 251, 323, 400 or 490 or 493, 422 or 423 or 427, 425, 425, 486; MKTG 300, 490; plus approved electives.

Fashion Merchandising:

CHEM 100 or 200 or 111A; ECON 201 and 202 or 300; PSY 100; SOC 100 or ANTH 120; ACCT 201 or 205; H EC 143, 251, 254 or 252, 353, 450, 451, 455, 456,459, 486; MKTG 300; MIS 240; plus approved electives.

Food Industries:

ACCT 201 or 205; H EC 232, 235, 241, 251, 323, 332, 333, 432; MKTG 300; MICR 210; plus approved electives.

Home Economics Education:

A/P 207; CHEM 111A or 200, 300 or 327 and 327L; ECON 201 and 202, or 300; ENGL 100, 101 or 300 or 317; PSY 100; SOC 100 or ANTH 120; HEC 111 and 111L, 232, 235, 241, 251, 254L, 323, 327, 331, 333, 342, 353, 412 or 413; plus approved electives. Candidates for the Ryan Single Subject Credential must take professional education requirements.

Interiors — Environmental Factors:

Program accredited by the Foundation for Interior Design Education and Research (FIDER): Art 181, HEC 142, 143, 241, 340, 342, 344A, 344B, 348, 353, 400, 441A, 441B, 443, 446, 447; IA 141, 347, 442, 481; plus approved electives.

Textiles and Clothing:

CHEM 100 or 200 or 111A; ECON 201 and 202 or 300; PSY 100; SOC 100 or ANTH 120; H EC 241, 251, 254 and 254L, 353, 357, 450, 451, 453, 454, 456, 459; MKTG 300; PHYS 104; SPCH 130 or 334 or 335.

Bachelor of Science in Dietetics and Food Administration

Requirements include a minimum of 128 units for the Bachelor of Science Degree. In addition to general education requirements, a minimum of 40 units in home economics must be completed, 24 of which must be upper division. Students may elect a program in general dietetics, clinical nutrition, community nutrition, food science, or food service administration. Copies of these programs of study are available in the Home Economics office. All programs except food science fulfill academic requirements for membership in the American Dietetic Association. Students are advised to obtain information regarding the qualifying experiences required for becoming a registered dietitian in addition to the academic courses included in the curriculum.

Requirements for the Bachelor of Science

Minimum Course Requirements:

Lower Division:

A/P 107 OR 207; CHEM 111A or 200; ECON 201, 202; ENGL 100, 101; SOC 100 or ANTH 120

Upper Division:

ECON 300 (if 200 and 20l were not taken); ENGL 300 or 317 (if 101 was not taken)

Natural Sciences:

A minimum of 20 units selected by advisement from A/P 207 or 209; CHEM 111A, 327, 448 or 441 A-B and 449; or CHEM 200 and 300; MICR 210; PHYS 104.

Social Sciences:

ANTH 120 or SOC 100; ECON 200 and 201 or 300; PSY 100.

Supporting Professional Courses:

ENGL 100 and 101 or 300 or 317; competency demonstrated by the entry level math test; ED P 305:MGMT 300 or 303; Q S 240; ED P-419 or H SC 403 or Q S 310; HRM361 or PSY381.

Home Economics:

232, 234, 235, 312, 321, 331, 332, 333, 486 and three units in 400 or 490 or 499. A total of 40 units in home economics must be completed with no less than 24 units taken at the 300-400 level. A total of 128 units must be completed for the bachelor of science degree.

Food-Service Systems Administration Certificate

The Certificate program in Food-Service Systems Administration is designed to provide those students pursuing the bachelor's degree in Dietetics and Food Administration, Business Administration, and other related fields with additional background in food-service management, increasing their expertise at the management entry level. The program is appropriate for a variety of applications, including food-service in restaurants, catering, hospitals, public schools, industrial food-service, hotels and motels, airlines, and in governmental regulatory agencies.

The Certificate may be earned in conjunction with the bachelor's degree or awarded subsequent to obtaining the degree at CSULB. Courses taken to meet the requirements of the Certificate may be the same ones used to satisfy major, minor or General Education requirements, or the degree requirements of the participating departments.

Requirements for the Certificate in Food-Service Systems Administration

A. A bachelor's degree in dietetics/food administration, business administration, or other related fields.
B. Satisfactory completion of the following courses:
   1. Nutrition: H EC 232;
   2. Food Preparation and Service: H EC 235,333;
   3. Food Service Management: H EC 334, 335, 337, 400, 434;
   4. Business Administration: ACCT 201, HRM 361, 362, 440, MGMT 300 or 303, MKTG 300, Q S 240;
   5. Related Fields: CHEM 200 and 300, ECON 300.
C. Maintain a grade point average of 2.5 in the courses of the program and overall.
D. Consultation with and certification of successful completion by the Director of the Program in the Department of Home Economics.

Courses taken under the CR/NC grading option may not be applied to this Certificate program.

Child Development Certificate

Child Development in the Home Economics Department provides an academic and professional background for working with children and families. It offers an interdisciplinary foundation in several areas that influence the life and education of children and families. Field-work opportunities where students have direct experiences with children and families in the community are provided. Specifically, the program qualifies the students to apply for the Children's Center Instructional Permit from the State of California which is required for teaching in and directing child development programs such as nursery schools, day care centers, Head Start and preschool programs-campus child development centers and other children's programs in public and private agencies.

The Certificate in Child Development may be earned in conjunction with the baccalaureate degree or teaching credential in home economics or related field. Courses offered for the certificate may be the same ones used to satisfy, where applicable, major, minor, credential, or general education requirements.

Requirements for the Certificate:

1. A bachelor's degree in home economics or related field.
2. 39 units distributed as follows:

   Lower Division (6 units): H EC 111 and 111L, 232

   Upper Division (27 units): H EC 312, 311 or 314, 400, 411, 412 or 413, 414, 416, 418, 419 or 433.

   Electives: A minimum of six units, selected in consultation with the coordinator.

Certification of successful completion of the Certificate in Child Development will be recommended by the Coordinator.

Interested students should apply to Child Development and Family Studies faculty, Home Economics Department.

Gerontology Certificate

A Certificate in Gerontology (24 units) may be earned in conjunction with the baccalaureate or master's degree. The purpose of this multidisciplinary program is to prepare specialists to work in the field of aging. Specific requirements are listed under Gerontology.

Master of Arts in Home Economics

Each applicant should request that a copy of the official transcript of all college course work be sent to the Coordinator of Graduate Studies in the Home Economics Department in addition to the copies required by the Office of Admissions and Records.

Prerequisites

1. A bachelor's degree with a major in home economics, or;
2. A bachelor's degree with a minimum of 24 units of upper division courses in home economics.
3. An undergraduate overall grade point average of at least 3.0. Students with less than a 3.0 GPA on the last 60 undergraduate units attempted, but who show promise in all other aspects, may be given special consideration after petitioning for admission into the program through the Coordinator of Graduate Studies.
4. Prerequisites for all courses carrying graduate credit must have been completed within seven years of taking the graduate courses. If the prerequisite is outdated, the prerequisite(s) may be repeated or credit obtained by examination.
5. Students deficient in undergraduate preparation must take courses to remove these deficiencies at the discretion of faculty in the specified subject matter area and the Coordinator of Graduate Studies.

Advancement to Candidacy

1. Satisfy the general University requirements for advancement to candidacy. 2. Completed 9 units of graduate courses including Home Economics 696.
3. Successful completion of Writing Proficiency Examination.
4. Approval of the Coordinator of Graduate Studies, and Associate Dean of Graduate Studies and Research, School of Applied Arts and Sciences.

Requirements for the Master of Arts

1. Completion of 30 units of approved upper division and graduate courses with a minimum of 21 units in home economics.
2. At least 18 units of 500/600-level courses in Home Economics, including H EC 599 and 696 (for students in Interiors: Environmental Factors).
3. A thesis, H EC 698, and oral thesis presentation or H EC 697 and a comprehensive examination.
4. An approved course in statistics.

Master of Science in Nutritional Science

The Master of Science Degree in Nutritional Science provides an opportunity for students to:

1. Specialize in food science, food service systems administration, clinical nutrition, and community nutrition with emphasis on nutrition education.
2. Complete a master's degree and the academic requirements to qualify for membership in the American Dietetic Association concurrently.
3. Increase competence in food and nutrition subject matter in preparation for college teaching, research, graduate study beyond the master's degree, and administrative positions in public and private agencies.

Each applicant must request that a copy of the official transcript(s) of all college course work be sent to the Coordinator of Graduate Studies in the Department of Home Economics in addition to the copies required by the Office of Admissions and Records.

Prerequisites

1. A bachelor's degree with a minimum of 24 units of upper division courses in Home Economics and the natural sciences, which will include, but not be limited to, biochemistry, chemistry, computer science, food science, mathematics, microbiology, nutrition, physiology, and statistics.
2. An Undergraduate overall grade point average of at least 3.0. Students with less than a 3.0 GPA on the last 60 undergraduate units attempted, but show promise in all other aspects, may be given special consideration after petitioning for admission into the program through the Coordinator of Graduate Studies.
3. Prerequisites for all courses carrying graduate credit must have been completed within seven years of taking the graduate courses. If the prerequisite is outdated, the prerequisite(s) may be repeated or credit obtained by examination.
4. Students deficient in undergraduate preparation must take courses to remove these deficiencies at the discretion of the faculty in the specified subject matter area and Coordinator of Graduate Studies.

Advancement to Candidacy

1. Satisfy the general University requirements for advancement to candidacy.
2. Completed 9 units of graduate courses, including Home Economics 696.
3. Successful completion of Writing Proficiency Examination.
4. Approval of the Coordinator of Graduate Studies, the Associate Dean of Graduate Studies, Research, and Faculty Affairs, School of Applied Arts and Sciences.

Requirements for the Master of Science Nutritional Science

1. Completion of minimum 30 units of approved upper-division and graduate courses.
2. At least 18 units of 500/600 level courses in Home Economics, including H EC 633(3), H EC 582(3), and H EC 696(3).
3. Professional requirements to meet career goals by advisement.
4. A thesis, H EC 698 and oral thesis presentation; or H EC 697 and a comprehensive examination.

A student desiring to become a Registered Dietitian must complete a six-month, American Dietetic Association approved, supervised field experience in addition to completing the Master of Science degree requirements.

Courses (H EC):

Home Economics Education and General Home Economics

Lower Division

100. Introduction to Home Economics (1) F,S Faculty

History, development and professional career opportunities in the field of home economics. Open to lower division students only or consent of instructor. (Lecture 1 hour.)

Upper Division

*400. Internship in Home Economics (3) F,S Faculty

Prerequisites: Senior standing, consent of instructor. Field experience of 120 hours in which the student assumes a self-directed, responsible role in an agency, business or other community setting with professional supervision, consultation and evaluation. Placement must be approved by instructor and may be repeated to a maximum of six units.

*486. Teaching-Learning Strategies in Home Economics (3) F,S Faculty

Utilize the principles and concepts of each area of home economics in developing a variety of teaching-learning experiences appropriate for individuals or groups in a community setting. (Laboratory 6 hours.)

*488. Developing Occupational Programs in Home Economics (3) S

Prerequisite: EDSS 300 H or teaching experience or consent of instructor. Utilizing knowledge and skills derived from the field of home economics as a basis for offering occupational opportunities for youth and adult through planning programs in school and community. (Lecture, discussion 3 hours.)

490. Directed Studies (1-3) F,S Faculty

Prerequisites: Upper division standing, consent of instructor. Independent study under the supervision of a faculty member. Exploration and experience in areas which are not a part of any regular course. May be repeated for a maximum of six units with consent of department chairperson. Grading: Student Option.

*493. Contemporary Issues in Home Economics (1-3) F,S Faculty

Prerequisite: Consent of instructor. Current contemporary issues in the various areas of home economics selected for exploration and development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

*499. Special Topics (1-3) F,S Faculty

Group investigation of selected topics. Topics to be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units.

Child and Family Development

Lower Division

111. The Preschool Child (2) F,S Faculty

Prerequisites: PSY 100, SOC 100 or 142 or Anthropology 120 (may be taken concurrently), or equivalent. Behavior and development in early childhood, with emphasis on the interaction of parents, children and teachers. (Lecture- discussion 2 hours.)

111L. Observation of Preschool Children (1) F,S Faculty

Prerequisite or concurrent registration in H EC 111. Concepts underlying behavior and development in early childhood are applied through direct observation of young children in the preschool environment. (Laboratory 3 hours.)

211. Guiding Young Children (3) F,S Tuveson

Prerequisites: PSY 100 or SOC 100 or equivalent. Processes, techniques, models, research, and selected issues in child guidance as applied to 3- to 5-year-old children in family and community settings. Development of a personal approach to guidance based on current scientific research and theory concerning child development. (Lecture-discussion 3 hours)

214. Environments for Young Children (3) F,S Faculty

Prerequisites: HEC 111 and 111L; or HDEV 307I or equivalent. Introduction to designing professional care environments for infants, toddlers, and preschool children with emphasis on social, emotional, physical-motor, cognitive, and creative development in family and community settings. (Lecture- discussion 3 hours)

Upper Division

311. Prenatal Development and Infancy (3) S Tuveson

Prerequisites: Upper division standing, A/P 107 or 207, H EC 111 and 111L. Human development from conception through prenatal development, childbirth, the neonatal period, infancy and toddlerhood with emphasis on the various aspects of development and the environmental social factors essential for human growth. (Lecture-discussion 3 hours.)

312IC. Family and Personal Development (3) F,S Koval

Prerequisites: PSY 100, SOC 100 or 142, or ANTH 120 or consent of instructor. Interdisciplinary introduction to the concepts underlying contemporary American family life and the influence of social and cultural conditions on human development. (Lecture-discussion 3 hours.)

314. The Older Child (3) F Tuveson

Prerequisite: H EC 111 and 111L, or ED P 301 or PSY 361 or HDEV 307; or consent of instructor. Behavior and development in middle and late childhood and early adolescence, with emphasis on individual and cultural differences. (Lecture-discussion 3 hours.)

358. Fathers and Fathering (3) S Connor

(Same course as PSY 366.) Prerequisites: PSY 100 and SOC 100 or H EC 111. An overview of the sociological and psychological literature on parenting with emphasis on fathers and fathering in the U.S. Focus on current literature and research regarding the perceived and changing roles of fathers. Discussion of fathers from various ethnic groups in an effort to diminish stereotypes. (Lecture-discussion 3 hours)

*411. Individual Child Study and Guidance (3) F,S Tuveson

Prerequisite: Upper division standing, H EC 311 or 314, or ED P 301 or HDEV 307 or consent of instructor. Analysis and interpretation of theory, research, trends and techniques for the study and guidance of the individual child in family and community settings. (Lecture-discussion 3 hours.)

*412. Family Interaction (3) F,S Koval

Prerequisites: Upper division standing, H EC 312, or consent of instructor. Dynamics of interaction and communication in interpersonal relationships throughout the family life cycle. Experience with a variety of communication skills in small group settings. (Lecture-discussion 3 hours.)

*413. The Family in the Community (3) F,S Koval

Prerequisites: Upper division standing, H EC 312, or consent of instructor. Study of cultural varieties and the needs of the contemporary American family in an urban community, analysis of current issues and problems, identification of and experience with community resources and agencies. (Lecture-discussion 3 hours.)

414. Fieldwork with Preschool Children (3) F,S Faculty

Upper division standing, HEC 214, and 411 and consent of instructor. Participation in Home Economics Child Study Preschool Laboratory. Development of skills in designing, implementing and evaluating activities for young children in family and community settings. Overview of theory and research influencing preschool education. (Lecture 2 hours, Laboratory 3 hours)

415. Fieldwork with Infants/ Toddlers (3) F,S Faculty

Upper division standing, HEC 214, 311 and 411 and consent of instructor. Participation in Home Economics Child Study Toddler Laboratory. Organization and implementation of developmentally appropriate activities for infants and toddlers in family and community settings. Overview of theories and research concerning professional care of infants and toddlers. (Lecture 2 hours, Laboratory 3 hours)

416A. Introduction to Administration and Supervision of Child Development Programs (3) F Faculty

Prerequisite: H EC 414. Minimum and recommended standards and laws pertaining to housing, equipment, play space, adult/child ratio, health supervision and meal service for children's programs. Selection and supervision of personnel, program planning and directing. (Lecture-discussion 3 hours.)

416B. Applications of Administration and Supervision of Child Development Programs (3) S Faculty

Prerequisite: H EC 416 A. Decision theory and its application, communication strategies, planning, operating and evaluating programs for young children. (Lecture-discussion 3 hours,)

*418. Parent Education (3) S Tuveson

Prerequisites: H EC 413 and consent of instructor. Principles and techniques for working with parents in community and school programs. Assessment of needs and development of programs for adults in a variety of social and cultural settings. (Lecture-discussion 3 hours.)

*419. Family Life Education (2-3) F Koval

Prerequisites: H EC 412 and 413 or consent of instructor. Concepts of family development and interaction with special emphasis on leadership opportunities for professional persons. (Lecture-discussion 3 hours.)

Interiors: Environmental Factors

Lower Division

141. Techniques in Applied Arts (3) F,S Faculty

Basic concepts and techniques of applied art including media, presentation methods, visual communication and esthetics. (Lecture-laboratory 6 hours.)

142. Beginning Space Planning and Design Development (3) F,S

Prerequisites: H EC 141, 241 and IA 141 (may be taken concurrently) or consent of instructor. Functional and aesthetic factors of space planning and design development for interior spaces. (Lecture-laboratory 6 hours.)

143. Color: Theory and Application (3) F,S Hoff-Templeton

Essential theories of color perception. Applied problems dealing with color interaction phenomena, effects and functions. (Discussion 3 hours)

241. Contemporary Housing and Interiors (3) F,S Dinerstein

Planning the total life space environment. Shelter and interior concepts from a functional, technical and esthetic basis. (Lecture-discussion 3 hours.)

242. Techniques of Applied Art II (3) S Trout

Prerequisite: H EC 141 and 143. Advanced concepts and techniques of applied art including media presentation methods, visual communication and three dimensional form. Same course as IA 242. (Laboratory 6 hours.)

Upper Division

340. History of Applied Arts (3) S Faculty

Study of the history of the applied arts with emphasis on interior furnishings. Critical appraisal of esthetic and functional qualities of the environment. (Lecture-discussion 3 hours.)

341. Interior and Exterior Materials and Resources (3) F,S Sondhi

Prerequisite: HEC 142. Structural detailing of installation of interior and exterior materials to conform with the Uniform Building Code. Exploration of creative applications of processes and materials. (Discussion 3 hours)

342. Environmental Factors in Housing and Communities (3) F,S Hoff-Templeton

Traces the factors which have influenced urban environments in the United States and their effect upon man now and in the future. Sociological, psychological, architectural, legislative, economic and technological factors are investigated. Their influence upon shelter, architecture, urban environments and man are explored. (Lecture-discussion 3 hours.)

343. The Science and Art of Light and Color (3) F Hoff-Templeton

The nature and properties of light and color and their applications to the sciences and arts. Scientific and creative applications in areas such as environmental design, photography, industrial design, theatre, art, engineering, medicine, and psychology. (Lecture-discussion 3 hours.)

344A. Interiors (3) F,S Sondhi

Prerequisites: HEC 142, 143, 348, 446 and consent of instructor. HEC 446 may be taken concurrently. Design principles as applied to interiors: analysis of materials and elements used in environmental planning with emphasis on residential design. (Discussion 3 hours)

344B. Interiors (3) F,S Sondhi

Prerequisite: HEC 344A. Commercial interior design. Studio problems with emphasis on open and closed office space planning. Exploration of architectural and interior commercial systems. (Discussion 3 hours)

348. Perspective in Architecture and Interiors (2) S Church

Prerequisite: ART 181; IA 141 or HEC 142. Perspective drawing of architectural interiors and exteriors. Includes various perspective approaches: shades, shadows, pen and pencil techniques. Same course as IA 348. (Laboratory 4 hours.)

*440. Environmental Factors and the Urban Family (3) F Faculty

Prerequisite: H EC 342 or consent of instructor. Critical analysis of the urban family's environment including aspects of shelter, community and the city. (Lecture-discussion 3 hours.)

*441A. Advanced Interiors (3) F,S Hoff-Templeton

Prerequisites: HEC 340, 344A, 344B, 353, IA 442. IA 442 may be taken concurrently. Research, development and design aspects in planning major commercial interior environments. (Discussion 3 hours)

*441B. Advanced Interiors (3) F,S Sondhi

Prerequisite: HEC 441A. Individual solutions to planning major commercial interior environments. (Discussion 3 hours)

*443. Business Principles and Practices for Interior Designers (3) S Faculty

Organization, structure, business procedures, contracts, regulations, programming installations, compensation and fees, marketing and public relations in the interior and environmental design business. (Lecture-discussion 3 hours.)

*445. Computer Graphics for Interiors and Architecture (3) S Faculty

Principles and methods of computer graphic applications. Specification writing, drafting, graphic illustrations, space planning, and perspective are included. Students will become proficient with plotters, programs and processing, color, 2-dimensional and 3-dimensional planning.

*446. Presentation Techniques: Architecture and Interiors (3) F Faculty

Prerequisites: IA 348 or HEC 348 and consent of instructor. Same Course as I A 446. Techniques in preparing two and three dimensional architectural and interior renderings and presentations. Same course as IA 446. (Laboratory 6 hours.)

*447. Rapid Techniques: Architecture and Interiors Presentations (2) S Faculty

Prerequisite: H EC 446 or IA 446 or consent of instructor. Methods of visual communication used in architecture and interior presentation with emphasis on development of professional formats using abstraction, fluidity and rapid techniques. Same course as IA 447. (Laboratory 4 hours.)

Consumer Affairs

Upper Division

321. Family Resource Management (3) F,S Faculty

Prerequisite: Upper division standing. Examination of basic principles of family management. Application of principles to personal and family settings. (Lecture, discussion 3 hours.)

323. Personal and Family Financial Management (3) F,S Buckner

Prerequisite: Upper division standing. A functional approach to personal finance including budget systems, consumer credit, insurance, debt collection system, status obligation, accumulating reserves. Applicable for personal and professional use. (Lecture, discussion 3 hours.)

326. Consumer Problems (3) F Buckner

Prerequisite: Upper division standing. A study of consumer problems, their effective prevention, and resolution through government, business, and private organizations with a view toward personal and professional interventions. (Lecture-discussion 3 hours.)

327. Household Equipment Technology (3) F,S Faculty

Prerequisite: Upper division standing. Principles and consumer information needed for the selection, care and operation of equipment for the home environment. Application of basic physical science principles. (Lecture 2 hours, laboratory 3 hours.)

*422. Housing Policies: Public and Private (3) S Faculty

Prerequisite: H EC 342 or consent of instructor. Federal, state and local legislation and policies concerning housing, urban renewal financing and city planning. Analysis of the housing industry and its influence on the consumer market. (Lecture 2 hours, field work 3 hours.)

*423. Personal Finance for the Aging (3) F,S Faculty

Provides an understanding of the operations of personal finance as applied to the aging population. Topics covered include public and private sources of income, living expense, public and private sources of assistance, personal budget systems, financial planning, legal rights of the aging affecting their personal finances, and financial counseling for the aging.

*424. Independent Living for the Handicapped and Elderly (3) F,S Faculty

Prerequisite: H EC 321 or consent of instructor. Home management concepts as related to the physically disabled and the elderly in the near environment. Rehabilitation procedures for independent living. Emphasis on research findings in regards to functioning in the home and family. (Lecture-discussion 3 hours.)

*425. Personal Financial Planning Analysis (3) S Faculty

Prerequisite: H EC 323 or consent of instructor. Analysis and protection of personal and family resources; planning and forecasting goals; development of financial strategies utilizing insurance, investments, tax management, pensions, wills and trusts. (Lecture 3 hours.)

*426. Family Financial Problems (3) F,S Buckner

Prerequisite: H EC 323 or consent of instructor. Theory and practice in the diagnosis of family financial crises; selecting alternative solutions; constructing practical methods for the prevention of family financial problems. (Lecture 2 hours, laboratory 3 hours.)

*427. Energy Management for Consumers (3) S Faculty

Prerequisite: H EC 327. Course is designed to analyze personal energy needs and energy resource management. Topics covered will include demand and supply of energy, alternate sources of energy, energy legislation, energy conservation strategies. (Lecture-discussion 3 hours.)

*428. World Housing (3) F Faculty

Prerequisite: H EC 342 or consent of instructor. Theories and solutions of family housing in urban and rural areas throughout the world. (Lecture 3 hours.)

Food and Nutrition

Lower Division

232. Nutrition and You (3) F,S Faculty

Essential nutrients, their physiological functions and human needs during the life cycle, food sources as applied to selection of an adequate diet; problems encountered in providing food to meet nutritional needs; food additives and consumer protection. (Lecture-discussion 3 hours.)

234. Orientation to Dietetics and Food Administration (2) F,S Faculty

Role of the professional in dietetics and food administration; orientation to career opportunities in food, nutrition and food service systems management; personnel and physical facilities, including equipment, in health care and mass feeding programs. (Lecture 1 hour, activity 2 hours.)

235. Principles of Food Preparation (3) F,S Faculty

Prerequisite: CHEM 111A or 200. Application of scientific principles in the preparation of selected food products, with emphasis on the physical and chemical properties of food: methods and techniques of food preparation; factors that contribute to quality of food products; judging quality of prepared foods. (Lecture 2 hours, laboratory 3 hours.)

Upper Division

331. Fundamentals of Human Nutrition (3) F,S Rodriguez

Prerequisites: H EC 232; A/P 107or 207 or 209; CHEM 300 or 327, or equivalent. Nutritional needs with the emphasis on the physiological and chemical foundation for these needs; factors influencing nutrient needs. (Lecture-discussion 3 hours.)

332. Food Science (3) F,S Toma

Prerequisites: CHEM 300 or 327, H EC 235, or equivalents. Composition and structure of foods; chemical changes in foods that affect their color, flavor, texture, aroma and nutritive quality during processing and preparation; techniques for food preservation. (Lecture 2 hours, laboratory 3 hours.)

333. Meal Management (3) F,S Faculty

Prerequisites: H EC 232, 235, 321. Factors which influence meal plans; food selection, preparation and service in relation to management of time, energy and money. (Lecture 2 hours, laboratory 3 hours.)

334. Fundamentals of Food Service Sanitation and Safety (3) F Faculty

Basic biological information underlying good sanitary practices. Food-borne and waterborne diseases. Procedures for sanitation in the food-service facility; sanitation-conscious employees; receiving and storage; food preparation and serving; proper dishwashing; facility and equipment cleaning; garbage and refuse disposal. General safety regulations including elementary first aid. (Lecture-discussion 3 hours.)

335. Quantity Food Production (3) F,S Faculty

Prerequisites: H EC 234, 333. Principles of menu planning as applied to institutional food service; methods of producing food in quantity using institutional equipment; cost control. Experience in food service operations, such as hospitals, college residence hall and school lunch volume food production centers. (Lecture 2 hours, laboratory 3 hours.)

336. Cultural Aspects of Food and Nutrition (3) S Toma

Prerequisites: PSY 100 or SOC 100 or ANTH 120 or equivalent. Cross cultural study of food and nutrition. Factors such as religion, food supply and socioeconomic status are considered as they influence nutritional status and food intake in various populations throughout the world. [Lecture]

337. Food-Service Systems Management (3) F Faculty

Prerequisite: H EC 335, MGMT 300 or 303. Principles of organization and management, cost control, personnel management and administration in institutional food services. (Lecture 3 hours.)

339. Metabolic Functions of Nutrients (1) F,S Rodriguez

Prerequisites: CHEM 300 and A/P 209. The fundamental metabolic role of nutrients in the human body; practical application of nutrition to patient care. For Nursing majors only. (Lecture-activity 2 hours.)

430. Nutrition and Health (3) F,S Faculty

Prerequisite: Upper division standing. Intensive study of nutrition including evaluation of current trends in food and nutrition. Designed for students in health education, elementary and secondary education, social service and other elective students. Not open to home economics majors. (Lecture 3 hours.)

431. Food Processing, Preservation and Packaging (3) F Toma

Prerequisite: H EC 332 or consent of instructor. Methods and research findings in food processing, preservation and packaging. Application of principles, and assessment of nutritional, physical, and organoleptic quality. Evaluation of chemical additives. Microbiological aspects of food safety. (Lecture 2 hours, laboratory 3 hours)

*432. Experimental Foods (3) F Toma

Prerequisites: CHEM 300 or 327, H EC 332, or equivalents. Application of scientific methods for the interpretation and evaluation of food. Consideration of the manner in which such variables as ingredients, proportions, and techniques in food preparation alter the quality of the product. Experimental laboratory problems. (Lecture 2 hours, laboratory 3 hours.)

433. Nutrition in the Life Cycle (3) F Faculty

Prerequisite: HEC 232 or 331 or equivalent. Nutrition throughout the life cycle. Interaction of physical, biological, cultural and psychological factors involved in assessing and maintaining optimal nutritional health. Community nutrition programs introduced. (Lecture 3 hours)

*434. Cost Control in Food Service Operations (3) S Faculty

Prerequisite: H EC 335 or consent of instructor. Financial management, including control of food, labor, equipment and other operational costs; principles and procedures used when purchasing food for food service operations; use of specifications; factors affecting quality; inventory management; development, utilization and maintenance of physical facilities; analysis of purchasing problems of food service managers. Field trips required. (Lecture 3 hours.)

*436. Advanced Nutrition (3) F,S Jacob

Prerequisites: H EC 331, CHEM 448, 449. Corequisite: H EC 436L. Metabolism of protein, fats, carbohydrates, minerals and vitamins; interrelationships of nutrients; procedures for determining nutritional requirements of individuals. (Lecture 3 hours.)

*436L. Nutritional Status Assessment Techniques (1) F,S Jacob

Prerequisites: None. Corequisite: H EC 436 or consent of instructor. Designed to provide training in the basic techniques of assessing nutritional status. Includes procedures for instructing patients and methods of collecting and interpreting dietary, anthropometric, clinical and biochemical data. (Laboratory 3 hours.) Traditional grading only. [Laboratory]

*438. Diet Therapy (3) F Faculty

Prerequisite: H EC 436, 438 L. Introduction to therapeutic nutrition. Metabolic changes in specific pathological conditions, dietary modification used for treatment. (Lecture 3 hours.)

*439. Nutrition and Aging (3) F Faculty

Prerequisites: H EC 232 or 331 or A/P 401. Nutritional needs as related to physiological changes that occur during aging. Factors that influence food intake and nutritional status of the elderly. Diet adaptation for chronic diseases commonly found in older people. (Lecture-discussion 3 hours.)

*461. Community Nutrition (3) S Faculty

Prerequisites: Upper division standing, H EC 331. Survey of nutrition programs in the community. Techniques of program planning, implementation, management and evaluation. [Lecture] Grading: Student Option.

*491. Directed Studies in Food and Nutrition (1-3) F,S Faculty

Prerequisites: 12 units in food and nutrition. Independent study under the supervision of a faculty member. Readings in areas of interest to student and faculty which are not a part of any regular course. Written report is required. May be repeated once for credit with consent of instructor.

Textiles, Clothing and Fashion Merchandising

Lower Division

251. Principles of Apparel Selection (3) F,S Kefgen

Apparel selection for the individual and family based on design guidelines, cultural and fashion influences. Wardrobe analysis and coordination; consumer clothing purchasing guides. (Lecture-discussion 3 hours.)

252. Analysis, Evaluation and Comparison of Ready-to-Wear (3) F Faculty

Analysis of the quality of materials, design and construction in ready-to-wear garments and accessories; comparison of processes involved in manufacturing, concepts of sizing, principles of fit; aids in buying and selling. (Lecture-discussion 3 hours)

254. Fundamentals of Clothing Design (2) F,S Kefgen, Lare

Corequisite: H EC 254L unless waived by examination. Analysis of the interrelationship of garment design and clothing construction. (Lecture 2 hours.)

254L. Laboratory in Clothing Design (1) F,S Kefgen, Lare

Application of theories and methods of clothing design to garment construction. (Laboratory 3 hours.)

Upper Division

353. Textiles (3) F,S Lare

Prerequisites: CHEM 100 or 111A or 200 or consent of instructor. Interrelationship of fiber, yarn structure, fabric geometry and finishing treatments to the textile's appearance, comfort, durability and maintenance. (Lecture 2 hours, laboratory 3 hours.)

354. Analysis of Tailoring Processes (3) F Kefgen

Analysis of traditional and contemporary processes applied to the construction of suits and coats. (Lecture 2 hours, laboratory 3 hours.)

357. Apparel Design: Flat Pattern (3) S Lare

Prerequisite: H EC 254 or equivalent. Exploration of the total design concept as it applies to pattern manipulation. (Lecture- discussion 2 hours, laboratory 3 hours.)

*450. Cultural Bases of Textiles and Apparel Design (3) S Kefgen

Prerequisites: H EC 353, ANTH 120 or SOC 100 or 142 or consent of instructor. Factors influencing design and techniques of textile and apparel production in societies that create and utilize them. Symbolism of indigenous and adapted textile and clothing designs as a communicative device for expressing social and cultural values. (Lecture-discussion 3 hours.)

*451. Fashion Industry (3) S Kefgen

Prerequisites: H EC 251 and 353 or consent of instructor. Organization, structure and interrelationship of industries and services that comprise the business of fashion; terminology, designers, trade organizations and publications. Analysis of trends that influence fashion. Professional opportunities explored. (Lecture 3 hours.)

*452. Apparel Design: Draping (3) F Lare

Prerequisite: H EC 357 or consent of instructor. Exploration of the total design concept as it applies to fabric manipulation. (Lecture-discussion 2 hours, laboratory 3 hours.)

*453. Advanced Textiles (3) S Lare

Prerequisites: H EC 353. PHYS 104. Chemical and physical structure of fibers and finishes and physical structure of yarns and fabrics in relation to serviceability. (Lecture-discussion 2 hours, laboratory 3 hours.)

*454. Experimental Clothing (3) S Kefgen

Prerequisites: H EC 254 or consent of instructor. Solving clothing construction problems through the experimental process. Evaluation of equipment and supplies used in construction; garment recycling; individual investigation of a creative design process; techniques for using challenging fabrics. (Lecture 2 hours, laboratory 3 hours)

455. Fashion Merchandising (3) F Faculty

Prerequisites: Home Economics 451 or consent of instructor. Application of merchandising concepts for budgeting, planning, buying, promotion and selling of fashion goods and apparel in retail organizations. Traditional grading only. [Seminar]

456. Historic Perspectives of Fashion (3) F,S Faculty

Prerequisite: HEC 251 or consent of instructor. Social, political, economic, and religious forces which affect styles of clothing from antiquity to the present day. Emphasis on the relationship of historic styles to current fashion. Primary focus on the fashion influences of the western world.

*458. Theories and Issues in Textiles and Clothing (1-3) F,S Lare

Prerequisites: Six upper division units in textiles and clothing or consent of instructor. Topics of current interest in textiles and clothing selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

*459. Apparel Behavior (3) F Lare

Prerequisites: ECON 300, PSY 100 and SOC 100. Psychological, sociological and economic influences on the selection of individual and family clothing. (Lecture 3 hours.)

*492. Directed Studies in Textiles and Clothing (1-3) F,S Faculty

Prerequisite: Senior standing. Independent study under the supervision of a faculty member. Written report is required. May be repeated for credit with consent of instructor.

Graduate Division

500. Internship in Home Economics (3) F,S Faculty

Prerequisites: Graduate standing and consent of instructor. Field experience in which student assumes a self-directed, responsible role in an agency, business or other community setting. May be repeated to a maximum of six units.

511. Family Development (3) S Koval

Prerequisite: H EC 412 or 413 or consent of instructor. Theoretical approaches to the study of the family; analysis of the process of interaction between the individual, the family and society with emphasis on current issues.

515. Perspectives in Human Development (3) F Tuveson

Prerequisite: H EC 411 or consent of instructor. Theory, trends and research toward maximum development of human potential as it applies to children in the family and community.

521. Decision Making in Home Management (3) F or S Faculty

Prerequisites: 400-level course in home management or family finance, PSY 351 or SOC 335. Depth course in the science of decision making as it can be applied to management in the home and in home economics.

523. Consumer Protection (3) F Buckner

Prerequisite: 400-level course in home management or family finance or consent of instructor. Concepts of consumer protection with analysis of myriad resources available for individuals and families with financial problems.

530A. Carbohydrates, Lipids and Proteins (3)

Prerequisites: H EC 436, 436L, BIOI 260. Nutritional, metabolic and clinical aspects of carbohydrates, lipids and proteins. Current knowledge of interactions between macronutrients and assessment of needs. (Lecture-discussion 3 hours.) Traditional grading only.

530B. Vitamins and Minerals (3)

Prerequisites: H EC 436, 436L, BIOL 260. Nutritional, metabolic and clinical aspects of vitamins and minerals. Current knowledge of interactions between micro- and macro- nutrients. Principles of nutritional status assessment and determination of needs. [Lecture-discussion 3 hours.] Traditional grading only.

531. Nutrition Programs For School and Community (3) F Rodriguez

Prerequisite: H EC 436 and 436 L or 562; 486 or EDSS 450H. Program development, resources and evaluation with emphasis on interdisciplinary involvement and techniques for motivation and communication in the field of nutrition.

532. Advanced Experimental Food Sensory Evaluation (4) S Toma

Prerequisites: BIOL 260, CHEM 251, HEC 432 or equivalent. Application of analytical chemistry, food biochemistry, and sensory evaluation techniques to advanced food research - sensory and physical-chemical assessment of food quality and product evaluation. (Lecture 2 hours, Laboratory 6 hours)

533. Recent Advances in Food Science (3) S Toma

Prerequisites: H EC 432 or consent of instructor. New developments in food processing, techniques of food preservation, chemical additives. Food and water sanitation. Methods of standardization, preservation, and evaluation of quality. Retention of nutritive value, flavor, appearance, and safety of foods. (Lecture-discussion 3 hours.)

534. Current Topics in Food-Services Systems Research (3) F

Prerequisites: Graduate standing in food and nutrition or related fields. HEC 332, 335, 337, BIO 260. Study of recent research related to food-service systems management. Extensive investigation of research data and techniques on special topics. Independent research will culminate in a research paper. (Lecture 2 hours, Laboratory 3 hours)

541. Design of Human Environments (3) F Hoff-Templeton

Prerequisites: H EC 342, 344B. Evaluation of human perception, theories of human brain functioning, belief systems in relation to creativity and perception, and research methods in environmental design.

552. Garment Design (3) F Lare

Prerequisite: H EC 452 or consent of instructor. Integration of problems encountered in garment design, fabric manipulation and clothing construction. The technical application of engineering principles involving pattern, fabric and the human form. Student research in design such as clothing for the handicapped, aged and those on limited budgets. (Lecture 2 hours, laboratory 3 hours.)

561. Curriculum Development in Home Economics (3) S Rader

Prerequisite: Field experience in home economics or a related area. Current philosophies and principles basic in the analysis and organization of curricular programs and materials.

562. Contemporary Issues in Nutrition (3) F Rodriguez

Prerequisite: H EC 436 or consent of instructor. Analysis of recent developments and current research in human nutrition. Topics included: nutrition through the life cycle; diet and dental health, athletic performance, human behavior, obesity, cancer; vegetarianism; practical application of scientific knowledge to diet management. (Lecture-discussion 3 hours.)

563. Evaluation in Home Economics (3) F,S Koval

Prerequisite: H EC 696, upper-division statistics course. Principles, design and methods of evaluation for use by professional home economists. Selection and development of instrumentation for data collection and interpretation. Methods of reporting for purposes of accountability.

590. Independent Study (1-3) F,S Fornia

Prerequisite: H EC 400 level course in area of study. Varied learning activities utilized to achieve competency related to Home Economics not offered in regular courses. Written report required.

599. Studio Problems (3) F,S Hoff-Templeton

Prerequisite: H EC 590 or 697. Advanced individual graduate studio projects, with faculty supervision, related to specific functions and problems of selected human environments.

605. Seminar in Administration of Home Economics Programs (3) F,S Rader

Prerequisite: H EC 696 or consent of instructor.

615A,B. Seminar in Child and Family Development (3,3) S Tuveson

Prerequisites: A: Child Development: H EC 511 or 515, 696 or consent of instructor. B: Family Development: H EC 511 or 515, 696 or consent of instructor. Area of study will be announced in the Schedule of Classes.

625 A,B. Seminar in Family Finance and Home Management (3,3) S Buckner

Prerequisites: A: Family Finance: H EC 523, 696. B: Home Management: H EC 521, 696. Area of study will be announced in Schedule of Classes.

635. Seminar in Food Science, Nutrition and Food-Service Systems Management (1) S Jacob, Rodriguez

Prerequisite: Graduate standing. Presentation and discussion of advanced work in special fields. Must be repeated for credit for a minimum of two units and for not more than a total of three units.

655A,B. Seminar in Clothing and Textiles (3,3) F Kefgen, Lare

A: Clothing. Prerequisites: H EC 450, 459, 696. B: Textiles. Prerequisites: H EC 450, 453, 696. Area of study will be announced in the Schedule of Classes.

665. Seminar in Home Economics (3) F,S Rader

Prerequisites: H EC 696, consent of instructor.

696. Research Methods (3) F,S Tuveson

Prerequisite: Upper-division course in statistics (may be taken concurrently). Problems in home economics with emphasis on the methods of research and use of the library. Required of all master's degree candidates in home economics.

697. Directed Research (1-3) F,S Fornia

Prerequisites: Advancement to candidacy, Home Economics 500 level course in area of study and 696. Independent study under the guidance of a faculty member.

698. Thesis (1-4) F,S Fornia

Prerequisites: Advancement to candidacy, approval of department graduate committee. Planning, preparation and completion of a thesis related to the home economics field.

Industrial Education

School Of Applied Arts and Sciences

Department Chair: Irvin T. Lathrop
Department Office: Industrial Education Building 1, Room 101
Telephone: 498-4681
Faculty: Professors: Robert J. Kunst, Irvin T. Lathrop, Robert L. Nicholson, John C. Patcha, Donald H. Smith, Earl M. Smith, Leonard Torres, Robert G. Trout, William V. Wittich; Associate Professors: Gerald J. Brandstatt, David C. Church, Ross E. Martin, Louis E. Quinones
Emeritus Faculty: Boyd Davis, C. Thomas Dean, George Genevro, Floyd M. Grainge, Paul Powell, Robert D. Routh, James Ryan
Department Secretary: Frances G. Daro
Industrial Education Advisory Council: Chris Almeida, Program Manager -IE, State Department of Education; Gilbert D. Brown, Regional Manager, Paxton Patterson; Ron J. Coleman, Fire Chief, City of Fullerton; George Conner, Financial Management, Donna Farmer, Dean of Applied Arts Sciences, Rancho Santiago College; Karl Freeman, Department Supervisor, Penberthy Lumber Company; William Govette, Vice President General Dynamics; Rush Hill II, Partner, The Hill Danielson Associates, Inc.; Jim Hoover, Manager, Manufacturing Engineering, Northrop Aircraft; Elvera Izaguirre, Vice President, First Interstate Bank of California; Harry J. Krebs, Manager of Operations, Long Beach Oil Development Company; Sarann Kruse, Executive Director, Southern California Aerospace Consortium, Northrop Aircraft; Tom J. Lazear, President, T W Systems, Inc.; E. G. Linhart, Vice President, Western Gear Corporation; Charles H. Margelli, Vice President, Yaesu Electronics Corporation; Jerry Miller, PIC Liaison, Private Industry Council, City of Long Beach; Yuji E. Naito, Vice President, SBD International, Inc.; John Normann, Regional Manager, Brodhead-Garrett Company; Charles Ogden, Director, Fire Technology, Santa Ana College; Thomas Olson, Consulting Psychologist; Jerrold S. Pressman, President, Master Protection Enterprises; Rick Sanchez, Administrator, Amigos De SER, Jobs For Progress, Inc.; Paula S. Sawyer, District Administrator, Department of Rehabilitation; David Smith, Chief Executive Officer, North Orange County ROP; Patrick R. Smorra, General Sales Manager, Chrysler Corporation; Billy Ware, Manager, Southern California Gas Company; John B. Waltemeyer, District Manager, Oliver Machinery Company; Larry Wright, Western Regional Field Service Manager, Scientific Atlanta.
Graphic Arts Advisory Council: Russ Brown, Vice President, Gans Ink and Supply Company, Inc.; Tom Burke, Owner, Morrison and Burke Screenprinting, Inc.; William Edwards, President, Queen Beach Printers, Inc.; Morris Giles, Educational Director, Varityper Corporation; Joseph Ponce, Jr., President, Desktop Graphics and Design, Inc.; Robert Ryerson, Technical Director, Printing Industries Association, Inc.; Steve Santoro, Manager, Kelly Paper Company; Tim Stevens, President, Procolor;Gary Stoltenberg, Owner, Pacific Coast Color Service, Inc.; Lynn Walker, Manager, Graphic Productions, Richard West, Production Coordinator, Ampress (West Offset Printing); Ron Yary, President, Yary Printing.

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisor, Graduate Advisor, Credential Advisor.

Industrial education is a study of industry primarily designed to prepare elementary, secondary and community college teachers who will help students gain an insight and understanding of industry and its place in the American culture, discover and develop attitudes and skills useful for trades, professions and activities requiring technical information and skills.

The industrial education curriculum is designed to meet the needs of the following groups of students: (1) those preparing to enter the teaching profession in the field of industrial arts who need the teaching credential; (2) those preparing for certification as manual arts therapists; (3) those who are teaching industrial arts and who desire to further their professional growth; (4) those who desire to broaden their experiences but who do not plan on entering the teaching profession; (5) those who are vocationally qualified and who desire to qualify to teach industrial arts subjects in their special areas; (6) those who qualify for the designated subjects credential with specialization in vocational trade and technical teaching and who wish to teach occupational subjects in secondary schools, ROP and ROC centers, community colleges and adult education.

Courses in industrial education also are designed for students completing majors in other subject fields and wishing to take elective units in this area. Course offerings in industrial education have been selected so that the student can qualify for (1) technical training leading to the baccalaureate degree; (2) a teaching major or minor in industrial arts for the teaching credential; (3) the standard designated subjects credential with specialization in vocational trade and technical teaching; (4) the master of arts degree with a major in industrial arts; (5) a certificate in industrial plastics processing and design in association with the School of Engineering; (6) a certificate in automotive supervision; and (7) a certificate in graphic arts supervision.

Graduate work in industrial education provides the opportunity for men and women to: (1) expand and increase competencies in one or more areas of specialization; (2) develop maturity of thought and attitude toward their profession; (3) gain insights into problems of professional leadership and knowledge to assume positions of leadership; (4) obtain the necessary understandings to be able to engage in research resulting in contributions of knowledge in an atmosphere of freedom of inquiry; and (5) engage in an interchange of ideas between faculty and qualified students in a spirit of research and scholarship to enhance one's personal and professional competencies.

The master of arts degree in industrial arts is provided for: (1) those who are teaching and who want to complete the requirements for a master's degree to become better teachers, (2) those who participate in industrial training programs, and (3) those who wish to pursue work toward the doctorate degree. Each graduate applicant should request a copy of the official transcripts or all college course work be sent to the graduate advisor in the Industrial Education Department in addition to the copies required by the Office of Admissions and Records.

Bachelor of Arts in Industrial Arts (code 2-1025)

Lower Division:

In consultation with an advisor in the Industrial Education Department, 12 units selected from six of the following eight courses: IA 101, 111, 121, 131, 141, 141, 151, 170, 283.

Upper Division:

24 units of technical industrial arts courses planned in consultation with a major adviser, which must include IA 343. Also required are IA 329, 349, 369,385, 388, 483, 484 and EDSS 300I. EDSS 450I is not a requirement for the baccalaureate degree but must be taken the semester before student teaching.

Minor in Industrial Arts (code 0-1025)

The minor in industrial arts requires a minimum of 20 units of technical courses selected in the general area of industrial arts to provide a well-balanced program. The 20-unit program should include work in at least three of the eight areas available in the major. It is recommended that there be concentration in two areas of work. At least 15 units must be at the upper-division level. It is recommended students consult with an adviser in the Industrial Education Department.

Certificate in Automotive Supervision

The Certificate Program in Automotive Supervision and Service is designed to prepare students for automotive supervision positions that require a strong technical background in automobile construction and operation. Opportunities in automotive supervision and service range from manufacturer's customer and technical representative to service instructor.

This interdisciplinary program provides a student with a depth of technical training in automotives, related technical courses and also provides the student with experiences in supervision necessary for supervisory level positions.

Requirements for the Certificate in Automotive Supervision:

1. A bachelor's degree in industrial arts that includes the following: a minimum of 18 units of automotive technical courses selected from IA 361, 362, 363, 364, 365, 461, 462, 465 and 492. In addition, the student must complete 20 units of supporting technical courses and professional courses chosen in consultation with an adviser: IA 321, 322, 323, 326, 331, 343, 370, 384, 470 and EDSS 450I.
2. The completion of the following courses from the Department of Engineering and Industrial Technology: ET 307, EIT 300, 309, or their equivalent.

Any deviation from this program requires the written permission of the program adviser. Interested students should contact the Department of Industrial Education.

Certificate in Graphic Arts Supervision

The Certificate Program in Graphic Arts Supervision is an interdisciplinary program sponsored by the Industrial Education Department in cooperation with the Industrial Technology Department. The printing industry ranks as the second largest industry in the United States. A definite need exists for personnel familiar with the procedures necessary to operate in the supervisory realm of the industry. The program would permit a student to study, in detail, industrial production processes, quality control procedures, economics and personnel requirements of the industry.

Requirements for the Certificate in Graphic Arts Supervision:

1. A bachelor's degree in industrial arts that includes the following: IA 342, 343, 351, 352, 353, 391, 453, 464, 455, 492.
2. Approval of the Certificate Committee for admission to the certificate program during the first semester of enrollment. An adviser will be appointed upon admission to the program.
3. Satisfactory completion of 24 units as listed below, or their equivalent: ET 307, EIT 300, 309, 315,405; ACCT 202, FIN 222, PSY 381.

Any deviation from this program requires the written permission of a program adviser. Interested students should contact Dr. Robert Kunst or Mr. Ross Martin, Department of Industrial Education.

Certificate in Industrial Plastics Processing and Design

The Certificate Program in Industrial Plastics Processing and Design is an interdisciplinary program sponsored by the Industrial Education, Mechanical Engineering and Chemical Engineering Departments. Polymeric materials rank as second in tonnage use currently of all materials, and indications are that in the near future they may surpass metals in total usage. There is a definite need for personnel familiar with the processing and special design considerations necessary to properly make use of the special properties of this broad class of materials. The program permits a student to study in detail the industrial production processes, material testing procedures, economics of the polymerics industry and degradation of polymerics. All students in the program complete an individual project, consisting of the design of an item, choice of proper polymeric material for the particular application, choice of the processing operation and construction of the necessary moulding tools and testing of the completed device. Contact Mr. Robert Schureman, Department of Industrial Education.

Requirements for the Certificate in Industrial Plastics Processing and Design:

1. Bachelor's degree in industrial arts or engineering.
2. Satisfactory completion of the 23 units listed below.
3. Approval of the certificate committee for admission to the certificate program. An adviser will be appointed at that time.
4. Adviser's approval of completion of special project.

Required Courses

Polymeric Processing: IA 370, 470; ME 471, either ME 472 or 476; IA 492 (four units minimum) and/or ME 450.

Properties of Polymers: IA 170; ME 373, 374, 424.

Certificate in Cartography

Director: Dr. Judith Tyner (Geography)

Advisory Committee:

Dr. Robert Alexander (Civil Engineering)
Sandra Lamprecht (University Library)
Dr. Robert Kunst (Industrial Education)
Dr. Rodney Steiner (Geography)

The Cartography Certificate program offers specialized training in a variety of theoretical and applied cartographic techniques. The program is designed to provide experience in communication through maps and serves as a supplement to standard degree programs. It provides essential training for those seeking map making careers in both the public and private sector. The program

is characterized by an interdisciplinary approach reflecting the nature of the field which has two major aspects — thematic and topographic. Those skills required by both branches are encompassed by a core program and the two concentrations provide specific training for each of the two types of cartography.

The Thematic/General concentration is designed for students whose goals involve graduate programs in cartography or map librarianship or working for commercial map making firms, planning departments and the like. The Topographic concentration is designed for the student who intends to work for engineering or geological research firms or agencies.

Requirements for the Certificate in Cartography:

1. A bachelor's degree; may be earned concurrently with the certificate.
2. 30 units distributed as follows:
   (A) Core (required of all students) of 15 units: GEOG 380, 482, 492, 484, and Industrial Arts 352.
   (B) Concentration (required of all students) in one of these two patterns selected in consultation with an adviser:
   (1) Thematic/General Cartography
   Group A: Six units chosen from: GEOG 400, 490; IT 315; MATH 101, 180, 115s, 270; C/ST 200.
   Group B: Six units chosen from: IA 141, 151,341, 342, 453, 454; ME 172.
   Group C: Three units chosen from: C E 225, 428; GEOL 490f.
   (2) Topographic Mapping
   Group A: GEOG 440 and six units chosen from GEOG 487, C E 225, 420, 428; GEOL 490f.
   Group B: Three units chosen from: IA 141, 341, 342; ME 172.
   Group C: Three units chosen from: MATH 101, 115s, 270; IT 315; C/ST 200.

Master of Arts in Industrial Arts (code 5-1025)

Prerequisites

1. A bachelor's degree with a major in industrial arts, or:
2. A bachelor's degree in industrial education with course work judged by the Industrial Education Department to be the equivalent of that required at this University, or:
3. A bachelor's degree with 24 units of approved upper-division Industrial Technical education. (Students deficient in undergraduate preparation must take courses to remove these deficiencies at the discretion of the Department Graduate Study Committee.)

Advancement to Candidacy

1. Satisfy the general University requirements for advancement to candidacy (all upper division courses marked with an asterisk may be included in the masters degree program.)
2. Approval of the department graduate advisor and Director of Graduate Studies and Research, School of Applied Arts and Sciences.

Requirements for the Master of Arts Degree

1. Completion of a minimum of 30 units of approved upper division and graduate courses.
2. Completion of a minimum of 20 units of industrial arts courses of which 18 units must be in the 500 and/or 600 series at this University.
3. Completion of IA 696 and 697.
4. Thesis approved by the Department Graduate Study Committee.

Courses (IA):

Lower Division

280. Consumer Literacy in a Technological Society (3) F,S Faculty
A survey of the interaction between man as a consumer and the products and services of a technological society. The course is designed to develop consumer literacy in the purchase, maintenance and operation of a broad range of technological products and services.

281. Exploratory Woodwork (2) F,S Trout
General woodworking designed to provide a broad background of information related to woodworking processes involving both hand and machine tools. Skills and safe work habits developed through individual solutions to given problems. Certification of safety instructions provided. (Laboratory included.)

282. Exploratory Metalwork (2) F,S Trout
Metalworking in the areas of bench work, forging, casting, art metal, sheet metal and welding processes. Designed: (1) to give a broad background and understanding in the technology of materials; (2) to develop skills through individual solutions for given problems; and (3) to develop safe habits in working with metals and equipment associated with metal work. (Laboratory included.)

283. Introduction To Computers For Technology (2) F,S Faculty
Prerequisites: None. A survey of basic computer operation for technology. Practices and apparatus with emphasis on the understanding of current principles and procedures of microcomputers. [Activity] Grading: Student Option.

Upper Division

329. Production Technology (3) F,S, Faculty
Prerequisites: none. Survey of industrial production techniques. As part of this presentation, a survey will be presented of production technology; careers in production; materials and processing methods; the role of computers in industry, industrial management, marketing, and quality assurance.

349. Communications Technology (3) S Wittich
Prerequisites: none. Analysis of the newer communication technologies employed in the gathering, storing, transforming, and retrieving of information. An emphasis will be placed on the integration of communication and computing, i.e., information management, electronic mail, online data bases, telecommunications, and the myriad new information services.

***381. Shop Maintenance (2) F,S Faculty**
Prerequisite: Majors only in the senior year. Systems used in the maintenance of records, tools and equipment. (Laboratory included.)

***382. The Comprehensive General Shop (3) F Faculty**
Experiences in planning, organizing and teaching a multiple activity program of industrial arts combined with utilization of tools, materials and processes as applied to public School practice. (Laboratory.)

***384. Materials Testing and Evaluation (2) F Patcha**
Prerequisite: Consent of instructor. Testing and evaluation of basic metallic industrial materials, cutting fluids, lubricants, chemicals, finishing processes, plastics, fasteners and methods of quality assurance. (Lecture, laboratory.)

***385. Organization and Management of Industrial Education Facilities (3) F,S Faculty**
Area planning problems with emphasis on general architectural specifications, auxiliary spaces and selection of tools, equipment and supplies. Plans and specifications for an instructional area are presented and evaluated. Includes safety considerations as applied to the planning, operation and utilization of laboratory facilities. Not open to students with credit in IA 492.

388. Technological Literacy (3) F,S Lauda, Wittich
Prerequisites: none. Exploring the concepts of technology impact on humans, society and culture. Emphasis will be placed on technology as a human adaptive system and its relationship to sociological and ideological systems.

***389. Career Education for Children (2) F,S Faculty**
Prerequisite: IA 388 or equivalent. Further studies in integrating construction with children's programs. Special emphasis on Career Education with opportunities to work in the public Schools and community. (Laboratory included.)

***391. Internship in Industrial Education (2) F,S Faculty**
Prerequisite: Consent of coordinator. Planned, coordinated and supervised work experience in an industry allied with the students' technical areas of concentration. May be repeated for a maximum of eight units. Students may receive technical credit the second and the fourth time the class is repeated. Field trips into industrial complexes are scheduled according to technical areas of interest.

481. House Construction (1) F,S Faculty
Designed for the homemaker desiring knowledge of materials and methods used in house construction. Not open to industrial arts majors.

***482. Teaching Aids (2) F,S Faculty**
Prerequisite: Basic Woodworking or equivalent. Criteria for the selection, planning, development and construction of teaching aids for the individual student and/or teacher. Laboratory experiences to develop familiarity of above criteria and their use. (Laboratory included.)

***484. Contemporary American Industry (3) F,S Faculty**
Study of the development of modern industry and technology with emphasis on recent industrial change and career development. Implementation of educational, political, economic and technical change in modern systems of industrial education is an important consideration. (Lecture-discussion 3 hours.)

491. Special Problems in Industrial Education (1-3) F,S Lathrop
Prerequisite: Consent of instructor. Advanced work within an area of specialization done on an experimental or research basis. The area designated by letter at the time of registration as: (a) woods, (b) metals, (c) electricity-electronics, (d) industrial drawing, (f) automotive, (g) industrial crafts-plastics, (h) professional, (i) graphic arts, (j) photography, (k) plastics. May be repeated for a total of six units. (Non-technical.)

***492. Advanced Technical Studies (16) F,S Lathrop**
Prerequisites: Consent of instructor and area requisite courses. Advanced work done within an area of specialization designed for the present industrial arts teacher who wants upgrading in his field of concentration. Covers new industrial processes and materials that may be related to teaching in the secondary schools. May be repeated for a maximum of six units per area of concentration (automotive, drawing, electricity-electronics, graphic arts, industrial crafts, plastics, metals, photography, woods and special generalized 492 courses not specifically allied to an area of industrial arts). (Laboratory included.)

***493. Industrial Rehabilitation Therapy Clinical Practice (36) F,S Lathrop**
Prerequisite: Consent of department. Supervised experiences in Industrial Rehabilitation therapy at various Veterans' Administration hospitals and rehabilitation centers. Students will acquire through observation and participation, clinical insight and experience in the procedures and practices in the field. 240 hours of experience required. (Field work.)

Automotive

Lower Division

161. Automotive I (2) F,S Faculty
Principles of operation of various components and the economics of selection and use of the modern automobile. Practical experience in maintenance and repair at the owner-operator level. (Laboratory included.)

Upper Division

***361. Auto Engines (3) F,S Faculty**
Prerequisite: IA 161 or equivalent. Theory of design, construction and operation of internal combustion engines. Laboratory experiences are focused on the practices and processes of engine diagnosis and overhaul. (Laboratory included.)

***362. Auto Electronics (2) F,S Faculty**
Prerequisite: IA 131 or 161 or equivalent. Principles and theory of operation of electrical and electronic system components that are common to automobiles. Latest methods of testing and diagnosis are stressed. (Laboratory included.)

***363. Chassis Technology (2) F,S Bobb**
Prerequisite: IA 161 or equivalent. Theories of design and operation of chassis components affecting stopping stability, power flow, suspension and steering. Includes testing, trouble diagnosis and modern methods of servicing. (Laboratory included.)

***364. Auto Body Repair (2) F,S Faculty**
Prerequisites: IA 161 and 322, or equivalents. Techniques and practices of body rebuilding, refinishing and styling. (Laboratory included.)

***365. Small Engine Technology (2) S Bobb**
Prerequisite: IA 161 or equivalent. Theory of operation, maintenance, troubleshooting and reconditioning of small lawnmower, chainsaw, outboard, moped and motorcycle engines. (Laboratory included.)

***461. Automotive Performance Diagnosis (3) F,S Faculty**
Prerequisite: IA 382 or equivalent. Theories of design and operation of fuel and emission control systems. Laboratory experiences focused on diagnosis and service using advanced analysis equipment. (Laboratory included.)

***462. Automatic Transmissions (2) F,S Bobb**
Prerequisite: IA 181 or equivalent. Theories of design and operation of front wheel drive and rear wheel drive automatic transmissions. Latest methods of testing, servicing and repair are stressed. (Laboratory included.)

***466. Computer Control Systems (2) F,S Bobb**
Principles of operation of automotive microprocessor systems used to control engine, transmission, instrumentation suspension, air conditioning and accessories. Laboratory experiences focus on computer self-diagnostic procedures. (Laboratory included.)

Drawing

Lower Division

141. Industrial Drawing I (2) F,S Faculty
Basic principles of instrument and freehand drawing. Use and care of instruments, lettering, isometrics, orthographics, sections, auxiliary views, charts and graphs, maps, plot plans and architectural drawing. (Laboratory included.)

242. Techniques of Applied Art II (3) S Trout
Prerequisite: H EC 141. Advanced concepts and techniques of applied art including media presentation methods, visual communication and three dimensional form. Same course as H EC 242. (Laboratory included.)

Upper Division

***341. Industrial Graphics (3) F,S Faculty**
Prerequisite: IA 141 or equivalent. Use of graphic techniques as a means of presenting data and the solution of arithmetical problems. The course encompasses the application of automated computer graphics, geometrical dimensioning and tolerancing and SI metric standards and techniques. (Laboratory included.)

***342. Technical Sketching (2) F,S Faculty**
Prerequisite: IA 141 or equivalent. The principles and practice of freehand and mechanically assisted sketching to produce a drawing of three-dimensional objects. (Laboratory included).

***343. Creative Problem Solving (3) F,S Trout**
Prerequisites: IA-141 or equivalent. Course deals with the elements of two and three dimensional design, stressing the understanding and application of creative problem solving and design principles to the technology education program. [Activity] Grading: Student Option.

345. Industrial Drawing II (3) F,S Faculty
Prerequisite: IA 141 or equivalent. Theories and graphic solutions in rotation, isometric, oblique projections. Intersections, curved surfaces, developments, space problems of angle and distance. (Laboratory included.)

***346. Small Boat Design (2) F,S Faculty**
Prerequisite: IA 141. Development of preliminary drawings for a sailing or planing vessel. The set of drawings includes the line drawing, arrangement and profile plans, sail plan, table of offsets, transom expansion and deck beam development. The design will be analyzed using graphic methods and static calculations using a computer. (Laboratory included.)

***347. Architectural Drafting (3) F,S Church**
Prerequisite: IA 141 or equivalent. Development of drafting techniques applicable to graphics employed in the planning and study of light frame construction processes. (Laboratory included.)

348. Perspective in Architecture and Interiors (2) S Church
Prerequisites: ART 181; IA 141 or HEC 142. IA 141. Perspective drawing of architectural interiors and exteriors. Includes various perspective approaches; shades, shadows, pen and pencil techniques. Same course as H EC 348. (Laboratory included.)

***441. Machine Drawing (3) F,S Faculty**
Prerequisite: IA 141 or equivalent. Sketching and drawing of machine parts in detail and in assembly. Use of nomenclature standard tables and empirical formulae. (Laboratory included.)

442./542. Architectural Planning and Presentation (3) F,S Church
Prerequisite: IA 347. Study and planning of structures for specific functions. Development of presentation drawings including perspective drawing, shades and shadows, materials and colors. Review of architectural history. (Lecture, laboratory 6 hours.)

***443. Electronic and Electro-Mechanical Drafting (2) F,S Faculty**
Prerequisites: IA 131, 141. Development of drafting techniques applicable to electronic drafting standards, terminology and schematic, wiring and interconnection diagrams. It also includes standards and techniques for pipe drawing and study of electro-mechanical packages. (Laboratory included.)

***445. Computer Graphics for Interiors and Architecture (3) Faculty**
Principles and methods of computer graphic applications. Specification writing, drafting, graphic illustrations, space planning, and perspective are included. Students will become proficient with plotters, programs and processing, color, 2-dimensional and 3-dimensional planning.

*446. Presentation Techniques: Architecture and Interiors (3) F Faculty

Prerequisites: IA 348 or HEC 348 and consent of instructor. Techniques in preparing two and three dimensional architectural and interior renderings and presentations. [Activity] Same course as H EC 446.

*447. Rapid Techniques: Architecture and Interiors Presentations (2) S Faculty

Prerequisite: IA 446 or H EC 446 or consent of instructor. Methods of visual communication used in architecture and interior presentation with emphasis on development of professional formats using abstraction, fluidity and rapid techniques. Same course as H EC 447. (Laboratory included.)

Electricity-Electronics

Lower Division

131. General Electricity (2) F,S Faculty

Survey of electrical principles and devices. Discussions and activities emphasizing magnetism, DC and AC theory, basic test equipment, components and circuits and the importance of electricity to technology. (Laboratory included.)

Upper Division

*331. Electronic Fundamentals (3) F,S Brandstatt, D. Smith

Prerequisite: IA 131. Study of power supply and voltage regulator circuits, amplifier and oscillator circuits and basic semiconductor devices. Use of test equipment will be emphasized. (Laboratory included.)

*332. Semiconductor Devices I (3) F,S Brandstatt, D.Smith

Prerequisite: IA 331 or equivalent. Theory and operation of discrete and integrated semiconductor devices. Basic circuit analysis, design, measurement and test equipment will be emphasized. (Laboratory included.)

*333. Electronic Communication (3) F,S Brandstatt, D.Smith

Prerequisite: IA 331. Theory and operation of receivers, transmitters, modulators, antennas and related circuits. Specific applications for AM, FM and video communications will be presented including FCC licensing requirements. (Laboratory included.)

369. Energy and Power Technology (3) F,S Faculty

Prerequisites: None. Study of energy and power production systems with emphasis on basic energy conversion processes for electric power production including relevant topics on conservation, alternatives, user distribution, economics, social and environmental effects, and energy policies. Traditional grading only. [Lecture - Discussion]

*430. Electronic Service and Repair (2) F,S D. Smith

Prerequisite: IA 331. Repair and preventive maintenance of electronic and electrical equipment. (Laboratory included.)

*432A,B. Amateur Radio Licensing (2,2) S D. Smith

432A — Amateur Radio code and electrical theory in preparation for the Federal Communication Commission's Examination for the Novice, Technician and General Class amateur license. 432B — Amateur Radio code and electrical theory in preparation for the Federal Communication Commission's Examination for the Advanced and Extra Class amateur license. (Laboratories included in both A and B.)

*433. Television and FM Principles (2) S D. Smith

Prerequisite: IA 331, 332, or equivalent. Theory of FM and TV systems. Analysis of circuit operation and service techniques of modern receivers. (Laboratory included.)

*435. Digital Electronics I (3) F Brandstatt, D. Smith

Prerequisite: IA 331. The theory and operation of digital electronics logic circuits and devices. Both sequential and combinational logic circuits will be presented. (Laboratory included.)

*436. Digital Electronics II (3) F,S Faculty

Prerequisite: IA 435 or equivalent. A study of microprocessor theory and operation including: number systems, codes, microprocessor architecture, instruction sets and programming operations. (Laboratory included.)

Graphic Arts

Lower Division

151. Introduction to Graphic Arts (2) F,S Faculty

Principles of elementary typographic design and layout, type composition and presswork. Discussions and activities emphasize the letterpress, offset lithography, silk screen and intaglio printing processes, as well as bookbinding and paper manufacturing. (Laboratory included.)

Upper Division

*351. Composition Methods in Graphic Arts (3) S Martin

Prerequisite: IA 151. Advanced typographic design and layout. Discussions and activities emphasize newspaper and magazine layout, multiple run in position methods, copyfitting, hot and cold composition methods and the composition of printing papers and inks. New techniques and developments in graphic arts included. (Laboratory included.)

*352. Graphic Arts Photography (3) F,S Faculty

Photographic theory and operations related to graphic arts. Study of process camera in making line, halftone negatives and stats. Use of the vacuum frame and point light source for contacting and various proofing processes. Basic stripping operations presented. (Laboratory included.)

*353. Design and Layout of Printing Forms (2) F Faculty

Principles of printing layout, type estimating and typographical specifications. Experience offered in designing typical display and commercial printing forms. (Laboratory included.)

*354. Graphic Arts Handicrafts (2) S Faculty

Methods of producing printing designs with minimum equipment and facilities. Activities and projects specifically designed for recreation and junior high School graphic arts instructional programs. (Laboratory included.)

*453. Graphic Arts Presswork (3) F Martin

Prerequisite: IA 151. Principles and techniques of both letterpress and photooffset presswork. Discussions and activities emphasize the theory, practice and problems of letterpress and photooffset presswork. Development of technical knowledge of materials and methods. Practice in running increasingly complex jobs including multicolor work. (Laboratory included.)

454./554. Color Separation Techniques (3) F Faculty

Prerequisite: IA 352. Advanced presentation of photographic theory and practices common to the graphic arts field. Laboratory techniques to encompass the basic kinds of color separations. These include indirect and direct methods utilizing the enlarger, process camera and contact frame. Masking techniques to include both silver and dye masks. Experimental processes to be included. (Laboratory included.)

*455. Graphic Arts Printing Production (3) S Martin

Prerequisites: IA 351, 352, 453 or consent of instructor. Principle of and experiences in printing production. Through lecture and laboratory experiences the course identifies and covers topics such as: production planning, cost estimating, job order planning and control, quality control, maintenance, purchasing and material control. (Laboratory included.)

Metals

Lower Division

121. Basic Metalworking Processes (2) F,S Faculty

Properties of ferrous and non-ferrous metals, characteristics of hand and machine tools, and the basic processes of metal casting, machining, light metal fabrication and welding. (Laboratory included.)

Upper Division

*321. Patternmaking and Casting Processes (3) F,S E.Smith

Prerequisites: IA 1 1 1, 121. Theory and practice in the patternmaking, coremaking and metalcasting processes, including green sand molding, shell molding, investment casting, permanent mold casting and applicable related processes. (Laboratory included.)

*322. Welding I (2) F,S Patcha, E. Smith

Oxy-acetylene and electric welding principles and practice, welding equipment and principles of ferrous metallurgy. (Laboratory included.)

*323. Machine Tools I (3) F,S Patcha

Basic principles and practices in machining operations including bench work, drilling, lathe, milling, and grinding with emphasis on tool set-ups and procedures representative of industry. (Laboratory included.)

*326. Metal Forming and Fabrication (3) F,S Patcha, E. Smith

Prerequisite: IA 121. Principles and practices of hand and machine forming processes on light gauge ferrous and nonferrous metals, production fabricating techniques and metal joining processes. (Laboratory included.)

*422. Welding II (2) S Patcha

Prerequisite: IA 322 or equivalent. Principles and practices of shielded metallic arc, gas tungsten arc, and gas metal arc welding, brazing processes and study of welding metallurgy. (Laboratory included.)

*423. Machine Tools II (3) F,S Faculty

Prerequisite: IA 323 or equivalent. Advanced machining EMD tooling operations including basic machine design, tool and cutter maintenance, numerical control (N/C) and electrical discharge machining (EDM). (Laboratory included.)

425A,B./525A,B. Numerical Control Manufacturing (3,3) S Faculty

Prerequisite: IA 323 or equivalent. Principles and practices of numerical control part programming, machine setup and operation. IA 425 A deals with manual programming techniques. IA 425B is computer-assisted programming. (Laboratory included.)

Photography

Lower Division

101. Basic Photography (2) F,S Faculty

A beginning course to familiarize students with the fundamentals of photography. Units pertaining to cameras, exposure meters, films, darkroom technique, lighting, portraiture and optics. (Laboratory included.)

Upper Division

*304. Intermediate Photography (3) F,S Wittich

Prerequisite: IA 101. Course designed to further increase photographic knowledge in camera, darkroom and lighting. An emphasis is placed on reaching a higher level of print quality (Laboratory included.)

*306. Color Photography (2) F,S Wittich

Prerequisite: IA IDI. Survey of current color materials and processes with emphasis on exposing, developing and printing. Contemporary approach to color photography will be stressed. (Laboratory included.)

*308. History and Criticism of Photography (2) F Faculty

Prerequisite: IA 101. Determination of the history, aesthetics and criticism of still photography as an art form. Content presented in lectures, tapes, slides and films. Designed to help students evolve a philosophical approach to photography.

*401. Photo Marketing/Portfolio (2) S Wittich

Prerequisites: IA 304, a minimum of four additional upper division units in photography. The art and craft of preparing a professional photographer's portfolio and the necessary techniques to display photographic skills, utilizing the portfolio as the chief marketing tool.

*403. Photographic Sensitometry (2) S Faculty

Prerequisite: IA 101 or equivalent. Emphasizes photographic control of exposure, development and printing through sensitometric procedure. Examines control techniques such as the Zone, Sanders and Davis systems. Lab and field experience in exposure, development and printing will be utilized to confirm sensitometric data. (Laboratory included.)

*404. Commercial Photography (2) F Wittich

Prerequisite: IA 101 or equivalent. Course designed to give exploration of camera and laboratory techniques as applied to advertising and commercial fields. Related photo assignments of studio and location problems will be given. (Laboratory included.)

*406. Experimental Photography (2) S Routh

Prerequisite: Industrial Arts 101 or equivalent. Course work to generate experimental solutions to conceptual visual design problems. Both color and b/w films will be used for studio and location photography. (Laboratory included.)

407./507. Documentary Photography (2) F Wittich

History, theory and practice of still documentary photography. Students will research, script and produce a documentary photo essay on a topic of social concern. Lectures and films will focus on the documentary still photography as an instrument for social influence and change. (Laboratory included.)

*408. Corporate Presentations (3) S Wittich

Prerequisites: IA-101 or equivalent. Planning and producing slide-tape presentations. Scripting, photography, sound recording and synchronization of color slides and tape. (Laboratory included.) Traditional grading only. [Activity]

*409. Photo-Graphics (2) S Faculty

Prerequisite: IA 101. Indepth study of graphic techniques as applied in photography: high contrast, tone separation, color graphics, line, posterization, tone line, Sabattier effect, etchbath. (Laboratory included.)

Plastics

Lower Division

170. Introductory Plastics (2) F,S Schureman

Materials, processes and applications of industrial plastics and polymers. Basic operation in processing, fabricating and finishing of thermoplastics and thermoset plastics materials. (Laboratory included.)

Upper Division

*370. Advanced Plastics Processing (3) F,S Faculty

Prerequisite: IA 170 or consent of instructor. Primary plastics processing techniques; principles. Operation of thermoforming, rotational molding, injection molding, compression molding, extrusion and blowmolding equipment. Product and process evaluation. (Laboratory included.)

*373. Plastics Application to Design (3) F Faculty

Prerequisite: IA 17 D or consent of instructor. Interpretation of plastic design data in their capabilities and limitations as a class of materials. Provide an understanding of the principles underlying the properties of plastics and design problems associated with plastics through the laboratory application of plastic processes and their effects on design. (Laboratory included.)

*470. Reinforced Plastics and Composites (3) F,S Schureman

Prerequisite: IA 170 or consent of instructor. Mold preparation and production of reinforced plastics products. Standard specifications for reinforced materials and composite materials. (Laboratory included.)

474./574. Plastics Mold Construction (3) F,S Schureman

Prerequisite: IA 170 or consent of instructor. Properties and characteristics of thermo-setting and thermoplastic materials. Analysis and construction of molds and dies for use with reinforced plastics, injection molding, thermoforming processes, extrusion and compression and transfer molding. (Laboratory included.)

Woods

Lower Division

111. Introductory Wood (2) F,S Faculty

Survey of basic wood processes, practices and apparatus with emphasis on the understanding of current principles and procedures. (Laboratory included.)

Upper Division

*311. Industrial Coatings (2) F Faculty

Development, manufacture and use of modern industrial coatings, with emphasis on their application as protective and decorative substances for wood and allied materials. (Laboratory included.)

*312. Machine Wood (3) F,S Quinones

Prerequisite: IA 111 or equivalent. Basic principles and study of the proper care, selection, maintenance of power equipment, with emphasis on safety and proper technique and use of power machines as they relate to the industrial arts program. (Laboratory included.)

*313. Wood Technology (2) S Quinones

Prerequisite: IA 111 or equivalent. Applications, implications and values of wood and woodworking in our technological society, with emphasis upon understanding through study and experiment. (Laboratory included.)

*411. Furniture (3) F,S Quinones

Prerequisite: IA 312 or equivalent. Analysis of characteristics and principles of furniture designs, with emphasis on selection and construction of furniture, employing advanced hand and machine tool operations. (Laboratory included.)

*412. Carpentry (2) F Faculty

Prerequisite: IA 111 or equivalent. Planning and techniques of estimating construction costs of building with the study of techniques involved in laying out and framing a structure. (Laboratory included.)

*413. Upholstery (2) F Quinones

Prerequisite: IA 111. Methods of upholstery practices and use of tools and equipment employed in the process of upholstery. (Laboratory included.)

*414. Boat Construction (2) S Faculty

Prerequisite: IA 312 or consent of instructor. Interpretation of line drawings and specifications, design and construction of forms, molds and hulls of stroked, molded plywood and fiberglass systems. (Laboratory included.)

*415. Industrial Wood (2) S Faculty

Prerequisite: IA 312. Comprehensive study of modern industrial woodworking, its production and management, from skilled hand craftsmanship to numerical automation, with emphasis on the operational functions and technical procedure involved. (Laboratory included.)

Graduate Division

507./407. Documentary Photography (2) F Wittich

History, theory and practice of still documentary photography. Students will research, script and produce a documentary photo essay on a topic of social concern. Lectures and films will focus on the documentary still photograph as an instrument for social influence and change. (Laboratory included.)

525A,B./425A,B. Numerical Control Manufacturing (3,3) S Faculty

Prerequisite: IA 323 or equivalent. Principles and practices of numerical control part programming, machine setup and operation. IA 425A deals with manual programming techniques, IA 425B is computer-assisted programming. (Laboratory included.)

542./442. Architectural Planning and Presentation (3) F,S Church

Prerequisite: IA 347. Study and planning of structures for specific functions. Development of presentation drawings including perspective drawing, shades and shadows, materials and colors. Review of architectural history. (Lecture, laboratory 6 hours.)

554./454. Color Separation Techniques (3) F Faculty

Prerequisite: IA 352. Advanced presentation of photographic theory and practices common to the graphic arts -field. Laboratory techniques to encompass the basic kinds of color separations. These include indirect and direct methods utilizing the enlarger, process camera and contact frame. Masking techniques to include both silver and dye masks. Experimental processes to be included. (Laboratory included.)

574./474. Plastics Mold Construction (3) F,S Faculty

Prerequisite: IA 170 or consent of instructor. Properties and characteristics of thermo-setting and thermoplastics materials. Analysis and construction of molds and dies for use with reinforced plastics, injection molding, thermoforming processes, extrusion and compression and transfer molding. (Laboratory included.)

590. Supervision and Administration in Industrial Education (3) F Kunst, Lathrop

The study of management and supervisory methods, systems and theories as applied to industry and to industrial education programs.

591. Industrial Program Development (3) F Kunst, Lathrop

The selection and organization of industrial training curricula and development of courses of study to be used in public and private industrial education programs.

592. Evaluation In Industrial Education (3) S Kunst, Lathrop

Development of methods, techniques and devices for evaluating people, programs and other aspects in industry and in industrial education. Evaluation of students, employees, facilities, safety and other areas of interest with emphasis on development of evaluation devices.

593. Teaching Industrial Subjects (3) S Kunst, Lathrop

Teaching techniques, philosophy, organization and planning in industrial training programs, public and private education.

594. Technology and Civilization (3) Kunst

The study of the creation and utilization of adaptive means, including tools, machines, materials, techniques, and technical systems, and the relation of the behavior of these elements and systems to human beings, society, and the civilization process.

599. Advanced Individual Studies (3) Kunst, Torres

Prerequisite: Consent of instructor and graduate advisor. Advanced individual projects with faculty supervision in en area of industrial education specialization. Limited to three units per semester. May be repeated for a total of six units.

650. Seminar in Industrial Practices and Education (3) F,S Faculty

Prerequisite: Consent of instructor. Study of selected topics in industrial education, including important legislation, industrial innovations, technical change and contemporary problems. Topics will be announced in Schedule of Classes. May be repeated for a maximum of six units.

696. Research Methods (3) F,S Kunst, Torres

Selecting, defining and presenting methods applicable to the solution of problems in industrial education with emphasis on experimental, descriptive, technical projects and library techniques. Required of all master's degree candidates in industrial arts.

697. Directed Research (2) F,S Kunst, Torres

Prerequisites: IA 696, advancement to candidacy. The definition, presentation and discussion of selected problems in industrial education.

698. Thesis (1-4) F,S Kunst, Lathrop, Torres

Prerequisite: Advancement to candidacy. Planning, preparation and completion of a thesis related to this field. Limited to classified graduate students who have completed or are completing IA 697.

Military Science

Army Reserve Officer Training Corps

School of Applied Arts and Sciences

Lieutenant Colonel House, Professor, Military Science

Advisory Board: Mr. Tom Bennett, Vice President, The Garrett Corporation; Dr. Howard Boehmer, Vice President, Hughes Aircraft (retired); Lieutenant Colonel Leon R. Busby, Pilot, Western Airlines; Colonel Phillips E. Copeland, U.S. Air Force (retired); Dr. George Donohue, Associate Director, International Security and Defense, Rand Corporation; Colonel Roy C. Eckard, Employee Communications Specialist, Northrop; Mr. Edward Elko, President, Aerojet Ordnance Company; Colonel Jack L. Fisher, Vice President, California Air Force Association; MG Daniel Helix, Commander, 63rd U.S. Army Reserve Command; MG James Delk, Commander, 40th Infantry Division (Mech); Mr. A.U. Lamkins, Jr., Defense Electronics Operations, Rockwell International; Dr. Dawn Maire Patterson, Dean, Continuing Education, California State University, Los Angeles; Mr. Ronald K. Ressler, Vice President, Defense Group Marketing, Ford Aerospace Communications Corporation; Dr. Eleanor Wynne, President, Aerospace Education Foundation.

The Army Reserve Officers Training Corps (AROTC) program offers leadership and management training to CSULB students through the Department of Military Science. The Department offers four-, three- and two-year programs leading to a commission as a Second Lieutenant in the U.S. Army, the Army Reserve, or the Army National Guard. Participants must be full- time students at the undergraduate or graduate level and meet physical and other qualifications for commissioning as an Army Officer.

Students enrolled in the last two years of ROTC (Junior and Senior years) receive $100 per month plus $800 for a summer training program. Four-, three-, and two-year scholarships are available which pay all tuition and fees, $360 per year for books, plus $100 per academic month and the $800 summer camp pay. Scholarships are based strictly on merit with academic performance and potential for success as an officer being the primary selection criteria. Financial condition is not considered.

The normal four-year program consists of the Basic and Advanced Courses. The Basic Course (Military Science I and Military Science II) is normally taken in the freshman and sophomore years, with no military obligation. The Basic Course consists of one unit per semester plus leadership laboratory. The Advanced Course (Military Science III and Military Science IV) covers the final two years and includes a summer advanced camp with pay and travel expenses. Advanced Course classes are three units per semester. Books and uniforms for all courses are loaned to the student at no cost.

The three-year program enables a student with three academic years remaining in college to accelerate a four-year program by taking two military science courses per term the first year plus a one-hour weekly laboratory.

The two-year program (Advanced Course only) is available to students who have two years remaining toward a baccalaureate or graduate degree. The student attends a six-week Basic Camp, with pay, the summer before enrolling in the Advanced Course, with application by April of that year. Camp attendees are under no obligation and may compete for two-year scholarships during basic camp.

Veterans (including enlisted members of the Guard or Reserve) usually qualify to enter the Advanced Course without Basic Camp. They are eligible to receive the $100 per month allowance as well as any veterans' benefits to which they are entitled.

All students attend a summer Advanced Camp between the first and second years of the Advanced Course. The camp is at Ft. Lewis, Washington, and consists of a six-week leadership development course.

For additional information contact the Department of Military Science. Offices are in Industrial Technology Room 213 or call (213) 498-5766.

Courses (M S):

Lower Division

101. United States Defense Establishment (1) Barnett

Prerequisites: None. Examines the evolution of the Department of Defense and the military services with particular emphasis on the U.S. Army; the Constitutional foundations of the military; the role of the military as an instrument of national policy and strategy; the Army's mission, organization, components, staffs and their functions in conjunction with contemporary military problems; role of the Army in support of national objectives. (Lab required of all AROTC Cadets only.) [Lecture

103. Basic Military Survival Skills (1) Faculty

Prerequisites: None. Introduction to basic field survival skills in a military environment: emergency first aid; swimming survival training; physical readiness training; use of a compass for land navigation; map reading and terrain association; hiking, camping, rope rappelling skills. (Lab required of all AROTC Cadets only.) [Lecture - Discussion]

211. Introduction to Military Operations and Basic Tactics (1) Faculty

Prerequisites: None. Fundamentals of operations and tactics employed in the U.S. Army: fire and maneuver, operations orders, patrolling; offensive and defensive operations. (Lab required of all AROTC Cadets only.)

212. Basic Principles of Small Unit Leadership (1) Faculty

Prerequisites: None. An overview of basic psychological principles related to military leadership: effective communication, individual motivation and development, human needs, power and influence, and introduction to management skills. (Lab required of all AROTC Cadets only.)

Upper Division

301. Leadership and Management (3) Faculty

Prerequisites: None. Examines current leadership theories and models and their applicability for junior military officers. Emphasizes specific interpersonal skills: counseling, oral and written communications, supervision, coordination and decision-making. Traditional grading only. Same as A S 301. (Lab required of AROTC Cadets only.) [Lecture - Discussion] Grading: Traditional only. Same course as AS 301.

302. Leadership and Management II (3) Faculty

Examines learning theories to support development of knowledge, skills, and attitudes necessary for instructing-teaching applications; techniques for applied education with emphasis on teaching and group process (Lecture 3 hours; laboratory 3 hours, required only of AROTC students).

400. Practicum in Leadership and Management (3)
Prerequisite: Permission of Professor of Military Science and enrollment in AROTC. Intensive leadership and management training conducted at Fort Lewis, WA. Application of the theories and principles learned in the classroom to actual situations is provided. The student's ability to lead, to plan, and to conduct military operations is thoroughly evaluated under the direct tutelage of Professors of Military Science. (260 contact hours).

411. U.S. Military History (3) McCullough

Prerequisites: None. Survey course in American military history from the origin of the U.S. Army to present; principles of war and their application in U.S. military history, leadership and the U.S. military heritage. (Lab required of all AROTC Cadets only.) [Lecture - Discussion] Grading: Student Option

412. Officership and Professionalism (3) House

Prerequisites: None. Examines the role of the Army as a profession and its responsibility to society. The course focus is an inquiry into the nature of moral choice as applied to armed conflict between nations. Examines the principles of military justice and selected ethical theories as a background to an extended inquiry into the morality of war and the Just War tradition. (Lab required of all AROTC Cadets only.) [Lecture - Discussion] Grading: Student Option.

Nursing

School of Applied Arts and Sciences

Department Chair:
Department Office: Nursing Building, Room 17
Telephone: 498-4464
Faculty: Professors: Joan Cobin, Loucine Huckabay, Elizabeth Kaufman, Margaret L. Koehler, M. Adrienne Mayberry, Beth Moore, Ruth G. Mullins, Barbara J. Nelms, Wanda Pentecost, Sharon L. Roberts, Martha A. Siegel, Colleen Sparks, Vivian Sucher; Associate Professors: Margaret Brady, Flora Meisenheimer, Sylvia A. Puglisi, Judy E. Smith, Elaine E. White; Assistant Professors: Randy Caine, Kathleen Keller, Jane L. Timpke
Emeritus Faculty: Mabel J. Hoffman, Phyllis Lackey, Eva Sakamoto, Dorothy L. Walsh
Department Secretary: Kathleen Olsen

Students desiring information should contact the department office for dates of open counseling sessions.

Bachelor of Science in Nursing

The baccalaureate program offers courses that prepare the student to become a professional nurse. Two distinct categories of students are eligible for admission: The "basic student" who enters the University without having completed a first level nursing program and the "registered nurse student" who, having completed a course of study at the first level, desires further study to expand her or his nursing capabilities to the professional level. Though each category of student enters at different levels, the terminal objectives of the nursing program are the same for both groups. The "basic student" upon completion of specific courses is eligible to write the examination for licensure to practice as a registered nurse. All graduates are recommended for certification as a public health nurse in the State of California. The program is accredited by the California State Board of Registered Nursing and the National League for Nursing.

The purpose of the bachelor of science program in nursing is to prepare graduates to function as a professional nurse in the primary care role in a variety of settings. Graduates are expected to have acquired foundations for continuing professional development.

The curriculum is formulated to help the student develop understanding of self and others, intellectual curiosity and ability to work with colleagues to identify and resolve the health problems of individuals and families in a changing society. The professional nurse, while able to assess and intervene where health deviations exist, is committed to the role of maintaining health and preventing illness in self and others.

Admission Requirements for the Basic Student

Students must apply for admission to the University as an undeclared or prenursing major. The number of applicants to nursing exceeds the number that can be accepted. For this reason nursing applicants are subject to criteria in addition to those required for admission to the University. The "basic student" may apply as a new or transfer student. After the student is accepted in N-200 the department submits a change of major to nursing for the student.

To be accepted as a nursing major, basic students are required to do the following:

1. Earn a "C" grade or better and a G.P.A. of 2.5 or better in all prerequisite courses.
2. Complete a test that assesses their ability for logical thinking and problem solving.
3. Have a personal scheduled interview with a designated nursing faculty member.
4. Submit transcripts of any previous college work to Nursing Department as well as to the Admissions Office.
5. Complete a written selff-assessment.

Further information regarding admission to program courses is available at group counseling held in the department.

Requirements for the Bachelor of Science Basic (code 3-1072)

Required Support Courses:

CHEM 200, 300; A/P 208, 209, 246, 345; MICR 210, two social sciences (PSY IOO and SOC 100); and H EC 339.

Required Nursing Courses:

NRSG 200, 200L, 202, 202L, 250, 250L, 251, 253, 253L, 300, 300L, 302, 307, 350, 350L, 352, 357, 400, 400L, 402, 402L, 450, 460L, 452, 452L.

Admission Requirements for the Registered Nurse Student

Registered Nurse applicants are required to apply for admission to the University and do the following:

1. Hold a current license to practice nursing in California.
2. Have 56 transferable units.
3. Obtain malpractice insurance.
4. Have completed the following courses: Psychology, Sociology, Chemistry, Microbiology, Anatomy, Physiology with a C grade or better in each and a 2.5 GPA in these prerequisite courses:
5. Attend a group counseling session for R.N. students and complete a student profile.
6. Submit unofficial transcripts of any previous college work to the Nursing Department.

Further information regarding admission to nursing courses is available from faculty members who are registered nurse advisors. Graduates of diploma Schools of nursing are urged to seek information/admission to a community college that offers the opportunity to earn credit for a diploma nursing program

All courses offered by the Nursing Department are letter graded unless otherwise specified in the Schedule of Classes.

Requirements for the Bachelor of Science R.N. (code3-1073)

Prerequisites:

Completion of 56 transferable units and California R.N. license. Completion of general education requirements is advised.

Required Support Courses:
CHEM 300, A/P 345, 3 unit upper division Social Science course.

Required Nursing Courses:

NRSG 305, 305L, 307, 355, 355L, 357, 400, 400L, 402, 402L, 450, 450L, 452, 452L.

Course of Study

A specific combination of general education, prerequisite nursing and elective courses totaling 132 units are required for graduation. All courses in the nursing program must be taken in sequence, in general the number assigned to each nursing course indicates where it occurs in the sequence. Admission to the first course is by application which will be accepted upon successful attainment of the criteria listed above. The last date to file course applications for each semester will be available in the Nursing Department. Progress in the nursing major requires that students maintain a cumulative 2.0 grade point average on all units attempted and attain a minimum of a C grade in each of the nursing courses as well as all required support courses. The student who earns less than a grade of "C" must repeat that course prior to being admitted to the next course in sequence. A nursing course may be repeated one time. The nursing sequence of courses requires a minimum of six semesters for the "basic student" and four semesters for the "R.N. student." A break in the sequence of courses necessitates readmission on a space-available basis.

Master of Science in Nursing

The master of science degree is available to qualified students who desire advanced preparation in a variety of clinical specialty areas.

The philosophy of graduate nurse education is that the practice of nursing is constantly changing as health needs and health delivery systems are altered. Integral to nursing is an ability to work effectively and cooperatively with other disciplines and community services to promote health.

The focal point in this curriculum is the nursing process with strong components of clinical medical knowledge complemented by behavioral science concepts. Courses are interdependent and have been structured to provide clinical depth in the area of student's choice.

The graduate will have the knowledge and skill to function as a nurse practitioner or clinical specialist in one of several specialty areas. Nursing research skills and the application of nursing theory to practice are major emphases of the curriculum. Each applicant should request a copy of the official transcript of all college course work be sent to the department graduate advisor of nursing in addition to the copies required by the Office of Admissions and Records.

Prerequisites

1. A bachelor's degree in nursing.
2. Current license to practice as a registered nurse in California.
3. Admission to graduate standing in nursing at the University.
4. An upper division or graduate course in statistics.
5. A physical assessment course which includes 60 hours of clinical practice.
6. Upper division or graduate level course in Pathophysiology.
7. An upper division public health nursing course.
8. An overall grade point average of 3.0 or better; an upper division nursing grade point average of 3.0 or better and a science grade point average of 3.0 or better. Students who fall below these averages will be evaluated on an individual basis.

Advancement to Candidacy

1. Satisfy the general University requirements for advancement to candidacy.
2. Completion of all undergraduate deficiencies.
3. Successful completion of the CSULB Writing Proficiency Examination.
4. Approval of the department graduate advisor and Director of Graduate Studies and Research, School of Applied Arts and Sciences.

The M.S. in Nursing requires completion of the required courses in one of the following specialty areas: Adult, Family, Geriatric, Pediatric or Psychiatric Mental Health Nurse Practitioner, Critical Care Clinical Specialist or Nurse Anesthetist. A Nurse Practitioner certificate is awarded to students who complete the required courses in one of the Nurse Practitioner specialty areas. Most of the specialization instruction is offered through the 660 and 680 series of courses.

Requirements for the Master of Science

1. Completion of a minimum of 36 units in upper division and graduate courses.
2. Completion of NRSG 680 (at least six units), 680 L (at least six units), 660 (six units), 696 (3 units) and 698 (4 units).
3. An overall grade point average of 3.0 or better in all courses.
4. Completion of an approved thesis.

Courses (NRSG):

Lower Division

150. Explorations in Nursing (2) F,S Pentecost
Prerequisite: Consent of instructor. Corequisite NRSG 150L. Discussion of current issues in nursing with the student's identification of personal learning needs and goals. Investigation of the evolution of nursing, areas in which nursing is involved, and the impact of culture, ethnicity and society upon nursing today. Evaluation on Credit/ No Credit basis.

150L. Explorations Laboratory (1) F,S Faculty
Co-requisite NRSG 150. Credit/ No Credit grading only.

200. Basic Health Theory and Nursing Skills (4) F,S Meisenheimer
Prerequisites: Sophomore standing, A/P 208, 209, CHEM 200, 300, MICR 210, one psychology course and one sociology course (six units), consent of instructor. Corequisites: NRSG 200L, 202, 202 L, and H EC 339. Development of concepts of high level wellness and self care. Introduction to physical and social science principles which provide the basis for beginning level nursing theory and practice. Introduction to the nursing process as the framework for nursing practice. (Lecture discussion 4 hours.)

200L. Health Skills Laboratory I (2) F,S Meisenheimer
Prerequisites: Same as NRSG 200. Corequisites: NRSG 200, 202, 202L, H EC 339. Guided utilization of beginning level theory and skills in a simulation and clinical laboratory utilizing the concepts of the nursing process in patient care delivery (Laboratory 6 hours.)

202. Human Awareness in the Health Professions (2) F,S Faculty
Prerequisite: Consent of instructor. Corequisites: NRSG 200, 200 L, 202L, and H EC 339. Introduction to understanding the individual and the psycho-social and cultural factors which influence his responses to his environment. Primary focus is on the health profession and on the health professional-client interaction. Traditional grading only.

202L. Human Awareness in the Health Professions Laboratory (1) F,S Faculty
Prerequisites: Consent of instructor. Co-requisites: NRS 200, 200L, 202, and H EC 339. Reality oriented projects in simulated and direct client contact provide opportunities for application of theory presented in NRSG 202. Traditional grading only.

250. Intermediate Health Theory and Nursing Skills (4) F,S
Prerequisites: NRSG 200, 200L, 202, 202L, H EC 339 and consent of instructor. Co-requisites: NRSG 250L, 251, 253, 253L and A/P 246. Development of intermediate level theory of physiological and psycho-social wellness and accountability. Application of recognized physical and social science principles and current research findings to intermediate level nursing theory and skills essential to the actualization of the nursing process. (Lecture-discussion 4 hours.)

250L. Health Skills Laboratory II (2) F,S Faculty
Prerequisites: Same as NRSG 250. Co-requisites: NRSG 250, 251, 253, 253L, and A/P 246. Guided laboratory experience to assist the student to synthesize intermediate level theory and gain skills in application of selected nursing process activities in simulation and in direct patient care. (Laboratory 6 hours.)

251. Legal Aspects of Health Care (2) F,S Mayberry
Prerequisites: Same as NRSG 250. Corequisites: NRSG 250, 250L, 253, 253L, and A/P 246. Legal duties and responsibilities of nurses and other professional health care personnel in the delivery of health services. Professional licensure regulations and scope of nursing practice are emphasized. (Lecture-discussion 2 hours.)

253. Physical Assessment (2) F,S Faculty

Prerequisites: Same as NRSG 250. Corequisites: NRSG 250, 250L, 307.250L, 251, 253 L and A/P 246. Study of basic techniques of history taking and physical assessment which are used by the nurse in identification of patient problems.

253L. Physical Assessment Laboratory (1) F,S Faculty

Prerequisites: Same as NRSG 250. Co-requisites: NRSG 250, 250L, 251, 253, and A/P 246. Advanced study of basic techniques of history taking and physical examination which are used by the nurse in identification of patient problems. Includes demonstration and practice of physical assessment methodology. (Laboratory 3 hours.) Traditional grading only.

300. Nursing Process I (2) F,S Caine

Prerequisites: NRSG 250, 250L, 251, 253, 253L, A/P 246, A/P 345, consent of instructor. Corequisites: NRSG 300L, 302, 307. Exploration of psycho-social concepts, cultural and environmental influencing factors relative to wellness-illness of individuals and family groups. Group interaction is directed toward development of self awareness as well as development of professional role. (Lecture-discussion 2 hours.)

300L. Nursing Process Laboratory I (6) F,S Caine

Prerequisites: Same as NRSG 300. Corequisites: NRSG 300, 302, 307. Experience in using established nursing interventions to assist man to manipulate a moderate number of overt and covert variables which interfere with his adaptation on the health-illness continuum. The use of some alternative nursing interventions will be encouraged.(Laboratory 18 hours.)

302. Clinical Studies I (2) F,S Caine

Prerequisites: Same as NRSG 300. Co-requisites: NRSG 300, 300L, 307. Group interaction concerned with synthesis of knowledge and experience comparing and contrasting trends in nursing interventions in a variety of situations and clinical settings. Withdrawal from NRSG 302 requires withdrawal from NRSG 300L. (Lecture-discussion 2 hours.)

305. Nursing Assessment I (2) F,S Faculty

Prerequisites: Admission to the University as a nursing major and consent of instructor. Corequisites: NRSG 305L, 307, CHEM 300. Use of concepts and theory to structure assessment and intervention with emphasis on the psycho-social modes of adaptation. Included are selected concepts of communication, psycho-social assessment, influencing factors, therapeutic relationships, nursing process and expanded role of the nurse. (Lecture-discussion 2 hours.)

305L. Nursing Assessment Laboratory I (2) F,S Faculty

Prerequisites: Admission to the University as a nursing major and consent of instructor. Corequisite: NRSG 305, 307. CHEM 300. Guided assistance to help the student identify and continue development of individual strengths and competence in nursing practice. Emphasis is on communication skills both individual and in groups and psycho-social assessment. (Laboratory 6 hours.)

307. Human Life Cycle I (3) F,S Nelms

Prerequisites: Junior standing, consent of instructor. Corequisite: NRSG 300 or 305, or R.N. admitted as a nursing major. Study of the physiological, social, intellectual and emotional development of persons as individuals and as family members from conception through adolescence. (Lecture-discussion 3 hours.)

350. Nursing Process II (2) F,S Faculty

Prerequisites: NRSG 300, 300L, 302, 307; A/P 345, consent of instructor. Corequisites: NRSG 350L, 352, 357. Group interaction drawing on knowledge and experience from a variety of situations and clinical settings. Content is focused on the nursing process and includes the decision making process, group dynamics and leadership skills. (Lecture-discussion 2 hours.)

350L. Nursing Process Laboratory II (6) F,S Faculty

Prerequisites: Same as NRSG 350. Corequisites: NRSG 350, 352, 357. Application of theory to clinical practice assisting individuals of various cultural and age groups to manipulate multiple variables that interfere with basic physiologic and psycho-social needs. Anticipation of nursing problems, assessment and nursing diagnosis, implementing and evaluating nursing interventions, is the framework for this laboratory. Emphasis is on student responsibility for own learning and behavior including dependent and interdependent relationships with other health team members. Withdrawal from NRSG 352 requires withdrawal from NRSG 350L. (Laboratory 18 hours.)

352. Clinical Studies II (2) F,S Faculty

Prerequisites: Same as NRSG 350. Corequisites: NRSG 350, 350L, 357. Theory base for assessment of an individual's position on the wellness-illness continuum by objective description of behaviors and identification of overt and covert bio-psycho-social variables. The emphasis will be acute pathological changes across various cultural and age groups. Withdrawal from NRSG 350L requires withdrawal from NRSG 352. (Lecture-discussion 2 hours.)

355. Nursing Assessment II (2) F,S Faculty

Prerequisites: NRSG 305, 305L, CHEM 300, consent of instructor. Corequisites: NRSG 355L, 357, A/P 345. Role of the nurse in facilitating adaptation toward optimum health for individuals and families. Particular emphasis on physical and psycho-social assessment, and exploration of expanded role of the nurse. (Lecture-discussion 2 hours.)

355L. Nursing Assessment Laboratory II (4) F,S Faculty

Prerequisites: NRSG 305, 305L, consent of instructor. Co-requisite: NRSG 355. Guided learning experiences to develop individual strengths and competence in physical and psycho-social assessment of patients, based on an integration of psycho-social and physiological concepts. (Laboratory 12 hours.)

357. Human Life Cycle II (3) F,S Meisenheimer

Prerequisites: Junior standing, NRSG 307, consent of instructor. Co-requisite: NRSG 350 or 355 or R.N. admitted as a nursing major. Study and application to nursing of the physiological, social, intellectual and emotional development of persons as individuals and as family members from young adulthood through old age. (Lecture-discussion 3 hours.)

400. Nursing Process III (2) F,S Keller, White

Prerequisites: NRSG 350, 350L, 352, 357; A/P 345, (NRSG 355, 355 L for R.N.'s in place of NRSG 350, 350L, 352) and consent of instructor. Corequisites: Nursing 400L, 402, 402L. Study of the economics of health care and the health delivery systems with emphasis on the role of nursing within these systems. Emphasis is upon less well defined problems and their causes, more original and creative nursing interventions and more indepth study of the involvement of families and the community as cause/effect and therapeutic agents in patient problems and care. (Lecture-discussion 2 hours.)

400L. Nursing Process Laboratory III (1) F,S Keller, White

Prerequisites: NRSG 350, 350L, 352, 357; A/P 345, (NRSG 355, 355L for R.N.'s in place of NRSG 350, 350L, 352, 402 L) and consent of instructor. Corequisites: NRSG 400, 402, 402L. Experience in assisting individuals, families and communities to make positive adaptations to complex health problems involving multiple variables and posing many possible nursing interventions. Emphasis on planning and implementing appropriate nursing interventions, evaluation of care, utilization of the health care systems, and creating new approaches to solving health problems. Traditional grading only. (Laboratory 3 hours.)

402. Clinical Studies III (2) F,S Keller, White

Prerequisites: NRSG 350, 350L, 352, 357; A/P 345, (NRSG 355, 355L for R.N.'s in place of NRSG 350, 350L, 352) and consent of instructor. Corequisites: NRSG 400, 400L, 402L. Group interaction which focuses on diversified and/or permanent interuptions in the health-illness continuum and associated nursing care in non-acute institutions and community facilities. Emphasis on the variety of life styles and diversified ethnic groups. (Lecture-discussion 2 hours.)

402L. Clinical Studies Laboratory III (4) F,S Keller, White

Prerequisites: NRSG 350, 350L, 352, 357; A/P 345, (NRSG 355, 355L for R.N.'s in place of NRSG 350, 350L, 352), consent of instructor. Corequisites: NRSG 400, 400L, 402. Evaluating multiple and diversified health problems (both temporary and permanent) of individuals, families and communities representing a variety of life styles with emphasis on care outside of acute care institutions. Experience will be provided to evaluate indicated and creative nursing interventions in a variety of settings. (Laboratory 12 hours.)

450. Nursing Process IV (2) F,S Huckabay

Prerequisites: NRSG 400, 400L, 402, 402L, consent of instructor. Corequisite: NRSG 450L. The relationship of the nursing process using research methodology, teaching and learning theory in selected clinical settings. (Lecture-discussion 2 hours.)

450L. Nursing Process Laboratory IV (1) F,S Kaufman, Moore, Roberts, Smith, Sucher

Prerequisites: NRSG 400, 400L, 402, 402L, consent of instructor. Co-requisite: NRSG 450. Completion of a research design in a clinical area selected by the individual student. Traditional grading only.(Laboratory 3 hours.)

452. Clinical Studies IV (2) F,S Kaufman, Moore, Roberts, Sucher, Smith

Prerequisites: NRSG 400, 400L, 402, 402L, consent of instructor. Corequisite: NRSG 452L. Exploration of didactic and experimental material specific to an area of concentration selected by the student. (Lecture-discussion 2 hours.)

452L. Clinical Studies Laboratory IV (4) F,S Kaufman, Moore, Roberts, Sucher, Smith

Prerequisites: NRSG 400, 400L, 402, 402L, consent of instructor. Corequisite: NRSG 452. Experience in developing expertise by using the nursing process in the student's area of clinical concentration. (Laboratory 12hours.)

481IC. Parenting (3) F,S Faculty

Prerequisite: Upper division standing. Effective parenting with emphasis on common parenting concerns and the developmental tasks of parents and children.

482. Physical Assessment and Aging (3) F,S Sucher

Prerequisite: Upper division standing. Study of the physical, emotional and social changes which accompany aging. Theory and practice in the assessment of these factors. Course is designed to prepare the average lay person and those in the helping professions to work with the aged and deal with their own aging.

*490. Independent Study (1-3) On demand Faculty

Prerequisite: Consent of any nursing faculty. Students who have made prior arrangements with a faculty adviser for appropriate learning objectives may enroll. May be repeated to a maximum of six units.

499./599. Special Topics in Nursing (1-3) On demand Faculty

Prerequisite: Consent of instructor. Topics consistent with contemporary nursing or curricular trends will be announced each semester. Credit may be earned for course each time a new topic is offered.

Graduate Division

556A. Conditions of Learning and Instruction in Nursing (2) F,S Huckabay

A systematic study of theories of learning and instruction as they apply to patient and/or student teaching-learning situations. Content covered includes conditions of learning, models of instruction, transfer of learning, behavior modification techniques, variables influencing learning and instruction, and evaluation of instruction.

556B. Curriculum Development in Nursing (3) F Huckabay

A critical appraisal of patterns of nursing education as considered from the standpoint of the changing order. A systematic study of principles of curriculum development as they apply to different types of nursing programs. Focuses on the relationship between philosophy, objectives, the selection and organization of learning experiences and the evaluative process.

556L. Theoretical Concepts Laboratory of Nursing Education (1-4) S Faculty

Instructional skills and the application of theories of learning and instruction to the practice and teaching of nursing within a supervised practice-teaching situation. Reference to ways teaching skills relate to broader educational issues such as teaching/learning theory. May be repeated for a maximum of 4 units.

557. Nursing Interaction with the Elderly (3) F,S Pentecost

Prerequisites: Graduate standing, consent of instructor. Study of the psycho-social development, needs and problems of the elderly and related nursing intervention.

558. Advocacy and the Nurse Practitioner (3) F,S Pentecost

Emphasis is upon the nurse advocate's ability to relate the major social problems and the status of current/pending legislation to the elderly clients' needs, the health care delivery system and the health care the nurse practitioner provides.

559. Nursing Administration (3) F,S Mayberry

Theories, issues and application of techniques pertaining to management applicable to nurses in the clinical setting.

590. Independent Study (1-3) F,S Faculty

Prerequisite: Consent of a nursing faculty member. Independent research under the supervision of a nursing faculty member.

599./499. Special Topics in Nursing (1-3) On demand Faculty

Prerequisite: Consent of instructor. Topics consistent with contemporary nursing or curricular trends will be announced each semester. Credit may be earned for course each time a new topic is offered.

660A,B. Theoretical Base for Advanced Nursing Practice (3,3) F,S Mayberry

Prerequisites: Pathophysiology, Physical Assessment. Study of the relationship of psycho-social theory to health care with an emphasis on the application of theory to clinical practice. Various sections will focus on different areas of clinical interest.

680A,B,C. Theories for Extended Nursing Practice (3,3,3) F,S Brady, Mullins, Siegel, Sparks

Prerequisites: A physical assessment course (including 60 hours laboratory practice), A/P 345. Normal and pathological conditions and the management theory base applicable for the role of nurse practitioner clinical specialist in clinical areas of concentration. May be repeated for credit with change of topic.

680L. Clinical Studies in Nursing (3,3,3) F,S Faculty

Corequisite: NRSG 680. A laboratory course offering clinical experience in selected settings to prepare the student for advanced nursing practice. May be repeated for credit with change of topic. A maximum of nine units for degree credit.

696. Research Methods (3) F,S Huckabay, Koehler

Prerequisite: Upper division course in statistics. The research process in nursing including the use of theory, study design, data collection, data analysis and interpretation of findings.

698. Thesis (1-4) F,S Faculty

Prerequisites: Advancement to candidacy, NRSG 696, and consent of department graduate adviser. Planning, preparation and completion of a thesis in clinical nursing.

Physical Education

School of Applied Arts and Sciences

Department Chair: William S. Husak
Department Office: Applied Arts and Sciences Building, Room 201
Telephone: 498-4051
Faculty: Professors: Daniel D. Arnheim, Kenneth Bartlett, Marguerite A. Clifton, James A. Davis, Dorothy Deatherage, Dorothy L. Fornia, Betty R. Griffith, D. Ruth Lindsey, M. Joan Lyon, Joseph Mastropaolo, Margaret E. Miller, Thomas D. Morgan, William Patterson, Jack W. Rose, Charles R. Sandefur, William A. Sinclair, Edward B. Souter, D. Margaret Costa, Dale P. Toohey, Robert W. Wuesthoff; Associate Professors: Daniel A. Campbell, Betty V. Edmondson, Barbara J. Franklin, John J. Garhammer, John Gonsalves, Dixie A. Grimmett, William S. Husak, Jo A. Redmon, David Wurzer; Assistant Professors: Peggy M. Lasko, Mary Ellen Leach
Emeritus Faculty: Warren J. Boring, James L. Comer, Corinne J. Crogen, Walter Crowe, Marcel J. DeLotto, Elizabeth 0. DuPont, Dorothy L. Ericson, Earl C. Kidd, Carl E. Klafs, John J. McConnell, Jack E. Montgomery, Robert A. Pestolesi, Don F. Reed, C. Patricia Reid, Frances Schaafma, Herman Schwartzkopf, L. LaVonne Stock
Department Secretary: Marjorie Caton
Department of Physical Education Advisory Council: Marvin Appel, Cardiologist, Long Beach Heart Association; Sherry Ballance, Director of Home Health, Alamitos/Belmont Rehabilitation Hospital; William C. Barnes, Dean, Long Beach City College; Richard Bell, Podiatrist; Robert Blum, Obstetrician/Gynecologist, Kaiser Permanente; Marie Blume, Registered Nurse; Jordan Bradley, Vice President, Coast Bank; William Bradley, Neurologist, Veterans Hospital; Stephen E. Brown, Pulmonary Medicine, Veterans Hospital; John Cole, President-Elect, Long Beach Lung Association; J. Michael Criley, Cardiologist, Harbor-UCLA Medical Center; Senator Ralph C. Dills, California State Senate; Myrvin H. Ellestad, Cardiologist, Long Beach Memorial Hospital; Ronald Fairshter, Associate Professor of Pulmonary Medicine, University of California, Irvine; John Fleitz, President, Los Caballeros Racquet and Sports Club; Victor F. Froelicher, Cardiologist, Veterans Hospital; Jan Hall, Long Beach City Council; Jim Hayes, Deputy Aid, California State Senate; Fred Jensen, President, National Bank of Long Beach; Daniel Kao, Internal Medicine and Pulmonary Disease; Robert Levy, Attorney at Law; Michael Liff, Pulmonary Medicine; Richard Light, Pulmonary Diseases, Veterans Hospital; William McMaster, Orthopedist, University of California, Irvine; Mark J. Meyers, Attorney; Ronald Nolte, Athletic and Celebrity Agent; Robert A. Pestolesi, Professor, USC; George Pugsley, Commissioner, Long Beach Municipal Court; Doug Richie, Podiatrist; Bill Ridgeway, Owner, Bill Ridgeway Design, Inc.; Loren Roberts, Executive Director, Long Beach Lung Association; Fran Schaafsma, President, FMS Associates; Paul Selecky, Medical Director, Pulmonary Medicine, Hoag Memorial Hospital; Judson Schoendorf, Allergist; Joseph D. Simmons, Personnel Director, Compton Unified School District; William Simmons, Real Estate Investor; Robert Stuart, Cardiologist, Memorial Hospital; Dave Thompson, General Manager, Thompson Tank.

Students may contact the Department Office for information and referral to the appropriate Faculty Advisor, Graduate Advising Coordinator, Student Teaching Coordinator, Credential Advising Coordinator, or Scheduling Coordinator.

The Department of Physical Education offers programs designed to satisfy the professional needs of prospective physical educators for various occupational roles. Courses are offered which meet requirements of the following: (1) the Bachelor of Arts degree with a major in Physical Education; (2) Physical Education major leading to a single-subject teaching credential; (3) a minor concentration in Physical Education; (4) Adapted Physical Education Single Subject Emphasis Credential; (5) Certificate Programs; (6) the Master of Arts degree in Physical Education.

The department assumes the responsibility for the psychological, physiological, and sociological needs and interests of the college student through course offerings of physical activities in sport, dance, aquatics and fitness.

Each new student enrolling in the University is required to have on file at the Student Health Service a completed health history record. A physical examination is no longer mandatory for an entering student. Students enrolling in physical education activity courses assume the responsibility for satisfactory health status appropriate for class activity.

Bachelor of Arts in Physical Education

Students pursuing a degree in Physical Education must complete courses and proficiency requirements plus Track courses in a specific area or areas. In meeting the requirements of one major, the Department offers 11 specialized Tracks for study which permit students to develop conceptual understanding related to human movement and to focus on preparation for one or more specific occupational roles. The Physical Education major must show skill proficiency and knowledge in PED 263 and the personal performance activity units completed according to requirements of the CSULB lower division program in the Physical Education Major Core for specific Tracks prior to graduation. Waiver of personal performance activity courses requires successful completion of a written and a practical examination in the courses to be waived. A petition for this procedure must be filed at the Office of Admissions and Records. The examinations are given on Monday and Wednesday at 12:00 o'clock Noon throughout the semester. Further information regarding waiver or waiver by examination is available in the Department Office. Upper division courses may not be waived by substitution or examination without Department petition and approval.

In addition to the Physical Education Degree requirements, ALL Physical Education majors must satisfy the following Departmental policies at the time of University Graduation: (1) Departmental approval and clearance is required for lower division courses and skill proficiencies. (2) Current certification in First Aid [Standard, Advanced, EMT] and Cardiopulmonary Resuscitation [CPR].

Requirements for the Bachelor of Arts in Physical Education (code 2-1201)

Core of Courses Required of All Students:

Lower Division:

Tracks: Aquatics, Athletic Training, Corrective Therapy, Developmental, Fitness, Gerontology, Wilderness Studies, Sociocultural Studies.

P ED 215, 263, and eight physical activity units distributed over a minimum of four activity categories: Aquatics: P ED 125, 240; Combative: P ED 106, 149, 249; Dance: P ED 181, 185, 280; Individual/Dual Sports: P ED 100, 104, 112, 264, 265, 266, 267; Wilderness Studies: P ED 131, 190, 242, 244, 246; Team Sports: P ED 250, 253, 255, 257.

Tracks: Adapted, Elementary, Secondary.

Requirements: P ED 171, 215, 240, 260, 263, 265, 370; Select two courses from P ED 250, 253, 255, 257; Select one course from P ED 264, 266, 267; Select one course from P ED 149, 249 (Note: Majors completing P ED 149 must select one additional course from P ED 100 - 199); Select one additional course from P ED 250, 253, 255, 257, 264, 266, 267.

Proficiencies: Each major is required to demonstrate proficiency at a 3.5 average level (1-5 scale) in P ED 263 and the personal performance activity units completed according to the requirements in the Physical Education Major Core for specific tracks prior to graduation.

Upper Division:

P ED 300, 301, 312, 315, 332, 335.

Select one of the following Tracks to complete the requirements for the Major:

Adapted Track

Upper Division:

P ED 320, 322, 380, 387, 388; and select one course in Applied Theory from P ED 350-369.

Aquatics Track

Lower Division:

P ED 121, 122, 131, 132, and 240.

Upper Division:

P ED 321, 358, 458; REC 401, 425; select six units from P ED 245, 346, REC 430.

Athletic Training Track

Upper Division:

P ED 307, 308, 309, 310, 363, 407; HSC 427; EDP 434B; select one course from HEC 430 OR HSC 210.

Corrective Therapy Track

Lower Division:

P ED 210

Upper Division:

P ED 309, 320, 322, 425, 489E; PSY 345, 370.

Developmental Track

Upper Division:

P ED 322, 415, 416, 417, 483; H DEV 307; select five units from P ED 276, 320, 375, 387.

Elementary School Physical Education Track

Upper Division:

P ED 320, 375, 376, 380, 322 or 483; select one Applied Theory course from P ED 350-369.

Fitness Track

Lower Division:

P ED 210.

Upper Division:

P ED 305, 309, 363, 405, 489D; REC 425; H EC 430.

Gerontology Track

Lower Division:

PED 210

Upper Division:

PED 309, 320, 425, 489G; GERN 400; A/P 401.

Wilderness Studies Track

Lower Division:

P ED 210; select four units from P ED 113, 119, 131, 153, 242; select six units from P ED 243, 245; REC 430.

Upper Division:

P ED 346, 447, 448.

Secondary School Physical Education Track

Upper Division:

P ED 320, 380, 483; select eight units distributed over a minimum three of the five categories from P ED 350-369.

Sociocultural Studies Track

Lower Division:

P ED 230.

Upper Division:

P ED 336, 338, 437, 439; select six units from B/ST 167, POSC 215, 220, PHIL 312, PSY 354, ANTH 411.

Adapted Physical Education Specialist Credential

This program is designed for those students interested in working with the disabled. Completion of this credential authorizes the teaching of physical education to the disabled, K-12. The Adapted Physical Education Specialist Credential must be obtained concurrently or after completion of the Single Subject Physical Education Credential, K-12. The requirements also include a Bachelor's Degree with a major in Physical Education.

A minimum of 24 units as follows: P ED 320, 322, 387, 388, 489A, EDP 350; Select two courses from CD 380, EDP 405, 451, 561, 563.

Minor in Physical Education-Teaching

This minor is designed for those students who are striving for an additional credential. With the completion of this minor and a successful score on the National Teacher Examination in Physical Education, the University will recommend the additional credential in Physical Education. The Elementary and Coaching concentrations do not qualify as add-ons to the single-subject credential.

Requirements for the Minor in Physical Education — Teaching:

A minimum of 24 units as follows: P ED 263, 303, 312, 380, 483; EDSS 300P; Eight physical activity units from: Aquatics: P ED 125, 240; Combative: P ED 106, 147, 148, 149, 249; Dance: P ED 260, 280; Individual/Dual: P ED 100, 104, 112, 171, 264, 265, 266, 267; Team: P ED 164, 165, 250, 253, 255, 257; and select 4 units from P ED 350, 352, 353, 355, 356, 358, 360, 361, 362, 363, 364, 365, 366, 369.

In addition to the above, each minor is required to demonstrate proficiency at a 3.5 average level (1-5 scale) in P ED 263 and the physical activity units distributed over a minimum of two activity categories completed to satisfy requirements of this minor.

Requirements for the Concentration in Physical Education — Elementary Teaching:

A minimum of 18 units from: Physical Education 276, 303, 312, 315, 322, 370, 376, 380.

Requirements for the Concentration in Physical Education — Coaching

A minimum of 21 units as follows: Physical Education 232, 303, 307; a minimum of 11 units selected in consultation with appropriate P ED Advisor from the following: Physical Education 312, 363, 450, 451, 452, 453, 454, 455, 456, 458, 464, 465, 466, 468, 489B.

Certificate Programs

The Department of Physical Education offers five different certificate programs each of which is related to a special emphasis provided in the curriculum. All certificate programs are open to students enrolled in the University who meet general admission requirements as follows:

1. Completion of 30 hours of course work.
2. A minimum 2.75 GPA in all completed course work.
3. Admission application and approval by a faculty committee in the certificate program selected.

Community Physical Fitness Certificate

Specific emphasis in this program is directed to the knowledge, understanding and application of principles designed to develop physical fitness. Course work is designed to prepare the student to promote, conduct and/or direct community fitness programs in the Y's, industry, commercial health clubs, hospitals, senior centers, retirement facilities and other public/private fitness, sport or aerobic dance centers.

Requirements for the Community Physical Fitness Certificate

1. Current certification in cardiopulmonary resuscitation and standard first aid.
2. Course work (35 units as follows): PED 301; 303 or A/P 202, 207, and PED 300; 305; 309; 363; 489D; HEC 232 or 430. In consultation with the advising coordinator, select five courses from one of the following, three of which must be from a single area.

   Area I: HEC 331, 433, 436, 436L, 461, PED 405, 425, 499- Aerobc Danc/Tchrs, 499-Biomech Fac/Strth; HEC 312, 421, 425.

   Area II: ACCT 205, HRM 360 or 361 or MGMT 303 or 421; MRKT 300, 330, or JOUR 270; Q S 130, 240, 242, 243; C/ST 200, 210, 280; I T 315 and 315L.

   Area III: A/P 342, 342L, 345, 400, 441, 443, 446, 545, BIO 260.

   Recommendations: For General Education — EDP 191 or 39I.

Wilderness Studies Certificate

This program is designed to develop leaders who can provide safe and challenging situations for individuals seeking self-fulfilling experiences in wilderness environments. The program of study will enable the student to acquire appropriate knowledge and skills, and to develop a personal philosophy reflecting understanding and concern for the protection of the environment and safety of participants in wilderness activities.

Requirements for the Wilderness Studies Certificate

1. Certification in First Aid and Cardiopulmonary Resuscitation.
2. Completion of Log of Outdoor Experiences.
3. Course work (31-33 units as follows):
   BIOL 100, P ED 346, 447, 448, REC 490. The following coursework must be taken in consultation with the advising coordinator: select four courses from P ED 131, 153, 242, 244, 246A, 246B, 247A, 248A; select two courses from P ED 243A, 243B, 243C, 245, REC 430; select one course from P ED 141, 241, 246C, 247B, 348, 499 — Outdr Prob Hndicp, 497, 499; select one course from BIOL 203, HEC 232, REC 317, 407, 495.

Pre-Athletic Training Certificate

This program is designed to assist the student in acquiring a foundation of knowledge and skills necessary for providing prevention and care of athletic injuries, and the administration of athletic training programs in public and private schools, colleges, universities and professional sport teams. Individuals who wish to pursue certification by the National Athletic Trainers' Association must complete additional requirements. Information concerning specific requirements for admission to the NATA program may be obtained from the Department of Physical Education.

Requirements for the Pre-Athletic Training Certificate

1. Certification in cardiopulmonary resuscitation and first aid.
2. Course work: (31 units as follows): P ED 300, 301, 307, 308, 309, 363, 483, 489C; H EC 430.

Corrective Therapy Certificate

This program is designed to prepare the student to pass the American Corrective Therapy (Kinesiotherapy) Association Certification (ACTA) Test. ACTA certification will qualify the therapist to provide therapeutic physical activities in rehabilitation settings including clinics, hospitals, schools, universities, convalescent homes and other private and public institutions or in private practice. The student will complete the Corrective Therapy Track in the undergraduate curriculum plus 27 additional units. Information concerning specific requirements for admission to and retention in the program may be obtained from the Director of the Corrective Therapy Program in the Physical Education Department.

Requirements:

1. Application and approval by Director.
2. Completion of Physical Education — Corrective Therapy Track.
3. Specialization course work requires a "B" or better grade for ACTA Certification.
4. Course work (as follows): PED 210, 309, 320, 322, 425, 489F, PSY 345, 370. HSC 210 or 411 or 427, PED 321 or 387 or 388, PED 405 or 499, PED 485, 588, 589.

Psychomotor Therapy Certificate

This program is designed to assist the student in acquiring a foundation of knowledge and skills in sensory-motor performance. Students will achieve proficiency in the organization and conduct programs for children with special movement problems.

Requirements for the Psychomotor Therapy Certificate: (30 units as follows):

P ED 303, 315, 316, 320, 415, 417, 489A or 489F; two courses selected from ED P 461, PSY 361, REC 485, 491.

Master of Arts in Physical Education (code 5-1201)

The Department of Physical Education offers graduate study leading to the master of arts degree in physical education. Through curricular flexibility the student may pursue individualized goals of either comprehensive study or specialization within the scope of the profession. All candidates are required to complete a core of courses which includes a thesis or oral and written comprehensives. Detailed information about the general curriculum option and the specialization option is contained in the Handbook for the Master of Arts Degree in Physical Education, available upon request from the department office.

Each applicant should request a copy of the official transcript of all college course work be sent to the graduate advisor of physical education in addition to the copies required by the Office of Admissions and Records.

Prerequisites

1. A bachelor's degree from an accredited institution with a major in physical education, or:
2. A bachelor's degree with a minimum of 24 units of upper-division courses in physical education composed of prerequisite courses needed for tentative degree plan and remaining courses to be selected by the student in conjunction with the student's major advisor and approved by the Physical Education Graduate Advisory Council. All deficiencies must be removed prior to advancement to candidacy.
3. An overall undergraduate grade point average of 2.50 or better and an upper division physical education major grade point average of 2.75 or better.

Advancement to Candidacy

1. Refer to the general University requirements for advancement to candidacy.
2. Successful completion of the CSULB Writing Proficiency Examination. Information is available in the Testing Office (SS/A-216).
3. A graduate program, must have the approval of the candidate's advisor, department graduate advisor and the Associate Dean of Graduate Studies, Research, and Faculty Affairs, School of Applied Arts and Sciences.

Requirements for the Master of Arts Degree

1. A minimum of 30 units with at least 24 units of 500 and/or 600 series courses in physical education, including P ED 590, 696, a thesis P ED 698, and an oral examination over the thesis, or
2. A minimum of 36 units with at least 30 units of 500 and/or 600 series courses in physical education, including P ED 590, 695, 696 and an oral and written comprehensive examination.
3. With either option a maximum of six units may be elected outside the major. Specified upper division courses taken after the bachelor's degree may be counted.

Courses (P ED):

Activity Courses

100-199. Physical Education Activity (1) F,S Faculty

Broad range of physical education activities is offered. These activities are designed to provide an opportunity for students to meet their health, physical and recreational needs and interests. Maximum of eight units may be applied toward the University graduation requirement. Students enrolling in physical education assume the responsibility for satisfactory health status appropriate for class activity. Physical Education activity courses may be offered at the beginning (I), intermediate (II), and advanced (III) levels. All classes are coeducational, and any student may enroll in the activity courses offered by the Physical Education Department. Classes offered within areas are as follows:

Individual/Dual Activities (1)

100. Archery
102. Badminton
104. Bowling
105. Dry Land Skiing
108. Golf
109. Handball
110. Horsemanship
112. Racketball
114. Tennis
145. Gymnastics
150. Rhythmical Gymnastics
152. Yoga

Combative Activities (1)

106. Fencing-Foil
107. Fencing-Sabre
147. Judo
148. Karate
149. Self Defense

Wilderness Studies (1)

118. Wilderness Survival
131. Canoeing
153. Orienteering

Aquatics (1)

121. Sailing
122. Scuba
124. Surfing
125. Swimming
126. Swimming Conditioning
127. Synchronized Swimming
128. Water Polo
132. Springboard Diving
133A. Windsurfing

Fitness Activities (1)

140. Aerobic Dance
141. Bicycling
144. Fitness Conditioning
146. Jogging
151. Weight Training and Conditioning
154. Physical Fitness
156. Jazzaerobics
157. Fitness for Living (3) [E.]
158. Senior Citizen Fitness
159. Aerobic Fitness

Team Activities (1)

161. Basketball
162. Beach Volleyball
164. Field Hockey
165. Flag Football
166. Rugby
167. Soccer
168. Slow Pitch
169. Softball
170. Team Handball
171. Track and Field
172. Volleyball

Recreational Dance (1)

181. Folk Dance
182. Recreational Classical Movement
183. Recreational Dance Workshop
184. Recreational Freestyle Movement
185. Social Dance
186. Square Dance

Special Studies (1-3)

191. Why Exercise?
197. Special Topics
198. Special Activities
199. Special Studies

* See Physical Education professional courses for additional activities open to non-majors.

Physical Education Professional Courses

Physical education majors and minors will be given priority enrollment in classes required for the major. Selected courses are available to the general student body to receive credit toward general education requirements.

Lower Division

210. Advanced Emergency Care (3) F,S Bartlett, Griffith, Redmon, Wurzer [E.]

Theory and practice of first aid for the injured. Successful completion of course requirements leads to the American National Red Cross "Standard" first aid and personal safety and CPR certificate.

215. Career Perspectives in Human Movement (1) F,S Bartlett, Edmondson, Rose, Souter

An overview of human movement including professional preparation and employment opportunities. Orientation to current programs and proficiency requirements. Students entering the physical education major are required to enroll in this course their first semester of study.

230. Sports Appreciation (3) F,S Costa, Edmondson, Grimmett, D. Toohey [E.]

Introduction to the study of sport as a social institution in American society.

240. Advanced Lifesaving and Water Safety Instructor (2) F,S Morgan, Wurzer

Prerequisite: P ED 125. Instruction and techniques in advanced lifesaving and water safety. Student may qualify for the American National Red Cross Water Safety Instructor Certificate and/or Advanced Lifesaving Certification.

241. Spelunking (2) F,S Faculty

Prerequisites: none. Introduction to the equipment, skills, techniques and judgment for safe caving. Course includes field trip.

242. Backpacking (2) F,S Faculty

An experiential examination and analysis in the judgment, knowledge, equipment and skills necessary to safe wilderness travel and living. (2-3 day field experience required)

243A. Winter Mountain Environment (3) F Miller

Introduction to winter mountaineering skills; study of the mountain environment. An experiential field class.

243B. Spring/Summer Mountain Environment (3) S Faculty

Prerequisites: none. Instruction and extended experience developing the attitudes, judgment, knowledge and skills for safe mountain travel and living. Trip planning, logistics, navigation, mountain medicine, mountaineering techniques, safe and ecological camping will be learned and practiced while on a ten-day expedition. Throughout the wilderness expedition group process, leadership, problem solving and judgment all provide growth and experiential education opportunities that develop the successful wilderness traveler.

243C. Desert Environment (3) F,S Faculty

Prerequisites: none. Introduction to the skills, attitudes and knowledge required for safe use and enjoyment of desert areas. An interdisciplinary introduction to the meaning and significance of the desert. Trip planning, map use, methods of safe travel. Course includes field trip.

244. Kayaking (2) F,S Faculty

An experiential examination and analysis of the judgment, knowledge, equipment and skill development necessary to safe flat and whitewater kayaking. (2-3 day field experience required).

245. Wilderness Water Environment (3) Miller

Introduction to the skills, attitudes and knowledge required for safe use of varied types of wilderness waters. The skills and techniques of boat handling and trip planning. An interdisciplinary introduction to the study of waterways. Course includes field trip.

246A. Mountaineering (2) F,S Faculty

An experiential examination and analysis in the judgment, knowledge, equipment and skills necessary to safe mountaineering (2-3 day field experience required)

246B. Winter Mountaineering (2) S Faculty

Prerequisites: none. Introduction to the equipment, skills, techniques and judgment for winter wilderness travel and living involving snow. Course includes a field trip.

246C. Advanced Mountaineering (2) S Faculty

Prerequisite: PED 246A or 246B or consent of instructor. Mountaineering skills with advanced techniques and skills for solving the problems of mountain travel and living on rock, snow, and ice. Special topics of ice axe, crampons, techniques, mountaineering skiing, advanced river crossing, snow shelters, and route finding will be selected based upon skill needs of the students. Course includes a field trip.

247A. Techniques of Rockclimbing (2) F,S Faculty

Prerequisites: none. Introduction to the basic skills, judgment and safety for technical rockclimbing. The skills and techniques of top roping, belaying rappels and self rescue. Course includes a field trip.

247B. Advanced Rockclimbing (2) F,S Faculty

Prerequisite: PED 247A or consent of instructor. Advanced rockclimbing techniques including rope teams, lead climbing, advanced climbing and placement of protection and aid climbing. Course includes a field trip. 248A. Techniques of Cross Country Skiing (2) F,S Faculty Prerequisites: none. Introduction to the skills, judgment, understanding and knowledge required for cross country skiing including flat and downhill. Course includes a field trip.

248B. Advanced Cross Country Skiing (2) F,S Faculty

Prerequisite: PED 248A or consent of instructor. Emphasis on Nordic downhill techniques involving instruction and practice on stem/step, parallel and telemark turns. The course is taught primarily on snow during scheduled day ski sessions.

249. Techniques of Wrestling (2) F,S Souter

Instruction and practice in takedown, breakdowns and controls, pinholds, escapes, reversals, blocks and counters.

250. Techniques of Basketball (1) F,S Faculty

(Open to Physical Education majors and minors only.) Instruction in individual and team skills and techniques utilized in the sport of basketball for successful performance.

253. Techniques of Soccer (1) F,S Husak, D. Toohey

(Open to Physical Education majors and minors only.) Instruction in individual and team skills and techniques utilized in the sport of soccer for successful performance.

255. Techniques of Softball (1) F,S Gonsalves, Wuesthoff

(Open to Physical Education majors and minors only.) Instruction and practice in catching, throwing, hitting, sliding, base running, and bunting. Comprehensive teaching of skills and techniques in softball.

257. Techniques of Volleyball (1) F,S Grimmett, Sandefur

(Open to Physical Education majors and minors only.) Instruction in individual and team techniques utilized in the sport of volleyball.

260. Fundamental Rhythms (2) F,S,SS Griffith

Prerequisites: None. Instruction and practice in fundamental rhythms involving folk and social dance forms. Designed for physical education majors and minors, but open to all students. [Laboratory] Grading: Student Option.

263. Techniques of Physical Fitness (2) F,S Souter

Instruction, practice and evaluation in physical fitness. Calisthenics, static and dynamic flexibility exercises, weight training, fitness trail, running, and other aerobic activities, including exercises to music and relaxation training, will be part of the training program. (Laboratory, including off campus long distance runs and other aerobic activities.)

264. Techniques of Golf (1) F,S Clifton, Wurzer

(Open to Physical Education majors and minors only.) Instruction and techniques in individual skills and strategies for successful performance in golf.

265. Techniques of Gymnastics (2) Faculty

(Open to Physical Education majors and minors only.) Instruction, techniques and evaluation in gymnastic skills and events which constitute the competitive programs for men and women.

266. Techniques of Badminton (1) F,S Franklin, Miller

(Open to Physical Education majors and minors only.) Instruction and techniques in the skills and strategies for successful performance in badminton.

267. Techniques of Tennis (1) F,S Campbell, Deatherage, Grimmett

(Open to Physical Education majors and minors only.) Instruction, techniques and analysis in the concepts of teaching, coaching, and playing tennis.

276. Fundamental Game Skills (2) S Faculty

Analysis and practice of the teaching of fundamental game skills to the elementary school child. (Lecture, activity.)

280. Fundamentals of Creative Movement (2) F,S Griffith

Instruction and practice in fundamental knowledge and skill basic to successful developmental experience in creative movement (modern dance). Includes musical terminology, notation, and elemental music forms with specific reference to modern dance. Also includes a brief history of modern dance in education.

Upper Division

300. Kinesiology (3) F,S Lindsey, Lyon

Prerequisites: A/P 202, satisfactory completion of a proficiency exam covering anatomy administered within the first two weeks of this course. Anatomical structure and function, and mechanical principles relating to human motion, including analytical application. (Lecture, laboratory.)

301. Exercise Physiology (3) F,S Mastropaolo

Prerequisite: A/P 207. Basic concepts of immediate and long term physiological responses of the body to the exercise demands experienced in physical education, athletic and physical fitness programs. (Lecture, laboratory.)

303. Scientific Foundations (4) F Lyon, Mastropaolo

Basic information involving human anatomy, kinesiology, physiology, motor learning as related to physical activities. Not open to physical education majors.

305. Introduction to Community Physical Fitness (2) F Souter

Introduction to community physical fitness, leadership, management and skill proficiency. (Lecture, laboratory.)

307. Prevention and Care of Athletic Injuries (3) F,S Arnheim

Prerequisites: PED 210 or equivalent. Principles and techniques of the prevention and care of common athletic injuries. (Lecture, laboratory.)

308. Advanced Athletic Training (2) S Arnheim

Prerequisites: P ED 300, 307; A/P 202. Study of advanced training techniques, methods and skills required for the evaluation and therapeutic treatment of athletic injuries. (Lecture, laboratory.)

309. Developmental and Therapeutic Exercise (3) F Lindsey

Prerequisites: P ED 300, 301 or consent of instructor. Principles, techniques, and prescription of exercises for development or rehabilitation of the body. (Lecture, laboratory.)

310. Therapeutic Approaches in Athletic Training (3) S Faculty

Prerequisites: PED 308, 309, and permission of instructor. Theory and application of therapeutic modalities and exercise rehabilitation commonly used in athletic training programs. Designed for physical education majors in athletic training. [Lecture - Laboratory]

312. Motor Learning (3) F,S Clifton, Husak

Prerequisites: A/P 202, 207; PSY 100. Principles of motor learning in the acquisition of motor skills. (Lecture, laboratory.)

315. Motor Development (3) F,S Clifton

Prerequisite or corequisite: P ED 215. Developmental perspective of the factors which contribute to the acquisition of motor control from the period of infancy through adolescence. (Lecture, laboratory.)

320. Adapted Physical Education (2) F,S Arnheim, Lasko, Lindsey, Souter

Prerequisites: A/P 202. Investigation of the adapted physical education field, as well as mainstreamed environments, with primary emphasis on the characteristics of individuals with exceptional needs. (Lecture, laboratory.)

321. Teaching Aquatic Activities to the Disabled (2) F,S

Prerequisite: P ED 320. Theory of teaching adaptations of selected aquatic activities for disabled individuals. (Lecture, activity.)

322. Physical and Motor Assessment (3) Clifton, Lasko

Prerequisites: P ED 315, 320. Background in basic statistics or P ED 483 strongly recommended. The selection, administration, and interpretation of tests used in the physical and motor assessment of individuals with exceptional needs. (Lecture, laboratory.)

332. Sociocultural Dimensions of Sport and Human Movement (3) F,S Costa, Edmondson, Grimmet, D.Toohey

Sociological and psychological correlations to human movement.

335. Historical and Cultural Foundations of Sport in America (3) F,S Costa, Miller, Rose

Survey of the history of sport. Historical identification of the cultural trends and functions of sport and physical education in America.

336. The Olympic Movement (3) S Rose, Costa

Survey of the Olympic movement. Identification of its trends and functions as a social force throughout the world.

338 IC. Women in Sport (3) S Edmondson, Grimmett, Miller, Costa [E.]

Survey of women's historical and contemporary involvement with sport. The social, cultural and developmental implications of sports participation for women.

340. Sport and Politics (3)

Prerequisite: Upper division standing. Analysis of the interrelationship between sports and politics. The use of sports as a political tool and the influences of politics on the international sports scene.

342. Sport: An International Perspective (3) F,S Costa, Edmondson, Miller, Toohey

Prerequisite: Upper division standing. An investigation of the historical, cultural and sociological dimensions of sport in selected contemporary international societies. Sport as expression of culture and national character. International sporting events. Course will include a sports activity component.

344. Sport Behavior Analysis (3) F,S,SS Faculty

Prerequisites: None. Application of behavioral psychology to sport with particular emphasis on increasing, decreasing, maintaining or learning sport skill. A secondary course focus emphasizes increasing the participant's understanding of behavioral psychology as it relates to sport performance for the beginner through professional athlete. [Lecture] Grading: Student Option.

346. Wilderness Emergency Care (3) F Faculty

Prerequisites: One wilderness studies activity course or equivalent, P ED 210. Techniques concerned with wilderness emergencies, including advanced first aid, cardiopulmonary resuscitation, search and rescue and emergency evacuation methods. (Lecture, laboratory.)

348. Adventure Dynamics (2) F,S Faculty

Prerequisites: none. Dynamics of adventure programming for school, recreation and outdoor programs. Includes the use of high and low ropes course events, initiative games, and adventure courses. (Lecture, laboratory)

350. Applied Theory of Basketball (2) F,S Grimmett, Sandefur

Prerequisite: P ED 250 or equivalent. Comprehensive analysis of the principles of movement, the motor skills and the strategy concepts used in basketball. (Lecture, activity.)

352. Applied Theory of Field Hockey (2) F Miller

Prerequisite: P ED 164 or equivalent. Comprehensive analysis of the principles of movement and the motor skills used in field hockey. Includes teaching strategies. (Lecture, activity.)

353. Applied Theory of Soccer (2) F D. Toohey

Prerequisite: P ED 253 or equivalent. Comprehensive analysis of the principles of movement and the motor skills used in soccer. Includes teaching strategies. (Lecture, activity.)

355. Applied Theory of Softball (2) F,S Gonsalves, Grimmett, Wuesthoff

Prerequisite: P ED 255 or equivalent. Comprehensive analysis of the principles of movement, the motor skills and the strategy concepts used in softball. (Lecture, activity.)

356. Applied Theory of Volleyball (2) F,S Grimmett, Sandefur

Prerequisite: P ED 257 or equivalent. Comprehensive analysis of the principles of movement, the motor skills and the strategy concepts used in volleyball. (Lecture, activity.)

358. Applied Theory of Aquatics (2) F,S Edmondson, Morgan

Prerequisite: P ED 125 or 240 or equivalent. Comprehensive analysis of the principles of movement and the motor skills used in aquatics. Includes teaching techniques and class management. (Lecture, activity.)

360. Applied Theory of Recreational Dance Forms (2) F,S Griffith

Prerequisites: Physical Education 181, and 185, or pass the proficiency exams for social, folk and square dance. Comprehensive analysis of the theory and practice of social, folk and square dance. Includes skills analysis, organization, leadership and evaluation of recreational dance forms. (Lecture, activity.)

361. Applied Theory of Creative Movement in Physical Education (2) F,S Griffith

Prerequisite: P ED 280 or equivalent. Comprehensive analysis of the principles of creative movement for physical education majors and minors who will be teaching in the public schools.

362. Applied Theory of Self Defense and Combat (2) F,S Edmondson, Leach

Prerequisite: P ED 149. Application of the theory and techniques of self defense and combative movement forms. Content focuses on analysis, teaching techniques and strategies. (Lecture, laboratory.)

363. Applied Theory of Fitness and Conditioning (2) F,S Souter

Prerequisite: P ED 283. Analysis, practice and assessment in physical fitness and conditioning. Methods, techniques, safety factors, equipment, ergogenic aids, and sex differences are considered in teaching physical fitness and conditioning. Instruction to include off campus running, swimming, cycling, skating, strength, and general fitness activities. (Lecture, activity.)

364. Applied Theory of Wrestling (2) F,S Souter

Prerequisite: P ED 249 or equivalent. A scientific approach to the theoretical and practical application of teaching wrestling. (Lecture, activity.)

365. Applied Theory of Gymnastics (2) F,S Bartlett

Prerequisite: P ED 265 or equivalent. Comprehensive analysis of the principles of movement and motor skills used in men,s and women's gymnastics with the emphasis on methodology and teaching techniques. (Lecture, activity.)

366. Applied Theory of Racket Sports (2) F,S Campbell, Deatherage, Grimmett

Prerequisite: P ED 267 or equivalent. Comprehensive analysis of the concepts which deal with teaching and playing tennis, badminton and racquetball. (Lecture, activity.)

369. Applied Theory of Track and Field/Cross Country (2) F,S

Prerequisite: P ED 171 or equivalent. Comprehensive analysis of the principles of movement and motor skills used in track and field and cross country. Includes teaching techniques and strategies. (Lecture, activity.)

370. Movement Theory and Practice of Elementary Physical Education (3) F,S,SS Faculty

Prerequisites: None. A creative and movement oriented analysis of the components of basic movement with application to games, gymnastics, dance, aquatics, and developmental skills commonly experienced and/or taught in elementary school physical education programs. Principles, aims, and objectives of elementary physical education. Observation and practice in the teaching techniques used in elementary physical education. Designed for Physical Education majors. [Lecture - Activity] Grading: Student Option.

375. Applied Movement Skills for Elementary School Children (2) F Faculty

Prerequisite: P ED 275. Analysis and teaching of advanced movement concepts to elementary school children. (Lecture, laboratory.)

376. Dance for Children (2) F Griffith

Prerequisite: Proficiency in basic dance steps. Exploration of movement and accompaniment in the learning and creativity of dance as it relates to the elementary school child.

380. Principles, Organization and Management of Secondary School Physical Education (3) Deatherage, Miller, Morgan, Sandefur, Wurzer

Prerequisites: EDSS 300P. Principles, organization and management of activities taught in secondary schools, includes teaching strategies. [Lecture - Laboratory]

387. Physical Activities for the Exceptional Student (3) F Lasko, Souter

Prerequisites: P ED 322. Corequisite: P ED 489A. Adaptation of physical activities, equipment, and facilities for individuals with exceptional needs. (Lecture, laboratory.)

388. Program Planning and Instruction in Adapted Physical Education (3) F Lasko

Prerequisites: P ED 387. Corequisite: P ED 489A. Emphasis on program planning and the development of teaching skills in adapted physical education.

405. Cardiopulmonary Aspects of Health-Related Exercise Programs (4) Davis

Prerequisites: P ED 210 or current First Aid and CPR Certificates, P ED 301, 305. Application of advanced exercise science concepts in the design and execution of cardiopulmonary exercise training programs for apparently healthy adults. Traditional grading only. (Lecture, laboratory.)

407. Management Theory of Athletic Injuries (3) S Arnheim

Prerequisites or corequisites: P ED 300, 307, 308, A/P 202. Theory and management of specific injuries in physical education and athletics, including recognition, treatment and identification of the trends in injury management.

415. Perceptual Factors in Motor Development (3) F Clifton

Prerequisites: P ED 215, 315. Study of selected factors which influence the perceptual motor development and function of the individual. (Lecture, laboratory.)

416. Influences on Motor Development (3) S Clifton

Prerequisites: P ED 215, 315. Study of the factors which influence motor development of the typical and atypical individual.

417. Developmental Motor Programs (3) S Clifton

Prerequisites: P ED 315, 322, 415. Emphasis on perceptual-motor principles in developing physical activity sequential tasks and programs which stimulate and enhance the motor behavior of infants and children. (Lecture, laboratory.)

425. Gerokinesiatrics (3) F Lindsey

Prerequisites: A/P 202, 207 and GERN 400; or consent of The rationale, organization and conduct of exercise programs for the older adult. (Lecture, laboratory.)

437. Sport and Culture (3) S Costa, Edmondson

A survey of the means by which individuals express themselves in terms of sport.

439. Philosophical Issues in Human Movement (3) F,S Costa

Prerequisite: P ED 215. Survey of philosophies of leading theorists as they relate to human performance.

447. Wilderness Studies: Principles and Methods (3) F,S Miller

Prerequisite: Completion of a minimum of six units of wilderness studies course work. An investigation of the philosophies, principles and program methods underlying the conduct of wilderness adventure programs.

448. Wilderness Studies: Leadership Practicum (3) S Miller

Prerequisites or corequisites: P ED 346, 447. Analysis and practice of the leadership and teaching techniques appropriate to the conduct of wilderness adventure programs.

450. Theory of Coaching Basketball (1) F,S Grimmett,

Prerequisites: P ED 250, 350. Theories of coaching, principles and organization of interscholastic basketball. (Activity.)

451. Theory of Coaching Baseball (2) F,S Gonsalves, Wuesthoff

Theories of coaching, principles and organization of interscholastic baseball. (Lecture, activity.)

452. Theory of Coaching Field Hockey (1) S Faculty

Prerequisites: P ED 164, 352. Theory and practice, of tactics, strategies and coaching techniques for field hockey. (Activity.)

453. Theory of Coaching Football (2) S Morgan

Prerequisites: Junior or senior status, consent of instructor. Theories of coaching, principles and organization of interscholastic and intercollegiate football. (Lecture, activity.)

454. Theory of Coaching Soccer (1) S D.Toohey

Prerequisites: P ED 253, 353. Theory and practice, development of tactics, strategies and coaching techniques for soccer. (Activity.)

455. Theory of Coaching Softball (1) S Wuesthoff

Prerequisites: P ED 255, 355. Theory and practice, development of tactics, strategies and coaching techniques for softball. (Activity.)

456. Theory of Coaching Volleyball (1) F Grimmett, Sandefur

Prerequisites: P ED 257, 356. Theory and practice, development of tactics, strategies and coaching techniques for volleyball. (Activity.)

458. Theory of Coaching Aquatics (1) F,S Faculty

Prerequisites: P ED 125 or 240, 358. Theoretical and practical application of coaching techniques in swimming and water polo.(Activity.)

464. Theory of Coaching Wrestling (1) F Souter

Prerequisites: P ED 249, 364. Theory and techniques of coaching wrestling in relation to current educational philosophy and intercollegiate rules. (Activity.)

465. Theory of Coaching Gymnastics (1) F,S Bartlett

Prerequisites: P ED 265, 365. Theoretical and practical application of coaching techniques in gymnastics. (Activity.)

466. Theory of Coaching Tennis (1) S Campbell

Prerequisites: P ED 267, 366. Theory and practical development of tactics, strategies and coaching techniques for tennis. (Activity.)

467. Theory or Coaching Cross Country (1) F Faculty

Prerequisites: P ED 171, 369. Theories of coaching, principles and organization of interscholastic cross country. (Activity.)

468. Theory or Coaching Running Events (1) F Faculty

Prerequisite: P ED 369. Theory and practice, development of tactics, strategies and coaching techniques for running events. (Activity.)

469. Theory of Coaching Field Events (1) S Faculty

Prerequisites: P ED 171 or equivalent. Coaching theories and principles and organization of interscholastic competition in field events. (Activity.)

475./575. Psychology of Coaching (3) F,S Faculty

Current topics of psychological concern and application as related to athletic performance.

476. Physical Education for Elementary Teachers (3) F,S Faculty

Instruction and practice in teaching physical education to children. Emphasis is placed upon teaching techniques, progression, and physical fitness. Students will be trained in the administration of the California Physical and Health Related Fitness Test. (Lecture, laboratory)

483. Measurement and Evaluation in Physical Education (3) F,S Deatherage, Franklin, Sinclair

Prerequisite: Senior standing. Principles and techniques of construction, organization, administration, interpretation and evaluation of measuring devices used in physical education.

485. Neurological and Pathological Foundations for Corrective Therapy (3) F Faculty

Prerequisites: A/P 202, 207, PED 300, 301, 320 489F or permission of instructor. A survey of neurological control of normal movement and the implications of various medical pathologies for rehabilitation. Emphasis on inflammatory processes, metabolic and vascular disturbances, traumatic injuries, nutritional deficiencies, neoplasms, degenerative conditions and congential disorders as related to the practice of Corrective Therapy. Traditional grading only. [Lecture]

489. Field Work in Physical Activity Settings (1-3) F,S Faculty

Prerequisites: Completion of physical education course requirements for the major track in which field work is taken. Supervised practice in working with individuals or small to large groups in public or private agencies and Schools. CR/NC only. May be repeated to a maximum of nine units of credit.
A. Fieldwork in Adapted Physical Education
B. Fieldwork in Athletic Coaching
C. Fieldwork in Athletic Training
D. Fieldwork in Community Fitness
F. Fieldwork in Corrective Therapy
G. Fieldwork in Motor Development
H. Fieldwork in Gerontology

497. Independent Study (1-3) F,S Clifton

Prerequisites: Major or minor in physical education, senior status and consent of instructor. Student will conduct independent library or laboratory research under the supervision of a faculty member and write a report of the investigation. May be repeated for a maximum of six units. Grading: Traditional only.

499. Special Studies (1) F,S Faculty

Group investigation of topics of current interest in physical education or athletics. Topics to be announced in the Schedule of Classes. May be repeated for a maximum of six units of credit with change of topic.

Graduate Division

521. Administration and Supervision of Physical Education (3) Offered every third semester beginning Spring, 1985 Deatherage, Fornia, Morgan, Sinclair

Prerequisite: EDSS 450P or 450W or equivalent, or teaching experience (including student teaching). Administration and supervision in physical education, including philosophies, principles and practices at the school, city, county and state level.

524. Analysis of Teaching in Physical Education (3) Offered every third semester beginning Spring, 1986 Wurzer

Analysis of teachers and teaching in physical activity environment: focus on developing observational competencies, analysis of research completed and future research designs.

525. Instructional Design in Physical Education (3) Offered every third semester beginning Spring 1985 Wurzer

Prerequisites: Undergraduate major in physical education, IM 300. A systems approach to designing instruction for the physical education program.

526. Applied Behavior Analysis in Physical Education (3) F 1988 Wurzer

Prerequisites: None. Application of applied behavior analysis principles to physical education (sport) with particular emphasis on single subject research designs and behavior analysis in the physical education setting.

535. Exercise Science: Tests and Training (3) Offered every third semester beginning Spring, 1985 Mastropaolo

Prerequisites: P ED 300, 301, 551. Scientific aspects of exercise tests and training over an exercise spectrum from anaerobic to aerobic metabolism.

537. Physical Education for Special Populations (3) Offered every third semester beginning Spring, 1985 Faculty

Foundations in the organization and conduct of Adapted Physical Education.

538. Motor Dysfunction and the Exceptional Person (3) Offered every third semester beginning Spring, 1986 Arnheim

Prerequisite: A basic undergraduate course in Adapted Physical Education or its equivalent. Recognition, analysis, assessment and remediation of movement problems in a child with minor nervous system dysfunctions.

540. Biomechanical Factors in Human Movement (3) Offered every third semester beginning Spring, 1985 Lyon

Prerequisite: P ED 300 or equivalent. Study of static and dynamic principles of mechanics influencing human motion in sport, dance and rehabilitative programs, including techniques for age-related qualitative and quantitative analysis.

546. Developmental Aspects of Motor Behavior (3) Offered every third semester beginning Spring, 1986 Clifton

Prerequisite: P ED 315 or equivalent. The study of major factors which contribute to the development of motor skillfulness from birth to maturity.

550. Human Performance Instrumentation (3) F 1988 Mastropaolo

Prerequisites: PED 300,301. Fundamentals of instruments used in advanced studies of exercise physiology, kinesiology, and biomechanics.

551. Advanced Exercise Physiology (3) S 1988

Prerequisites: PED 300,301. Advanced concepts of exercise physiology. [Seminar]

560. Health Related Problems in Sport (3) F 1988 Arnheim

Prerequisites: PED 301 and 307 or their equivalents and A/P 202 and 207 or their equivalents. Examination of health problems related to engaging in vigorous physical activity. Traditional grading only. [Seminar]

561. Musculoskeletal Injuries in Sport (3) S 1988 Arnheim

Prerequisites: PED 300 and 307 or their equivalents and A/P 202 or its equivalent. An indepth study of the most prevalent musculoskeletal injuries occurring in sports activities, including mechanisms, tissue responses, and management procedures. Traditional grading only. [Seminar]

562. Advanced Strength and Conditioning (3) F 1988 Garhammer

Prerequisites: PED 300, 301. Study of biomechanical and kinesiological factors which are important in understanding the function and proper techniques for execution of a wide variety of standard and advanced weight training exercises. Physiological bases for strength training and adaptations caused by different training regimes are emphasized. Traditional grading only. [Seminar]

573. History of Sport in the U.S.A. (3) Offered every third semester beginning Spring, 1986 Miller, Costa

Prerequisite: P ED 335 or equivalent. An analysis of the history of American sport as it reflects the dominant themes in American society.

574. Contemporary International Sport (3) Offered every third semester beginning Fall, 1985 Miller, D.Toohey

Investigation of contemporary international sport in various world cultures.

575./475. Psychology of Coaching (3) F,S Faculty

Current topics of psychological concern and application as related to athletic performance.

577. Sport in U.S. Culture (3) Offered every third semester beginning Spring, 1986 D. Toohey

Prerequisite: P ED 332 or equivalent. Analysis of physical activities in U.S. culture. Consideration of the relationships between sports and games and the factors of status, values, environment and cultural change.

588. Clinical Basis of Corrective Therapy (3) S Lindsey

Prerequisites: Completion of Bachelor's degree in physical education, physical therapy, exercise physiology, or kinesiotherapy and admission to Corrective Therapy Certificate Program and successful completion of a course(s) in pathological and neurological foundations of rehabilitation or approval of the Corrective Therapy Coordinator. The theoretical foundations of clinical practice in Corrective Therapy. Traditional grading only.

588L. Corrective Therapy Clinical Training I Laboratory (6) F,S Lindsey

Corequisite: P ED 588. Instruction and observation in the Long Beach Veterans' Hospital.

589. Corrective Therapy Clinical Training II (3) F,S Lindsey

Prerequisite: Satisfactory completion of P ED 588. The theory and practice of corrective therapy techniques in the hospital setting. 500 hours of instruction and observation at the Long Beach Veterans' Hospital. (Lecture, laboratory.)

589L. Corrective Therapy Clinical Training II Laboratory (3) F,S Lindsey

Corequisite: P ED 589. Instruction and observation in the Long Beach Veterans' Hospital.

590. Statistical Analysis and Measurement in Physical Education (3) F Deatherage, Sinclair

Prerequisites: EDSE 421, EDSS 450 P or 450 W, P ED 483 or equivalent. Consideration of the logic and application of statistical inference, sampling theory, correlation, analysis of variance and design of statistical studies. Critical analysis of selected research publications. Required of all master's degree candidates. To be completed within first 12 units of 500-600 series courses.

592. Sports Management Internship (3 or 6) F,S Grimmett

Prerequisites: Bachelor degree with a major or minor in Physical Education or an approved related major; PED 521 or PED 685; approval of Intern Coordinator. A minimum of 40 hours per week for 16 weeks (6 units) or 20 hours per week for 16 weeks (3 units) of supervised work experience in an approved sport management/administrative setting, jointly supervised by a University Faculty member and a supervisor from the assigned organization. May be in a paid or volunteer capacity. Note: 6 units in one semester may not be taken if student is full-time employed. May be repeated for a maximum of 6 units. Grading: Traditional only.

593. Coaching Internship (3 or 6) F,S Faculty

Prerequisites: Bachelor degree with a major or minor in Physical Education or an approved related major; advancement to candidacy and approval of Intern Coordinator. A minimum of 40 hours per week for 16 weeks (6 units) or 20 hours per week for 16 weeks (3 units) of supervised work experience in an approved coaching setting, jointly supervised by a University Faculty member and a supervisor from the assigned organization. May be in a paid or volunteer capacity. Note: 6 units in one semester may not be taken if student is full-time employed. May be repeated for a maximum of 6 units. Traditional grading only.

594. Exercise Science Internship (2-3) F,S Faculty

Prerequisites: PED 550 and 551 (PED 405 recommended but not required). Practical experience in applying exercise science concepts in a fieldwork setting. The experience will consist of conducting the exercise testing and monitoring or leading the exercise training of selected subject populations such as patients undergoing cardiac rehabilitation, asymptomatic adults and athletes. Traditional grading only.

597. Independent Research (1-3) F,S,SS Faculty

Prerequisites: Consent of physical education faculty member and graduate advisor. Independent research under the guidance of a faculty member. Varied learning activities utilized to achieve competency related to Physical Education not offered in regular classes. Written report required. Traditional grading only. [Independent Study]

630. Seminar in Motor Learning (3) Offered every third semester beginning Fall, 1985 Husak

Prerequisites: P ED 312, 590 and 696 (may be taken concurrently). Identification and analysis of principles and concepts applicable to motor learning in physical education.

633. Seminar in Sport Psychology (3) S 1988 Faculty

Prerequisites: P ED 332 or equivalent and PSY 100; teaching or coaching experience (including student teaching). Study of psychological theories and concepts and their relationship to human behavior in sport. Sport viewed in the context of the participant, the teacher/coach, the spectator and the entrepreneur.

638. Seminar in Trends in Adapted Physical Education (3) F 1988 Arnheim, Sinclair

Prerequisite: P ED 537 or 538, or equivalent. An examination and analysis of the current trends in Adapted Physical Education.

671. Seminar in Current Trends and Issues in Sport and Physical Education (3) F 1987 Fornia

Current trends, issues and research in physical education and sport.

674. Seminar in Philosophical Concepts of Sport and Physical Education (3) Offered every third semester beginning Fall, 1985 Fornia, Costa

In depth, critical analysis of philosophical movements affecting physical education with emphasis on practical application and future implications.

675. Seminar in Human Movement Theory (3) Offered every third semester beginning Spring, 1985 Costa

Examination of the writings of the major human movement theorists including the aesthetic nature and significance of the human movement experience.

685. Seminar in Athletics (3) Offered every third semester beginning Fall, 1985 Grimmett, Morgan

Experience in the field. Special problems related to the administration of an athletic program including current issues and practices and supervised research in selected areas.

695. Seminar In Professional Literature (3) S Deatherage, Fornia

Prerequisites: P ED 590, 696. Critical analysis and synthesis by comparative review of professional literature in physical education. Required of all candidates not electing thesis option.

696. Research Methods (3) S Clifton, Sinclair

Prerequisites: P ED 590, undergraduate major in physical education or related field. Methodological approaches to contemporary problems in physical education; research design and reporting; bibliography. Required of all master's degree candidates. To be completed within the first 12 units of 500-600 series courses.

697. Directed Studies (1-3) F,S Deatherage

Prerequisites: P ED 590, 696, advancement to candidacy. Research in an area of specialization under the direction of a faculty member.

698. Thesis (1-4) F,S Deatherage

Prerequisites: P ED 590, 696, advancement to candidacy. Planning, preparation and completion of an approved thesis.

699. Seminar in Selected Topics (3) F,S Faculty

Prerequisites: Teaching experience and graduate standing. Intensive study of salient problems of current professional importance to experienced physical educators. May be repeated (with selection of a second topic) for a maximum of six units. Topics to be announced in the Schedule of Classes.

Physical Therapy

School of Applied Arts and Sciences

Department Chair: Ray J. Morris
Department Office: Industrial Technology Building, Room 130
Telephone: 498-4072
Faculty: Professors: David D. Williams; Associate Professors: Charles L. Carter, Kay Cerny, Ray J. Morris, A. Jerome Nielsen
Emeritus Faculty: Frank J. Bok
Department Secretary: Lois M. Magette

Students desiring information should contact the department office for referral to one of the faculty advisors.

The physical therapy curriculum is a competency based program designed to prepare entry-level practitioners who will become an integral part of the medical rehabilitation team as a professional health care provider. Appropriate science, professional, medical and clinical experiences are provided. Successful completion of the degree requirements leads to a bachelor of science degree in physical therapy and qualifies one to write the State of California examination to practice as a physical therapist. The program is accredited by the American Physical Therapy Association.

In accordance with a professional goal in physical therapy, all physical therapy entry-level education programs will be conducted at the master's level in 1990. The program at CSULB is currently planning for this transition.

The comprehensive curriculum plan includes a sequence of integrated student-oriented learning experiences to enhance attainment of terminal competencies. As a professional health care provider the physical therapist will be able to:

1. Determine the physical therapy needs of any patient referred;
2. Design a physical therapy plan of care;
3. Implement a physical therapy plan of care;
4. Evaluate, interpret and respond to changes in physiological state;
5. Identify and recommend solutions for architectural barriers;
6. Interact with patients and families;
7. Demonstrate safe, ethical, and legal practice;
8. Demonstrate appropriate and effective communication skills;
9. Participate in the design and management of a physical therapy service;
10. Apply basic educational concepts of learning theories;
11. Apply basic principles of the scientific method;
12. Assume responsibility for professional growth;
13. Identify activities between governmental, health and educational institutions;
14. Identify issues and problems in the health care delivery system;
15. Engage in the clinical decision-making process;
16. Design a program of self-learning and professional development.

Requirements for Admission

The pre-physical therapy education requirements are similar to pre-medical and pre-health professional programs. Students must follow a prescribed program which includes general education course work and appropriate physical, biological, and behavioral sciences.

The number of applicants to the physical therapy professional program exceeds the number that can be accepted. For this reason physical therapy applicants are subject to supplemental criteria in addition to those required for admission to the University. Admission is on a competitive basis and is limited to California residents. Applicants with a bachelor's degree should consult the current CSULB catalog for second baccalaureate degree requirements.

Admission to the Professional Program

In addition to meeting the University's academic standards for admission in good standing, the applicant must:

1. Declare physical therapy as a major (if not declared prior to admission).
2. Complete and file a Supplemental Application with the Department.
3. Complete a minimum of 82 semester units (including all general education requirements and prerequisites), (Note: all lower-division General Education courses must be completed prior to the semester in which the application is submitted).
4. Complete Physical Therapy 210 (optional) and Physical Therapy 374 at this campus. (Opportunities to enroll in Physical Therapy 210 and 374 vary according to demand and resources.)
5. Earn a minimum grade of B in all prerequisite courses. (See below.)
6. Submit transcripts of all academic work attempted.
7. Submit a minimum of four letters of recommendation.
8. Be a California resident.
9. Complete the Watson-Glasser test for critical thinking (see Testing Office, SSA 216).
10. Possess CPR Certification.

In determining the eligibility of an applicant for admission to the program, the admission committee will consider:

1. All college/university academic work completed.
2. The grade point average in all prerequisite/science courses. The following sciences and their semester unit values are the CSULB science prerequisites to the professional program: Statistics course (Biostatistics preferred) (3 units) Human Anatomy 202 (3 units) Physics 100A and B (8 units) Human Physiology 207 (3 units) General Psychology 100 (3 units) Introductory Chemistry 200 (4 units) Abnormal Psychology 370 (3 units) Psychology of Disability 374 (3 units-CSULB) Bio organic Chemistry 300 (4 units) Computer Studies 200 (3 units)
3. Related work/volunteer experience (must be documented and not exceed 1000 hours).
4. The state of physical/emotional wellness in order to carry out the typical responsibilities of a therapist.
5. An interview of the applicant (at the discretion of the election committee).
6. Results of a test for critical thinking and problem solving by appointment with the Testing Office (Watson-Glaser Test).
7. Physical Therapy 210(1) (optional)

Critical Dates:

1. February 15: Supplemental physical therapy application and support documents (transcripts, references, etc.) due for Fall admissions.
2. May: Notice of Admission decision for Fall acceptance.
3. September 15: Supplemental physical therapy application and support documents (transcripts, references, etc.) due for Spring admission.

4. December: Notice of admission for Spring acceptance.

Requirements for Admittance to Clinical Practice:

1. Complete all requirements for the baccalaureate degree at the time of application for admission to clinical practice.
2. Earn a minimum of 2.0 (C) in each professional course attempted.
3. Successfully complete a comprehensive examination.

Note: Students who complete the requirements receive a B.S. in Physical Therapy and after successful completion are qualified to write the licensing examination by the Board of Medical Quality Assurance. Effective 1985.

Requirements for the Bachelor of Science in Physical Therapy (code 3-1226)

Lower Division:

PT 210 (optional).

Upper Division:

A/P 307, PT 301, 302, 325, 350, 351, 353, 360, 371, 374, 380, 430, 431, 440, 446, 450, 460, 472, 474, 475, 480.

Post Baccalaureate:

PT 485.

Courses (P T):

Lower Division

210. Orientation to Health Care Professions (1) F,S Faculty

Prerequisite: Consent of instructor. Orientation to health care professions.

Upper Division

301. Anatomy and Kinesiology I (4) F,S Cerny, Williams

Prerequisites: Admission to the physical therapy professional program and consent of instructor. Normal human anatomy and kinesiology with emphasis on the upper extremity, neck, head and trunk. Also includes histology and the mechanical analysis of musculoskeletal disabilities. (Lecture 2 hours, laboratory 6 hours.1

302. Anatomy and Kinesiology II (4) F,S Cerny, Williams,

Prerequisites: Admission to the physical therapy professional program and consent of instructor. Continuation of P.T. 301 with an emphasis on the normal anatomy and kinesiology of the lower extremities, pelvis. Also includes gait, locomotion, analysis of movement and pathomechanics of disability. (Lecture 2 hours, laboratory 6 hours.)

325. Human Development For Therapists (2) F,S Morris,

Prerequisites: Admission to physical therapy professional program and consent of instructor. Human development from conception through changes accompanying the aging process with emphasis on normal development of the sensorimotor system. Also includes normal and abnormal reflex development, assessment of the developmental level, sensory, perceptual and psychosocial development.

350. Principles of Physical Therapy I (2) F,S Morris,

Prerequisites: Admission to the physical therapy professional program and consent of instructor. The recognition, specification and performance of definitive physical therapy assessment procedures, including treatment planning process. (Lecture 1 hour, laboratory 3 hours.)

351. Principles of Physical Therapy II (3) F,S Faculty

Prerequisites: Admission to the physical therapy professional program and consent of instructor. Principles and practice in basic patient care, including massage, hydrotherapy, traction, intermittent compression, wrapping, bandaging and aspectic technique. (Lecture 2 hours, laboratory 3 hours.)

353. Principles of Physical Therapy III (3) F,S Bok, Morris

Prerequisites: Admission to the physical therapy professional program and consent of instructor. Principles and practice in electrotherapy and assessment procedures for neuromuscular disorders. (Lecture 2 hours, laboratory 3 hours.)

360. Neuroanatomy and Neurophysiology for Therapists I (2) F,S Williams, Faculty

Prerequisites: Admission to the physical therapy professional program and consent of instructor. Survey of human neuroanatomy and principles of normal neurophysiology. (Lecture 1 hour, laboratory 3 hours.)

371. Clinical Medicine I (3) F,S Williams

Prerequisites: Admission to the physical therapy professional program and consent of instructor. Survey of general pathology with emphasis on the role of the physical therapist in patient care.

374. Psychosocial Aspects of Disability I (3) F,S Rabin

Prerequisite: PSY 100, 370 (may be taken concurrently) and consent of instructor. Survey of the psycho-social, emotional and cultural reactions to disease and disability.

380. Clinical Practice I (14) F,S Bok, Morris, Nielsen,

Prerequisites: Admission to the physical therapy professional program and consent of instructor. Initial supervised preclinical experience in designing, implementing and managing a physical therapy plan of care, including recognition, specification and performance of definitive physical therapy assessment procedures.

430. Principles of Physical Therapy IV (4) F,S Morris, Nielsen

Prerequisites: Admission to the physical therapy professional program and consent of instructor. Principles and practice in designing, implementing and managing a physical therapy plan of care, including therapeutic exercise design, assistive devices and the recognition, specification and performance of definitive physical therapy assessment procedures. (Lecture 3 hours, laboratory 3 hours.)

431. Principles of Physical Therapy V (4) F,S Morris, Nielsen

Prerequisites: Admission to the physical therapy professional program and consent of instructor. Principles and practice in advanced therapeutic exercise, including the recognition and performance of definitive physical therapy assessment procedures. (Lecture 2 hours, laboratory 3 hours.)

440. Administration in Physical Therapy (2) F,S Faculty

Prerequisites: Admission to the physical therapy professional program and consent of instructor. Design and management of a physical therapy service by applying the administrative principles of planning, organization, supervision, control and evaluation. Also includes the relationship of physical therapy to other health agencies and professions in the health care delivery systems.

446. Learning and Counseling for Therapists (2) F,S

Prerequisites: Admission to the physical therapy professional program and consent of the instructor. Application of basic educational concepts of learning theories in designing, implementing and evaluating learning experiences in order to teach patients and families, and to design and implement community education in-service programs. (Traditional grading only.) [Lecture]

450. Principles of Physical Therapy VI (3) F,S Faculty

Prerequisites: Admission to the physical therapy professional program and consent of instructor. Application of basic knowledge of cardiopulmonary physiology, electro-cardiography, graded exercise test administration and establishment and operation of intervention and rehabilitation cardiopulmonary exercise programs.

460. Neuroanatomy and Neurophysiology for Therapists II (2) F Williams

Prerequisites: Admission to the physical therapy professional program, PT 360 and/or consent of instructor. Continuation of Physical Therapy 360 with emphasis on the clinical disorders of the central and peripheral nervous system and the neurophysiological basis of patient care. Also includes appropriate assessment procedures, (Lecture 1 hour, laboratory 3 hours.)

472. Clinical Medicine II (3) F,S Bok, Morris, Faculty

Prerequisites: Admission to the physical therapy professional program, PT 371 and consent of instructor. Pathology, clinical course, medical and/or surgical management and the role of the physical therapist in patient care, including the recognition, selection and performance of definitive physical therapy assessment procedures.

474. Psychosocial Aspects of Disability II (2) F,S

Prerequisites: PT 374, consent of instructor. The interpersonal relationships between patient and therapist relating to stages of adjustment, behavioral management techniques, communication skills, pain management, sociocultural differences, and to special age groups from children to geriatric.

475. Research Methods (3) F,S Cerny, Morris, Carter

Prerequisites: Any basic course in statistics and admission to the physical therapy professional program. Introduction to basic principles in physical therapy research including research planning, research designs, measurement, clinical research designs, and library research.

480. Clinical Practice II (1-4) F,S Nielsen, Faculty

Prerequisites: Admission to the physical therapy professional program and consent of instructor. A continuation of PT 380 with emphasis on advanced principles and practice in designing, implementing and managing a physical therapy plan of care.

485. Clinical Practice III (6) F,S Nielsen, Faculty

Prerequisites: Completion of all professional courses with a minimum passing grade of 2.0 (C) and consent of instructor. Supervised clinical experience (internship) in designing, implementing and managing a physical therapy plan of care in a variety of clinical settings for 18-40 hour weeks.

490. Independent Studies (1-3) F,S Faculty

Prerequisite: Consent of department. Independent projects in any area of physical therapy. Human dissection is available as a special study. May be repeated to a maximum of six units.

499. Special Topics (1-3) F,S Faculty

Prerequisites: Admission to the physical therapy professional program and consent of instructor. Identification and investigation of current topics in selected areas of physical therapy. Topics to be announced in the Schedule of Classes. May be repeated for a maximum of six units of credit with change of topic.

Recreation and Leisure Studies

School of Applied Arts and Sciences

Department Chair: Marilyn A. Jensen
Department Office: Applied Arts and Sciences Building, Room 218
Telephone: 498-4071
Faculty: Professors: Raymond Cook, Marilyn A. Jensen; Associate Professors: Rhoda M. Andersen, John Minar; Assistant Professors: Jerry Byrd, CeEtta Crayton
Emeritus Faculty: Stanley R. Gabrielsen, David E. Gray
Department Secretary: Pat Harris

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisor; Coordinator, Certificate in Therapeutic Recreation; Coordinator, Certificate in Administration of Volunteer Services; Coordinator, Certificate in Administration of Outdoor Recreation; Coordinator, Certificate in Travel and Tourism; Coordinator, Graduate Certificate in Leisure Counseling; Graduate Advisor.

The experience of leisure is one of the basic facets of life. It is an elemental experience, essential to the total well-being of every person; it is a reflection and expression of the cultural values of a society; it is an important treatment modality. The provision of recreation services is one of the largest industries in the world, whether measured in dollars spent, persons served, hours of time devoted, or resources used. The study of leisure and recreation is a broad discipline, combining aspects of diverse fields of study and professional practice.

The Department of Recreation and Leisure Studies exists to promote a broader and deeper understanding of the role of leisure and recreation in the lives of all people, and to enhance the quality of experiences available to each person. This purpose is expressed in the four-fold mission of the Department of Recreation and Leisure Studies: (1) to offer a curriculum which leads the student to an increased understanding of the phenomena; (2) to conduct basic research which contributes to the general body of knowledge; (3) to serve the community by conducting applied research and providing consultation and training to practitioners; and (4) to serve society by providing professional practitioners who are skilled, dedicated, and ethical stewards of the profession.

Bachelor of Arts in Recreation

The curriculum is designed to prepare men and women for positions of leadership, supervision and administration in public recreation and park departments, armed forces recreation, industrial recreation, medical recreation, camping and outdoor education, voluntary youth and adult serving agencies, and travel and tourism.

The curriculum includes selected courses in education and psychology to provide an understanding of people; courses in recreation leadership, art, music, physical education and theatre arts to achieve a broad background in program skill and a variety of professional courses to develop an understanding of American leisure and the recreation profession.

Each major student must maintain a cumulative 2.0 grade point average on all units attempted and attain a minimum of a C grade in each course required in the major. Students earning less than a C grade in a required recreation prefix course must repeat that course. A recreation prefix course may be repeated only one time.

The department is accredited by the National Recreation and Park Association Council on Accreditation.

The Department of Recreation and Leisure Studies offers a program of graduate studies leading to the master of science degree in recreation administration. Detailed information about the program is available upon request from the Recreation and Leisure Studies Department. The program helps prepare professional personnel who can contribute to the development of a philosophy of leisure, who are competent managers of private and public agencies and programs, and who can accomplish the field research necessary to support current and future operations. Unusually fine opportunities exist in this area for interaction with recreation agencies of all kinds.

Each applicant should request a copy of the official transcript or all college course work be sent to the graduate advisor in the Recreation and Leisure Studies Department in addition to the copies required by the Office of Admissions and Records.

Requirements for the Bachelor of Arts in Recreation (code 2-1220)

Lower Division:

REC 100, 211, 241.

Upper Division:

REC 300, 312, 340, 350, 421, 425, 475, 482, 483, 484, 485 or 486.

Additional Courses:

Each major student is required to complete courses selected from the following groups: Choose two courses of the following: REC 315, ART 304, THEA 358; Choose two courses of the following: REC 402, EDP 301, 302, 311, PSY 370; Choose three courses of the following: REC 491, 493, 495, 497 (REC 326 may be substituted for REC 497); Choose seven units from the following: REC 400, 401, 403, 404, 405, 407, 410, 430, 490.

Minor In Recreation (code 0-1220)

A minimum of 21 units approved by departmental adviser which must include: REC 211, 241, 312, 340, 421 or 425, 484; one of the following: REC 315, 317, 482, 491, 493, 495, 497.

Certificate Program in Therapeutic Recreation

Requirements for the Certificate in Therapeutic Recreation:

1. A bachelor of arts degree or minor in recreation. The majority of the work for the certificate can be done concurrently with the recreation degree.
2. REC 402, 484 or 485, 487, 491 and 494. REC 484 or 485, (Fieldwork I or II) must be completed in an approved therapeutic setting. REC 487, (Internship), must be taken after completion of the baccalaureate degree in Recreation. The internship requirement is 480 hours to be completed within a maximum period of six months.
3. Nine units of upper-division course work must be taken from two or more of the following areas, with approval of the Therapeutic Recreation Adviser: Biology, Educational Psychology, Health Science, Physical Education, Sociology, Social Work; three of these units must be in a science.

Certificate Program in Administration of Volunteer Services

Students pursuing an approved degree at CSULB may, at the same time, earn a Certificate in Management of Volunteer Services. Courses taken to meet the requirements of the certificate may also be used simultaneously, where appropriate, to meet the general education requirements of the degree or credential requirements of cooperating departments. The certificate may be earned through continuing education by students not regularly enrolled at the University. The program is also open to persons who have years of volunteer services in their background and are interested in becoming employed as paid volunteer coordinators.

Requirements for the Certificate in Administration of Volunteer Services.

1. A baccalaureate degree which may be awarded concurrently.
2. Satisfactory completion of 25 units which must include 10 units of core requirements as follows: REC 400, 488, 493 and 499; 15 units of elective courses including REC 410, REC 490; at least one three-unit course in administrative skills, one in communication skills, and one in an area related to the student's special interest. All electives must have prior approval from the adviser of the certificate program.
3. Overall GPA of 2.5 and maintenance of 2.5 GPA in all courses in the program.

Certificate Program in Administration of Outdoor Recreation Resources

Students pursuing an approved degree at California State University, Long Beach may at the same time earn a Certificate in Administration of Outdoor Recreation Resources. Courses taken to meet the requirements of the certificate may also be used simultaneously, where appropriate, to meet the general education requirements of the degree or credential requirements of cooperating departments.

Requirements for the Certificate in Administration of Outdoor Recreation Resources:

1. A baccalaureate degree which may be awarded concurrently.
2. Satisfactory completion of 24 units which must include 15 units of core requirements as follows: REC 430, 489, 495, 499 and either 317 or 486. Nine units of elective courses from Biology and/or Geography with approval of faculty adviser.
3. Overall G.P.A. of 2.5, and maintenance of 2.5 G.P.A. in all courses in the program.

Certificate Program in Travel and Tourism

Travel and tourism is a very large and growing field for which there are usually many opportunities for well-trained individuals. The certificate program provides instruction in the history and theoretical bases of tourism, including its economics, psychology, and sociology as well as the political and legal aspects. The fundamentals of business, food and food service technology, the performing arts, and resources management are themes throughout the program.

Admission Standards and Requirements for the Certificate in Travel and Tourism:

To be eligible for admission a student must have an overall gradepoint average of 2.5. A student must maintain a 2.5 gradepoint average in all courses taken for the certificate.

Only REC 481 and 484 may be taken for CR/NC grading.

Prerequisites:

For REC 481: Permission of the instructor and 1,500 paid or volunteer hours of experience in a recognized travel/tourism situation, or REC 484; other course prerequisites as listed.

Course Requirements:

A total of 24 to 27 semester units as follows: REC 326, 450, 481, 490 or 499, GEOG 352; Electives: Six units of upper-division courses listed in the University catalog under the "Regional" category in the Department of Geography; three additional upper-division units selected in consultation with the Program advisor.

Graduate Certificate Program in Leisure Counseling

Admission/Prerequisites: Persons holding a bachelor's or master's degree in Recreation or Therapeutic Recreation or a closely related allied health field, e.g., Occupational Therapy, Music Therapy, Gerontology, Psychology, Adapted Physical Education, Counseling.

Two years verified experience in counseling approved by the program advisor.

Requirements for the Graduate Certificate in Leisure Counseling:

1. Satisfactory completion of 25 units of coursework which must include:
   a. Recreation 402/502, 411, 503, 588, 590;
   b. Educational Psychology 434, 532, 533;
   c. Electives, selected in consultation with the program advisor, 3 units.

Master of Science in Recreation Administration (code 6-1220)

Prerequisites

1. A bachelor's degree with a major in recreation; or,
2. A bachelor's degree with a minimum of 24 units of upper division courses comparable to those required in the undergraduate recreation major at this University. (Students deficient in undergraduate preparation must take courses to remove these deficiencies at the discretion of the departmental graduate committee.)

Advancement to Candidacy

1. Satisfy the general University requirements for advancement to candidacy.
2. Approval of the department graduate adviser and the Associate Dean of Graduate Studies and Research, School of Applied Arts and Sciences.

Requirements for the Master of Science

1. Thesis option program: thirty units with a minimum of 24 units in recreation including REC 501, 521, 571, 575 or 595, 591, and 698 (Thesis [4 units] with an oral examination on the thesis); Comprehensive Examination option program: thirty-six units with a minimum of 30 units in Recreation including REC 501, 521, 571, 575, 595, 698, 697 (Directed Studies and the oral and written comprehensive examinations).
2. REC 696, Research Methodology, must be completed in the first year of the program, or concurrently with the first enrollment in a 500- or 600course.
3. A maximum of six units may be elected outside the department.

Courses (REC):

Lower Division

100./300. Orientation to the Recreation Major (1) F,S Faculty
Evaluation of student's academic, social and personal attitudes and abilities determined through standardized tests. Personal cumulative records started. Orientation to the philosophy of the Recreation and Leisure Studies Department, and employment potentials of the field. Not open to students with credit in REC 300.

211. The Recreation Program (3) F,S Faculty
Methods and materials used in planning and conducting organized recreation programs in public and private agencies. Theory and practicum. Special emphasis on supervised programming in field experiences.

215. Management of Outdoor Field Trips (1) F Minar
Field experiences in unique outdoor recreation programs. Course content will include planning, logistics and leadership techniques involved in field-trip organization.

241. Introduction to Leisure Services (3) F,S Faculty
Principles and organization of community recreation. Concepts of community structure. Survey of public and private agencies engaged in community-wide recreation.

Upper Division

300./100. Orientation to the Recreation Major (1) F,S Faculty
Evaluation of student's academic, social and personal aptitudes and abilities determined through standardized tests. Personal cumulative records started. Orientation to the philosophy of the Recreation and Leisure Studies Department and employment potentials of the field. Not open to students with credit in REC 100.

***312. Recreation Leadership (3) F,S Andersen**
Prerequisites or corequisites: REC 211, 241. Theory and application of leadership as it pertains to leisure service agencies. Analysis of interpersonal and group skills necessary for effective leadership.

315. Recreational Sports Supervision (3) F,S Faculty
Organization and supervision of recreational sports for community-wide participation.

317. Administration of Organized Camps (3) S Faculty
Program and administration of the summer camp, with special emphasis on the responsibilities of the camp counselor. Designed for students seeking summer camp employment.

320. The Universality of Play (3) F,S Faculty
Examination of theories and origins of play. Study of the influence of play on the creativity, drive and self-image of a society.

326. Introduction to Travel and Tourism (3) F Faculty
Survey of the nature of tourism. History of pleasure travel; economic benefits from travel; cultural impact; travel motivators; organization of tourism; statistical measures of travel volume; components of the travel business.

340. Leisure in Contemporary Society (3) F,S Faculty
Prerequisite: Upper division standing. Intensive study of the new leisure and its impact on contemporary society. Grading: Student Option. Approved G.E.: E.

350. Media Relations in Leisure Service Agencies (3) F,S Faculty
Basic knowledge and skills in media relations explored to provide techniques to effectively promote and publicize recreation and leisure activities.

400./500. Policy-Making Boards (1) F,S Andersen
Study of policy-making structures within private and public organizations with special attention to volunteers working in the administrative area.

401. Swimming Pool Management (1) S Minar
On-site, hands on experiences in swimming pool operation and facility management. Classroom theory in areas of pool water chemistry, filtration and public health requirements for private and public pool operation.

402./502. Leisure Counseling (3) F Faculty
Current processes and procedures in leisure counseling. Includes techniques of leisure needs assessment, development of leisure resource files and leisure values orientation.

403. Aging and Leisure (1) S Faculty
Physical, social and psychological characteristics of aging as they apply to leisure.

404. Computers in Leisure Services (3) F,S Jensen
Emphasis is on the practical aspects of computers in Leisure Service Agencies. Techniques of analyzing agency needs, selecting hardware and software, and utilizing communication capability are included. Laboratory projects involving student use of the computer are required.

405. Management of Assaultive Behavior (1) S Faculty
Current techniques and procedures utilized by the California State Hospital system to deal with the assaultive patient/client, emphasizing preventive, therapeutic approaches. Certificate issued upon successful completion of this course.

406. Legal Aspects in Leisure Services (1) F,S Faculty
A survey of legal aspects relating to park land acquisition, liability, constitutional issues, and employment in recreation and park agencies. Students will participate in legal research. Case studies, lecture, problem solving.

407. Starting a Recreation Business (1) F Cook
Examines the basic legal, financial, and practical concerns related to starting a recreation business in California.

410. Designing Effective Workshops and Conferences (1) F Andersen
Course will enable a student to analyze elements of workshop and conference design, and provide the student with the knowledge and skills necessary to develop effective, participative group meetings.

***411. Assessment of Special Populations For Recreation and Leisure (2) F,S Faculty**
Current recreation and leisure assessment instruments to determine client functioning are explored for utilization as a basis of planning and evaluating therapeutic recreation services.

412. Political Realities in Leisure Services (1) F,S Faculty
A survey of the political attitudes, values, and philosophical positions of elected and appointed officials in leisure services, both public and non-profit sectors.

413. Community Recreation for the Handicapped (1) F,S Faculty
A survey of current practices and methods utilized in developing recreation services for handicapped people living in the community.

414. Cultural Arts For the Handicapped (1) F Faculty
A survey of practices and methods utilized in bringing cultural arts to the handicapped.

421. Supervisory and Administrative Practices (3) F,S Jensen
Prerequisite: Lower Division requirements. Concepts and techniques of supervision and administration in recreation agencies; emphasis on recruitment, assignment, evaluation and in-service training of recreation personnel.

425. Finance and Marketing of Leisure Services (3) F,S Andersen, Cook
Prerequisites: Lower division requirements. Types of financing in public and private sector; management by objectives as related to fiscal elements; marketing of leisure services in the public and private sector agencies and organizations.

430. Recreation in the Ocean Environment (3) S Minar
Study of the skills and techniques of administration of an ocean-oriented recreational resource, including management and trip planning. Course content will be supplemented with a weeklong field trip to Santa Barbara Island. Additional fee required.

450. Tourism Planning and Development (3) F,S Faculty
Analysis of elements which are included in a community development plan. Assessment of the touristic potential of a region or site, enabling legislation, organization, and administration of a tourism development plan. Identification of sources of resistance and support.

475. Philosophy of Recreation and Leisure (3) F,S
Corequisite or prerequisites: REC 483. Exploration of the philosophic bases for current practices in recreation and leisure organizations.

481. Internship in Administration of Travel and Tourism (3) F,S Faculty
Prerequisite: REC 484 or 1,500 hours of paid or volunteer experience in recognized travel/tourism or related agencies (prerequisites for REC 484 are listed in the bulletin). A minimum of 120 hours of supervised work experience in an approved agency. May be in a paid or voluntary capacity.

482. Human Services Programming in Urban Areas (3) F,S Crayton
Exploration of the social problems, minority populations and community resources of the urban impacted areas in relation to concerns of recreation and human needs.

483. Professional Preparation For Leisure Services (3) F,S Andersen
Corequisite: REC 484. Synthesis of knowledge and experience comparing and contrasting trends in a variety of leisure service agencies. An integral part of the course is completion of the student assessment program with emphasis on analysis of professional goals and the development of career objectives. CR/NC.

484. Field Work I (3) F,S Andersen
Prerequisites: Consent of instructor, REC 211, 241, 300, 312, senior standing; plus a minimum of 1,000 hours of verified paid or volunteer leadership experience, approved by faculty adviser. An intensive leadership experience in an approved agency jointly supervised by university and agency personnel.

485. Field Work II (3) F,S Andersen

Prerequisites: Consent of instructor, REC 211, 241, 300, 312, 484, senior standing; plus a minimum of 1,000 hours of verified paid or volunteer leadership experience, approved by faculty adviser. Supervised experiences in recreation leadership, supervision or administration in an approved agency other than the one to which the student was assigned in REC 484.

486. Field Work in Outdoor Recreation (3) F,S Minar

Prerequisites: Consent of instructor, REC 211, 241, 300, 312, senior standing; plus a minimum of 1,000 hours of verified paid or volunteer leadership experience, approved by faculty adviser. Supervised leadership in outdoor recreation program of School, public or other approved agency. Minimum of 80 hours of supervised field experience in an approved agency required.

487. Internship in Therapeutic Recreation (3) F,S,SS Crayton

Prerequisites: B.A. degree in Recreation plus REC 491, 494, 484 or 485, plus nine units of course work from related allied health departments. Students are required to complete 480 hours within a maximum of 6 months at an agency certified by the California Board of Park and Recreation Personnel

488. Internship in Management of Volunteer Services (3) F,S,SS Andersen

Prerequisites: 1,500 hours of paid or unpaid experience in a recognized volunteer program or REC 484. A minimum of 120 hours of supervised work experience in a specific agency, either public or private, jointly supervised by a coordinator of volunteer services and a University faculty member. May be in a paid or volunteer capacity. Does not substitute for REC 484, 485.

489. Internship in Administration of Outdoor Recreation Resources (3) F,S,SS Minar

Prerequisite: REC 484 or 1,500 hours of paid or volunteer experience in a recognized outdoor recreation agency. A minimum of 120 hours of supervised work experience in approved outdoor recreation agency, jointly supervised by the agency supervisor and a University faculty member. May be in a paid or volunteer capacity. Note: Does not substitute for REC 484, 485, 486.

490. Special Studies in Recreation (1-3) F,S Faculty

Identification and critical analysis of current problems in selected areas of recreation. Topics to be announced in the Schedule of Classes. May be repeated for a maximum of six units of credit with change of topic.

491. Therapeutic Recreation Procedures I (3) F,S Crayton

Analysis of adapted recreational and leisure activities and their relationship to the institutionalized or community based handicapped person.

493./593. Management of Volunteer Programs (3) F,S Andersen

Prerequisites: None. This course is designed to develop an understanding of volunteer services and their value to agencies; to provide knowledge of the structure and function of social agencies, and to acquire administrative skills which will enable supervisors to provide meaningful roles for volunteers. Grading: Student Option.

494. Therapeutic Recreation Procedures II (3) F,S Crayton

Prerequisite: REC 491. Advanced principles, theories and trends relating to the field of therapeutic recreation. emphasis on laboratory experiences leading to certificates in specialized rehabilitation areas.

495. Outdoor Recreation Management (3) F,S Minar

Extensive review of the techniques of management of outdoor recreation resources and the roles of federal, state, local and private agencies in acquisition and development of these resources.

497. Commercial Recreation (3) F Faculty

Prerequisite: REC 241. Current procedures and processes in commercial recreation enterprises. Includes in-depth exploration of many careers available and techniques and functions of commercial recreation.

499. Independent Study (1-3) F,S Faculty

Prerequisites: Consent of department and approval by department chairperson. Individual projects in areas of special interest. Independent study under the direct supervision of a faculty member. May be repeated for a maximum of 6 units of credit with consent of instructor. Grading: Student Option.

Graduate Division

500./400. Policy-Making Boards (1) F,S Andersen

Study of policy-making structures within private and public organizations with special attention to volunteers working in the administrative area.

501. Readings in Recreation and Leisure Studies (3) F Andersen, Cook, Crayton, Jensen, Minar

Critical analysis and synthesis by comparative review of professional literature in the field of Recreation and Leisure Services.

502./402. Leisure Counseling (3) F Faculty

Current processes and procedures in leisure counseling. Includes techniques of leisure needs assessment, development of leisure resource files and leisure values orientation.

503. Leisure Counseling Practicum (2) EXED Faculty

Corequisite: REC 502/402. Clinical observations of Leisure Counseling sessions in approved training sites. Lecture/ discussion of significance of assessment and evaluation in Leisure Counseling. Discussion and evaluation of observational techniques.

521. Recreation Administration (3) F Jensen

Organizational theory; planning, staffing and budgeting of recreation programs in governmental and voluntary agencies.

571. Philosophy, Issues and Trends (3) F Cook

Current philosophy, trends and issues in the field of recreation.

575. Problems in Recreation (3) S Cook

Identification, analysis and proposed designs for the solution of problems in public and voluntary agencies.

587. Field Work in Recreation Administration or Supervision (3) F,S Andersen, Cook, Crayton, Jensen, Minar

Prerequisite: Full-time recreation leadership experience - minimum of 80 hours of supervised leadership in recreation administration or supervision in an approved public or private agency. Limited to students who expect to work in recreation administration or supervision.

588. Internship in Leisure Counseling (3) F,S, EXED Faculty

Prerequisites: REC 502, 503, 590, 411; EDP 430, 510, 536; Electives - 3 units approved by adviser. A minimum of 150 hours training in a clinical or community setting approved by the course coordinator and jointly supervised by the agency supervisor, and a university faculty member. May be in a paid or volunteer capacity.

590. Special Topics in Recreation (1-3) F,S Faculty

Prerequisite: Consent of instructor. In-depth investigation of topics of current interest and concern to students experienced in recreation. May be repeated (with selection of different academic sub-topics) for a maximum of six units of elective credit. Topics to be announced in the Schedule of Classes.

591. Research Proposal Writing (1) F,S Cook, Jensen

Prerequisite: REC 696. Course is concerned with variations in research design and methodology. Completion of a thesis proposal is a requirement of this course.

593./493. Management of Volunteer Programs (3) F,S Andersen

Prerequisites: None. This course is designed to develop an understanding of volunteer services and their value to agencies; to provide knowledge of the structure and function of social agencies, and to acquire administrative skills which will enable supervisors to provide meaningful roles for volunteers. Traditional grading only. [Lecture]
595. Management Studies (3) S Jensen
Administrative studies and surveys; procedures for conducting appraisals of recreation programs and facilities.

595. Management Studies (3) S Jensen

Administrative studies and surveys; procedures for conducting appraisals of recreation programs and facilities.

599. Independent Study (1-3) F,S,SS Cook

Prerequisites: Consent of Graduate Advisor and department Chair.Independent research under the supervision of a Recreation and Leisure Faculty member. May be repeated up to a maximum of six units. Traditional grading only.

696. Research Methodology (3) F,S Faculty

Research methodology in recreation. Must be taken in first year of program. Not open to students with credit in REC 496.

697. Directed Studies (1-3) F,S Andersen, Cook, Crayton, Jensen, Minar

Prerequisites: REC 698, advancement to candidacy. Independent investigation of field research problems in recreation.

698. Thesis (14) F,S Andersen, Cook, Crayton, Jensen, Minar

Prerequisites: REC 591, 698, advancement to candidacy. Planning, preparation and completion of an approved thesis.

Vocational Education Program

School of Applied Arts and Sciences

Department Office: Industrial Technology Building, Room 101
Telephone: 498-5633
Faculty: Professors: Paul A. Bott, Richard L. Resurreccion; **Associate Professors:** Leonard O. Albright, Lee Roy Black,
Emeritus Faculty: Boyd A. Davis, Norman R. Stanger
Program Secretary: C. Jane Twiss
Program Advisory Board: Mr. Chris Almeida, Program Manager, Industrial, Health and Apprenticeship Education, California State Department of Education; Mr. Ron Coleman, Fire Chief, City of Fullerton Fire Department; Dr. Donna Farmer, Dean Applied Arts and Sciences, Rancho Santiago College; Mr. Rush Hill,II, AIA, Partner, The Hill Partnership, Inc.; Mr. Jerry Miller, PIC Liaison, Private Industry Council; Mr. Charles Ogden, Director, Fire Science, Santa Ana College; Dr. Thomas Olson; Ms. Paula S. Ryan, District Administrator, Department of Rehabilitation; Mr. Rick Sanchez, Administrator, SER — Jobs for Progress; Mr. David Smith, Chief Executive Officer, North Orange County ROP.
Credentials Assistant: Rosemary Heins
Credential Advisory Board: Mr. Henry S. Alvarez, Occupational Program Specialist T I, Coastline ROP; Ms. Barbara Arnold, Early Childhood Occupational Instructor; Dr. Donald F. Averill, Dean, Occupational Education, Glendale Community College; Ms. Iris S. Balfour, Garden Grove Adult Education; Dr. Roger Braasch, Director, Adult/Vocational Education; Ms. Evelyn Canada, Personnel Technician; Dr. Julie Chan, Small Business Ownership Management Instructor, Coastline ROP; Ms. Stella Clay, Vocational Rehabilitation Counselor; Ms. Becky Goodoien, Instructor, Coastline ROP and Community College; Mr. Richard G. Harris, Contracts Management Officer, City of Long Beach; Ms. Cynthia Hutton, student; Dr. David L'Angelle, Training Systems Analyst, Nuclear Training Division, Southern California Edison; Ms. Patricia Langlin, Director, Program Development, North Orange County ROP; Mr. James C. Lindsay, Vocational/Adult Teacher Upholstery Customized; Mr. S.J. Marino, Community College Instructor; Mr. Paul E. Snyder, Superintendent, Coastline ROP; Mr. E. Ken Thurman, Auto/Body Repair and Printing, Welding Instructor; Ms. Tracy P. West, Instructor.

Students desiring information should contact the program office for referral to one of the faculty advisors: Credential Assistant, Graduate Advisor, Undergraduate Advisor; Designated Subjects Credential Coordinator.

The vocational education program is designed to enable persons to gain the skills and knowledge requisite for successful employment in secondary schools, community colleges and adult programs as teachers, coordinators and supervisors of vocational, occupational, career preparation, and related human resource development programs.

Designated Subjects Credential (Credential Code 300)

This program of instruction identifies and develops on an individualized basis the identified teaching competencies requisite for successful employment in designated subjects programs, as required by the California Commission on Teacher Credentialing. It is offered in conjunction with the School of Education.

Bachelor of Science in Vocational Education (code 3-1027)

The Bachelor of Science in Vocational Education is offered primarily for persons who are currently serving in the work force in business, industry, labor and government. The primary goal of the program is to improve the delivery skills and standards of persons involved in human resource development programs related to these areas. The program is distinct from the Bachelor of Vocational Education (BVE), also offered here, which is directed primarily toward public school vocational education.

Admission Requirements

Those interested in pursuing the Bachelor of Science in Vocational Education Degree must be admitted to the University in accordance with the provisions of the CSULB Bulletin. For admission into the degree program the student must have verified a competency, by education and/or occupational experience in a field normally considered to be within the purview of occupational education.

Requirements for the Bachelor of Science in Vocational Education (code 3-1027)

One hundred and thirty-two units to include:

1. Fifty-one units of General Education-Breadth course work at the lower- and upper-division levels;
2. Thirty-three semester units of occupational competency course work, of which a maximum of nine units may be granted for prior learning;
3. A minimum of 30 units in Vocational Education as follows: Administrative Studies: VE 417, 485, 418 or 470 (9 units); Special Learners: VE 456, VE 460 or 461 or 462 (6 units); Communication and Research: VE 420, 421, 422 (9 units), Option I: VE 483, 490 (6 units), or Option II: ENG 317, ENG 417 or 418 or 419 (6 units).
4. Eleven units in instructional Development as follows: VE 401 A,C (2); VE 402 A,B,C (3); VE 404(3); VE 405(3). 5. Six units of electives selected with advisement.

Bachelor of Vocational Education (code 4-1027)

The Bachelor of Vocational Education degree (with a major in vocational arts) is designed for teachers who are teaching in a vocational education program and qualify for a Swan Bill evaluation through the State Board of Examiners for Vocational Teachers. To qualify for the evaluation the requirements of the State Education Code, Sections 89220, 89221, 89222, and 89223 must be met. This statute stipulates a minimum period of vocational teaching experience amounting to 1,620 clock hours in a full-time position or 1,000 clock hours in an approved part-time position. Additional information concerning this degree may be obtained from the program undergraduate advisor.

Master of Arts in Vocational Education (code 5-1027)

The Master of Arts degree in Vocational Education is available to qualified students preparing for professional careers in the fields of career, occupational, and vocational education. A major thrust is the development of qualified leadership personnel to serve occupational education programs in public and private education as well as related human resource development programs in California and the nation.

Multidisciplinary and interdisciplinary in nature, the program complements existing graduate programs serving individual disciplines usually associated with occupationally-oriented curricula. Opportunities are provided for graduate students to improve their competencies related to programs dealing with the major career clusters: business and office, communications and media, construction, consumer and home economics, environmental control, fine arts and humanities, health, hospitality and recreation, manufacturing, marine science, public service and transportation.

All candidates are required to complete a core of courses which includes a thesis or written comprehensive examination and oral defense of the thesis. Detailed information about the curriculum options is found in the handbook for the Master of Arts in Vocational Education available upon request from the program office.

Each applicant must submit a copy of transcripts for all college work to the program office, in addition to the official copies required by the Office of Admissions and Records.

Prerequisites:

1. A bachelor's degree in vocational education, with a minimum of 24 upper division units in vocational education comparable to courses offered at this University; or
2. A bachelor's degree with a minimum of 24 upper division units comparable to courses offered at this University in the discipline in which the degree was awarded.

Advancement to Candidacy

1. Satisfaction of the general University requirements for advancement to candidacy.
2. Completion of all prerequisite requirements.
3. Establishment of degree objectives with the Records Office.
4. Maintenance of B average (3.0 GPA) in all work completed in graduate program.
5. Approval of Vocational Education Graduate faculty and Director of Graduate Studies and Research, School of Applied Arts and Sciences.

Requirements for the Master of Arts

1. Completion of VE 501, 502, 503, 505, 696
2. Completion of 30 units of approved upper division and graduate courses and a thesis (Vocational Education 698) and an oral presentation of the thesis approved by Program Graduate Committee; or 36 units of approved upper division and graduate courses and a written comprehensive examination.

Courses (V E):

Upper Division

401 A. The Vocational Legacy (1) F,S,SS Bott

Study of the social, philosophic, economic, and political factors that have affected occupational education from 1900 to the present.

401 B. The Publics of Occupational Education (1) F,S,SS Bott

Identification and discussion of the characteristics of the people served by occupational education. Instructional strategies are designed for dealing with each of the various publics.

401 C. Program Elements (1) F,S,SS Bott

Study of the relationship of occupational programs to other segments and levels of education. Particular emphasis is placed on the design of instructional facilities, legal implications, and the responsibilities of occupational teachers regarding safety in the classroom.

402 A. Needs Assessment (1) F,S,SS Bott

Techniques of occupational and task analysis, community surveys, and the use of subject matter advisory committees in curriculum development of occupational education.

402 B. Identifying Curriculum Content (1) F,S,SS Bott

Identification and development of specific units of instruction for occupational subjects.

402 C. Developing Training Objectives (1) F,S,SS Bott

Identification and development of Performance Objectives for Occupational Subjects.

404. Techniques of Occupational Instruction (3) F,S Bott

The development of the skills and knowledge necessary to teach occupational subjects. Emphasis is placed on instructional techniques specific to occupational education.

405. Instruction and Evaluation in Occupational Education (3) F,S Bott

Prerequisite: VE 404. The emphasis in this course is in two areas: the measurement of student growth and the effect of the occupational teacher in the classroom. Classroom laboratory visits are a required part of the course.

417. The Work Ethic (3) F,S Bott

Study of the development of various elements that comprise the values of work held by contemporary society and the effects that these values have on individuals, society, schools, and the workplace.

418. The Marketplace For Occupational Education (3) F,S Resurreccion

Studies of public and private agencies that serve persons who have the need to identify, prepare for and use occupational education; where such persons are placed, what they do, their successes and failures, and future trends and needs.

420. Evaluation of Occupational Education Programs (3) F Albright, Resurreccion

Analysis of evaluation models usable for occupational education programs and systems, including the phases of needs assessment, program planning, progress, implementation and outcome evaluation.

421. Research Design For Occupational Education (3) S Faculty

Study of research designs applicable in occupational education. Calculation of basic statistics, development of research proposals, use of minicomputers in occupational research.

422. Grants and Contract Writing in Occupational Education (3) F Albright, Bott

Study of process of contract and grant proposal writing for public- and private-funding agencies, including budget preparation, for occupational education.

440. Instructional Methods for Trainers (4) Faculty

(Offered only through Extended Education.) This 60-hour course prepares non-public School trainers and part-time public school vocational teachers in the objectives, curriculum, and instructional materials used in training. The emphasis in the course is on teaching methods and strategies.

456. Attitude Awareness For Occupational Education Teachers (3) F,S Black

Introduction to and application of the principles of communication, human relations, understanding other people, attitude recognition and development, and mental steps to motivation. Contributions of the behavioral sciences to more effective teaching in a vocational setting will be examined and plans for their implementation will be prepared.

460. Occupational Education for Special Needs Learners (3) F,S Albright

Identification, assessment and instructional development strategies for handicapped and disadvantaged students in occupational education.

461. Occupational Education For Disadvantaged and Culturally Different Learners (3) F,S Black

Techniques for teaching disadvantaged and culturally different learners in occupational education. Emphasis on methods, motivation, counseling and instructional organization.

462. Bilingual Occupational Education (3) F Faculty

A convergence of bilingual and vocational education principles, leading to an understanding and application of strategies suitable for teaching occupational skills to limited English-speaking students. The focus is on teaching occupational skills in the learner's native language with Vocational English-as-a-Second-Language (VESL). Bilingual proficiency is desirable, but not required.

470. Seminar in Occupational Education (3) F,S Faculty

Study of the major problems and issues confronting the educator and practitioner.

480. Internship in Occupational Education (14) F,S Faculty

Internship in community or School employment and training development programs which involve instruction, administration and research within the career education spectrum.

483. Senior Thesis or Project (1-3) F,S Albright, Bott, Resurreccion

Identification of, planning, preparation and completion of a project to solve or research problems particular to a business, educational or industrial setting. Written report required.

485. Identifying Management Competencies (3) S Resurreccion

A lecture and discussion course focusing on the identification of competencies requisite for effective management of occupational education programs. These competencies are categorized in three domains, including, but not limited to: the interrelationships of concepts, things, and people.

490. Independent Study in Occupational Education (1-3) F,S Faculty

Individual research and study under the direction of a faculty member in areas not an integral part of any regular course. Written report is required. May be repeated to a maximum of three units.

497. Practicum in Occupational Education (16) F,S Faculty

Action-oriented organized learning directed toward identifying the major problems and issues confronting occupational education and suggesting practical solutions for the practitioner. (A) Theoretical aspects, (B) Technical aspects, (C) Related informational aspects, (D) Attitudinal aspects, (F) Management aspects, (G) Human aspects.

499. Special Topics in Occupational Education (1-3) F,S Faculty

Topics of current interest in occupational education will be selected for intensive group study. Topics will be announced in the Schedule of Classes. May be repeated to a maximum of six units.

Graduate Division

501. Employment Development and Career Education Programs (3) F,S Albright

Education and training programs covering the spectrum of occupational preparation emphasizing occupational education and human resource development components.

502. Occupational Education Administration (3) F,S Faculty

Concepts and techniques of personal and professional administrative leadership.

503. Management of Occupational Education Programs (3) F,S Faculty

Advanced principles and procedures of management emphasizing local and county operations, and evaluation of occupational education programs.

504. The Environments of Occupational Education (3) F,S Resurreccion

Interrelationships among occupational education, business, industry, government and society.

505. Critical Analysis of Issues and Problems in Occupational Education (3) F,S Albright, Bott

Indepth analysis of major research reports and reviews of historical and contemporary issues and problems in occupational education. Particular attention will be given to the various research methodologies used to examine issues and problems in the field.

506. Vocational ESL/ESP: Program Design and Instruction (3) F,S Bott

Prerequisites: Admission to TESL certificate program, or instructor's consent. An examination of the integral role of tailored language instruction to the success of non- and limited-English speaking trainees and workers. This course will deal with vocational English as a second language, English for Specific Purposes, and English for Science and Technology settings. Key topics include language needs assessment, course design, instructional techniques, and testing in specified settings. (Same course as LING 570.) [Seminar] Grading: Student Option. Same course as LING 570.

696. Research Methods in Occupational Education (3) F,S,SS Albright, Bott, Torres

Selecting, defining and presenting methods of research demonstration of research theory to problem solution.

697. Directed Studies in Occupational Education (1-3) F,S,SS Albright, Bott, Resurreccion

Prerequisite: Advancement to candidacy. Research in an area of specialization under the direction of a faculty member.

698. Thesis (1-4) F,S,SS Albright, Bott, Resurreccion

Prerequisite: Advancement to candidacy. Planning preparation and completion of a thesis related to the occupational education field.

School of Business Administration

Dean: Dr. Mohamed E. Moustafa
Associate Dean:
Admissions Advising Center: Undergraduate/Graduate Programs, SBA Room 8
Telephone: 498-4514
School of Business Administration Advisory Board: J.B. Beal, Vice President, Employee Relations, ARCO Transportation Company; Ronald D. Blake, Vice President, Southern Division, Southern California Edison Company; Ralph D. Boethling, Vice President of Administration, Wrather Port Properties. Ltd.; Edward J. Brennan, Jr.. Vice President, Special Projects, TRW Information Systems Group; Vance Caesar, General Manager/ Senior Vice President, Press-Telegram; Loren Carroll, Vice President, Chief Financial Officer, Smith International; Timothy C. Collins, T.C. Collins Associates; Maury R. Dahn, Certified Public Accountant; Thomas D. Formica, President, IDM Properties Corporation; Steve P. Ginder, President, National Pacific Mortgage Corporation; A. Noel Gould, Esq., Director of Government Relations, Stradling, Yocca, Carlson Rauth; Robert P. Graham, R.P. Graham Associates; Charles E. Greenberg, Partner, Ball, Hunt, Hart, Brown and Baerwitz; John W. Hancock, III, Executive Vice President, Security Pacific National Bank; Omar Hefni, Chief Economist, Hughes Aircraft; Elaine Hutchison, President, Paragon Equities; Larry Jackson, President and General Manager, Long Beach Transit; Fred Jensen, President, National Bank of Long Beach; Richard L. Kussman, Sales Vice President/Western Region, ATT; Ronald G. Linford, Managing Partner, Ernst Whinney; Larry G. Manly, Vice President, Operations, Information Systems Center, Rockwell International; James H. McJunkin, Executive Director, Port of Long Beach; Henry J. Meyer, Owner, Hamburger Henry; Jane Netherton, President Chief Executive Officer, International City Bank; Roy A. Norry, Manager, Engineering International, Bechtel Power Corporation; Linda O'Toole, General Manager, Hyatt Regency Long Beach; Russell K. Peterson, Manager, Employment Placement/West, Douglas Aircraft; Philip J. Quigley, President Chief Executive Officer, PacTel Communications Industries; Vincent R. Rinehart, President, Firstline Mortgage, Inc.; William B. Rosenzweig, Vice President, Paris Audio; Joe R. Saucedo, President and Chief Executive Officer, Queen's City Bank, N.A.; Phil Scalzo, Region General Manager, Hewlett-Packard; Ted G. Shown, T.G. Shown Associates; William D. Slattery, Senior Vice President, Marketing, AirCal; S. A. "Pete" Smith, Vice President, Financial Planning Analysis, Occidental Petroleum Corporation; Carolyn S. Sutter, General Manager, Tidelands Agency, City of Long Beach; Alan J. Whiley, Partner, Peat, Marwick, Mitchell Company; Richard G. Wilson, Esq., Attorney.

The School of Business Administration seeks to prepare its students for entry into successful careers in business. As each graduate pursues a successful career, it is anticipated that personal responsibility will be accepted for maintaining and enhancing the quality of the society in which business and the individual operate.

Five objectives have been articulated by the faculty and by the School of Business Administration:

To develop the analytic abilities of the student through the varied courses to which each is exposed;

To develop proficiency in the business related skills and abilities represented by the disciplines within the School;

To accept and implement responsibility for enhancement of ethical and moral behavior within the business community;

To encourage peer learning for the student as a foundation for continued intellectual progress throughout the career of the student;

To develop an awareness of the necessity for responding to change and an adaptability to the changes that are certain to occur.

Accreditation

The School of Business Administration offers undergraduate and graduate programs of study. Both programs are nationally accredited by the American Assembly of Collegiate Schools of Business (AACSB) and may lead to completion of the following:

Bachelor of Science in Business Administration.

Specialization may be made in a choice of the following areas, hereafter referred to in this Bulletin as options:

- Accounting
- Administrative Systems
- Business Computer Methods
- Finance, Real Estate, Law
- Human Resources Mgmt.
- Management
- Marketing
- Operations Management
- Quantitative Methods

Minors in Business Administration

The School of Business Administration has developed minors available to any student. Appropriate notation of completion will be made on the diploma. Significant preparation for business employment may be developed through completion of an organized program from one of the following areas:

- Administrative Systems
- Human Resources Management
- Marketing
- Quantitative Methods

Certificate Programs

Certificate programs, completed as a separate objective or in conjunction with a degree program, are offered in International Business, Transportation and Quantitative Methods.

Master of Business Administration

Master of Science in Business Administration

Specialization in an area of major interest.

Academic Counseling and Advisement

The School of Business Administration maintains an academic counseling and advisement office in SBA Room 8. Counselors are available in this office throughout the semester to assist students with clearance of essential degree requirements, including General Education and transfer credit.

Center for International Business

The Certificate Program in International Business is administered by the Center for International Business. The function of the Center and of the program is to advance the career interests of those students concentrating on a career in international business.

Center For Transportation Studies

The Certificate Program in Transportation is administered by the Center for Transportation Studies. The function of the Center and of the program is to advance the career interests of those students concentrating on a career in transportation.

Student Organizations

Numerous leadership organizations are available for business students. Among the organizations of special interest to business students are: The American Marketing Association, Beta Alpha/Psi Accounting Society, Personnel and Industrial Relations Association, the Quantitative Systems Students Organization, The Society for the Advancement of Management, and Management Information Systems Society. Additional organizations include: Beta Gamma Sigma, Black Business Students Association, Delta Sigma Pi, Hispanic Students Business Association, International Association of Students in Business and Economics, Law Society, Long Beach Entrepreneur Society, National Association of Black Accountants, Real Estate Society.

The Associated Business Students Organization Council is a facilitating and coordinating organization for business student organizations. ABSOC is composed of elected officers from each organization. Through these student organizations each year business students are provided opportunity to meet representatives of business and industry. Prominent executives are, in addition, invited to the campus for dialogue with business students. ABSOC and the Associated Engineering Student Body co-sponsor the annual "Meet the Industries Night", a spring job fair which draws over 60 companies and several thousand students.

Beta Gamma Sigma

Beta Gamma Sigma, founded at the University of Wisconsin in 1907 as a business honor society, is the only honor society recognized by the American Assembly of Collegiate Schools of Business. Membership is available to business students at California State University, Long Beach only because the School of Business Administration is Accredited by AACSB. This event occurred in 1972 and the chapter was established the following year. There are only 213 chapters in all of the United States and Canada and only 200,000 members. The Assembly includes in its membership only Schools of business which meet the high standards of eligibility required of accredited member institutions with respect to curricula, teaching staff, teaching loads, library, and laboratory facilities.

The purposes of the Society are to encourage and reward scholarship and accomplishment among students of business administration, to promote the advancement of education in the art and science of business, and to foster integrity in the conduct of business operations. Election to membership in Beta Gamma Sigma is the highest scholastic honor that a student in business administration can attain. To be eligible for membership at CSULB students must rank in the upper three percent of their junior class or the upper seven percent of their senior class, or rank in the upper ten percent of those receiving masters degrees in business administration.

Impaction

The School of Business Administration has been declared Impacted at the upper-division level by The California State University Chancellor's Office. This means that admission to junior-level courses in the School is being carefully controlled and that students who are majors in business will have first priority to enroll in business courses. It also means that special criteria are being imposed to limit the number of students permitted to enroll in the University as business majors. It is best to contact the School of Business Advisement Center to learn the current admissions requirements. New or continuing students applying to the School of Business Administration for the upper-division major must apply during November for the following Fall semester and during August for the following Spring semester.

Concurrent Enrollment

Undergraduate students who wish to take course work in a community college or another university or college to meet CSULB School of Business Administration or General Education requirements must carefully observe University and School requirements. See "Registration Procedures" and "Transfer of Undergraduate Credit" in this Bulletin. Consult with the SBA Advisement Office for assistance with the appropriate petition.

Financial Assistance

Financial and advisory assistance is provided business students through the University Financial Aid Center. That office administers funds made available through the federal and state governments and through certain private sources. Awards are made to students who demonstrate a need for assistance with educational expenses.

Selected scholarships and fellowships within the School of Business Administration are publicized. Consult the Associate Dean for Student Services for information.

Beta Gamma Sigma — "Outstanding Student in Business"
Applications usually due April 1. Award is presented in early May at the annual Beta Gamma Sigma Installation and Banquet.

Outstanding Graduating Senior
Applications usually due March 1. The award is presented at the May commencement ceremony, and the recipient is also honored at an Alumni Association banquet in June.

Wall Street Journal Award (Based on GPA)
Applications from graduating seniors are usually due March 1. The award is presented at the May commencement ceremony.

Computer and Information Technology

Every student in the degree program develops basic understandings and competences relating to information processing, the application of computers in business and government, and computer programming. A terminal facility is maintained within the School to provide computer access for business students.

Requirements and Grading Policy

Specific University and School requirements are detailed in various sections of this Bulletin. Every student must develop complete familiarity and understanding of the requirements by which successful completion of a program will be determined. Business majors and minors may not exercise a Credit-No Credit grading option for courses required by the School of Business Administration in their program. No course taken for Credit-No Credit grading will be accepted to fulfill a Business requirement.

Bachelor of Science in Business Administration

Requirements for the Bachelor of Science in Business Administration

A Minimum of 124 units will be required for all options in business with the exception of Accounting, which requires a minimum of 128 units. The degree program must include:

1. A minimum of 51 units of the University General Education requirements from outside the School of Business Administration, to include:
   a. ECON 201.
   b. ECON 202.
   c. MATH 114.
   d. MATH 115 B.
   e. PHIL 160 or 170 (Accounting and Business Computer Methods students must take PHIL 170).
   f. Accounting majors must take a course from Anthropology, Psychology or Sociology.

   Business majors may not apply courses offered by the School of Business Administration toward General Education requirements.
2. A minimum of 51-54 units in business administration and related courses to include:
   a. Lower Division Core Requirements: Nine units
      1. ACCT 20l
      2. FIN 222
      3. MIS 240. Business Computer Methods majors must take MIS 200.
   b. Upper Division Core Requirements: 27 units
      1. ACCT 310 (accounting majors must substitute ACCT 320)
      2. ECON 333
      3. FIN 324
      4. FIN 362
      5. HRM 361
      6. MGMT 300
      7. MGMT 425 (senior status)
      8. MKTG 300
      9. QS 31O
   c. Completion of at least one option of 15 to 18 units as selected from Accounting, Administrative Systems, Business Computer Methods, Finance, Real Estate and Law; Human Resources Management, Management, Marketing, Operations Management or Quantitative Methods. Business Administration majors who complete two options may be regarded as having completed a double major, and appropriate notation can be made.
3. Elective units to total 124. Accounting must total 128 units. Elective freedom will vary from 0 to 23 units depending upon transfer credit. Each student is encouraged to select electives for expansion of knowledge and intellectual interests as well as for preparation for business employment. The School of Business Administration offers many specialized courses in the varied disciplines which may be utilized for elective credit. Students may consult the Advisement Center, Room 8, School of Business Administration, for advisement in selection of electives.
4. Additional requirements: Accounting majors must complete ENGL 303, finance majors must complete either Q S 402 or ENGL 303. Accounting majors must complete one course from Anthropology, Psychology, or Sociology.

Option in Accounting (code 3-2705)

The accounting curriculum offers study in the nature, theory and general problems of accounting with the objective of providing responsible leadership for a dynamic business environment. On a broad base of general education and business administration courses, the accounting program develops an understanding of an organization's management information system. The accounting program provides a background for the student interested in accounting as a career in business enterprises, not-for-profit organizations, or in the field of public accounting.

Accounting Option Requirements:

1. ACCT 30OA-B, 400 or 410, 450, 470 or 475, 480.
2. PHIL 170.
3. ENGL 303.
4. One course from Anthropology, Psychology, or Sociology.

Option in Administrative Systems (code 3-2720)

This option, administered within the Quantitative Systems Department, prepares its majors for positions of responsibility as administrative managers and managers of office services in business, industry, education and government. It is designed to give an understanding of the problems of administrative management and a perception of the principles, procedures and abilities needed to solve these problems. The program includes a substantial number of competences measured by the Certified Administrative Manager examination of the Administrative Management Society.

Administrative Systems Option Requirements:

Q S 302, 331, 402, 432, 433.

Option in Business Computer Methods (code 3-2725)

This option, administered within the Management Information Systems Department, prepares students for computer oriented careers in business, education, and government. Students may select an emphasis in Business Information Systems or in Business Computer Analysis. The Business Information Systems area emphasizes databases, file management, operating systems, and programming languages. The Business Computer Analysis area emphasizes application tools, system analysis, and problem solving using computers. Both areas lead to careers in system analysis, software engineering, and data processing management.

Business Computer Methods Option Requirements:

Select one area of emphasis.

Business Information Systems: QS 402, 440, 470, 481, 485, MIS 484.

Business Computer Analysis: QS 402, 440, 466, 470, 472, MIS 480.

Option in Finance, Real Estate, and Law (code 3-2710)

The finance, real estate, and law curricula offer education in the administration, techniques and regulations applicable to business finance, investments, insurance, risk management and real estate. The study of the institutions of American finance, their customs, practices, and legal frameworks gives a basis from which the student builds an understanding of the demand function of finance. The supply function is studied through offerings in investments including analysis of securities and commodities coupled with analysis of their price

trends and turning points. Special concentration is directed toward the study of acquisition, administration, and distribution of funds for the individual business firm as well as the supply of funds by individuals and institutions for investment in private enterprise. The finance, real estate, and law major may direct the concentration toward financial management, investments, or real estate.

Option in Finance, Real Estate, and Law Requirements:

1. FIN 382.
2. FIN 302 or 342.
3. FIN 464 (except Real Estate concentration).
4. Two courses in one of the following areas of concentration:.

   Financial Management. — FIN 360, 484, 490.

   Investments: FIN 484, 486, 488. Real Estate: (Any three) 444, 448, 449, or ECON 437.
5. Q S 300.

Option in Human Resources Management (code 3-2740)

The human resources management option offers education in theories, policies and practices relevant to the manager's crucial task of influencing others to work toward organizational goals. The curriculum is designed both for students who wish to specialize in the personnel or industrial relations field and for those who wish to obtain a background which will permit them to function more effectively in any Management position. The courses offered provide an in-depth study of interpersonal relations such as those between management and labor. Major objectives of this option are (1) to acquaint students with the types of management problems encountered in modern society, (2) to encourage them to develop an analytical approach to defining and solving those problems, and (3) to acquaint students with theories and practices on which effective courses of action can be based. Human resources management majors may direct their concentration toward either personnel management or labor relations.

Human Resources Management Option Requirements:

1. HRM 361 362
2. 12 or more units selected from HRM 440, 445, 446, 463, 464, 465 or 495

Option in Management (code 3-2745)

The objective of the management curriculum is to prepare students for a successful career in management of the business enterprise. Attention is given to the need to create and maintain a desirable internal environment. Interface of that environment with the external environment in relation to success of the enterprise is considered. Philosophical bases for the practice of management, ethical considerations and human values are stressed. The students' exposure to theory and concepts leads to the acquiring of knowledge and skills to assume first professional positions and progress through middle and upper management careers.

Management Option Requirements:

1. MGMT 426.
2. Four of the following: MGMT 326, 405, 430, 451, 453, 454, 455.

Option in Marketing (code 3-2750)

The discipline of Marketing, which is fundamental to all business enterprises, is largely a social process. The justification for any enterprise, be it involved in service or in the production or delivery of goods, is that it meets the needs of individuals or segments of society. The function of marketing is to determine those needs, to provide the most effective means of informing actual and potential customers of the availability of the services and goods they require, and to deliver such services and products to the appropriate people and areas. This concept of consumer-oriented marketing, which results both in improved societal welfare and in financial success of individual business enterprises, is basic to the Marketing option. Students who choose this option have vocational opportunities significant both in number and variety and can select from a range of careers including selling, advertising, marketing research, international marketing and strategic management.

Marketing Option Requirements:

1. MKTG 300;
2. Two courses selected from the 300-level foundations courses: MKTG 310, 320, 330, 340, 380;
3. Two courses selected from the advanced marketing concepts courses: MKTG 470, 480, 490, 492;
4. One course from the marketing strategies courses: MKTG 420, 430, 465;
5. MKTG 494.

Option in Operations Management (code 3-2758)

The objective of the operations management curriculum is to stimulate student competence in the conceptual, systemic and analytical tools prerequisite for entry-level and advanced positions. Goods-producing and service-oriented industries are considered. Emphasis is placed on the systems approach which stresses the concepts, techniques and policies essential for the economical and effective design, operation and control of the manpower, facilities, capital and informational inputs of organizations.

Operations Management Option Requirements:

1. Eighteen units as follows: MGMT 310, 410, 411.

   Manufacturing Planning and Control (MPC)

   Specialization: MGMT 412, 413.

   Purchasing and Materials Management (PMM)

   Specialization: MGMT 414, 415.
2. Three units of elective credit for either the MPC or PMM specialization may be selected from the following courses: HRM 362, 440, 445, MGMT 426, 430, 431, 432, 433.

Option in Quantitative Methods (code 3-2772)

This option, administered within the Quantitative Systems Department, leads toward quantitatively-oriented careers in business, industrial, educational and government organizations. It provides a foundation for problem solving and decision making using the methods of operations research, business statistics, and computer technology in such positions as operations research analyst, statistical analyst, computer analyst, and business researcher. Emphasis is placed upon concepts and application to the business environment, rather than upon mathematical-development of theory.

Quantitative Methods Option Requirements:

Q S 402, 410, 411, 460, 463, MIS 470.

Certificate in International Business: Undergraduate Program

Phenomenal growth of multi-national companies has been apparent in recent years, with increasing internationalization of the business world. Multi-national firms, governmental agencies, and varied international organizations express heightened demand for management personnel with a broad, global perspective. The Certificate in International Business, Undergraduate Program, combines an undergraduate degree in business with additional training in the area of international business beyond that normally included in a traditional business program. The objective of the program is to enhance the scope and perception of the business student to include the international business environment. Courses used to meet requirements for the Certificate in International Business may also apply toward School of Business Administration requirements for degree, option or minor. Students other than business majors may find application of certain courses to General Education requirements.

Requirements for the Certificate in International Business:

Undergraduate Program

1. A Bachelor of Science degree in Business Administration. This requirement may be completed concurrently with certificate requirements.
2. Eighteen units or more of study at this University in International Business, to include: ACCT 465, FIN 490, MGMT 405, MKTG 380, and 480.
3. A grade of "C" or higher will be required in each course completed.
4. The Certificate Program does not permit use of the Credit/No Credit option. Students with specific geographic areas of interest should consider development of language competence and cultural understanding relative to their area of interest concurrent with their Certificate Program. For additional information or for application to the program, interested persons may contact the Director of the Certificate Program in International Business, School of Business Administration or the Advisement Center, room 8.

Certificate in Quantitative Methods

The Quantitative Systems Department offers a Certificate in Quantitative Methods, designed to give students an understanding of the principles, procedures and abilities needed to solve the problems faced by business statisticians, operations researchers and computer programmers. The quantitative methods program prepares students for making scientific analyses and decisions relative to problems that may confront them in the industrial, business or governmental environments. It provides a foundation for problem solving and business decision making using the methods of statistics, operations research and computer technology. Operations research analysts, data processing managers, systems analysts, and other present and potential administrators may benefit from this program.

Requirements for the Certificate in Quantitative Methods

1. A bachelor's degree which may be taken concurrently with the certificate requirements.
2. A total of 18 units or more of Quantitative Methods at this University to include Q S 410, 411, 460, 463, MIS 470, 472.
3. A grade of "C" or higher will be required in every course taken for the certificate program.
4. The program does not permit use of the Credit/No Credit option.

Any deviation from this program requires the written approval of the program director.

Certificate in Transportation

Long Beach, containing one of the world's most modern and successful maritime commerce and international transportation centers, is situated in a unique and rapidly growing international hub of transportation. Surrounding its port facilities are major commercial airports, transcontinental railroads, and numerous trucking companies. The Long Beach-Los Angeles metropolitan area presents a challenging set of transportation realities. Stimulated by national concern over energy conservation and over the unfavorable balance of trade occasioned by expenditures for energy, the area anticipates an increased concentration of attention and resources from industry and government. The transportation facilities, systems, and problems that characterize the community served by the School of Business Administration provide an ideal laboratory for the serious student of transportation. The Certificate in Transportation is a program of preparation for professional competence in transportation that may be completed in conjunction with an undergraduate major in Business Administration or as a separate objective. Courses used to meet the requirements for a Certificate in Transportation may also be used to satisfy School of Business Administration requirements for degree, option, or minor. Students other than business majors may find application of certain courses to General Education requirements.

Requirements for the Certificate in Transportation

1. A bachelor of science degree in Business Administration which may be completed concurrently with the certificate requirements.
2. A minimum of 15 units of transportation and transportation-related course work at California State University, Long Beach to be selected from the following: MKTG 340, 380, 465; MGMT 407 and C E 426. The following courses may be selected with the approval of the Program Director: Marketing 495 and 497.
3. A grade of C or higher will be required for every course.
4. The certificate program does not permit the use of the Credit/No Credit option.

Minors in Business Administration

Minor programs of study in business administration, each requiring 18 or more units, are available for all students in the following areas: Administrative Systems, Human Resources Management, Marketing and Quantitative Methods. As with major fields of study, each minor has been carefully designed to ensure attainment of specific competencies in a significant area of specialization in business.

Minor in Administrative Systems (code 0-2720)

Eighteen or more units including

1. ACCT 20l
2. MIS 240, 302, 331, 432
3. Either Q S 402 or 433

Minor in Human Resources Management (code 0-2740)

Eighteen or more units including

1. HRM 361
2. Fifteen or more units selected from HRM 362, 440, 445, 446, 463, 464, 465.

Minor in Marketing (code 0-2750)

Eighteen or more units including

1. MKTG 300
2. 15 or more units selected from MKTG 310, 320, 330, 340, 380, 408, 420, 430, 465, 470, 480, 490, 492, 494 or 495 as approved by the Marketing Department.

Minor in Quantitative Methods (code 0-2772)

Eighteen or more units including Q S 410, 411, 460, 463, MIS 470 and 472 as approved by the Quantitative Systems Department

Courses (SBA):

493. Business Internship (3) F,S,SS

Prerequisite: Classified Business Major and Instructor consent. Qualifying students will be placed in career-related paid assignments in private or public agencies or businesses. An organized plan utilizing a series of seminars and learning agreements is required along with selected reading and writing assignments. A minimum of 120 hours paid experience per semester is required. (May be repeated for a maximum of six units.)

Graduate Programs

The School of Business Administration offers graduate study leading to either the Master of Business Administration (MBA), a program of breadth, or Master of Science degree in Business Administration (MSBA) in a single field of specialization. All degrees offered by the School Business Administration are accredited by the American Assembly of Collegiate Schools of Business.

Both the MBA and MS degrees are designed to serve the community by providing graduate business education to persons who show promise of leadership and success in business or related fields. For this reason, the faculty of the School of Business Administration has established rigorous standards of admission and completion for the program.

The School of Business Administration graduate program has seven educational objectives:

To develop a proficiency in the identification, analysis and solution of major problems in the management of an enterprise.

To develop an understanding of the functional areas within the enterprise and a high proficiency in the skills essential to the disciplines encompassed by the School of Business Administration.

To instill a respect for the highest levels of ethical behavior and an appreciation of personal and organizational responsibilities in natural, social, political and economic environments.

To inspire a recognition of managerial accountability.

To foster peer learning and establish a foundation for lifetime learning development.

To enhance an awareness of the need for adaptability to change in order to achieve personal, organizational, and social objectives.

To develop the ability to communicate effectively and with credibility and sensitivity.

Admission to Graduate Study

In addition to admission by the University Office of Admissions and Records, an applicant for graduate study in business must apply to and be admitted by the School of Business Administration. It is the responsibility of the student to purchase a current C.S.U.L.B. Bulletin which sets forth the policies of the University and the School of Business Administration graduate program.

Admission Procedures

1. Students should submit Part A and B of the University Common Admissions form to the University Admissions Office.
2. Two complete sets of official transcripts of all college work attempted are required. One set should be sent to:

   Admissions Office
   California State University,
   Long Beach
   1250 Bellflower Boulevard
   Long Beach, CA 90840

   The other should be sent to:

   Graduate Office
   School of Business Administration
   California State University,
   Long Beach
   1250 Bellflower Boulevard
   Long Beach, CA 90840
3. Graduate Management Admission Test (GMAT) scores must be forwarded directly from the Educational Testing Service or from the University Test Office to the Graduate Office, School of Business Administration
4. Foreign students should first contact the International Student Office on campus. Foreign students are required to take the TOEFL test and achieve a score of 550, in addition to the GMAT required of all students in the Graduate Business Administration programs.

Evaluation

All transcripts, the "B" part of the Application, and the GMAT test score and the TOEFL must be on file in the Graduate Office, School of Business Administration, before the file will be evaluated. Applications completed before October 15 for the following Spring Semester and before April 30 for the following Fall Semester will be given preference. Students submitting or completing their applications after these dates will be admitted as space is available.

Transcripts and GMAT scores are evaluated according to the criteria of (a) or (b) below. Upon completion of evaluation by the School of Business Administration Graduate Office, the student is notified by mail of acceptance or rejection. If accepted, the letter includes an evaluation listing prerequisites met by the student in previous coursework and those still requiring completion.

Coursework over ten years old at the time of acceptance will not be considered for satisfaction of the First Year Core, unless it can be validated by C.S.U.L.B. examination or special committee review.

Criteria

(a) At least 1050 points based on: 200 x overall undergraduate grade point average (GPA) (4.0 scale) plus GMAT score; or
(b) At least 1125 points based on: 200 x upper-division GPA plus GMAT score, using the last 50 percent of coursework taken, which may include post-baccalaureate study.

Applicants with GMAT scores below 450 will only be admitted by special review and on a space available basis, and only if they otherwise meet GPA formula (a) or (b). Applicants with GMAT scores below 400 will not be considered.

Enrollment

Admission to the University as a graduate student does not constitute admission to graduate study in the School of Business Administration. Due to undergraduate impaction, graduate students seeking admission will find it difficult or impossible to enroll in any business course until formally admitted into a graduate program. School of Business Administration courses numbered 500 or higher may not be taken by a student who has not been admitted to a graduate program. Courses taken prior to admission to a graduate program of the School of Business Administration, whether undergraduate or graduate courses, may apply only in a very limited manner toward degree requirements. Consult the School of Business Administration Graduate Office for advisement.

Scholastic Standards

Learning is viewed as a function of motivation, academic aptitude and circumstances. Since there is a high demand for spaces, a limit is imposed to the number of times students may attempt to demonstrate their ability to meet minimum standards. A student who was not successful in maintaining a cumulative GPA of 3.0 or higher in work completed as a graduate student at another institution will not be considered for admission. A student who fails to maintain a cumulative GPA of 3.0 or higher in all work completed as a graduate student at this University and in all work completed at the University combined with work transferred from other institutions will be placed on academic probation.

A student on probation, who at the end of the second probationary semester fails to obtain a cumulative GPA of 3.0 or higher on all units attempted in post baccalaureate work at CSULB, will be disqualified and removed from the graduate program. The student should note that the cumulative GPA is calculated by the University Admissions and Records Office and includes all upper division and graduate courses taken.

A grade of C or better is required in any course taken to satisfy first-year Core requirements or as part of a student's second-year program. A grade of B or better is required in GBA 699. If either of these requirements is not met, a student must take the course a second time or withdraw from the program. A second failure to achieve the required grade will result in involuntary separation from the program. This requirement operates independently of the requirement for a cumulative GPA of 3.0 or better.

The School of Business Administration is committed to producing graduates of the highest caliber. Students come to the graduate programs from varied backgrounds. Through the program each student rises to demonstrable levels of achievement in crucial areas of competence. Throughout the program the necessity for individualization is recognized. Courses considered essential to the development of required competencies may be added to a student's program by the Director of Graduate Studies at the time of advancement to candidacy.

Master of Business Administration Degree (code 7-2701)

The Master of Business Administration program develops competencies essential to functioning professionally in a complex and competitive business environment. The program provides preparation for responsible administrative positions and the background essential for advancement in professional management careers. The Master of Business Administration degree is a program of breadth which builds a wide range of competencies required for effective management while permitting students to specialize in a functional area.

The Masters in Business Administration is normally a 60 unit program for the graduate without a BS in Business.

Because of high demand for admission to the MBA program, it is advisable that students make their application to the program early. Impaction of the undergraduate program may make it difficult for students not yet admitted to the MBA program to enroll in qualifying undergraduate courses. Each student is urged to study the School of Business Administration Graduate Handbook and to consult with the SBA Graduate Office, SBA room 8, telephone (213) 498-4514.

Advancement to Candidacy

Advancement to Candidacy for a graduate student in the School of Business Administration is contingent upon completion of the following requirements:

1. Acceptance into the graduate program of the School of Business Administration by the Office of Graduate Studies of the School.
2. Establishment of the degree objective.
3. Completion of all First Year Core courses with a grade of "C" or better.
4. Submission of the 33 unit program of study.
5. Maintenance of a 3.0 minimum GPA in all work complete as a graduate student at this University and in the cumulative GPA, including work transferred from other institutions.
6. Satisfaction of University requirements for Advancement to Candidacy.
7. Passage of the Writing Proficiency Examination.

Time Limitations

All course work in the MBA and MS programs submitted for advancement to candidacy must be completed within seven years from the date of completion of the first course in the 33 unit program.

Writing Proficiency Examination

The Writing Proficiency Examination (WPE) is a unique requirement of this University. Graduate students in Business should register for it when they first arrive on campus. This may be done by paying the fee at the Cashier's Office in the Administration Building and registering for the WPE in the Testing Office in the same building. Since passage of the WPE is required for Advancement to Candidacy, the requirement should be satisfied as early as possible. There are no exemptions to the requirement.

An individual's second year program is governed by the requirements of the University and the School of Business Administration in effect at the time of advancement to candidacy. Each student is urged to file for advancement to candidacy as early as possible. This essential, formal procedure includes the student's submitting a proposed area of specialization (12 or 15 units in Accounting and Taxation) in addition to the second year core for approval by the SBA Graduate Office and the Graduate Dean. A form is available in SBA, room 8. Students admitted with all first year Core requirements met must file their program during their first semester. Students enrolled in First Year Core courses should file for advancement in their last semester of First Year Core work. Not more than 6 units of the Specialization may be in 400 level courses; none may be at the 300 level.

Requirements for the Master of Business Administration Degree

The Masters degree presupposes a mastery of a common body of knowledge. However, a degree in business is not a requirement for admission to graduate study in business. This requirement may be satisfied by completion of a 27 unit Core of graduate courses following admission to the School of Business Administration. Students with a bachelor's degree in business from this University or from other AACSB accredited universities will have met all or most of the first year Core requirements. It may be discovered upon examination of transcripts that students with other degrees have met some of the Core requirements also.

This series of 500-level courses in functional areas of business study has been developed to assure that students possess the common body of knowledge. Students with courses remaining to be satisfied may complete the required 500-level course in that area following admission to the School of Business graduate program. This Core will be completed before enrollment in the second year program. Students who have not been admitted to the business graduate program may not enroll in 500 or above level courses. Evaluation of transcripts and determination of Core areas remaining to be satisfied is a function of the SBA Graduate Office. A study List of the Core courses yet to be satisfied in the Common Body of Knowledge is included with the notice of acceptance by the School of Business.

The MBA program must include:

I.	First Year Core:	27 Units
II.	Second Year Core:	18 Units
III.	Specialization:	12-15 Units
IV.	Capstone course:	3 Units
	Total	60-63 Units

I. First Year Core — Common Body of Knowledge

1. ACCT 500 Financial Accounting
2. FIN 501 Managerial Finance
3. HRM 500 Human Resources Management
4. MGMT 500 Business Policies, Operations and Organization
5. MKTG 500 Marketing Management
6. MIS 500 Applied Statistics and Decision Analysis
7. ECON 500 Managerial Economics
8. MIS 500 Management Information Systems
9. FIN 500 Legal Environment of Business

II. Second Year Requirements for the MBA

Upon completion of the first year Core either by transfer units or by course work students should plan to move directly into the second year Core. The second year requires completion of six courses (18 units) which provide the breadth requirements for the MBA degree at an advanced level, an area of specialization (12 or 15 units in Accounting, of which 3 units may be satisfied by 6 units of approved 400-level Accounting courses, and Taxation) and GBA 699 (3 units).

1. ACCT 510 Advanced Cost Accounting
2. FIN 631 Seminar in Business Finance
3. HRM 652 Seminar in Personnel Management
4. MGMT 647 Seminar in Management Planning and Control Systems
5. MKTG 661 Seminar in Marketing Policies
6. MIS 502 Management of Information Systems

III. Specialization

The area of specialization will be selected from one of the following areas of preference: Accounting, Taxation, Finance, Human Resources Management, Management, Marketing or Quantitative Systems. Courses for the specialization will be selected in consultation with faculty from the discipline.

A. Accounting
B. Taxation
C. Business Finance
D. Human Resources Management
E. Management F. Marketing
G. Quantitative Systems

* Students electing a Taxation specialization must substitute Acct 612 in place of Acct 510.

IV. Capstone Course: GBA 699. Integrated Analysis

Integrated Analysis, GBA 699, is taken as the last or Capstone course in the program. In this Comprehensive analysis the student will integrate the knowledge obtained in the functional areas. This capstone course serves in place of either comprehensive examination or thesis as the required evaluation of candidate competency. In addition, to completion of the required GBA 699, an MBA candidate may elect to complete a thesis for a minimum of four units credit.

Application for acceptance into GBA 699 must be filed in the Graduate Office before the end of the fourth week of instruction in the semester preceding graduation. Application forms and advisement relating to this important requirement are available in the Graduate Office of the School of Business Administration.

Master of Science Degree in Business Administration

The Master of Science Degree in Business Administration provides opportunity for specialization in an area of business administration of greatest interest to the student. Specialization is available in Accounting, Administrative Systems, Finance, Human Resources Management, Management, Marketing, Operations Management, or Quantitative Methods. An individual with well-defined career goals within a specialized field may find that the Master of Science Degree provides the intensive graduate business study desired.

Advancement to Candidacy

The process of advancement to candidacy for the Master of Science degree is essentially the same as for the Master of Business Administration.

Master of Science Degree Requirements:

I. Common Body of Knowledge

Both the Master of Science and the Master of Business Administration require the same common body of knowledge.

Additional Prerequisites

In addition, each area of the Master of Science specialization lists required prerequisites unique to that area of study. Please see the Master of Science Degree options that follow for these requirements. A student with a Bachelor of Science in Business will normally have met most of these prerequisites in the Bachelor of Science major concentration.

II. The Master of Science Second-Year Core

The Master of Science requires a minimum program of 33 units beyond satisfaction of the common body of knowledge and prerequisites, will be developed jointly by the student, the department of specialization and the Graduate Office. All programs will include:

MIS 500, Management Information Systems, and GBA 601, Applied Research. With approval of a specific project of applied research, GBA 697, Directed studies in the department of specialization, may be substituted for GBA 601.

III. Master of Science Options

Option In Accounting (code 6-2705)

The Master of Science Degree Option in Accounting is designed to develop the expanded knowledge and skills which serve as the foundation for specialization in public accounting or an accounting management career in business or government. The program serves as a basis for further advanced graduate study in accounting. Understandings are developed relating to the socio-economic aspects of our society which place increased demands on the accounting profession. Graduate study in accounting is based upon a strong foundation of accounting prerequisites.

Prerequisites

1. The Department of Accountancy requires satisfaction of the following prerequisite sequences in accounting. ACCT 201 or equivalent is prerequisite to ACCT 300A: Minimum of 15 Units. ACCT 300A-B, 320, 400, 450, 470, and 480. Students may contact the Chairperson of the Department of Accountancy concerning departmental prerequisites.

Option in Administrative Systems (code 6-2720)

The Master of Science Degree Option in Administrative Systems is designed to develop competencies required of the administrative manager in an expanding field comprising administrative systems, data processing, reprographics, micrographics, word processing, telecommunications, and records management in addition to the more traditional areas of office services. Instructors in the community college complete the degree as a subject matter area for the Community College Credential.

Prerequisites

The Quantitative Systems Department requires satisfaction of a minimum of 15 units of prerequisites, to include the following or equivalent: Q S 302, 331, 402, 432, and 433. Students may contact the Chairperson of the Quantitative Systems Department concerning departmental prerequisites.

Option in Finance, Real Estate, and Law (code 6-2710)

The Master of Science Degree in Finance, Real Estate, and Law is designed to prepare individuals for staff positions in business, to provide instruction to community college instructors, to train research personnel, and to provide additional background for those whose interests or professions draw from the subject areas included within the Department. The Department of Finance, Real Estate, and Law offers instruction in three fields: Financial Management, Investments, and Real Estate.

Prerequisites

The Department of Finance, Real Estate, and Law requires satisfaction of a minimum of 15 units of prerequisites in the field. Determined and approved by the Chairperson of the Department of Finance, Real Estate, and Law, these prerequisites will be equivalent to an undergraduate option in Finance, Real Estate, and Law.

Option in Human Resources Management (code 6-2740)

The graduate curriculum in human resources management has dual objectives. It prepares students for entry positions as technical specialists in personnel and industrial relations departments. It also serves as a step toward continuing graduate study in the field, offering breadth and depth. Courses direct attention to both individual and group behavior in working organizations and to the impacts of policy development. They emphasize the translation, interpretation, application and testing of relevant theory including contributions from the behavioral sciences.

Prerequisites

The Human Resources Management discipline, within the Management Department, requires satisfaction of a minimum of 15 units in human resources management. Determined and approved by the Chairperson of the Department, these prerequisites will be equivalent to an undergraduate option in human resources management. Students should contact the Department Chairperson concerning departmental prerequisites.

Option In Management (code 6-2745)

The graduate curriculum in management is designed to provide the student with a graduate education in management theory, doctrine and activities. Students completing this degree will have the basis for successful experience in business so as to progress into middle and upper management positions, and eventually to reach top management positions. Management graduates are equipped not only to advance in private enterprise but also are qualified for management positions in nonbusiness organizations, such as government, universities, and various other institutions.

Prerequisites

The Management Department requires satisfaction of a minimum of 15 units of prerequisites in management. Determined and approved by the Chairperson of the Management Department, these prerequisites will be equivalent to an undergraduate option in finance. Students should contact the Department Chairperson concerning departmental prerequisites.

Option in Marketing (code 6-2750)

The Master of Science degree in marketing is intended to prepare graduates for the responsibilities of marketing management, for devising, improving, and directing the policies, strategies, and techniques of marketing. It also prepares for a doctoral degree in marketing — a necessary requirement for those interested in either university teaching or sophisticated marketing research careers. The program is flexible, offering a balance between theoretical analysis and examination of established practices. It provides an opportunity for the student to explore the areas of marketing both in breadth and depth. Several areas of marketing offered include: advertising and promotion, consumer behavior, international marketing, logistics, and marketing research and analysis.

Prerequisites

The Marketing Department requires satisfaction of a minimum of 15 units of prerequisites in Marketing; determined and approved by the Chairperson of the Department, these prerequisites will be equivalent to an undergraduate option in marketing. Students should contact the Department Chairperson concerning departmental prerequisites.

Option in Operations Management (code 6-2758)

The graduate curriculum in operations management is intended to prepare the graduate for employment as a staff specialist in Operations Management in a wide variety of business enterprises and governmental institutions. Synthesis and analysis of the design, improvement, installation, and operations of integrated systems of people, materials, machines, and equipment are studied resulting in the specification, prediction and evaluation of the results to be obtained from such systems. The program is designed to present an organized body of knowledge dealing with the design of both continuous and intermittent processes for converting input factors into desired products and services produced.

Prerequisites

The Management Department requires satisfaction of a minimum of 15 units. Determined and approved by the Chairperson of the Department, these prerequisites will be equivalent to an undergraduate option in operations management. Students should contact the Department Chairperson concerning departmental prerequisites.

Option in Quantitative Methods (code 6-2772)

The graduate curriculum in quantitative methods is designed to develop quantitative abilities in the management sciences. Emphasis is placed on the interaction of economists, behavioral scientists, social scientists, mathematicians, engineers, computer specialists, etc., with the development of viable solutions to problems arising in the business environment. This option offers instruction in three fields: Operations Research, Statistics, and in Computer Methods.

Prerequisites

The Quantitative Systems Department requires satisfaction of a minimum of 15 units of prerequisites in Quantitative Systems courses, to include the following courses or equivalent: QS 410, 411, MIS 470, 484 and courses as required by the Department from QS 413, 483, or MIS 472. Students should contact the Department Chairperson concerning departmental prerequisites.

IV. Specialization Requirements:

1. Fifteen (15) units of Graduate Business Courses: (502-697). A minimum of 15 units of graduate business courses numbered 502-697 will be selected with advisement from the department of specialization.
2. Eight to twelve (8 to 12) Graduate Business Courses Units: Additional 502-697 level graduate business courses or approved upper division 400 level business courses will be selected to meet the 33 unit minimum program requirement. Designated by an asterisk in this Bulletin, approved 400 level courses must be taken in graduate status. They may be taken by unclassified graduate students before admission to the business program.

Note: No more than 3 of the 33 units may be either 497, directed studies or 697, directed studies from any of the departments within the School of Business Administration.

V. One of the following terminal evaluations:

Integrated Analysis GBA 699*

Thesis GBA 698

Comprehensive Examination

* — Application for acceptance into GBA 699, Integrated Analysis, must be filed in the Graduate Office before the end of the fourth week of instruction in the semester preceding enrollment. Application forms and advisement relating to this important requirement are available in the Graduate Office of the School of Business Administration.

Certificate in International Business: Graduate Program

International business is a rapidly growing field requiring trained specialists in this area for service both domestically and abroad. International trade is reaching ever higher levels, with the U.S. accounting for a large portion of the total. Thus few businessmen can continue to afford to be unconcerned about the impact of international business upon their welfare.

The Certificate in International Business is designed for those who are already in the business graduate program, or for those who are qualified for graduate study in business. The program provides a level of business education not available in the traditional business courses. The objective of this program is to enhance the perception and adaptation of the student's personal and educational background to the international business environment.

Requirements for the Certificate in International Business

1. An undergraduate degree in business administration, or completion of a common body of knowledge normally developed in an undergraduate business program.
2. Application to and approval of the Director, International Business Center and Director, Graduate Studies, School of Business Administration.
3. A minimum of 18 units of graduate international business coursework at C.S.U.L.B.
   (a) MKTG 506
   (b) MGMT 543, HRM 552, MKTG 666, 667, and FIN 691.
4. A minimum GPA of 3.0 must be maintained in all the courses taken for the certificate program. Courses in which the student earns a grade lower than a C may not be applied to the program.
5. No more than six units of these 18 units may be used to fulfill the basic 33-unit M.B.A. or M.S. in business requirements at this University.

Modification of the Certificate in International Business graduate program will require written approval of the Director of the International Business Center. Students with specific geographic areas of interest should consider development of language competency and cultural understanding relating to their area of major interest.

For additional information or for application to the program, interested persons may contact the Director of the Certificate in International Business graduate program, International Business Center, School of Business Administration.

Graduate Business Administration Courses (GBA):

601. Applied Research (3) F,S Faculty

(Not open to those with credit in GBA 690.) Prerequisite: QS 500 or equivalent. Scientific methods of research methodology and design. The application of research findings to major phases or business. Individual research projects. Emphasis is on experimentation and surveys. Utilities background of specific statistical tools and techniques. Computer statistical packages will be utilized.

698. Thesis (2-4) F,S Faculty

Prerequisite: GBA 601. Planning, preparation, and completion of a thesis in business administration.

699. Integrated Analysis (3) F,S Faculty

Prerequisites: Classified MBA/MS status in the last semester or within six units of completion of the 33-unit minimum graduate program and advanced to candidacy. A comprehensive course which serves as the required terminal examination for School of Business Administration graduate candidates. A project is required. A study of a wide range of business problems and formulation of solutions to them. The object of this course is to assess student skills in integrating knowledge from all functional areas of business and applying them to complex business problems arising out of changing technology, competitive market conditions, social changes and governmental actions. The methodology may include cases, business simulation, and team teaching. A grade of B or better is required for successful completion. Students must file application for entry into GBA 699 no later than the fourth week of instruction in the semester preceding the one in which GBA 699 will be taken. Application forms are available in the SBA Graduate Office.

Accountancy

School Of Business Administration

Department Chair: John T. Martinelli, Sr.
Department Office: SBA-224
Telephone: 498-4586
Faculty: Professors: Truman O. Hickerson, Sitikantha Mahapatra, John T. Martinelli, Sr., Mohamed E. Moustafa, Jae K. Shim, Talmadge C. Tillman; Associate Professors: Stewart Berkshire, Michael Chase, David Davidson, John E. Hinds, Peter P. LaPage
Assistant Professors: Deanna Daniels, Merrill Lewis.
Emeritus Faculty: Edna M. Andrews, Serafina Q. Gunter, Aren A. Lewis, A. Mary McKinnon, Clyde T. Suttle

Students desiring information should contact the department office for referral to one of the faculty advisors.

Department Secretary: Juanita Daly

For all degree requirements see Business Administration.

Department of Accountancy Advisory Board: Robert W. Cole, Financial Management Officer, City of Long Beach Water Department; Dalton Dennis, Director of Accounting Douglas Aircraft, McDonnell Douglas Corporation; Mike Garnreiter, Arthur Andersen; Patrick Gormley, Audit Manager, United States General Accounting Office; Sanford Groves, Assistant City Manager, City of Paramount; Ken Heintz, Partner, Deloitte, Haskins, Sells; Jack Hinsche, Partner, Windes, McClaughry Company; Steven Kahn, Ernst Whinney; John Kimes, Vice President Controller, Norris Industries; Andrew Marincovich, Managing Partner, Marincovich Hickerson; Bea Morrow, Partner, Coopers Lybrand; Carlos Perez, Partner, Touche Ross Company; William E. Pierce, Certified Public Accountant; James O. Pittman, Controller, Sully-Miller Construction Company; David Ransom, Owner, Ransom Enterprises; Richard Sprayregen, Audit Partner, Kenneth Leventhal Company; Lynn Steiner, Partner, Murchison Marek, Accountancy Corporation; Mike View, Arthur Young; Robert G. Walden, Senior Vice President, Logicon Corporation; Alan Whiley, Partner, Peat, Marwick, Mitchell Company.

Courses (ACCT):

Lower Division

201. Elementary Financial Accounting (3) F,S Faculty

Introduction to financial accounting theory, practice. For business majors. Laboratory and/or class computer applications are a requirement of the course.

205. Accounting Concepts (3) F,S Faculty

Prerequisites: Financial and managerial accounting concepts with emphasis on utilization of accounting data in management decisions. For non-business majors only. Laboratory and/or class computer applications are a requirement of the course.

Upper Division

300A-B. Intermediate Accounting (4,4) F,S Faculty

Prerequisites: 300A: Acct 201 or equivalent with a grade of "C" or better, 300B: ACCT 300A with a grade of "C" or better. Accounting theory including recording, valuation, and statement presentation of assets, liabilities, capital, earnings; funds statements; financial analysis; compound interest theory and applications. Laboratory and/or class computer applications are a requirement of the course.

310. Managerial Accounting (3) F,S Faculty

Prerequisites: ACCT 201 or equivalent. Use and interpretation of financial statements; evaluation of accounting information systems; accounting for and analysis of costs; managerial use of accounting data for planning and decision making. Not open to accounting majors for course or unit credit. Laboratory and/or class computer applications are a requirement of the course.

320. Cost Accounting (4) F,S Faculty

Prerequisites: ACCT 210 or equivalent with a grade of "C" or better. Theory and practice of cost accounting. Managerial use of cost accounting data for planning, controlling and decision making. Emphasis on cost accumulation and management information systems. Laboratory and/or class computer applications are a requirement of the course.

400. Advanced Accounting (4) F,S Faculty

Prerequisites: ACCT 300B with grades of "C" or better. Specialized problems in partnership and corporate accounting, consolidations, foreign currency transactions and translations, fund accounting and selected topics. Laboratory and/or class computer applications are a requirement of the course.

410. Advanced Managerial Accounting (4) F,S Faculty

Prerequisites: ACCT 320 with a grade of "C" or better. Managerial accounting concepts as they apply to planning, decision making, performance evaluation and control. Laboratory and/or class computer application are a requirement of the course.

450. Federal Tax Law I (4) F,S Faculty

Prerequisites: Any upper-division accounting course with a grade of "C" or better. Federal income taxation of the individual taxpayer. Laboratory and/or class computer applications are a requirement of the course.

451. Federal Tax Law II (4) F,S Faculty

Prerequisites: ACCT 450 with a grade of "C" or better. Federal income taxation of partnerships, corporations, estates and trusts. Laboratory and/or class applications are a requirement of the course.

460. Accounting for Not-for-Profit Organizations (4) F,S Faculty

Prerequisites: ACCT 300B and 320 with grades of "C" or better, or consent of instructor. Financial and managerial concepts as they apply to organizations whose objectives are primarily to provide service rather than generate profit. Laboratory and/or class computer applications are a requirement of the course.

465. International Accounting (4) F Faculty

Prerequisites: Any 300-level accounting course with grade of "C" or better. Contemporary accounting theory and practice form an international perspective. Comparative accounting systems in various countries based on prevailing practice in the United States. Analysis of international accounting and auditing standards. Laboratory and/or class computer applications are a requirement of the course.

470. Auditing (4) F,S Faculty

Prerequisites: ACCT 300A, 300B, 320 with grades of "C" or better. Problems of verification, valuation and presentation of financial information in reports covered by the opinion of an independent public accountant. Major concepts of operational auditing and its relationship to the independent audit. Responsibilities of the public accountant, internal auditor and rules of professional conduct. Laboratory and/or classroom computer applications are a requirement of the course.

475. Operations Auditing (4) F,S Faculty

Prerequisites: Concepts, methods and techniques of performing operational audits as a management control tool. Major concepts of financial auditing and its relationship to the operational audit. Responsibilities of the internal auditor, public accountant and rules of professional conduct. Laboratory and/or classroom computer applications are a requirement of the course.

480. Accounting Systems and Data Processing (4) F,S Faculty

Prerequisites: QS 240, ACCT 300B and 320 with grades of "C" or better or consent of instructor. Course is designed to familiarize students with the accounting information systems development process. Major topics include analysis, design, development and implementation of accounting information systems. Consideration will be given to the automation of accounting information systems through the use and application of computers. Laboratory and/or classroom computer applications are a requirement of the course.

493. Accounting Internships (3) F Faculty

Prerequisite: Accounting 300B, Accounting GPA 3.0, Overall GPA 3.0. Students work in public accounting or accounting divisions of private industry or governmental agencies to gain accounting experience in real world situations. Class seminar analysis, evaluation of academic theory in terms of the real world environment

***495. Selected Topics (I-3) F,S Faculty**

Prerequisites: Consent of instructor and a 3.0 grade point average in accounting. Topics of current interest in accounting selected for intensive study. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

*497. Directed Studies (I-4) F,S Faculty

Prerequisites: Consent of instructor and department Chair, on Dean's List and 3.0 GPA or higher in accounting. Individual projects, study and research of advanced nature in accounting.

Graduate Prerequisite Courses

500. Managerial and Financial Accounting (3) F,S Faculty

Prerequisites: Graduate Standing. (Graduate students starting accounting and planning on continuing in that area should elect ACCT 201). Evaluation of accounting systems, preparation of financial statements, computer information processes and analysis and interpretation of accounting information as an aid to business decisions. Laboratory and/or class computer applications are a requirement of the course.

Graduate Division

508. Contemporary Problems in Management Accounting (3) F,S Faculty

Prerequisites: ACCT 310, 320 or equivalent, with a grade of "C" or better, or consent of instructor. Examination of the literature on profit planning, control, and decision making. Current problems in management accounting; behavioral implications of management information systems; and quantitative approaches to managerial accounting. Laboratory and/or class computer applications are a requirement of the course.

510. Advanced Cost Accounting, Budgeting and Control (3) F,S Faculty

Prerequisites: ACCT 320, or 310 with a grade of "C" or better, or consent of instructor. Problems in planning, budgeting and cost control for decision making from a quantitative analysis approach with emphasis on evaluation of the accounting information system. Laboratory and/or class computer applications are a requirement of the course.

513. Advanced Auditing (3) F,S Faculty

Prerequisites: ACCT 470, with a grade of "C" or better or consent of instructor. Extension of the basic auditing course beyond principles and procedures into areas of theory and practice. Additional concern has to do with the forces having an interest in, and an influence on, the external audit process. Laboratory and/or class computer applications are a requirement of the course.

515. Advanced Internal Auditing and Control (3) F,S Faculty

Prerequisites: ACCT 470 or 475 with a grade of "C" or better, or consent of instructor. Philosophy, principles, procedures, and literature of the internal auditing field. The effect of the Foreign Corrupt Practices Act. The role of internal control and auditing on the management of the business enterprise. Laboratory and/or class computer applications are a requirement of the course.

517. EDP Controls and Audit (3) F,S Faculty

Prerequisites: ACCT 470 or 475, 480, with grades of "C" or better, or consent of instructor. The development and implementation of control procedures and policies over the computerized environment. A highly technical course designed for accountants and auditors interested in developing skills in computer assisted auditing techniques. Laboratory and/or class computer applications are a requirement of the course.

521. Advanced Corporate Taxation (3) F,S,SS

Prerequisites: Compliance and planning stratagies of Federal taxation as they relate to the organization, capital structures, operation, reorganization, distributions, redemptions, liquidations of corporations, and introduction to S corporations. The Federal Tax consequences of these events on both the shareholders and the corporation will be studied. Laboratory and/or class computer applications are a requirement of the course.

522. Advanced Partnership Taxation (3) F,S,SS

Prerequisites: Compliance and tax planning strategies of Federal taxation as they relate to agreements formations, operations, distributions, dissolutions, and other dispositions of partnership interests, family partnerships and limited partnerships will be studied. Laboratory and/or class computer applications are a requirement of the course.

523. California State and Local Taxation (3) F,S,SS

Prerequisites: Current problems in California taxation are discussed and researched. Income, sales, property, multi-state operations, and other taxes of state and local governments are examined. The differences and interrelationships with Federal tax law are also studied. Laboratory and/or class computer applications are a requirement of the course.

525. International Taxation (3) F,S,SS

Prerequisites: Analysis of the tax treatment of foreign income of United States citizens, non-resident aliens, foreign corporations, foreign currency, subpart F rules, and the effect of treaties will be studied. Tax concepts and principles related to selected current tax topics. Laboratory and/or class computer applications are a requirement of the course.

580. Accounting Information Systems F,S Hinds, Chase, Hickerson

Prerequisite: Graduate Standing. Information requirements and transaction processing procedures relevant to integrated accounting systems, including computer systems analysis, design, and controls.

610. Seminar in Accounting Theory (3) F,S Faculty

Prerequisites: ACCT 300B or 500 with a grade of "C" or better. The development of accounting principles and theory; problems in valuation, income determination and financial disclosure. Laboratory and/or class computer applications are a requirement of the course.

612. Tax Research and Procedures (3) F,S,SS Faculty

Prerequisites: ACCT 450 451. The study of the primary sources of income tax law; their uses and interrelationships in researching problems arising under the federal tax laws. Research techniques will be applied to compliance and tax planning problems of individuals, business organizations, estates and trusts. Analysis of the organization of the Internal Revenue Service and the procedures relating to audits, tax collections criminal prosecutions and federal tax litigation. Laboratory and/or class computer applications are a requirement of the course.

620. Seminar in Tax Theory and Business Applications (3) F,S,SS

Prerequisites: Conceptual foundation of the structure and operation of tax laws as they relate to the decisions relating to the operation of and tax planning for a business entity. Laboratory and/or class. Computer applications are a requirement of the course.

621. Taxation of Property Transactions (3) F,S,SS

Prerequisites: ACCT 612. Student's knowledge is updated on current developments and in the application of the Code, Regulations and court decisions in analyzing and resolving property transaction tax problems, identifying investment criteria, and planning opportunities for clients. Concepts and principles of transactions involving the sale, exchanges and other transactions are studied. Recognition and the nature of gains and losses and current developments relating to property transactions are examined. Laboratory and/or class computer applications are a requirement of the course.

622. Seminar Planning Federal Estate Trust and Gift Taxes (3) F,S,SS

Prerequisites: ACCT 612. Analysis of tax treatment, tax planning techniques and tax problems of trusts, estates and lifetime gifts. Emphasis is placed on structuring personal financial plans to minimize income, estate and gift taxes. Laboratory and/or class computer applications are a requirement of the course.

625. Seminar in Pension and Profit Sharing (3) F,S,SS

Prerequisites: ACCT 612. The current tax regulations governing employee retirement plans including pension and profit sharing plans, stock bonus plans, self employed retirement plans, individual retirement accounts, and deferred compensation. Tax implications for employers and employees will be analyzed. Laboratory and/or class computer applications are a reqirement of the course.

695. Special Topics (3) F,S Faculty

Prerequisites: Consent of instructor. Topics to be announced in the Schedule of Classes. May be repeated once under a different topic.

697. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Individual study under the direction of the faculty.

Finance, Real Estate & Law

School of Business Administration

Department Chair: Wendell H. McCulloch, Jr.
Department Office: SBA-340
Telephone: 498-4569
Faculty: Professors: Earl S. Beecher, Virginia M. Belt, Harold R. Dilbeck, Barbara C. George, Charles V. Harlow, Michael L. Kearney, Arthur M. Levine, Wendell H. McCulloch, Jr., David E. Pastrana, Lowell R. Runyon, Darshan L. Sachdeva, Richard J. Teweles; Associate Professors: Son V. Le, Gene P. Morris, Thomas J. Rhoads.
Department Secretary: Laurie Ellen Potter

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisors: Rhoads, Morris; Graduate Advisor: Runyon; Real Estate Advisor: Kearney.

For all degree requirements see Business Administration.

Courses (FIN):

Lower Division

200A. Introduction to Law (1) S Faculty

For non-business majors only. Examination of legal remedies, the attorney/client relationship, the court systems,civil trial process, criminal trial process and judicial/administrative decision-making. Three-week modular course covering 15 hours of classwork.

200B. Personal Law (2) S Faculty

Recommended prerequisite: FIN 200 A. Torts, contract rights and remedies, wills and estates, laws affecting the rights of the landlord/tenant and the purchase of property, marriage, divorce, family law and race and sex discrimination in employment and education. Six-week modular course covering 30 hours of classwork.

200C. Consumer Law (2) S Faculty

Recommended prerequisite: FIN 200 A. Consumer problems. In the marketplace, specific protective legislative enactments, warranties and product liability, consumer rights and remedies and the rising power of government regulatory agencies. Six-week modular course covering 30 hours of classwork.

222. Legal Aspects of Business Transactions (3) F,S Faculty

Introduction to law and the legal system, elements of contracts sales, and commercial paper.

Upper Division

302. Insurance Principles (3) F,S Faculty

Principles of risk-bearing and insurance; life and property-liability insurance needs of the individual. Types of carriers and insurance markets; organization and functions of carriers; industry regulation.

324. Legal Aspects of Business Organizations (3) F,S Faculty

Prerequisite: FIN 222. Laws governing agency, partnerships and corporations and property.

342. Real Estate Principles (3) F,S Faculty

Overview of real estate markets, institutions and activities from the perspective of the decision makers involved in real estate development, financing and equity investment. The fundamental physical, legal, regulatory, economic, mathematical and taxation considerations influencing real estate decision and values are investigated. The real estate decision support areas of brokerage, property management, appraisal and counseling are examined.

360. Capital Markets (3) F,S Faculty

Capital formation, rates, markets and institutions. Flow of fund analysis, intermediation, interest rate structures, risks and liquidity. Management of financial institutions.

362. Business Finance (3) F,S Beecher, Harlow, Morris

An introductory course for all business majors, integrating computer applications and management information systems to the following areas of finance: 1. Time Value of Money, Risk, Valuation, Cost of Capital, Capital Structure; 2. Capital Budgeting; 3. Long-Term Financing Decisions; 4. Working Capital Policy and Management; 5. Financial analysis and Planning; 6. Special Topics including; Mergers, Bankruptcy, and International Finance.

382. Investment Principles (3) F,S Harlow, Runyon

Prerequisites: FIN 362. Investment markets and transactions; souces of investment information and advice; return vs. risk; margin trading and short selling; investment planning; investing in equities and fixed income securities; speculative tax-sheltered investments; gold and other tangibles; portfolio management. Demonstrations and use of microcomputer technology in the above areas, including accessing various databases available to the investor.

432. The Consumer: A Socio-Legal Approach (3) F George, Klein

Psychology of the consumer and growth of the consumer movement. Major issues including problems relating to advertising, sales practices, pricing, warranties and product safety. A study of consumer protection legislation. An examination of legal remedies and corporate responsibility.

*444. Legal Aspects of Real Estate (3) F,S Faculty

Prerequisite: FIN 342. Basic principles of the law of real estate as related to conveyances, titles, private and public restrictions on the use of land, escrows, community property and financial transactions.

*446. Residential Appraising (3) F,S Gilon

Prerequisite: FIN 342 or consent of instructor. Determining real property values, economic foundations, housing market, purpose of appraisals, analysis of factors involved and their relationship to trends in property values. Gross rent multiplier analysis in residential and income property. Emphasis on residential properties.

*448. Income Property Valuation (3) F,S Gilon

Prerequisite: FIN 342 and 362 or consent of instructor. Analysis of factors influencing values of residential, commercial and industrial properties. Appraisal principles and procedures are developed and applied to the valuation of land, single-family homes, apartments, office and commercial buildings, leases and other real property interests.

*449. Real Estate Finance and Investments (3) F,S Faculty

Prerequisite: FIN 342 and 362 or consent of instructor. Survey of markets, institutions, instruments and techniques associated with financing real property. Examination of the interactions of investment opportunities, property type, financing strategy, business risk and taxation in connection with maximizing return on capital invested in real estate. Financial modeling of the real estate investment decision used to identify investment strategies that achieve superior portfolio performance.

*464. Financial Management (3) F,S Beecher, Morris

Prerequisites: FIN 362 and ACCT 300B, 310, or 320. An intermediate level course in financial management integrating computer applications and management information systems into the area of financial functions and decisions. The course is primarily a case study and requires use of the computer and appropriate software. The main areas of concentration are: cash budgeting, capital budgeting, business combinations and mergers, cost of capital, and international finance.

*482. Security Markets (3) F,S Belt, Rhoads

Prerequisite: FIN 362. Examination of purposes and functions of over-the-counter markets and organized exchanges for securities marketing. Operations of New York Stock Exchange and Chicago Board of Trade are reviewed. Fundamental and technical aspects of securities industry required of individuals in qualifying for certificates as customers brokers, security salesmen and analysts and other registered positions of finance and investment. Market analysis and strategy with individual presentation required.

*484. Security Analysis (3) F,S Beecher, Harlow, Runyon

Prerequisite: FIN 382. Use of microcomputer technology to perform security analysis including bonds and the bond market, stocks and the stock market, security valuation, fundamental and technical analysis, portfolio management and risk-reward relationships. A review of the various microcomputer software programs available to perform all aspects of security analysis and portfolio management, including accessing and utilization of the numerous databases available to the investment analyst.

*488. Futures Markets (3) F,S Harlow, Teweles

Prerequisite: FIN 362 or consent of instructor. The study of futures markets includes an analysis of the exchanges, the operation of member firms, the mechanics of trading, the construction of a personal-risk profile analysis and the discussion of traditional decision variables, including the construction of a 2-asset portfolio. Included is a solid theoretical examination of the question of bias in futures prices, the theory of the price of storage, ledger and speculator behavior, and the stochastic nature of the futures prices.

*490. International Finance (3) F,S McCulloch

Prerequisite: FIN 362; suggested, MKTG 380. International trade theories, international payments; currency value fluctuations and exchange rates; international capital markets;, roles of developing countries; international institutions and multi-national enterprises. Individual research required.

495. Selected Topics (1-3) F,S Faculty

Prerequisites: Consent of instructor and grade point of 3.0 in finance. Topics of current interest in finance selected for intensive study. May be repeated for a maximum of 6 units. Topics will be announced in the Schedule of Classes.

*497. Directed Studies (1-3) F,S Faculty

Prerequisites: Consent of instructor and department Chair, on Dean's List and 3.0 GPA or higher in finance. Individual projects, study and research of advanced nature in finance.

Graduate Prerequisite Courses

500. Legal Environment of Business (3) F,S Faculty

Prerequisite: Graduate standing. Framework and role of law in society emphasizing the judicial process, basic concepts of commercial law and evolution of legal attitudes between business and government. Not open to students with credit in FIN 222 or 324.

501. Finance Survey (3) F,S Teweles, Sachdeva

Prerequisite: Graduate standing. Financial theory, management and environment of the firm. Not open to students with credit in FIN 360 or 362.

Graduate Division

531. Estate Planning (3) F Faculty

Prerequisites: FIN 222, 324, or 500. Planning and administration of the disposition of property by wills, estates and trusts including use of life insurance, in pact of federal and state taxes and special trust provisions and devices.

532. Problems in Real Estate (3) S Faculty

Prerequisite: FIN 342 and 449 or consent of instructor. Effect of government on the market functions and structure, management of related industry firms, investment risk and return analysis and special urbanization trends.

533. Capital Budgeting (3) F Dilbeck

Prerequisites: FIN 362, 484. Theory of capital budgeting within framework of the firm. Cost of capital determination and logic of expansion vs. growth and equity financing vs. debt financing.

630. Seminar in Financial Forecasting (3) S Sachdeva

Prerequisites: FIN 362, 464 or consent of instructor. Research projects in general forecasting and financial forecasting in industry, individual company, product and commodity areas.

631. Seminar in Business Finance (3) F Faculty

Prerequisites: FIN 360, 362, or 501. Specific analysis of capital formation with selected problems concerning supply and demand of investment funds. Problems imposed on equity capital markets by public taxation, business debt financing, and practices of investing institutions. Presentation and interpretation of student reports on selected topics.

633. Seminar in Investments (3) S Faculty

Prerequisites: FIN 464, 382 or 484. Selected problems in security analysis, portfolio planning, balance and adjustment as related to (1) individual circumstances of the investor, (2) specific market conditions, and (3) broader financial aspects of the economy. Presentation and interpretation of student reports on selected topics.

691. Seminar in International Finance (3) F,S McCulloch

Prerequisites: FIN 490, background in economics, accounting and finance, graduate standing in business administration. Covers real and monetary factors in the finance of international business, international capital markets. movements of funds and special problem area.

695. Selected Topics (3) F,S Faculty

Prerequisite: Consent of instructor. Topics to be announced in the Schedule of Classes. Topics change each offering and in the absence of significant duplication the course may be repeated once for credit.

697. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Individual study under the direction of the faculty.

Management and Human Resources Management

School of Business Administration

Department Chair:
Department Office: SBA-205
Telephone: 498-4557
Faculty: Professors: Filemon C. Campo-Flores, Donald L. Bates, Charles D. Hamburger, Reinald C. Heise, John F. Herrmann, Vernon A. Metzger, Wesley Morse, Michael T. Quinn, Roger D. Roderick, Robert J. Smith, Roger R. Stanton, Herbert L. Stone, Kenneth S. Teel, William J. Traynor, Susanne W. Whitcomb; Associate Professors: Philip S. Chong, Robert J. DeVoe, Gerald L. Ford, Ralph J. Lewis, Dan L. Madison, Jonathan S. Monat, Robert J. O'Donnell; Assistant Professors: David J. Abramis, Linda S. Henderson, Salah M. Masoud.
Emeritus Faculty: Carl E. Gregory, James J. Kirkpatrick, Arthur C. Laufer, Vernon A. Metzger, Glenn H. Stewart, William J. Traynor, Dale M. Yoder.
Secretary: Peggy Gilbert

Students desiring information should contact the department office for referral to one of the faculty advisors: Management option: Ford; Human Resources Management option: Quinn

For all degree requirements see Business Administration.

Operations Management Advisory Board (Department of Management/ Human Resources Management): Frank Alcock, Manager of Corporate Purchasing (ret.), U.S. Borax and Chemical Corporation; R. H. Blanchard, Deputy General Manager ATF, Lockheed California Co.; Bruce G. Collier, Manager of Purchasing (ret.), Thums Long Beach Co.; James C. Dever, Jr., Manager of Material and General Services Operations, TRW Electronics and Defense Sector; Art Goudreault, Vice President, Materials, Rockwell International; James M. Hall, Vice President of Product Operations, Hughes Aircraft Co.; J. Gaston Kent, Vice President, Materials, Facilities and Service, Northrop Corp.; Kenneth R. Williams, Vice President, Douglas Aircraft Co.

Management Courses (MGMT):

Upper Division

300. Principles of Management (3) F,S Bates, Campo-Flores, Madison, Stone

Prerequisite: Business major or consent of instructor. Analysis of Principles and theories of management with special emphasis on organizational behavior and planning and control techniques applied to the operations systems of organizations.

303. Introduction to Management (3) F,S Campo-Flores, Hamburger

Survey of the various theories, principles and concepts of management as developed by the classical, behavioral and management science Schools of thought. This course is primarily intended for the student who needs to acquire introductory and unifying knowledge in management theories and concepts.

310. Operations Management (3) F,S DeVoe, Herrmann, Stone

Prerequisite: Management 300 or equivalent. Introduction to production and operations management functions that are applicable to all types of organizations. Survey of basic models and tools with special emphasis on the introduction of supporting computer resources. All students will work "hands-on" computer exercises in forecasting, material requirements planning, aggregate planning, and other operations management areas.

326. Management and Society (3) F,S Hamburger, Heise, Morse

Issues of concern to business managers in dealing with the social environment. Analysis of business responsibility to stockholders, employees, customers, the government, and society. Issues include: profits, consumerism, product safety, pollution, government regulation, and social accountability.

*405. International and Comparative Management (3) F,S Bates, Campo-Flores, Ford

Prerequisite: MGMT 300 and one of the following three: MKTG 380, MKTG 480, or ECON 471. Analysis of the functions of management in international business; comparative management studies, and the impact of the environment on management performance.

410. Materials Management (3) F DeVoe, Herrmann, Stone

Prerequisite: Management 310 or equivalent. Analysis of basic frameworks for managing material flows into, within, and out of organizations, Study of inventory models for independent demand items, material requirement planning, and distribution systems. Heavy emphasis on learning supported by MRP II tools and other computer resources.

411. Production Planning (3) S DeVoe, Herrmann, Stone

Prerequisite: Management 410 or consent of instructor. Analysis of demand management and production planning problems. Study of forecasting tools and techniques using available computer resources. Concepts of aggregate planning, master scheduling, and capacity planning will be examined using the framework of an MRP II system.

412. Production Control (3) F DeVoe, Herrmann, Stone

Prerequisite: Management 410 or consent of instructor. Analysis of tools and techniques for scheduling, controlling, and evaluating manufacturing activities at the shop-floor level. Shop order release, dispatching, priority control, queue management, and input/output monitoring will be simulated using MRP II software. Job sequencing and scheduling techniques will be examined and available software and simulations employed. Just-in-time production, Kanban control, and optimized-production-technology (OPT) will be presented.

413. Managing Quality for Productivity (3) S DeVoe, Herrmann, Stone

Prerequisite: Management 310 and Q.S. 310. Analysis of the relationship between productivity and quality. Examination of the quality-assurance function, statistical quality control, and lot inspection. Study of the relationship between productivity improvement, product quality, and manufacturing strategy.

414. Purchasing Management (3) F DeVoe, Herrmann, Stone

Prerequisite: Management 410 or consent of the instructor. Analysis of functions, principles, and tools of purchasing management. Study of the relationships of purchasing to other management functions. Use of MRP II systems to simulate purchasing decisions, monitor performance, and track costs.

415. Analysis of Purchasing Problems (3) S DeVoe, Herrmann, Stone

Prerequisite: Management 414. Study of the methods for purchasing research and negotiations. Procurement and management of transportation services. Case studies in purchasing strategy and traffic management.

*421. Management of Small Business Enterprises (3) F,S Campo-Flores, Heise

Prerequisite: MGMT 300 or equivalent. Analysis of the formation of management functions and decision making as related to small enterprise. Cases and problems will be examined.

425. Business Strategy and Policy (3) F,S Faculty

Prerequisite: Completion of Business core requirements, senior standing. This course is designed to integrate and apply knowledge, theories and techniques derived from the study of business disciplines. The case method and business simulations are used to formulate business strategies and plans. Written reports are required.

*426. Management and Information Systems (3) F,S Smith

Prerequisite: Senior standing and BASIC programming experience. Evaluation of concepts for evaluation and design of decision support systems, management decision models, socio-technical strategies for implementing information system changes.

430. Project Management (3) F Bates, Campo-Flores, Herrmann

Prerequisite: Completion of business core requirements. This course describes how ideas are selected for projects and how the projects are implemented. It explores the role of the project team members, the project manager, and the various ways projects can be organized and planned. The project implementation tasks of budgeting, scheduling, monitoring and controlling are explored including computerized network models and project management software packages. Final project analysis and termination are addressed.

431. Current Topics in Operations Management (3) S DeVoe, Herrmann, Stone

Prerequisites: Management 310 and 410 or consent of the instructor. Survey and analysis of current topics in Operations Management. Study of newly developed and developing tools and techniques for improving productivity, quality, and competitive position.

432. Management of Service Operations (3) F DeVoe, Herrmann, Stone

Prerequisite: Management 310 and 410. Analysis of the nature of non-manufacturing operations in a variety of service organizations. Cases, examples, and simulation tools will be used to explain and illustrate concepts.

433. Case Analysis of MPC/PMM Problems (3) S DeVoe, Herrmann, Stone

Prerequisite: MGMT 310, 410 and consent of the instructor. Case analysis and discussion of current topics related to manufacturing planning and control and purchasing and materials management. Primary focus on strategic issues and implementing system changes.

451. Management and Performance Evaluation Analysis (3) F Bates, Campo-Flores, Hamburger, Madison, Smith

Prerequisite: Completion of Business Core courses. Examination of the efficiency and effectiveness of economic, organizational and human factors in achieving stated organizational objectives. Topics include designing the evaluation, organizational matters associated with the evaluation, data gathering, analyzing and performing the evaluation, preparing recommendations, and reporting the results. The course will acquaint students with concepts and procedures that facilitate decision making, policy formulation, and other managerial functions.

453. Management Systems (3) F Bates Hamburger, Madison, Smith

Prerequisite: Management 300. Focuses on general systems theory as related to business and industry. Emphasis is placed on the functions of the sub-systems of the enterprise and the interactions of these sub-systems from an integrative point of view. Design philosophies for identifying and measuring elements of sociotechnical systems. Methods of modeling, analyzing, and evaluating business systems are examined for their applicability to real situations including technological change and social change models. Cases, games, and computer simulation techniques may be employed as appropriate.

454. Organization Theory (3) S Madison, Morse, Smith

Prerequisite: Management 300 and HRM 361. Examination of the design and adaptation of organizations. Tools for analysis and design are developed from the general principles and theory of organization and the forces from inside and outside the organizations that help to shape it. The structure of organization is explored from many perspectives and functions. The organization is viewed as a goal implementation device, a system of authority, a political system, and an information and coordination device. Cases and computer simulations of real business and non-profit organizations may be used, as appropriate.

455. Managerial Decision Making Processes (3) F,S Herrmann

Prerequisites: MGMT 300 and either HRM 360 or 361. Managerial decision making is presented as a complex process that involves setting objectives, identifying and evaluating alternative courses of action, choosing and implementing the decision, and controlling results. Recent research is used to explain the influence of task, people, organization, and environment on the decision process. This course will help students become better decision makers by improving their understanding of decision making processes.

495. Selected Topics (1-3) F,S Faculty

Prerequisites: Consent of instructor and GPA of 3.0 in management and operations management. Topics of current interest in management selected for intensive study. May be repeated for a maximum of 6 units. Topics will be announced in the Schedule of Classes.

497. Directed Studies (1-3) F,S Faculty

Prerequisites: Consent of instructor and Department Chair, study of advanced nature in management.

Graduate Prerequisite Course

500. Business Policies, Operations and Organization (3) F,S Faculty

Prerequisite: Graduate standing. Recommended preparation: Q S 410. Theory and philosophies of industrial management, principles of internal industrial organization and control systems, motion and time study, industrial statistics, industrial safety and industrial research as aids to decision making. Administrative organization systems, information systems, management functions, decision making, strategies and policy formulation. Not open to students with credit in MGMT 300, 425, 412G or 500.

Graduate Division

510. Management for Engineers (3) Faculty

The transition of the engineer to manager; planning and organizing technical activities; selecting and managing projects, selecting and managing teams, techniques of control and communication. Not open to MBA students.

511. Project Management (3) Faculty

Theory and philosophies of project management. The problems of assembling an effective team and the control issues, techniques, and tools appropriate for the preproject proposal stage to program conclusion are examined. Not open to MBA students.

512. Engineering Management Information Systems (3) Faculty

Study of the development and management information systems used by middle and higher management of technological and scientific organizations in the control of many facets of their function. Not open to MBA students.

513. Cases in Engineering Management (3) Faculty

A course that permits application of newly acquired technical skills. It involves cases from engineering, technical or scientific programs of industrial firms or government agencies. The cases may be from new ventures as well as mature firms in both product and process development. Not open to MBA students.

541. Industrial Logistics (3) S DeVoe

Prerequisites: Minimum of three units in operations management and three units in marketing or consent of instructor. Systems analysis and synthesis of the general logistics system containing the marketing, production, and transportation activities. Emphasis placed on definition of system components of outputs, activities and inputs and the specification and quantification of the major functional relationships interrelating these components.

542. Enterprise Structure and Operation (3) F Hamburger, Smith

Prerequisite: Graduate standing or consent of instructor. Systems analysis and synthesis of the general enterprise system composed of the logistics, money, information, talent and decision sub-systems. Emphasis on the examination of the components of each of the sub-systems and how they interrelate in the operation of the total enterprise. Systems approach of defining outputs, activities and inputs is used as the vehicle for analysis.

543. International Business Policy (3) F Bates, Campo-Flores

Prerequisites: Nine units of 500/600 level courses in the area of international business. Analysis of current theory and principles of international business management pertaining to problems of formulating policy and developing strategies and tactics in the multinational corporation; case studies, readings, logistic analysis and research report.

645A,B. Seminar in Management Policy and Problems (3,3) F,S Metzger, Stanton

Prerequisite: MGMT 425 or 500 or consent of instructor. History of management thought; business organization, strategies and policies; executive control; managerial problems. GBA 645A not open to students with credit in MGMT 625.

646A,B. Seminar in Organization Analysis (3,3) S Bates, Campo-Flores, Smith, Stanton

Prerequisite: MGMT 425 or 500 or consent of instructor. Scientific analysis of organization. The management function;, audit of management performance. MGMT 646A not open to students with credit in MGMT 626.

647A,B. Seminar in Management Planning and Control Systems (3,3) F,S Bates, Smith

Prerequisite: MGMT 425 or 500 or consent of instructor. Analysis of planning and control systems in management. Cases and problems will be examined.

695. Selected Topics (3) F,S Faculty

Prerequisite: Consent of instructor. Topics to be announced in the Schedule of Classes. Topics change each offering and in the absence of significant duplication the course may be repeated once for credit.

697. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Individual study under the direction of the faculty.

Human Resources Management Courses (HRM):

Upper Division

361. Human Resources Management (3) F,S Lewis, Monat, O'Donnell, Quinn, Teel, Traynor

Survey of the functions concerning the management of human resources including organization, job analysis, recruitment and selection, training and development, performance appraisal, compensation management, labor relations, and organizational behavior. Emphasis is placed on practical problem solving through the application of theories and principles.

362. Labor-Management Relations (3) F,S Monat

Development, aims, structure and functions of labor and employer organizations; the nature and objectives of management; the bargaining process; labor law and governmental intervention; dispute settlement techniques; unemployment; unions and minorities; and employee organizations in government and the professions. Not open to students with credit in ECON 340.

*440. Collective Bargaining (3) F,S Monat

Prerequisite: HRM 362 or consent of instructor. Collective negotiations. Examination of the roles of management, labor and government in structuring work environments. Nature of the process of negotiation and conflict resolution in organization.

*445. Job Analysis and Compensation Management (3) F,S Faculty

Prerequisite: HRM 361, or consent of instructor. Job analysis and compensation management processes as an integrated human resources management system. Emphasis on the role these processes play in modern organizations in defining the job tasks and the methods of compensation. Methodology includes lectures, case studies and outside readings, plus pertinent classroom exercises.

*446. Leadership in Organizations (3) F,S Hamburger, Quinn

Prerequisite 361 or consent of instructor. Critical analysis of the determinants of effective leadership. Review of theories and real-life case studies. Emphasis on identification and application of leadership skills.

*463. Personnel Development (3) F,S Monat, Traynor

Prerequisite: HRM 361. Criteria for identifying development and training needs of managers, supervisors and employees. Survey and critical analysis of current industrial programs and trends.

*464. Organizational Behavior (3) F,S Hamburger, Lewis

Prerequisite: HRM 361 or consent of instructor. Contributions, theories and philosophies in the field of organizational behavior. How to manage and supervise individuals within the restraints of the organization. Managerial skills that produce an effective work force. Theories of employee motivation, case studies of human relation problems and techniques for integrating individual organizational goals.

*465. Personnel Selection and Appraisal (3) F,S Teel

Prerequisite: HRM 360 or 361 or consent of instructor. Survey and critical analysis of techniques for identifying personnel requirements, recruiting an adequate supply of candidates, selecting the best qualified applicants and appraising on-the-job performance, both of individuals and of organizations. Entry level through top management jobs considered. Emphasis on student participation in developing and/or using selection and appraisal techniques.

*495. Selected Topics (1-3) F,S Faculty

Prerequisites: Consent of instructor and GPA of 3.0 in human resources management. Topics of current interest in human resources management selected for intensive study. May be repeated for a maximum of 6 units. Topics will be announced in the Schedule of Classes.

*497. Directed Studies (1-3) F,S Faculty

Prerequisites: Consent of instructor and Department Chair, on Dean's List and 3.0 GPA or higher in human resources management. Individual projects, study and research of advanced nature in human resources management.

Graduate Prerequisite Course

500. Human Resources Management (3) F,S O'Donnell

Prerequisite: Graduate standing. Principles, practices and techniques of employee-employer relations. Significance of labor-management relations. Effective use of human resources. Not open to students with credit in HRM 461G.

Graduate Division

510. Behavioral Science for Engineers (3) Faculty

Examination of the individual, groups and organizational structure designs, and interpersonal relationships that are peculiar to managing and directing professionals. Emphasis on managerial applications of Behavior Science concepts and research findings. Not open to MBA students.

552. Comparative Labor Relations Systems (3) F Monat

Prerequisite: HRM 361, 440 or GBA 650. Comparative cross-country survey and analysis of the history, structure, institutional arrangements and philosophy of the labor relations systems in advanced, developing and underdeveloped countries. Comparative survey and analysis of labor and management relations and the role of government in industrial relations particularly in the settlement of industrial disputes.

554. Labor Arbitration (3) S Monat

Prerequisite: HRM 440 or consent of instructor. Application through case analysis of the principles, practices and techniques of labor arbitration. Course will include the preparation and handling of materials in briefs and oral presentations. Special attention is given to the conduct of labor relations under a collective bargaining agreement, such as union security, seniority, discipline, transfers and promotions, management rights and grievance procedures and arbitration.

556. Fair Employment Practice (3) F Faculty

Prerequisite: Graduate standing. Consideration of the special management problems in working toward the goal of equal employment opportunity and affirmative action compliance. Emphasis will be placed on management policies and practices with respect to minority, sex, age, handicapped, and other discrimination issues.

650. Seminar in Labor Relations (3) S Monat

Prerequisite: HRM 362 or 440. Intensive analysis of current problems of labor and management.

652. Seminar In Human Resources Management (3) Monat, Quinn

Prerequisite: HRM 361 or 500. Case approach to human relations problems confronting business executives.

655. Seminar in Employee Motivation (3) F Teel

Prerequisite: HRM 360 or 464 or consent of instructor. Survey and analysis of research studies of the relationship between employee motivation and productivity. Critical review of theories of human motivation and the data supporting them. Emphasis on applications of motivation theory in the industrial environment.

657. Seminar in Leadership Skills (3) F,S Quinn

Study of leadership skills, such as self-awareness, problem solving, communication, interpersonal and leadership situation awareness. Case studies, class discussion, psychological tests, TV taping, student presentations and lectures are used.

695. Selected Topics (3) F,S Faculty

Prerequisite: Consent of instructor. Topics to be announced in the Schedule of Classes. Topics change each offering and in the absence of significant duplication the course may be repeated once for credit.

697. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Individual study under the direction of the faculty.

Management Information Systems

School Of Business Administration

Department Chair: Merle P. Martin
Department Office: SBA-114
Telephone: (213) 494-8031
Faculty: Professors: Paul R. Gilon, Carl R. Payne; Associate Professors: Mohamed B. Khan, KarenAnn Kievit, Merle P. Martin, Takeshi Ohara; Assistant Professor: Karen Ann Kievit.
Department Secretary: Dorene Mojica

Students desiring information should contact the department office for an appointment with the Chair. For all degree requirements see Business Administration

Management Information Systems Advisory Board: John Allen, Senior Employment Representative, McDonnell Douglas Astronautics; Mark Barmann, President and Chief Executive Officer, First Interstate Services; James Canney, Director of Systems Development, Hughes Aircraft Company; Charles Dolan, MIS Manager, Northrop Corporation; Stephen Kelley, Assistant Vice President for Information Technology Services, CSULB; Joe La Rosa, Director of Technical Assessment, Fluor Corporation; Thomas V. McKernan, Jr., Assistant Vice President for Administration, Auto Club of Southern California; M. L. Mushet, Assistant Manager, Information Systems, Southern California Edison; Roy A. Norry, Manager of Engineering International, Bechtel Power Corporation; William Ramos, Manager of Test Software, Northrop Corporation; Carl H. Reynolds, Staff Vice President, Communications and Data Processing, Hughes Aircraft Company; Chuck Shorter, Vice President of Technological Systems, TRW Information Systems; Tom West, Director of Information Systems, Office of the Chancellor, The California State University; John Williams, Information Services Manager, Bechtel Power Corporation.

Courses (MIS):

Lower Division

200. Introduction to Computer Based Systems (3) F,S Faculty

Fundamental concepts of programming computers for business applications. Projects written in a programming language selected by the instructor to emphasize proper program design, structured techniques, programming style, and documentation standards as needed in business computer applications. Designed to provide to the student the logic background useful in the study of programming languages.

240. Management Information Systems and Computer Programming (3) F,S Faculty

An introduction to computer-based information systems in organizations, the system development life cycle, requirements definition and analysis, design, implementation and documentation, social consequences of MIS, trends and future prospects. Introduction to BASIC programming language.

242. Application Program Development I: Cobol (3) F,S Faculty

Prerequisite: MIS 200. Introduction to COBOL programming with an emphasis on the application to business problems usually characterized by the need to process large files of data. General treatment of language elements, file management techniques and input/output considerations. Intended for students with no background in COBOL.

243. Application Development I: FORTRAN (3) F,S Faculty

Prerequisite: MIS 200. Introduction to FORTRAN-programming with an emphasis on the application to business data processing. This course will include the use of subroutines and mass storage devices such as tapes and disks. Intended for students with no background in FORTRAN.

Upper Division:

340. Advanced BASIC Programming (3) F Faculty

Prerequisite: MIS 240 or equivalent. Solution of business data processing problems through the use of the BASIC programming language. Advanced features of the BASIC language, with emphasis on handling of sequential and random access data files.

342. Application Program Development II: COBOL (3) F,S Faculty

Prerequisite: MIS 242. Advanced features of Cobol, data structure and storage, advanced file organization and processing techniques, data base and data management systems design.

343. Application Program Development II: FORTRAN (3) F,S Faculty

Prerequisite: MIS 243 or equivalent. Advanced features of the FORTRAN programming language. Emphasis will be on the business data processing aspects of FORTRAN, particularly on the techniques of data file handling.

345. Procedural Languages (3) F,S Faculty

Prerequisite: MIS 200 Survey of the fundamentals of RPGII, Ada, and PASCAL languages. Computer projects required in each language.

349. Comparison and Analysis of Computer Languages (3) F,S Faculty

Prerequisite: MIS 242. Comparison of several major high level computer programming languages, including Ada, BASIC, FORTRAN, PASCAL, RPGII, and at least one of: APL, LISP, PLI, SNOBOL, or ALGOL. The features compared include capabilities, decision structure, iteration, data types, data structures, string processing, I/O, file organizations supported, efficiency, storage requirements, and cost/effectiveness. Computer projects to illustrate the language features.

350. Software and Hardware Concepts (3) F,S Faculty

Prerequisite: MIS 200. Survey of business computer resources, including hardware and system software. System components and organization. Functions and organization of operating systems, language processors, and system utilities. Data communication concepts, equipment, and systems. Survey of major manufacturers, field trips, hands on experience.

385. System Analysis Methods (3) S Faculty

Prerequisites: MIS 345 and 342. An introduction to the system development lifecycle. Emphasis is on system design and documentation using classical and structured tools including techniques for describing process flows, data flows, file designs, data structures and formal specifications. Discussions on the transition from analysis to design and information gathering and reporting.

440. TimeSharing Software for Business (3) F,S Faculty

Prerequisites: QS 310, MIS 342 and 350. Solution of elementary, practical business problems through time-sharing software such as MINITAB or SPSS. Programs covered include: descriptive statistics, analysis of variance, contingency tables, nonparametric methods. A survey of commonly used business packages and business data sources will also be covered.

***470. Business Computer Methods I (3) F,S Faculty**

Prerequisites: QS 310, MIS 342, 360, and either QS 345 or MIS 349. Business forecasting, time series decomposition and financial evaluation. Emphasis is on problem solving with software use and design, where applicable. Packages covered include COMPUTSTAT, SIBRUN, and FORESIGHT. A financial-regression type calculator is required for this course.

472./572. Business Computer Methods II (3) F,S Faculty

Prerequisite: MIS 470. Topics covered are: Multiple regression analysis (MRA), polynomial regression, and simultaneous equations modeling and econometric forecasting. The students will be guided in the development and verification of their own permanent MRA package using matrix algebra in BASIC, FORTRAN, or APL according to the student's own preference. Time Sharing software in MRA-related programs will also be covered.

481./581. Advanced Data Base Concepts (3) F,S Faculty

Prerequisite: MIS 484. In-depth study of data base concepts, including data base design, data structures found in data bases, logging, system recovery. Current literature and state of research in data base systems. Major project using a data base management system.

484./584. Data Base Program Development (3) F,S Faculty

Prerequisites: MIS 350 and either MIS 342 or Math 321. Study of computer data base systems, including: Data base design, data base models, data definition languages, data manipulation languages, and commercial data base systems. Documentation standards for software. Several computer projects using data base management systems on CSULB computers. Knowledge of COBOL is recommended.

485./585. Software Development Project (3) F,S Faculty

Prerequisites: MIS 470, 484. Tools and techniques of computer systems study leading to integration of data and computer analysis. Projects and computer problems are used in an integrative learning experience.

***495. Selected Topics (1-3) F,S Faculty**

Prerequisite: Consent of instructor and GPA of 3.0 or higher in major. Topics of current interest in the field as announced in the Schedule of Classes. In the absence of significant duplication, may be repeated for a maximum of six units.

***497. Directed studies (1-3) F,S Faculty**

Prerequisites: Consent of instructor and department Chair, on Dean's List and a GPA of 3.0 or higher in quantitative methods. Individual projects, research or study in quantitative methods.

Graduate Division

500. Management Information Systems (3) F,S Faculty

Management of information as a resource. Organizational issues surrounding MIS. Practical application of computer technology; analysis, design, programming, testing, and implementation of management information systems (MIS) in a "hands-on" environment. Development of MIS, uses of data bases, functional information systems, and human organizational factors.

502. Management of Information Systems (3) F,S Faculty

Prerequisite: GBA 500. Importance of information systems management; strategic issues; management of advanced information technologies; management of systems development; management of end-user computing/information centers; information systems' relationship to people.

572./472. Business Computer Methods II (3) F Faculty

Prerequisite: MIS 470. Topics covered are: Multiple regression analysis (MRA), polynomial regression, and simultaneous equations modeling and econometric forecasting. The students will be guided in the development and verification of their own permanent MRA package using matrix algebra in BASIC, FORTRAN, or APL according to the student's own preference. Time Sharing software in MRA-related programs will also be covered.

580. Management Information Systems in Organizations (3) F,S,SS Faculty

Prerequisites: QS 386 and one of MIS 342 or 343 or 346. Fundamental concepts of information systems within organizations. Relationship of computer-based information systems to organizational objectives and organizational structures. Study of key MIS issues frequently occurring in organizations. Computer-based projects to reinforce selected MIS concepts.

581./481. Advanced Data Base Concepts (3) F,S Faculty

Prerequisite; MIS 484. In-depth study of data base concepts, including data base design, data structures found in data bases, logging, system recovery. Current literature and state of research in data base systems. Major project using a data base management system.

582. System Design Process (3) S Faculty

Prerequisite: MIS 580 and 581. MIS capstone: integration of computer technology, systems analysis, systems design and organizational behavior in the implementation of an operational information system. Topics include quality assurance, software testing, design tools. Computer-based information project to implement an integrated system.

583. Information Analysis (3) F Faculty

Prerequisite: MIS 580. The application system development process, particularly the information analysis and system specification processes. Emphasis is on the iterative nature of the analysis and design process, and the software development lifecycle. Computer based projects as needed to emphasize course topics.

584./484. Data Base Program Development (3) F,S Faculty

Prerequisites: MIS 350 and either MIS 342 or Math 321. Study of computer data base systems, including: Data base design, data base models, data definition languages, data manipulation languages, and commercial data base systems. Documentation standards for software. Several computer projects using data base management systems on CSULB computers. Knowledge of COBOL is recommended.

585./485. Software Development Project (3) F,S Faculty

Prerequisites: MIS 470, 484. Tools and techniques of computer systems study leading to integration of data and computer analysis. Projects and computer problems are used in an integrative learning experience.

695. Selected Topics (3) F,S Faculty

Prerequisite: Consent of instructor. Topics to be announced in the Schedule of Classes. Topics change each offering and in the absence of significant duplication the course may be repeated once for credit.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of instructor. Individual study under the direction of the faculty.

Marketing

School Of Business Administration

Department Chair: Frank J. Alfieri (Interim)
Department Office: SBA-305
Telephone: (213) 498-4769
Faculty: Professors: William D. Ash, Benjamin C. Butcher, Edmund A. Cotta, Zohrab S. Demirdjian, Hubert V. Hall, Forrest E. Harding, Robert T. Holmes, Seymour Marshak, Feliksas Palubinskas, Richard Spiller, John R. Stuteville; Associate Professor: Terrence H. Witkowski.
Emeritus Faculty: Charles E. Wolff
Department Secretary: Irene Bjerregaard

Students desiring information should contact the department office for referral to one of the faculty advisors.

For all degree requirements see Business Administration.

Courses (MKTG):

Upper Division:

300. Marketing (3) F,S Faculty
Recommended preparation: ECON 200 or 201 or 300. Interdependence of elements in the firm's marketing system. Relation of the marketing system to other activities in the firm. The firm's role in domestic and world marketing environments. Economic and social effects on marketing. Human behavior as it affects marketing, marketing communications, marketing information systems, marketing management problems and their solutions.

310. Retail Concepts and Policies (3) F,S Ash, Butcher, Cotta
An overview of the retail system. Retail decision making emphasized in relation to the following areas: store operation and management; merchandise assortment and pricing; store location and layout; advertising and sales communication; consumer analysis; retail information systems; retail accounting and control.

320. Salesmanship (3) F,S Ash, Cotta, Demirdjian
Evaluation of selling techniques and practices. Individual and business objectives in selling from the perspective of the consumer, business and society. Contributions of economics, psychology, sociology, and other behavioral sciences to salesmanship. Integration of information technology into the sales function.

330. Mass Marketing Communications: Advertising (3) F,S Cotta, Demirdjian, Witkowski
Principles and practices of advertising. Social and economic importance of advertising and its relation to modern business organization; importance of an advertising plan; preparation of advertisements, copy and layout, media planning and application of information technology.

340. Transportation Systems (3) F,S Faculty
Management of the physical distribution system, pricing and rate development, route development, carrier management, logistic and optimization models, and buying transportation services.

380. International Business (3) F,S Faculty
An introduction to the nature, dimension, and environment of international business. Emphasis on business functions, practices, and decisions as they are influenced by cultural, political, economic, social, and institutional factors in various parts of the world. Diffusion of information technology.

***420. Sales Management (3) F,S Ash, Cotta, Harding**
Prerequisite: MKT 300. Managing the sales force; sales analysis; forecasting techniques; account and territory management; negotiations; integrating the personal computer into the sales function; computer simulation of the decision process in sales management.

430. Promotion Strategies (3) F,S Cotta, Demirdjian, Harding, Witkowski
Prerequisite: MKTG 300. Management of the promotional mix. Behavioral and data-based foundations for promotional strategies; budgeting; allocation of promotional resources; media models; integration of promotional strategies into the marketing mix; applications of information-based technologies and tools for analysis.

***465. Industrial Marketing (3) F,S Spiller**
Prerequisite: MKTG 300. Analysis of industrial products, markets, institutions, and strategy. comparison with consumer marketing. Emphasis on business-to-business negotiations and promotions. Integration and application of information technologies.

***470. Marketing Research (3) F,S Cotta, Demirdjian, Palubinskas, Spiller**
Prerequisites: MKTG 300, QS 310. Fundamentals of marketing and industrial research as an aid to problem-solving in business. Familiarization with current industry research efforts. Data collection, interviewing, and report-generation software. Analysis of data. Project, instrument and sampling designs.

480. International Marketing (3) F,S Harding, Palubinskas
Prerequisite: MKTG 300; suggested MKTG 380. The study of marketing systems and marketing operations in various countries and multinational market groups. Impact of foreign environments and information technologies. In-depth international marketing studies and formulation of appropriate strategies.

490. Consumer Behavior (3) F,S Butcher, Demirdjian, Stuteville
Prerequisite: MKTG 300. Application of psychological, sociological, anthropological, and economic theories to the understanding of buyer behavior. Consideration of personality, attitudinal, group, social class, subcultural, and demographic factors. Review of comprehensive models.

***492. New Products/New Services (3) F,S Stuteville**
Prerequisite: MKTG 300 or consent of instructor. Entrepreneurship; innovation management; the process and strategy of new product or services marketing; developing a business plan for a product or service introduction.

494. Marketing Management (3) F,S Faculty
Prerequisite: MKTG 300; senior standing. Strategies and techniques in marketing management. Application of prior material from marketing curriculum to problems and cases. Emphasis on utilization of information systems. Computer-assisted approach to the allocation of marketing efforts, including distribution, product, pricing, and promotional strategies. Problems, cases, and term projects utilizing market simulations.

***495. Selected Topics (1-3) F,S Faculty**
Prerequisites: Consent of instructor and a GPA of 3.0 in marketing. Topics of current interest in marketing selected for intensive study. May be repeated for a maximum of 6 units. Topics will be announced in the Schedule of Classes.

***497. Directed Studies (1-3) F,S Faculty**
Prerequisites: Consent of instructor and Department Chair, on Dean's List and a 3.0 GPA or higher in marketing. Individual projects, study and research of advance nature in marketing.

Graduate Prerequisite Course

500. Marketing Concepts (3) F,S Faculty
Prerequisites: Graduate standing, consent of instructor. Overview of the decision process in marketing. Consideration of functional areas and their interaction with the total operations of the firm. Application of information technology to the development of marketing strategy and planning.

Graduate Division:

506. International Business Concepts (3) F,S Faculty
Prerequisite: Graduate standing. Critical study of international business activity and business practices in international environment. Cases and projects.

530./430. Promotion Strategies (3) F,S Demirdjian, Harding, Witkowski
Prerequisite: MKTG 300. Management of the promotional mix. Behavioral and data-based foundations for promotional strategies; budgeting; allocation of promotional resources; media models; integration of promotional strategies into the marketing mix; applications of information-based technologies and toils for analysis.

580./480. International Marketing (3) F,S Palubinskas
Prerequisite: MKTG 300; suggested MKTG 380. the study of marketing systems and marketing operations in various countries and multinational market groups. Impact of foreign environments and information technologies. In-depth international marketing studies and formulation of appropriate strategies.

590./490. Consumer Behavior (3) F,S Butcher, Demirdjian, Stuteville
Prerequisite: MKTG 300. Application of psychological, sociological, anthropological, and economic theories to the understanding of buyer behavior. Consideration of personality, attitudinal, group, social class, subcultural, and demographic factors. Review of comprehensive models.

660. Seminar in Marketing Theory (3) F Ash, Butcher, Cotta, Demirdjian, Harding, Witkowski
Prerequisite: MKTG 500 OR 494. Discussion of the evolution of marketing practice and marketing thought. Consideration of ethical problems in marketing management.

661. Seminar in Marketing Policies (3) F,S Ash, Cotta, Harding, Spiller
Prerequisite: MKTG 500 OR 494. The solving of practical, profit-oriented problems in marketing. Sophisticated case analysis and discussion. Application of marketing principles and technologies, including information systems, databases, behavioral theories, and management techniques.

662. Seminar in Marketing Environment and Institutions (3) S Ash, Spiller
Prerequisite: MKTG 500, or 300, or 310. Analysis of the environment in which marketing institutions operate, with an accent of prognostication of marketing institutions.

663. Seminar in Advertising Policies (3) F or S Demirdjian, Witkowski
Prerequisites: MKTG 500 or 494. Discussion and analysis of advertising situations, objective setting, creative strategies, media strategies and models, and evaluation. Applications of mass communication theories and marketing databases.

664. Seminar in Transportation (3) F Harding
Prerequisite: MKTG 340. Consideration of environmental issues and national transportation policy; international distribution overview analysis of fares and pricing. Application of decision models to the solution of carrier management problems, planning and research in the development of transportation strategy.

665. Seminar in Marketing Research (3) F or S Cotta, Demirdjian
Prerequisite: MKTG 494 or 500. The role of research in the solution of marketing problems. Research methods in collecting, analyzing, and interpreting information for business use. Survey and experimental approaches included. Case studies and/or class projects required.

666. Seminar in International Marketing (3) S Palubinskas
Prerequisite: MKTG 500 OR 494. Analysis of problems and opportunities in international marketing operations. Consideration of entry strategies, competitive strategies, domestication, and nationalization problems. Use of marketing information system to evaluate opportunities and threats in foreign markets.

667. Seminar in International Business — Area Studies (3) S Faculty
Prerequisite: MKTG 506 or consent of instructor. Environmental conditions, requirements and problems confronting business in the countries of Africa and the Near East, Asia and Oceania, Europe, Latin America, and the East European Block. Research and analysis of impact and potential of these areas in world markets.

668. Seminar in Consumer Behavior (3) S Demirdjian, Stuteville, Harding
Prerequisite: MKTG 500 OR 494. Topics in the behavioral sciences as they apply to marketing. Application of psychological, sociological, anthropological, and economic theories and models to the understanding of buyer behavior and the development of marketing strategy.

669. Seminar In Strategic Planning (3) F Demirdjian, Harding
Prerequisites: MKTG 494 or 500. The role and use of marketing research and information systems as the basis for development and implementation of marketing strategy. Case studies and/or class projects required.

695. Selected Topics (3) F,S Faculty
Prerequisite: Consent of instructor. Topics to be announced in the Schedule of Classes. Topics change each offering and in the absence of significant duplication the course may be repeated once for credit.

697. Directed Studies (1-3) F,S Faculty
Prerequisite: Consent of instructor. Individual study under the direction of the faculty.

Quantitative Systems

School Of Business Administration

Department Chair: Owen O. Jenson (Interim)
Department Office: SBA-302
Telephone: 498-4993
Faculty: Professors: Lincoln Chao, William R. Doud, Emma Jean Gunderson, Ronald L. King, Dale E. Nelson, Perri J. Stinson, Richard D. Wollmer; Associate Professors: Kenneth L. Pickard, Mehran Sepehri.
Emeritus Faculty: Darrell V. Burras, Braxton C. Henderson

Students desiring information should contact the department office for referral to one of the faculty advisors: Administrative systems option: King; Quantitative Methods option: Wollmer For all degree requirements see Business Administration.

Courses (Q S):

Administrative Systems

Lower Division

130. Current Concepts of American Business (3) F,S Doud, Gunderson, King, Nelson

Development of an understanding of contemporary business and related societal issues and the roles of producer and in the American business enterprise system. Includes introduction to major business functions.

Upper Division

300. Written Bus Communication (3) F,S Gunderson, Pickard, Doud

Prerequisite: None. Study of written communication media utilized in business; emphasis on developing skills in informational writing.

302. Business Communication (3) F,S Doud, Gunderson, Pickard

Prerequisite: consent of instructor. Theory and practice of behavioral communication involved in the administrative management process; emphasis on written communication involving interaction, persuasion and human relations.

310. Business Statistics (3) Faculty

Prerequisites: Math 114, Math 115B, MIS 200 or MIS 240. Application of statistics to business problems, with use of some statistical software packages. Review of probability theory, measures of central tendency and dispersion, hypothesis testing and estimation, and simple regression and correlation.

331. Administrative Management (3) F,S Doud

Organization, function, layout and equipment of administrative departments; general introduction to computers and computer terminology as used in the administrative management process; Improvement of efficiency in the administrative management process.

402./502. Business Reports (3) F,S Doud, Pickard

Analysis of the principles of collecting, organizing and presenting business data. Oral and written reports involving problem solving in the administrative management process.

432./532. Administrative Information Systems (3) F,S Faculty

Prerequisite: MIS 240. Provides a review of modern data processing theory and technology. Areas covered are information processing concepts; data base concepts; systems analysis, evaluation, design and implementation; and administrative considerations of information systems and methodology.

433./533. Financial Aspects of Business Equipment (3) F,S Faculty

Prerequisite: Q S 331 or consent of instructor. Economic feasibility, procurement, financing and effective utilization of data originating, processing and communicating equipment used in the administrative management process.

493. Quantitative Systems Internships (3) F,S Faculty

Prerequisites: Classified Business Major, QS 481, QS 485, 3.0 GPA in QS, 3.0 GPA Overall. Students work in Information Systems or Quantitative Analysis divisions of private industry or governmental agencies to gain experience in real world situations. Class seminar analysis, evaluation of academic theory in terms of the real world environment.

***495. Selected Topics (1-3) F,S Faculty**

Prerequisite: Consent of instructor and GPA of 3.0 or higher in major.Topics of current interest in the field as announced in the Schedule of Classes. In the absence of significant duplication, may be repeated for a maximum of six units.

***497. Directed Studies (1-3) F,S Faculty**

Prerequisites: Consent of instructor and Department Chair, on Dean's List and a GPA of 3.0 or higher in Administrative Systems. Individual projects, research or study in Administrative Systems.

Graduate Division

502./402. Business Reports (3) F,S Doud, Pickard

Analysis of the principles of collecting, organizing and presenting business data. Oral and written reports involving problem solving in the administrative management process.

520. Problems in Business Communication (3) F Doud, Pickard

Prerequisite: Consent of instructor. Contemporary business communication thought and research applied in the solving of organizational communication problems.

521. Advanced Administrative Management (3) S Doud, Faculty

Prerequisite: Q S 331 or consent of instructor. Advanced study in the problems, practices and policies involved in administrative management. Methods of establishing, analyzing, standardizing and controlling administrative systems and procedures in the office.

522. Issues and Trends In Administrative Management (3) F Faculty

Advanced study in contemporary philosophies, issues and trends in administrative management and information systems.

523. Survey of Research in Administrative Management (3) S Faculty

Study, analysis, interpretation and evaluation of significant research in administrative management and information systems.

532./432. Administrative Information Systems (3) F,S Faculty

Prerequisite: MIS 240. Provides a review of modern data processing theory and technology. Areas covered are information processing concepts; data base concepts; systems analysis, evaluation, design and implementation; and administrative considerations of information systems and methodology.

533./433. Financial Aspects of Business Equipment (3) F,S Faculty

Prerequisite: Q S 331 or consent of instructor. Economic feasibility, procurement, financing and effective utilization of data originating, processing and communicating equipment used in the administrative management process.

620. Case Studies in Administrative Management (3) F,S Doud

Case studies in depth of regional organizations involving the interrelationships of information systems, communications and administrative management.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of instructor. Individual study under the direction of the faculty.

Quantitative Methods

Upper Division

310. Business Statistics (3) F,S Faculty

Prerequisite: MATH 114. Probability, measures of central tendency and dispersion, hypothesis testing and estimation, simple regression and correlation and applications of the probability distributions.

410. Probability and Decisions (3) F,S Chao, Stinson, Wollmer

Prerequisites: MATH 114, 115B or consent of instructor. Probability theory with emphasis on logical applications of probability models to business problems and decision making. Topics include elements of probability, distribution functions, random variables, probability distributions and their properties.

411. Statistical Decision Theory (3) F,S Chao, Stinson, Wollmer

Prerequisite: Q S 410. Statistical tools for the analysis of data and for business decision making. Topics include sampling and sampling distributions, hypothesis testing and estimation.

460./560. Operations Research: Deterministic Models (3) F,S Stinson, Wollmer

Prerequisites: MATH 114 and 116 or 123, Q S 410. Theory and applications of operations research as an aid to management decision making. Emphasis on the application of deterministic models such as network analysis, linear programming, dynamic programming, PERT/CPM and introduction to game theory.

463./563. Operations Research: Probabilistic Models (3) F,S Stinson, Wollmer

Prerequisite: Q S 410. Continuation of Q S 480 with extensions to probabilistic models such as inventory, queueing theory, Markov chains and simulation.

***466. Operations Research Software (3) F,S Faculty**

Prerequisites: Q S 310. (Students cannot receive credit for both QS 460 and 466.) Software use in the application of operations research models in business decision making. Emphasis is on problem definition and formulation for both hand and computer applications. Models covered include: linear programming, transportation, assignment, network analysis, (PERT), inventory, simulation, Bayesian and other heuristic models.

***495. Selected Topics (1-3) F,S Faculty**

Prerequisites: Consent of instructor and GPA of 3.0 or higher in major. Topics of current interest in the field as announced in the Schedule of Classes. In the absence of significant duplication, may be repeated for a maximum of six units.

***497. Directed studies (1-3) F,S Faculty**

Prerequisites: Consent of instructor and Department Chair, on Dean's List and a GPA of 3.0 or higher in Quantitative Methods. Individual projects, research or study in Quantitative Methods.

Graduate Division

500. Applied Statistics and Decision Analysis (3) F,S Stinson, Chao

Prerequisite: Graduate standing or consent of instructor. Background in finite mathematics and introductory calculus is assumed. Application of statistics to business problems, with use of some statistical software packages. Topics include review of probability concepts, distribution functions, measures of central tendency and dispersion, hypothesis testing and estimation, Bayesian decision analysis, and regression and correlation.

560./460. Operations Research: Deterministic Models (3) F,S Stinson, Wollmer

Prerequisites: MATH 114 and 116 or 123, Q S 410. Theory and applications of operations research as an aid to management decision making. Emphasis on the application of deterministic models such as network analysis, linear programming, dynamic programming, PERT/CPM and introduction to game theory.

563./463. Operations Research: Probabilistic Models (3) F,S Stinson, Wollmer

Prerequisite: Q S 410. Continuation of Q S 460 with extensions to probabilistic models such as inventory, queueing theory, Markov chains and simulation.

571. Theory of Information (3) S Chao, Stinson

Prerequisite: MIS 570 or consent of instructor. Decision making and behavior in terms of personal utilities and probabilities. Optimal decision and information rules. Amount, cost and value of information.

572. Stochastic Processes (3) F Faculty

Discrete and continuous stochastic processes including renewal theory, Markov chains and queuing theory. Application to the solution of business oriented problems.

573. Advanced Statistical Inference (3) S Faculty

Prerequisite: Q S 410. Statistical theory and practical applications to problems of the firm. Includes discrete and continuous distributions, random sampling, transformation of variables, estimation, tests of hypothesis, sufficience.

574. Topics in Multivariate Analysis (3) S Faculty

Prerequisite: Q S 410. Multivariate statistical techniques in behavioral and management science research. Topics include factor analysis, component analysis, multiple discriminant functions, canonical correlations, and generalized distance functions.

575. Experimental Design (3) S Stinson

Prerequisite: Q S 410. Experimental design as applied to behavioral and management science research. Topics include complete and incomplete block design, factorial experiments. Latin squares, analysis of covariance and multiple comparisons.

670. Seminar in Operations Research and Statistics (3) F Stinson, Wollmer

Contemporary issues, problems and trends in operations research and statistics.

695. Selected Topics (3) F,S Faculty

Prerequisite: Consent of instructor. Topics to be announced in the Schedule of Classes. Topics change each offering and in the absence of significant duplication the course may be repeated once for credit.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of instructor. Individual study under the direction of the faculty.

Graduate School Of Education

Dean: John Sikula
Associate Dean, Graduate Studies and Research: Carolyn H. Denham
Assistant to the Associate Dean: Jeanne Kaplan
Director of Support Services, Curriculum and Planning: John A. McAnlis
Assistant to the Director: Delores Blanchard
Director, Center for Educational Research and Services: Robert H. Berdan
Acting Director, Educational Career Services: Judi Walker
University Coordinator, Single Subject Teacher Education: Jean L. Conroy
Associate Dean, Student Services: vacant
Assistant to the Dean, Credential Programs: Catherine W. Whitcomb
Credential Analyst: Carol Riley
Secretary to the Dean: Belen Estrada

Graduate School of Education Advisory Council

The School Advisory Council is both advisory and developmental. It was organized primarily to provide input and feedback - from the broad community that CSULB serves - to the Dean and Department chairs of the Graduate School of Education. Members are appointed by the University President and serve indefinite terms. The current membership represents the general service area of the University and the broad range of education and other public service interests of the Graduate School of Education:

Nadine Barreto, Director of Operations, Elementary Curriculum, Norwalk-La Mirada Unified School District;
Gene Bedley, Principal, El Camino Real Elementary School (Irvine);
Neil Bradley, Principal, Jefferson Junior High School (Long Beach);
Beryl Brooks, Principal, McKinley Elementary (Long Beach);
Joe M. Carrillo, Personnel Director, Downey Unified School District;
Dale Coogan, Superintendent, Ocean View Elementary School District;
Rosa Cruz, Special Education Teacher, Akerson Development Center;
Jack DuBois, Principal, Wilson High School (Long Beach); Violet Dwyer, AAUW Representative;
Robert E. Ellis, Principal, Jordan High School (Long Beach);
Juliana Gensley, Professor Emeritus;
E. Tom Giugni, Superintendent, Long Beach Unified School District;
Stuart Gothold, Superintendent, Los Angeles County Office of Education;
Dick Hain, Member, Garden Grove Unified School Board;
Claudia Hampton, Trustee, The California State University;
Tadao Hara, Executive Director, International Bilingual School (Hermosa Beach);
Ruben Ingram, Superintendent, Fountain Valley School District;
Phil Jones, Principal, West Middle School (Downey);
Ted Kimbrough, Superintendent, Compton Unified School District;
Marta Jo Kirkwood, Commissioner, State Commission on Teacher Credentialing;
Harriet Koppel, Community Representative;
Francis Laufenberg, Member, State Board of Education;
Rod McClain, Olney and McClain Insurance;
Linda McCullough, Representative, Long Beach Junior League;
Robert Peterson, Superintendent, Orange County Department of Education;
Wayne Piercy, Principal, Polytechnic High School (Long Beach);
Jack Price, Superintendent, Palos Verdes Peninsula Unified School District;
Luanne Williamson Pryor, Community Representative;
Polly Ridgeway, Commissioner, State Commission on Teacher Credentialing;
Eunice Sato, Long Beach Councilperson;
Harriet Williams, Member, Long Beach Unified School District Board.

The Graduate School of Education

The Graduate School of Education prepares students for meaningful professional careers in the field of public and private education. The faculty and administration of the School share a set of values and endeavor to realize them in every activity, from the teaching of the curriculum to the supervision of teachers in training and to educational research. These principles are:

The individuality, worth and equality of each human being;

The promotion of democratic political and interdependent social principles;

The encouragement of individual fulfillment in a society needing sustained attention to issues of an ethical, moral and humane nature;

The never-ending love and pursuit of learning.

Consistent with the above beliefs, the Graduate School of Education stresses:

Learning a combination of teaching techniques and processes (methods) in order to maximize teaching effectiveness;

Using a variety of teaching-learning approaches, such as coaching, clinical supervision, peer, self and team teaching;

Field applications of the theory and practice learned in the classroom;

High expectations for achievement in an atmosphere of trust and acceptance.

The Graduate School of Education provides undergraduate and graduate studies in the field of education. It offers specific curricula focusing on the preparation of personnel for teaching and educational service in the elementary, middle and senior high schools, community colleges, adult programs, other educational agencies, and programs for training program developers and instructors in business, industrial, health and governmental areas.

Scholarships

Several scholarships are available to students enrolled in the Graduate School of Education. The Clyde Sanfred Johnson Memorial Scholarship fund and the William H. McCreary Scholarship are administered by the Educational Psychology and Administration Department. Three scholarships are also available in the Department of Teacher Education — the Sam Pollach Memorial Scholarship, the Steven Warren Endowment Scholarship fund, and the Norman Cahn Memorial Fund.

The Clyde Sanfred Johnson Memorial Scholarship fund, established in 1970 as a tribute to Dr. Clyde Johnson, a long time member of the faculty of the School of Education, provides monies for scholarships to be awarded annually by the Department of Educational Psychology and Administration. The scholarships are awarded to graduate students enrolled in the student personnel services program on the basis of scholarship, leadership (which includes personal characteristics), and need.

The William H. McCreary Scholarship is awarded annually by the California Personnel and Guidance Association to honor the former Chief of the Bureau of Pupil Personnel Services who retired from the California State Department of Education in 1972. The McCreary scholarship is awarded on the basis of need, academic record, and activities on and off campus in counseling related areas.

For prospective elementary school teachers, the Sam Pollach Memorial Scholarship has been established as a tribute to Dr. Pollach, a long time member of the department. The Pollach scholarship is limited to multiple subject credential candidates who are cleared for the student teaching program, and are awarded on the basis of financial need.

The Steven Warren Endowment Scholarship fund, established in 1984 as a tribute to former student Steven Warren, provides money for scholarships for student teaching. The Warren scholarships are awarded on the basis of potential for success in teaching and in working with children or adolescents.

The Norman Cahn Scholarship Fund is limited to multiple subjects credential candidates who are cleared for the student teaching program, and are awarded based on financial need.

Scholarship applications are available in the department offices, and should be completed and submitted by March 1.

Educational Psychology Clinic

The Educational Psychology Clinic is housed in the Graduate School of Education (room ED2-155, [213] 498-4991) and serves university and public school students. The primary purpose of the Educational Psychology Clinic is to give practicum experience for CSULB students in the areas of school psychology, special education (learning disabilities), elementary and secondary reading and mathematics. The secondary purpose of the clinic is to serve the wider community in Los Angeles and Orange Counties by providing services in the above areas at a reduced rate. No client is refused who can meet the criteria for acceptance but lacks the finances. Parents, as well as children and adolescents, participate in the clinic program through parent education groups in order to become better informed about their childrens' problems.

Between clients, parents, University students, instructors, etc., the clinic has close to 500 continuing contacts weekly during the fall and spring semesters. Included in the instructional program of the clinic is extensive monitoring, audio taping and video taping of student progress in working with individual clients, client groups and family groups. Introduction to the use of the microcomputer with the learning disabled is also included.

The Adult Learning Disability Program provided for CSULB students is also housed in the clinic although largely supported by the Office of Disabled Student Services. Presently 35 students are offered services including academic advisement, personal counseling, career counseling, liaison with university faculty and staff, assessment and remediation of information processing skills and weekly monitoring of progress. This program has become a model for The California State University System.

Office of Educational Career Services (ECS)

Located in the School of Education, Educational Career Services assists students and alumni in their search for teaching positions, and helps employers locate qualified candidates for professional positions. ECS serves students currently enrolled as student teachers and provides services to those seeking positions as administrators, counselors, college instructors, librarians, and school psychologists. Student teachers in Elementary, Secondary, and Special Education should establish a placement file and attend an orientation meeting. Other candidates should register with the office just prior to graduation or completion of an advanced credential.

Services offered by ECS include duplicating and mailing professional placement files; posting written job vacancy notices; conducting workshops; individual advisement; mailing job vacancy bulletins; and providing information about professional educational opportunities. Appointments may be scheduled with an Educational Career counselor to obtain information about the current job market within the field of education. The office is located in EDI Room 17 and is open 8 a.m. to 5 p.m. Phone (213) 498-5772. The 24 hour job tape hot line telephone number is (213) 498-5320.

Credential Processing Center

The Credential Processing Center (CPC) is responsible for the University recommendation of all initial elementary and secondary teaching and service credential applications to the Commission on Teacher Credentialing. The institutional issuance of the credential is dependent on successful completion of credential requirements and timely submission of documents to the CPC.

Credential candidates completing requirements by the end of the fall semester of any year should register prior to March 1, and spring and summer candidates prior to October 1. Multiple and single subject candidates complete this registration process as part of the student teaching application. Following registration with the Credential Processing Office a credential evaluation will be completed and results forwarded to the candidate indicating remaining University and State requirements. After all requirements are met, a verification of such is sent the Commission on Teacher Credentialing, which is also used by school districts and county offices for purposes of employment.

The CPC is located in Education 1, room 42, and is open for service Monday through Thursday from 8-12 and 1-6 and on Friday from 8-12 and 1-5, unless otherwise posted. The telephone number is (213) 498-5710.

Master's Degree Programs

To be considered for admission to a master's degree program, students must submit an application to the Graduate School of Education Office of Graduate Studies and Research. Application for admission in a master's degree program should be made by November 15 for the spring semester or by June 1 for the fall semester; application for enrollment for thesis or comprehensive examinations must be made by October 1 for the spring semester or by March 1 for the fall semester or summer session.

A graduate handbook and other materials regarding degree programs are available in the Office of Graduate Studies and Research. Students should consult with faculty in the various departments concerning particular programs.

All master's degree candidates in education are required either to complete a thesis or project or to take a comprehensive examination according to the requirements of the degree, degree option, or degree option specialization.

Admission to Graduate Program (Master of Arts in Education, Master of Science in Counseling, Master of Science in Special Education):

To be eligible for admission to the respective Graduate School of Education master's degree programs, applicants must meet the following grade point average (gpa) requirements:

Clear Admission — To be eligible for clear admission to the Graduate School of Education, applicants must have a gpa of 2.75 or higher on all course work taken for the bachelor's degree, or a gpa of 3.00 or higher on all coursework taken beyond the completion of the first 60 units and on all course work taken as a graduate student.

Conditional Admission — If applicants do not meet the gpa requirements for clear admission, they may qualify by earning a minimum of 3.00 on 15 units of upper division course work in Education taken as a graduate student at CSULB. This course work must be planned in consultation with a faculty member in the department or area of emphasis.

Advancement to Candidacy

To be advanced to candidacy for a graduate degree, each student must:

A. Pass the Writing Proficiency Examination (WPE) — By University regulation, all applicants must pass the WPE prior to advancement to candidacy.
B. Take the Graduate Record Examination (GRE) — Prior to advancement to candidacy, all applicants must take the GRE (1) General Test (Verbal, Quantitative, and Analytical) and (2) the Education Subject Test. (Note: students seeking the M.S. in Counseling are required to take ONLY the General Test.) Students whose scores on these tests fall below the 25th percentile are required to work with their respective advisors to plan additional course work which will assist them in the areas in which they have scored below the minimum.
C. Students must satisfy all general University requirements for advancement to candidacy as well as the specific requirements for the degree option and specialization.
D. All prerequisites and testing must have been completed, an approved program of studies must have been filed with the Graduate School of Education Office of Graduate Studies and Research, and the student must be currently enrolled.

Requirements for the Master of Arts in Education

A. Completion of 30-36 units of approved upper division and graduate courses with 18-21 units of 500/600 level courses in education;
B. A thesis or successful completion of a comprehensive examination as required by the appropriate Option or specialization.
C. Completion of the following requirements and courses appropriate to the option and the specialization:

Requirements for the various Options under the Master of Arts in Education are given in the departmental sections.

Single Subject Teacher Education Program

University Coordinator: Jean Conroy
Office: ED 1-54
Telephone: 498-5325
Secretary: Patricia Colucci
Advisory Committee: Chairman, Edward Mitchell, Physical Education Teacher, Whittier Union High School District; John Bovbert, Social Science Teacher, Huntington Beach Union High School District; Dave Chapel, Social Science Teacher, Huntington Beach Union High School District; Marilyn Cheeves, Mathematics Teacher, ABC Unified School District; Patti Dozen, Alumna and Supervisor CSULB Learning Assistance Center; Dan Forbess, Facilities Engineer, Hughes Aircraft; Winifred Gregg, Music Administrator, Westminster Unified School District, retired; Walter Hauenstein, Social Science Teacher, Los Alamitos Unified School District; Jack Hoar, Social Science Administrator, Long Beach Unified School District; Alan Holtz, Training Specialist, Rockwell International Aircraft; Art Korporaal, Science Consultant, Los Angeles County Education Office; Nancy Krause, Assistant Vice Principal, ABC Unified School District; Bill Lacey, Social Science Teacher, Huntington Beach Union High School District; Janet Lee, Principal, Long Beach Unified School District; John Meyers, Principal, Huntington Beach Union High School District; Paul Muschetto, Biology Teacher, Huntington Beach Union High School District; Bernie Negrete, Mathematics Teacher, Cerritos College; Stuart Nowinski, Chemistry Teacher, San Marino Unified School District; Pat O'Dell, Home Economics Teacher, Huntington Beach Union High School District; Sue Rice Sieveke, Biology Teacher, Rowland Unified School District; Sally Steiners, Instructional Support Assistant, CSULB Art Museum; Jean-Marie Van Dine, English Teacher, Long Beach Unified School District

General

Single Subject instruction means the practice of assignmemt of teachers and students to specified subject matter courses. This is commonly done in California high schools and in most California junior high schools and middle schools. The Single Subject Credential Program prepares university students to be credentialed in California for single subject instruction. At CSULB the program includes courses in students' credential area, in Secondary Education (EDSE), and in Single Subject Education (EDSS).

Admission Requirements

Candidates may be admitted to the program only after a completed application has been submitted to the University Single Subject Teacher Education Committee and approved. Students must have clear Junior standing to enroll in the professional education courses. Applicants must meet the following criteria and requirements:

Admission Requirements:

1. Complete the prerequisite course EDSS 300 in the appropriate subject field;
2. Have a grade point average meeting the requirements of the Chancellor, CSU System. Consult the Single Subject Coordinator's Office or credential advisor for current GPA requirements for each major;
3. Satisfactory performance as a teacher's aide (minimum of 30 hours);
4. Personal interview by credential major faculty;
5. Two letters of recommendation;
6. Submission of "Application for Certificate of Clearance to the California Commission on Teacher Credentialing";
7. Take the CBEST and fundamental skills requirements (spoken and written English, reading and mathematics);
8. Submit a written statement of professional goals or philosophy;
9. Submit completed program application to EDSS 300 instructor;
10. Satisfactory completion of all single subject area "requirements for admission."

Program Requirements (5 year credential):

1. Hold a bachelor's degree;
2. Satisfy the U.S. Constitution requirement (POSC 100 or 391 or exam);
3. Pass the CSULB Writing Proficiency Examination (undergraduate students);
4. Complete a Single Subject Credential Major (see below);
5. Attain a grade point average (GPA) of 3.0 or above for all professional education coursework, with a minimum grade of C in all professional education courses; 6. Complete the Single Subject Core: EDSS 450, EDSE 457, HSC 411B;
7. Complete the requirements of one of the Program Options (see below);
8. Pass CBEST;
9. Be admitted to and complete the student teaching requirement EDSS 470A-B or 471A-B

Program Options:

Sequential Program: EDSE 310, EDSE 421
Intercultural Program: EDSE 435, EDSE 436
Bilingual Program: (the bilingual section of EDSE 457), completion of 150 hours as teacher's aide in a secondary school bilingual setting.
English/Spanish Emphasis: (This option is available only in the Mathematics, Spanish, and Social Science Credential Programs.)
Intercultural Component (12 units): Candidates should consult with the chairperson of the Mexican American Studies Department for approval of courses.
Language Component: Candidates for the Bilingual Emphasis Credential are expected to achieve and to demonstrate the ability to perform the duties of a credentialed teacher equally well in both Spanish and English. The program administers an assessment for all candidates in both languages and provides advisement based on the result of that assessment. The Bilingual Proficiency Assessment is administered on the first Saturday of March and October. All candidates are required to complete SPAN 321.
Culture/History Component: Candidates must successfully complete a written assessment for competency in the target culture. The Culture/History assessment is administered on the third Saturday of March and October.

Student Teaching

Admission to the Final Directed Field Experience is based upon a second thorough assessment of the candidate's qualifications. The process involves an evaluation of the applicant's file and an interview with faculty in the Single Subject Program. The criteria for admission are as follows:.

1. An apparent potential for success in teaching, as indicated by successful leadership, teaching experience, or work experience. Updated information regarding the candidate's most recent experience, including the work in EDSS 450, forms the basis of this assessment. Candidates are urged to submit letters of recommendation which reflect activities undertaken since their admission to the credential program.
2. Continuing motivation for and enthusiasm toward teaching, together with those personality traits believed essential for successful teaching. New evidence may include a strong recommendation from the instructor of the EDSS 450 class and further recommendations from faculty who have worked with or have interviewed the student since the time of admission to the credential program.
3. Academic competence, overall and in the teaching major. The level of scholarly achievement of candidates is expected to be above average. Candidates can demonstrate their academic competence with an overall grade point average of 2.75 or higher at the time of application.

Admission Requirements to Student Teaching

1. Admission to the Single Subject Teacher Education Program.
2. 2.75 overall grade point average.
3. A grade of "C" or better in each course in the professional education program.
4. Physical examination clearance (examination must be within one year prior to completion of student teaching).
5. By October 1 or March 1 of the semester prior to the Final Directed Field Experience, file a student teaching application.
6. Passing the California Basic Education Skills Test (CBEST).

Applications to Student Teaching

1. Transfer graduate students should recognize that completion of the professional education sequence may take three or more semesters. The major department may require a minimum of six units in the major at CSULB prior to student teaching.
2. The application for the Final Directed Field Experience is reviewed by the student's Single Subject major area(s). The Credential Processing Center evaluates the transcripts. The department then makes a recommendation to the University Single Subject Teacher Education Committee which takes final action. When approved by this committee, the student registers for either EDSS 470AB or EDSS 471AB. A priority system is used if sufficient funding is not available to allow all qualified applicants to enroll in student teaching.
3. A Certificate of Clearance must be on file in the Single Subject Office prior to the beginning of Final Directed Field Experience.

Student teaching is full day, full semester, following the school district calendar. The students teach three classes which represent different aspects or levels of the single subject major. The other two periods are for preparation and observation. In addition the students attend a student teaching seminar. Student teaching is cross-cultural. The University determines the specific student teaching assignment.

Single Subject Credential Major Programs

Candidates for the Single Subject Credential must complete one of the credential major programs which have been approved by the Commission on Teacher Credentialing. Please consult the following list for the programs available at CSULB. Students should contact a Single Subject Advisor for complete details on each of these programs.

Art:

(51-52 units) DESN 121, ART 111, 112A, 112B, 131, 151, 181, 184, 187, 251, 300, 354A, 385A, 407, 438 or 439; one from ART 455, 455, 457, 466, 467, 468, 469, 470; one from ART 351A, 352A, 353A; one from ART 381, 384A, 387A, 389, 372, 376, 377, 378, 379; one from ART 327A, 327B, 371A, DESN 344A; one from ART 328, 341A, 344A, 355, 357A, 361, 362A, 428A.

English:

Options:
Literature, Language and Composition, Creative Writing, Comparative Literature, American Studies, Journalism, Speech Communication, Dance.

Requirements:

See University Coordinator, Jean Conroy.

Foreign Language:

French:
complete requirements for B.A. and include FREN 414.
German:
complete requirements for B.A. and include GERM 303 and 410.
Spanish:
complete requirements for B.A. and include SPAN 440 and 445.

Government:

See University Coordinator, Jean Conroy.

Health Science:

Students are required to complete the following core of thirty-three (33) units and twenty-five (25) units of coursework designed to provide breadth and perspective.
Core Courses (33 units):
Personal Health: H SC 421, 423, 430, H EC 430;
Family Health: H SC 425;
Community Health: H SC 403, 409, 422, MICR 101;
Drug Use Misuse: H SC 427;
Accident Prevention Safety: H SC 435.
Breadth and Perspective Courses (25 units):
Life Sciences (10 units): BIOL 107, 200, CHEM 200 (4);
Behavioral Sciences (9): PSY 351 or SOC 335, SOC 336, SPCH 332 or 335; Health Science (6 units): H SC 301, 440.

History:

See University Coordinator, Jean Conroy.

Home Economics:

See University Coordinator, Jean Conroy.

Industrial Arts:

Complete the requirements for the B.A. in Industrial Arts and five IA upper division electives or approved breadth and perspective courses.

Life Science:

See University Coordinator, Jean Conroy.

Mathematics:

MATH 122, 123, 224, 170 (2 units) or 270, 310, 345 or 346, 350 or 355, 361A, 380, 9 upper division MATH electives and 9 units in approved closely related courses (see credential advisor).

Music:

Complete the requirements for the B.M. with an option in either instrumental Music or Choral/Vocal Music.

Physical Education:

Core: P ED 171, 181, 215, 240, 263, 275; select one course from 149, 249; select two courses from 250, 253, 255, 257; select one course from 264, 266, 267; All of the following: 300, 301, 312, 315, 320, 332, 335, 380, and 381. (Students selecting 149 must select one additional course from 250, 253, 255, 257, 264, 266, 267.) In addition, each major is required to demonstrate proficiency at a 3.5 average level (1-5 scale) in P ED 263 and the personal performance activity units completed to satisfy a credential track. Select one of the following Tracks to complete the requirements for the Major:

Adapted Track: P ED 316, 387, 388; select one course from 350-369.

Coaching Track: P ED 317, 483; select one course from 350-369; select three units from 450-469.

Developmental Dance Track: P ED 360, 361 or 376, 483; select one non-dance course from 350-369. (The Department of Dance, School of Fine Arts, offers the Bachelor of Arts degree in Dance.)

Elementary School Physical Education Track: P ED 375, 376, 316 or 483; select one course from 350-369,

Secondary School Physical Education Track: P ED 483; select eight units from 350-369 (limit of two units per activity category).

Physical Science:

See University Coordinator, Jean Conroy.

Social Science:

See University Coordinator, Jean Conroy.

Single Subject Teacher Internship Credential

In cooperation with approved school districts, the Graduate School of Education may offer a Single Subject Teacher Internship Credential Program.

Admission Criteria

Applicants are to submit a complete application for the Internship Program for review and action by the University Single Subject Teacher Education Committee and the Internship Admissions Committee. Upon acceptance of the applicant into the Internship Credential Program, the student must submit the State application for an Internship Credential with supporting documents and fees to the California Commission on Teacher Credentialing or through the CSULB Credential Processing Center. The student must hold an Internship Credential prior to engaging in Internship teaching. The requirements for the Internship Credential are as follows:

1. complete the baccalaureate degree, complete or be very nearly complete with single-subject major (or equivalent);
2. pass the California Basic Educational Skills Test (CBEST);
3. apply for the Internship Credential Program in the CSULB Single Subject Credential Office;
4. have and maintain an overall grade point average of 3.00 and a grade point average of 3.0 in all upper- division and graduate courses in the single-subject major and in professional education courses;
5. provide verified evidence of a minimum of 40 hours experience with pupils in a school situation, such as serving as a teacher's aide; (This may be accomplished in EDSS 300 during the prior summer session);
6. have clearance on the CSULB speech assessment;
7. have health clearance prior to field experience;
8. have an offer of employment on an Internship Credential Program from the participating school district.

Academic Program

The Internship Credential Program may be presented in either of two formats, depending on the arrangements made with the participating school district.

Plan A:
Standard Teacher Education Program with Internship Teaching of One Year Substituted for Student Teaching

Prerequisite to Internship Teaching: EDSS 300, 450; EDSE 310 or 435, 421 or 436, 457. Effective with the fall semester 1986, a student must complete either EDSE 435 or 436 as a part of the above requirement. To be taken during Internship Teaching: EDSS 572A,B (6,6) taken as 6 units per semester. To be taken before, during or after Internship Teaching: HSCI 411B, ED P 350.

Plan B:
Two-year Internship Program — Required Courses Taken Concurrently and During Summer Sessions

Suggested sequence:
Summer session — EDSS 300;

Fall semester — EDSS 572A (3), EDSE 421;

Spring semester — EDSS 572B (3), EDSS 450;

Summer session — EDSE 457, I M 340;

Fall semester — EDSS 572C, EDSE 435;

Spring semester — EDSS 572D, ED P 302;

Summer session — ED P 400;

Additional courses to be taken before, during or after Internship teaching — I M 300, HSCI 411B, ED P 350.

Professional Duties of the Single Subject Intern

Most Single Subject Interns will be assigned to teach fulltime in a shortage field. Conditions of employment are governed by the Master Agreement, school district board policies and regulations. For the purpose of employment, interns are employed under the temporary provisions of the California Education Code (EC44920).

Courses in the Single Subject Credential Programs (EDSS):

300A-S. Preliminary Directed Field Experiences (2) F,S Faculty

Prerequisite: Advanced sophomore or junior standing. Directed field experience as a teacher aide. Evaluation of students for admission to the Single Subject Teacher Education Program. Required as the first course in the professional education sequence for the single subject credential and recommended to be taken in the junior year (Lecture 1 hour, laboratory/field 3 hours.) CR/NC only.

300A. Preliminary Directed Field Experience (Art) (2) F Faculty

300C. Preliminary Directed Field Experience (Life and Physical Sciences) (2) F Faculty

300D. Preliminary Directed Field Experience (Health Science) (2) S Burhansstipanov

300F. Preliminary Directed Field Experience (Foreign Languages: French, German, Spanish) (2) F Faculty

300G. Preliminary Directed Field Experience (English: Literature, Language and Composition, Creative Writing, Comparative Literature, Journalism, Speech, American Studies, and Dance) (2) F,S Brekke, Day

300H. Preliminary Directed Field Experience (Home Economics) (2) S Moore

300I. Preliminary Directed Field Experience (Industrial Education) (2) F,S Patcha, Heineman

300M. Preliminary Directed Field Experience (Mathematics) (2) F Conroy

300N. Preliminary Directed Field Experience (Music) (2) S Anderson

300P. Preliminary Directed Field Experience (Physical Education, Dance, Health Science) (2) F,S Bartlett, Franklin, Sandefur, Wuesthoff

Prerequisites: P ED 370 and completion of a minimum of five (5) skill proficiencies. CR/NC only.

300S. Preliminary Directed Field Experience Social Sciences, including Anthropology, Economics, Geography, History, Political Science, Psychology, Sociology) (2) F,S Faculty

***450A. Curriculum and Methods of Art Education (3) S Faculty**

Prerequisite: Admission to the Single Subject Credential Program. Objectives, curriculum, materials and procedures in art education. includes a survey of historical and current practices in art teaching with emphasis on the relationship of art to the total school program. Must be completed prior to student teaching. Traditional grading only.

***450C. Curriculum and Methods in Teaching Natural Science (3) S Ritz**

Prerequisite: Admission to the Single Subject Credential Program. Objectives, curriculum, materials and procedures used in teaching science. Must be completed before student teaching. (lecture 2 hours, laboratory 3 hours.) Traditional grading only.

***450D. Curriculum and Methods in Teaching Health Science (3) F Burhansstipanov**

Prerequisite: Admission to the Single Subject Credential Program. Objectives, curriculum, methods and materials used in teaching health education in secondary schools. Must be taken in the semester prior to student teaching. [Seminar] Traditional grading only.

***450F. Methods of Teaching Foreign Languages (3) S Faculty**

Prerequisite: Admission to the Single Subject Credential Program. Procedures for teaching French, German, Latin or Spanish, includes supervision of .cocurricular foreign language activities. Should be taken the semester prior to student teaching. Traditional grading only.

***450G. Teaching English (3) F,S Borowiec, Brekke, Day, Sullivan**

Prerequisite: Admission to Single Subject Credential Program. Methods of teaching language, literature and composition in junior high school, senior high school and community college. includes instruction in techniques of teaching. Must be completed before student teaching. Traditional grading only.

***450H. Methods and Curriculum in Home Economics Education (3) F Moore**

Prerequisite: Admission to the Single Subject Credential Program. Objectives, curriculum, methods and materials used in teaching home economics in secondary schools. Must be taken the semester prior to student teaching. Traditional grading only.

***450I. Curriculum and Methods in Industrial Education (3) S Patcha**

Prerequisite: Admission to the Single Subject Credential Program. Objectives, curriculum, materials and procedures in teaching industrial education with emphasis on current practices and the relationship of industrial education to the total school program. Must be taken the semester prior to student teaching. Traditional grading only.

***450 M. Curriculum and Methods in Teaching Mathematics (3) S Dorn**

Prerequisite: Admission to the Single Subject Credential Program. Objectives, curriculum, methods and materials used in teaching mathematics. Must be taken prior to the final directed field experience. Traditional grading only.

***450N. Curriculum and Methods in Teaching Music (3) F Faculty**

Prerequisites: Admission to the Single Subject Credential Program, major or minor in music. Philosophy, objectives, curriculum, materials, procedures and current practices in teaching music in secondary schools. Classroom music, instrumental and vocal music methods are presented. Should be taken the semester prior to student teaching. Traditional grading only.

***450 P. Curriculum and Methods in Teaching Physical Education (S) F,S Bartlett, Franklin, Morgan**

Prerequisites: Admission to the Single Subject Credential Program and completion of ALL skill performance proficiences with an overall average score of 3.5. Limited to students qualified to enroll in student teaching the following semester. Curriculum, legal aspects, methods and materials used in teaching physical education. Students are assigned to physical education activity classes as cadet teachers, in addition to classroom lectures. (Lecture 2 hours, cadet teaching 2 hours.) Traditional grading only.

***450 S. Curriculum and Methods of Teaching Social Science (3) F,S Faculty**

Prerequisite: Admission to the Single Subject Credential Program. Objectives, methods and materials for teaching social science in junior and senior high school. Must be taken prior to student teaching. Traditional grading only.

470 A-B. Final Directed Field Experience (6,6) F,S Faculty

Prerequisite: Acceptance of the student by the University Single Subject Teacher Education Committee for student teaching for the Single Subject Credential and permission of the Single Subject Credential adviser. Only students who will have assignments to teach concurrently at two different schools or assignments to teach concurrently in two different single subject areas or who will have two different university supervisors should register for 470 A-B. Students will teach three regular classes daily for which they have as complete responsibility as district policy will allow. For an additional two periods daily the students will engage in faculty enterprises and consult with school and University supervisors. CR/NC only.

471A-B. Final Directed Field Experience (6,6) F,S Faculty

Prerequisites: Acceptance of the student by the University Single Subject Teacher Education Committee for student teaching for the Single Subject Credential and permission of the Single Subject Credential advisor. Only those students whose student teaching assignment does not follow the pattern requiring them to enroll in 470 A-B should enroll in 471 A-B. Students will teach three regular classes daily for which they have as complete responsibility as district policy will allow. For an additional two periods daily the student will engage in faculty enterprises and consult with school and university supervisors. CR/N C only.

Graduate Division:

572A,B,C,D. Cooperative Teaching Program (3/6,3/6,3,3) F,S Faculty

Prerequisite: Admission to the Single Subject Internship Program. Supervised teaching experience in grades seven through twelve. Participants teach on salary in an approved school district while enrolled in three units per semester for two years or six units (A and B) each semester for one year. Teaching will be evaluated by the participating school district and university supervisor. CR/NC only.

Educational Psychology and Administration

Graduate School of Education

Department Chair: Russel E. Orpet
Department Office: ED1-10
Telephone: 498-4517
Faculty: Professors: Enid V. Blaylock, Robert H. Berdan, Robert W. Cash, George D. Demos, Carolyn H. Denham, Elaine J. Haglund, Albert Hamel, Alice M. Harris, Thomas J. Kampwirth, Charles J. Kokaska, Alfred L. Lazar, Phyllis F. Maslow, John A. Nelson, Vicente N. Noble, Russel E. Orpet, Carolyn M. Owen, John P. Sikula, Robert J. Swan; Associate Professors: Norma B. Gibbs, Alfred I. Schmidt, Carol Wareing; Assistant Professors: Patricia A. Bachelor, John A. Graham.
Department Secretary: Gloria Inzunza-Franco

The Department of Educational Psychology and Administration offers graduate level course work in the following program areas: Educational Administration, Special Education, school Counseling, School Psychology, Educational Psychology, Historical, Philosophical and Social Foundations, and Educational Research, as well as undergraduate service courses in life skills and other areas.

Students desiring information should contact the department office for referral to one of the faculty advisors.

Educational Administration Advisory Council

The advisory council for the approved programs in educational administration is composed of school board members, interested citizens, teachers, students, community leaders, supervisors and administrators from all levels in the geographic areas served by the University. These persons confer with and assist the program faculty in examining the educational needs of the community and in recommending changes in existing programs that will enable the University to meet these needs.

William Barnes, Dean, Long Beach City College; Janell Brown, Assistant Superintendent, Compton Unified School District; Howard Bryden, Principal, Brea-Olinda Unified School District; Richard Flores, Certified Personnel Director, Santa Ana Unified School District; William Hutton, Principal, Long Beach Unified School District; William Layne, Director of Magnet School Program, Los Angeles Unified School District; Ernest Moreno, Personnel Services Division, Los Angeles Community Colleges; James Polk, Alumnus, Long Beach; Thomas Stevens Jr., President, Los Angeles Trade and Technical College; Virginia Trapani, Alumnus, Seal Beach; James Willard, Principal, Ontario-Montclair Elementary District; Donald Woodington, Professor, California State University, Dominguez Hills.

Pupil Personnel Advisory Council

The advisory council for the approved programs in counseling and school psychology is composed of supervisors, school psychologists and counselors, alumni, non-educators, and currently enrolled students. These persons confer with and assist the program faculty in examining the educational needs of the community and in recommending changes in existing programs that will enable the University to meet these needs.

William Cooper, Career Center Coordinator, El Camino Community College; Karen Hanafusa, Counselor, John Muir Elementary School (Long Beach); Fitzgerald Jones, Counselor, Long Beach Unified School District; Jean Kunst, Counselor, TeWinkle Intermediate School (Newport-Mesa); Carlos Manrique, Special Education Director, El Monte Elementary School District; Nancy Manriquez-Dowell, Counselor, El Monte Elementary School District; Rick Nakashima, Student, CSULB; Sharon Paul, Administrator, Human Services Unit, Orange County Department of Education; Alice Sesno, Attendance and Administrative Services Consultant, Los Angeles County Office of Education; Winnie Strong, Counseling Services Consultant, Long Beach Unified School District Special Education Program.

Special Education Advisory Committee

The Community Advisory Committee provides suggestions for informational and instructional content that can be added to program courses in order to keep faculty and students abreast of relevant changes in the education and service needs for exceptional individuals. Committee members represent exceptional individuals, minority groups, parents of exceptional individuals, teachers, administrators, and University alumni.

Ed Ahrens, Former Director of Special Education, Long Beach Unified School District; Lynda Glascoe, LH-RSP Teacher, Garden Grove Unified School District; Ruth Govorchin, SH-Teacher, ABC Unified School District; Dora Henderson, community representative, Long Beach; Lynn Miller, SH-Teacher, Garden Grove Unified School District; Paul Perencevic, LH-Teacher, Los Angeles Superintendent of Schools; Robin Perencevic, SH-Autism Teacher, Orange County Department of Education; Sister Olivia Trejo-Solorio, Bilingual-Special Education Teacher, Poor Clare Missionary Sisters, Santa Ana; Marilyn Williams, LH-RSP Teacher, Long Beach Unified School District.

Master's Degrees

Master of Arts degrees in Education with the following options and specializations are offered:

Educational Administration Option

Educational Psychology Option, with three specializations

Social and Philosophical Foundations of Education Option.

Two Master of Science degrees are available, in Counseling and in Special Education.

The department also offers credentials in Administrative Services, Pupil Personnel Services, Counseling, School Psychology, Learning Handicapped, Severely Handicapped and Resource Specialist Certificate. In addition, a Graduate Certificate as a Career Guidance Specialist is offered.

Admission and Advancement to Candidacy:

Refer to the Graduate School of Education section for information concerning admissions criteria and advancement to candidacy.

Master of Arts in Education

Option in Educational Administration (Code 5-3103)

The faculty in the school administration program believe that the combination of theory and practice, coupled with substantive field applications, help develop flexible and creative administrators to serve the students and residents of California. The emphasis is on service to teachers and students, and stresses the need for team-building, trust, and other concepts found in pursuing excellence. The program stresses the interdisciplinary nature of leadership and administration, and draws upon research and successful approaches utilized in a variety of disciplines. The educational administration courses are available in the evening, but fieldwork requirements are met during the day. Depending on the ethnic distribution of the candidates local school, where candidates normally satisfy the fieldwork requirement, summer enrollment may be necessary to satisfy state requirements for multi-ethnic and multi-level field experiences.

Option Prerequisites

A. 18 units of upper division courses in education.
B. Teaching credential (partial fulfillment or standard) or equivalent experience.

Option Requirements

A minimum of 30 units with a 21 unit concentration in Educational Administration is required. 21 units must be in the 500/600 level series taken at this University.

A. Core Requirements
   1. One of the following (3 units): ED P 420, 574, or 576;
   2. One of the following (3 units): ED P 500, 520, or 696;
   3. One of the following (3 units): ED P 575, 582, 604, 605, 677, or 680;
   4. One of the following: EDAD 697 (1 unit) or EDAD 698 (4-6 units).
B. Additional Requirements
   All of the following (21 units): EDAD 541, 544, 580, 647, 649, 651, and 680.

Option in Educational Psychology (Code 5-3158)

Option Prerequisites:

Fifteen units of approved upper- or graduate-division units in education, including:

A. All of the following — or equivalent upper division courses (12 units): ED P 301 or 302, ED P 305, 419, and 420;
B. One of the following; ED P 574 or 576.

Option Requirements:

A minimum of 30 units with a 20 unit concentration in education is required. 18 units must be in the 500/600 level series taken at this University.

A. Core Requirements:
   All of the following (16-18 units): ED P 519, 520, 604, 605, and 698 (4-6 units).
B. Option requirements by Specialization: Students should select 5 courses from within or across the following areas (15 units):
   1. Measurement and Research/Assessment — ED P 525, 526, 697, I M 440;
   2. Child Development/Experimental Child Psychology — ED P 451, 560;
   3. Learning Theory/Principles of Educational Remediation — ED P 405, 451, 527, 554, IM 411.

Option in Social and Philosophical Foundations of Education (code 5-3162)

Option Prerequisites:

A. 15 units of upper division courses in education, including
   1. ED P 301 or 302,and
   2. Other upper division units in education to total 15 units.
B. A background suitable to a social foundations program, such as teaching experience, VISTA, Peace Corps, or Social Work, or an undergraduate major in social science or humanities.

Option Requirements:

A minimum of 30 units with a 20 unit concentration in education is required. 18 units must be in the 500/600 level series taken at this University.

A. Core Requirements
   1. All of the following (6 units): ED P 574, 576;
   2. One of the following (for comprehensive exam students) 3 units: ED P 500 or 696; (for thesis students) 9 units: ED P 419, 420, and 520.
   3. One of the following: ED P 697 (1 unit) or 698 (4-6 units).
B. Three courses from the following: ED P 550, 575, 677, or 680;
C. Electives to total 30 units selected in consultation with a faculty advisor in Social and Philosophical Foundations.

Master of Science in Counseling (Code 6-3165)

The program faculty in this academic area believe that counselors and school psychologists serve valuable functions in the field of education, business and private practice. Our philosophy is to introduce the students to a variety of different approaches to counseling, and to encourage the development of approaches that fit the personality of each candidate. The program combines theory and practice and utilizes on and off campus field assignments. Required courses are offered in the evening, but most field assignments require daytime placement. Students are trained at the graduate level to be able to perform the duties expected by professional groups and by their employers. Students are prepared to assume future leadership positions in their areas of expertise after additional work experiences in the field. All of the programs (with the exception of the Career Guidance Specialist Certificate) require the Master of Science in Counseling degree as the basic step toward their further specialization. This is a 36 unit degree program which also requires 24 units of prerequisite courses in the behavioral sciences. Those students wishing to obtain the school counseling (PPS) or school psychology credential need to take additional units. Those who wish to complete the educational requirements for MFCC license eligibility also take additional units toward that objective.

Prerequisites

A bachelor's degree with 24 upper division units in the following areas of study in the behavioral sciences (suggested courses in education noted in parentheses):

A. Developmental — 3 units (ED P 301 or 302),
B. Educational Psychology — 3 units (ED P 305),
C. Behavior Dynamics — 3 units (ED P 311),
D. Individual Differences — 3 units (ED P 350),
E. Statistics and Measurement — 6 units (ED P 419 and 420),
F. Counseling and Guidance — 3 units (ED P 430 or 434).

Other upper division courses may be substituted from Anthropology, Human Development, Social Work, Sociology, Psychology, or other appropriate disciplines provided they satisfy the area definition. Such substitutions must be selected in consultation with an advisor.

Requirements for the Master of Science in Counseling

Students must complete a minimum of 36 units of upper division and graduate courses with a minimum of 27 units in the 500/600 level series taken at this University including the following:

A. Core Requirements
   1. All of the following — 18 units: ED P 520, 532, 533, 536, 541, and 545;
   2. One of the following chosen in consultation with a faculty advisor: ED P 695A (2) and 698 (4) for thesis; or ED P 695B (3) and written comprehensive examination.

B. Program requirements by Specialization. Completion of at least one of the following areas of specialization:
   1. Elementary and Secondary Counseling and Guidance (6 units) — ED P 537 and either ED P 631 or 632);
   2. Student Services in Higher Education (9 units) — All of the following: ED P 537, 538 and 539;
   3. Career Specialist (9 units) — All of the following: ED P 530, 531, and 537.

C. Suggested electives to total 36 units (Other electives may be selected in consultation with an advisor): ED P 519, 529, 534, 555, 604, 605, 615, 639, or 696.

Graduate Certificate Program for Career Guidance Specialist

This post-baccalaureate certificate program is planned for counselors and educators with interests in career education and career counseling.

Admission requirements include the following: Application to the program, possession of an undergraduate degree, evidence of background in concepts of human development and basic behavioral sciences, and evidence of experience and/or interest in the area of career guidance.

Requirements for the Graduate Certificate for Career Guidance Specialist

1. 12 core course units: ED P 530, 531, 537, 545.
2. Passage of the Writing Proficiency Examination (WPE).
3. Approved electives (6 units) in the Departments of Educational Psychology, Manpower Management, Psychology, Sociology, or Vocational Education.

Special Education

The faculty in the special education program area each have their own specialization, which combined with the numerous part-time faculty used in the program provide depth and a rich combination of theory and practical application. All courses required for the special education credential are scheduled in the evening for the benefit of regular teachers pursuing this advanced credential. Student teaching in special education classrooms is available during the summer to accommodate regular classroom teachers, but opportunities are limited.

Master of Science in Special Education (Code 6-3155)

Prerequisites

A bachelor's degree with 24 upper division units in the following areas of study in the behavioral sciences (suggested courses in education noted in parentheses):

A. Developmental — 3 units (ED P 301 or 302),
B. Educational Psychology — 3 units (ED P 305),
C. Behavior Dynamics — 3 units (ED P 31l),
D. Statistics and Measurement — 6 units (ED P 4l9 and 420),
E. Individual Differences — 3 units (ED P 350),
F. Counseling and Guidance — 3 units (ED P 430).

Other upper division courses may be substituted from Anthropology, Human Development, Social Work, Sociology, Psychology, or other appropriate disciplines provided they satisfy the area definition. Such substitutions must be selected in consultation with an advisor.

Requirements for the Master of Science in Special Education

Students must complete a minimum of 30 units of upper division and graduate courses with a minimum of 18 units in the 500/600 level series taken at this University.

A. Requirements
   1. All of the following (15 units): ED P 536, 546A or B, 550, 566, and 650;
   2. One of the following (3 units): ED P 500, 519, 520 or 696 (ED P 519, 520, or 696 strongly recommended for thesis students);
   3. One of the following: comprehensive examination (ED P 697 — 1 unit), or completion of a thesis (ED P 698 — 4-6 units);

B. Electives to total 30 units selected in consultation with a faculty advisor in Special Education.

Bilingual/Special Education Internship Program

Prerequisite:

ED P 350

Admission Requirements:

1) Hold valid California basic teaching credential;
2) be eligible for or employed by the cooperating school district;
3) demonstrated proficiency in Spanish and in English;
4) demonstrated related cultural concerns by enrollment in or completion of bilingual emphasis or specialist program or passage of bilingual cross-cultural certificate of competence;
5) placement in learning handicapped special education classes during internship program duration.

Program Requirements:

30 units in the following sequence:

Semester 1:	ED P 451, 572A;
Semester 2:	ED P 454, 572B;
Summer Session:	ED P 405, 565;
Semester 3:	ED P 568, 572C;
Semester 4:	ED P 554, 572D.

Pupil Personnel Services (School Counselor) and School Psychologist Credentials

The credentials are required of persons serving a guidance function beyond the advisory duties customarily performed by classroom teachers. A teaching credential or experience is not required. The credential holder is authorized to work in public schools from kindergarten through grade 12 and receives an authorization for service in school counseling or, with additional training, in school psychology.

Admission Requirements:

1. A GPA of 3.0 on all upper division and graduate level coursework.
2. Passing the CSULB Writing Proficiency Examination.
3. Three letters of recommendation.
4. A Personal Statement.
5. Screening interview.

The pupil personnel credential includes (1) prerequisites in the behavioral sciences; (2) completion of specific requirements including practicum and field experiences.

Prerequisites:

1. A bachelor's degree and completion of the following course work or equivalents from other subject areas as approved by a program advisor in each of the following areas: Human Development and Learning; Behavior Dynamics and individual Differences; Measurement and Research; Counseling and Guidance. (Check with Pupil Personnel Services Faculty Advisor for acceptable equivalents.)
2. Application for Certificate of Clearance is required for public school field work. Apply at least one year prior to the expected first field work semester. Persons possessing a valid California credential are exempt from this requirement.

School Counselor Credential

Requirements:

1. Completion of the M.S. in Counseling degree with an acceptable master's thesis (or by Pupil Personnel Services Committee approval of documented evidence of research competence) or passing comprehensive examination.
2. Completion of the following or equivalent courses if not part of the master's program: ED P 532, 533, 536, 537, 541, 545, 555, 631 or 632, 604 or 605, 615, and 639, plus prerequisites.
3. Field Work Prerequisites:
   A. 1st Semester Counseling Field Work, ED P 541 (225 hours per semester/15 hours per week)
      1) All prerequisites, advancement to candidacy, and satisfactory completion of the following:
      2) ED P 631 or 632;
      3) ED P 533 (items 3A1-3A3 MUST be taken prior to ED P 532);
      4) ED P 532, may be taken prior to or with ED P 541;
      5) Certificate of Clearance (if not holding valid credential).
   B. 2nd Semester Counseling Field Work, ED P 545 1) ED P 541
      2) ED P 532 and
      3) ED P 536, 537 and
      4) ED P 639
      5) Passing the California Basic Education Skills Test prior to entrance in ED P 545.
4. Certification of competence by the Pupil Personnel Services Committee is required. Application for certification must be submitted to the Coordinator by March 1 for summer/fall certification and October 1 for spring certification. The Pupil Personnel Services Committee may require students to complete additional course work, field work, or demonstrate specific competence before approval.

School Psychologist Credential

Requirements:

1. Completion of an acceptable master's degree in one of the behavioral sciences plus equivalent Pupil Personnel Services Credential course work. Master's degrees which typically meet this requirement in the Department of Educational Psychology and Administration are as follows: Master of Science in Counseling; Master of Science in Special Education; Master of Arts in Education with an option in Educational Psychology or approved equivalent master's degree.
2. Completion of a minimum of 60 units in graduate course work or their equivalents with the approval of the Pupil Personnel Services Committee in the following areas of study: Human Development and Learning: ED P 604, 605. Counseling, Consultation, and Pupil Personnel Services: ED P 532, 533, 536, 537, 555, 615, 631 or 632, 639. Psychological Assessment, Remediation: PSY 574, ED P 405, 451, 525, 526, 527, 560. Measurement and Research: ED P 519, 520. Practicum and Field Work: ED P 541, 545, 642A (2 semesters at 2 units each). Electives to complete a minimum of 60 units.
3. Certification of competency by the Pupil Personnel Services Committee for School Psychology. The Pupil Personnel Services Committee may require students to complete additional coursework, field work, or demonstrate specific competencies before approval.
4. A Certificate of Clearance is required prior to field work/internship. (Refer to School Counseling "Prerequisites, Item No. 2.")
5. Field Work in School Psychology prerequisites: Master of Science in Counseling or equivalent and approval of field work-school psychology internship application by Pupil Personnel Services Committee. PSY 574, ED P 405, 451, 525, 526. Field work is typically unpaid and application deadlines are the same as school counselor.
6. School Psychology internship Prerequisites: Master of Science in Counseling or equivalent and approval of field work-school psychology internship application by Pupil Personnel Services Committee; Pupil Personnel Services Credential; PSYCH 574, ED P 405, 451, 525, 526. Passing the California Basic Education Skills Test prior to entrance in field experience.

Internship: An internship is paid field work, performed under the supervision and with the permission of the PPS faculty and the school district which hires the intern. In order to be recommended to a district as a possible intern, the student must have completed the prerequisites listed under 6 (above) and be approved by the PPS committee following the internship interviews held in the spring semester.

It is not necessary to be an intern in order to complete the school psychology credential requirements. One only has to complete field work. The field work requirement is half-time for a full academic year, or its equivalent.

Special Education Specialist Credential

This program provides teachers with advanced training in preparing exceptional students (communication handicapped, learning handicapped, severely handicapped) for their life pursuits.

Admission Requirements:

1. Admission to the University.
2. An overall GPA of 2.75 in all college and university coursework.
3. Hold a basic California Teaching Credential.

Program Requirements:

Core: ED P 350, 405, 451, 464, CD 361.

Specialization:.

Learning Handicapped: ED P 554, 565, 586B (10 units);
Severely Handicapped: ED P 561, 563, 586C (10 units);
Communication Handicapped: ED P 451, ENGL 429; CD 380; ED P 686A and 686B; complete M.A. in Communicative Disorders - Speech Pathology.

Learning Handicapped credential candidates jointly pursuing a bilingual credential, emphasis, or certificate, may substitute ED P 454 for CD 361.

Resource Specialist

The Resource Specialist Certificate Credential Program is a post-baccalaureate program for professionals who hold a regular teaching credential and a Special Education Specialist or the Clinical Rehabilitative Services Credential in Language, Speech and Hearing with the Special Class Authorization. The candidate for this certificate must have had three or more years of teaching experience, including assignments with both regular and handicapped students. Student teaching experience can be counted toward the three-year requirement.

Program Requirements:

ED P 535, 546B, 570, electives up to 3 units, based on determination of competencies in ED P 546B. (The evaluation process in ED P 546B is a certification of competencies and determination by the Special Education Faculty of the candidate's skills.)

Administrative Services

Certification of School administrators is established in a two-step Administrative Services Credential. The first step — Preliminary Services Credential is valid for five years from date of issuance, or three years from date of initial employment in an administrative position requiring the credential, whichever date is later, and is not renewable. The program at CSULB has been approved to meet requirements for the preliminary credential.

The second step — Professional Services Credential is valid for five years and is renewable. Requirements: a. Possession of a valid Preliminary Administrative Services Credential; b. a minimum of two years of successful, full-time experience in a position requiring the Preliminary Administrative Services Credential; and c. completion of a Commission-approved program of advanced study and field experience or internship. Information on the second step professional credential will be available as soon as implementation permits.

Preliminary Services Credential

Students may select one of the two options in the CSULB preliminary program. All options are oriented toward the following positions: superintendent of schools and all central office administrators, elementary and secondary school principals, assistant principals, supervisors of instruction, curriculum directors, and other building level positions. In addition, Option II is oriented toward a career in public service in the areas of health, community development, criminal justice, education, recreation, planning, systems analysis, finance, personnel, public policy analysis, educational administration, and urban administration.

Admission Requirements:

1. Admission to the University.
2. Possession of a valid basic California teaching credential, or pupil personnel, or librarianship, or health services credential, or vocational education instructor's credential, or Clinical Rehabilitative services credential.
3. A 2.75 minimum overall grade point average.
4. Personal interview with coordinator of the Administrative Services Credential Program.

Program Requirements:

Option I:

EDAD 541, 544, 647, 648, 649, 651, ED P 350 or 540, EDAD 580, 680. Three years verifiable experience with a credential listed above; passing the California Basic Education Skills Test prior to entrance in final field experience.

Option II:

For information on specific requirements for this option, candidates should consult with the program coordinator.

It is anticipated that candidates may wish to correlate coursework for the credential with the requirement of the MA in Education with an option in Educational Administration or the MPA in Public Administration. Candidates should consult with an advisor and be familiar with these master's degree programs.

Courses in Educational Administration (EDAD):

Graduate Division:

541. Principles and Leadership in School Administration (3) F,S Graham, Nelson, Wareing

Prerequisite: A valid regular teaching credential or 15 upper division or graduate units in education. Basic principles of school administration and federal, state, county and local school administration relationships are studied. Stress is placed upon the concepts and techniques of leadership as they relate to educational administration.

544. Legal and Financial Aspects of Schools (3) F,S Williams

Prerequisite: EDAD 541. Consideration of the law and public education, of school revenues, apportionments, budgetary procedures and cost accounting.

580. Introduction to Field Experience in Administration (3) F,S Wareing

Prerequisite: Approval by the Program Coordinator, Department of Educational Psychology and Administration. Written application should be made by October 1 for the spring semester and March 1 for the fall semester. The first of two on-the-job experiences involving the student in the solution of problems in administration and supervision at the elementary and secondary levels. CR/NC only.

590. Special Problems in Educational Administration (1-3) F,S Wareing

Prerequisite: Enrollment limited to graduate students who hold a standard teaching credential and have consent of instructor. Advanced study in educational administration within an area of specialization done on experimental, research and/or seminar basis. The area will be designated by the department at the time the course is scheduled. A student may enroll for one-three units to a maximum of six units for certificate and degree purposes, subject to suitable change in course content. Non-degree and non-certificate students may enroll for additional units subject to suitable change in course content.

647. Seminar in School Personnel Administration and Leadership Behavior (3) F,S Williams

Prerequisite: EDAD 541. Advanced study and research into the areas relating to the role and function of educational management and leadership and the planning, organizing, staffing, directing and expediting of the personnel function.

648. Seminar in Systems Approach and Educational Management (3) F,S Wareing

Prerequisites: EDAD 541, 544. Advanced study in educational administration done on a seminar basis.

649. Seminar in Urban Educational Administration (3) F,S Graham

Prerequisites: EDAD 541, 544. Consideration of problems plaguing the urban school system.

651. Seminar in Administration and Supervision (3) F,S Williams

Prerequisite: EDAD 541. Advanced study and research in school organization, administration, and supervision of elementary, secondary and alternative schools, along with an analysis of emerging designs in administration theory and practice.

680. Advanced Field Experience in Administration (3) F,S Wareing

Prerequisites: EDAD 541, approval by the Coordinator of Educational Administration, successful completion of EDAD 580. Application should be made by March 1 for the fall semester and October 1 for the spring semester. This is the second of two on-the-job experiences involving the student in the solution of problems in administration and supervision at the elementary and secondary levels. CR/NC only.

683. Field Work in Administration and Supervision of the Community College (3) F,S Faculty

Prerequisite: Approval by the Coordinator of Educational Administration. Written application should be made by October 1 for the spring semester and March 1 for the fall semester. On-the-job participation in the solution of problems in administration and supervision. Final course in the professional preparation sequence; individual conferences arranged. May be repeated for a maximum of six units. CR/NC only.

697. Directed Research (1-3) F,S Denham

Prerequisites: Consent of instructor, department Chair and associate Dean. Individual research or intensive study under the guidance of a faculty member. A student may enroll for one-three units to a maximum of three units for certificate and degree purposes, subject to suitable change in course content. Application for enrollment must be made by March 1 for the fall semester or by October 1 for the spring semester.

698. Thesis (1-6) F,S Denham

Prerequisites: Advancement to candidacy, ED P 696, approval by director, department Chair and associate Dean. Planning, preparation and completion of a thesis under supervision of a faculty committee. Must be taken for a minimum of four units. Application for enrollment must be made by March 1 for the fall semester or by October 1 for the spring semester.

Educational Psychology (ED P)

Lower Division

190. Current Topics in Education (1-3) F,S Faculty

Orientation to and exploration of topics relevant to the college student as a learner-scholar and decision-maker within the changing campus, community and societal milieu. Lectures, discussion, field study. May be repeated under different topics for a maximum of six units. Topics will be announced in the Schedule of Classes.

191. Career and Personal Explorations (3) F,S Marrs, Owen, Swan

A course designed for, but not restricted to, entering and undeclared students. Includes training in life problem-solving and self-management skills; an intensive exploration of one's own values, interests and abilities; an intensive career information search; and optional modules. Instruction by self-paced materials, lecture, small group discussion, interviews and inputs from various campus departments.

Upper Division

301. Child Development and Learning (3) F,S Blaylock

Physical, mental, emotional and social growth and development of the child with emphasis on the learning process.

302. Adolescent Development and Learning (3) F,S Blaylock

Prerequisite: General psychology. Physical, social, emotional and mental development during adolescence; learning processes.

305. Educational Psychology (3) F,S Harris

Prerequisite: ED P 301 or 302. Modifiability and educability of the human organism at different levels of maturity; psychology of learning applied to teaching.

311. Mental Hygiene (3) F,S Gibbs

Psychological factors important for the development of mental health; implications for teaching, group work and interpersonal relationships in home and school; behavior disorders and educational practice.

350. Survey of Education of Exceptional Individuals (3) F,S Kampwirth, Kokaska, Lazar, Schmidt

Survey of the education of exceptional individuals offering the opportunity for the study of, and exposure to, all exceptional individuals, including the communication-handicapped, physically handicapped, learning handicapped, severely handicapped and the gifted. Field work.

357. Self-Management (3) F Harris

(Not open to students with credit in PSY 357.) Prerequisite: PSY 100. Introduction to theory, research and application of self-management procedures. Methods for integrating and managing the cognitive, emotional, behavioral, and physiological aspects of an individual will be discussed. Topics will include systematic self-observation, career decision-making, interpersonal relations, time management, stress and emotion management, and habit change and maintenance.

373. Nonverbal Communication: Interaction of Mind and Body (3) S Owen, Schlaich

Same course as DANC 473. History and theories of the development of mind/body integration. Enhancement of personal and interpersonal relations through lecture, discussion, films and movement experiences. Analysis and synthesis of the interdependence of the psychological and physical processes in nonverbal communication.

390. Current Topics in Education (1-3) F,S Faculty

Orientation to and exploration of topics relevant to the college student as a learner-scholar and decision-maker within the changing campus, community and societal milieu. Lectures, discussion, field study. May be repeated under different topics for a maximum of six units. Topics will be announced in the Schedule of Classes.

391. Career and Personal Explorations (3) F,S Marrs, Owen, Swan

Designed for, but not restricted to, transfer students and upper division students who have not selected a major. Includes training in life problem-solving and self-management skills; an intensive exploration of one's own values, interests and abilities; an intensive career information search; and optional modules. Instruction by self-paced materials, lecture, small group discussion, interviews and inputs from various campus departments. Not open to students with credit in ED P 191.

*400. Fundamentals of Educational Statistics, Measurement and Evaluation (3) F,S Bachelor, Harris, Orpet, Perry

(May not be used as a substitute for ED P 419 and/or ED P 420.) Fundamentals of measurement, evaluation and statistical concepts in education: A research consumer and educational practitioner's approach.

*405. Behavior Management in the Classroom (3) F,S Kampwirth

Application of the principles of learning theory, social learning, and group dynamics in the classroom. Includes training in observation in a school setting, collection of observational data, building and implementation of intervention programs.

*419. Educational Statistics (3) F,S Bachelor, Orpet

Prerequisite: Elementary algebra. Introduction to statistical methods with application to educational research problems.

*420. Tests, Measurements and Evaluations (3) F,S Denham, Orpet, Maslow

Prerequisite: ED P 419. Determination, meaning and use of fundamental statistical concepts applied to problems of measurement and evaluation; construction, interpretation and use of standardized and teacher made tests.

*429. Statistical Data Processing (3) F Orpet

Prerequisite: ED P 419 or approved upper-division course in statistics. Univariate and multivariate analysis of educational data on the computer using the Biomedical Computer programs software.

*430. Principles of Counseling and Guidance (3) F,S Noble, Owen

Introduction to the fields of school counseling, school psychology, marriage, family, child counseling, and other community human services. An overview of the functions and duties of school counseling, community mental health services, and an orientation to professional issues, counseling theories and practices.

*434. Interpersonal Skills in Human Resource Development (2-4) F,S Cash

Designed to develop interpersonal skills identified as necessary to have effective helping relationships and human resources development. Includes a presentation of theory and research applicable to processes in interpersonal functioning and human relations. Didactic and experiential learning approaches. 434 A. (2), 434 B. (3), 434 C. (4)

*451. Learning Disabilities in Exceptional Individuals (3) F,S Lazar, Maslow

Assessment of learning disabilities in learning handicapped students as related to etiology and diagnosis. Identification of current issues and trends and the utilization of research findings in program implementation. Review of theoretical instructional systems used to design programs for the learning handicapped. Field work or clinical experience required as appropriate.

*453. Adults with Learning Disabilities: Counseling Model (3) F Faculty

Prerequisite: ED P 451 or equivalent or consent of instructor. An introductory course designed to help students gain knowledge in identification, diagnosis, remediation and counseling of adults with learning disabilities.

*454. Development of Communication Skills in Bilingual Contexts (3) F Faculty

Prerequisite: Consent of instructor. Normal and atypical development of language skills in school-aged children from non-English language backgrounds. Focus on the skills needed in the classroom, including communicative competence, pragmatics and literacy. Distinguishing between normal language development and linguistic problems.

*464. Teaching Exceptional Individuals (3) F,S Lazar

Study and experience concerning the principles of learning, development and curriculum for exceptional students with emphasis upon formal and informal instruments for testing and assessment of student behavior. Preparation of instructional objectives, task analysis, techniques in planning class management and developing alternate learning strategies will be included. Field work.

*490. Special Topics in Educational Psychology (16) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in educational psychology selected for intensive study. May be repeated under different topics for a maximum of six units. Topics will be announced in the Schedule of Classes.

492A. Field Studies in Human Services/Mental Health (1-3) F,S Gibbs, Hamel, Owen

Prerequisite: Consent of instructor. Students in any major are placed in agencies and organizations to engage in volunteer work in human services/mental health. Development of personal values, people skills, interpersonal communications, critical thinking, and problem solving are emphasized in the 15 hours of class time required. (A minimum of three hours volunteer experience per week, per semester for one unit of credit.) May be repeated to a total of six units in 492A and B.

492B. Field Studies in Human Services/Mental Health (1-3) F,S Gibbs, Hamel, Owen

Prerequisite: Consent of instructor. Students in any major are placed in agencies and organizations to engage in paid work in human services/mental health. Development of personal values, people skills, interpersonal communications, critical thinking, and problem solving are emphasized in the 15 hours of class time required. (A minimum of ten hours paid experience per week, per semester for one unit of credit.) May be repeated to a total of six units in 492A and B.

*497. Independent Study (1-3) F,S Orpet

Prerequisites: Consent of instructor and department Chair. Independent study undertaken under the supervision of a faculty member. May be repeated for credit to a maximum of six units, with no more than three units applicable to credential or major requirement.

Graduate Division

500. Educational Research (3) F,S Maslow, Orpet, Perry

Prerequisite: ED P 400. Meaning, types and applications of educational research, use of research resources and critiques of research studies. Should be taken early in a master's degree program. Open only to students taking comprehensive examinations.

510. Laws and Ethics for Counselors (3) S,SS Noble

Prerequisites: ED P 311, 430, and/or consent of instructor. Examines laws governing the professional aspects of counseling. Included are the legal and ethical considerations of the practice of family/child and clinical community counseling services. The emphasis will focus on clinical practice.

519. Advanced Educational Statistics (3) F,S Bachelor, Orpet

Prerequisite: ED P 419. Principles of statistical analysis, with emphasis on sampling procedures, hypothesis testing, experimental design and correlational techniques.

520. Program Evaluation and Research (3) F,S Bachelor

Prerequisites: ED P 419, 420. Research designs; problems of internal and external validity. Conducting program evaluations, including needs assessments, goal-setting by various constituents, summative and formative evaluation of objectives, and presentation of results.

525. Individual Pupil Diagnosis (3) F Faculty

Prerequisite: PSY 574. Administration and interpretation of diagnostic devices including tests used in the diagnosis of clinical and learning difficulties; preparation of complete case studies.

526. Multicultural and Bilingual Assessment (3) S Kampwirth

Prerequisite: ED P 525. Theory and practice of clinical procedures for the differential diagnosis of the linguistically and/or culturally different student and the application of diagnostic findings in the development of education for this student population. Field experiences are required.

527. Clinical Practice in Child Diagnosis (3) F Kampwirth

Prerequisite: ED P 525. Diagnostic techniques with exceptional children, including L.H. and those with low-incidence exceptionalities. Discussion and practice of school based intervention techniques.

529. Assessment in Career Counseling (3) S Swan

Prerequisite: ED P 420 or equivalent or consent of instructor. The selection, administration, scoring, and interpretation of assessment instruments in career counseling. Assessment areas include interests, values, personal characteristics, and aptitudes and abilities. Techniques for developing and using special assessment instruments will also be covered.

530. Career Development and Decision Theory (3) F Cash, Swan

Corequisite: ED P 531 or consent of instructor. Emphasis on life planning concepts as related to the world of work, theories of career development and the career decision process.

531. Career Information Resources (3) F Swan

Corequisite: ED P 530 or consent of instructor. Knowledge, use and management of information resources in the career development field.

532. Group Counseling (3) F,S Cash, Demos

Prerequisites: ED P 533, 539, 631 or 632 and consent of instructor. Theory and application of small group processes in guidance and counseling, laboratory practice in selection of participants, leadership, interaction methods, problem solving and evaluation. (Lecture-discussion 3 hours.)

533. Counseling Theory (3) F,S Cash

Prerequisites: ED P 301 or 302, 305, 311, 430 or 434. Major approaches, issues and techniques for counseling in marriage, family, child practices, community agencies, and schools. Major counseling theories examined and the competencies of each developed for use in helping relationships.

534. Career Development in Private Practice, Industry and Business (3) S Faculty

Career development concepts and skills applicable in non-educational settings. Organizational structures, needs analysis, program accountability, and commercial resources from a career perspective. [Seminar]

535. Counseling and Guidance of Exceptional Individuals (3) S

Prerequisites: ED P 305, 350, 430 and consent of instructor. Educational and vocational needs of exceptional individuals; methods of counseling; rehabilitation and guidance programs.

536. Consultation in Counseling Services (3) S Swan

Corequisite: Enrollment in ED P 541, 545, or 642, or consent of instructor. Theory and practice of consultation as it applies to counseling services. Emphasis is on understanding various models of consultation, and the ability to apply these models in school, college, agency, business or private practice settings. Field experiences are required.

537. Career Counseling (3) F,S Swan

Prerequisite: ED P 539 or 631 or 632 or consent of instructor. Emphasis on career counseling at the secondary and post-secondary levels with reference to elementary level practices.

538. Student Services in Higher Education (3) F Owen

Prerequisite: Consent of instructor. Survey of student services in public and private colleges and universities, focusing on historical, philosophical and theoretical foundations; roles and functions; legal, ethical and organizational issues.

539. Counseling the College Student (3) S Demos, Owen

Prerequisite: ED P 533, consent of instructor. Theory and practice of counseling and guidance of the college student.

540. Administration, Organization, and Supervision of Special Education (3) S Faculty

A study of the administration, organization and supervision of special education programs in compliance with current State and Federal regulations. Specific models for delivery of services to exceptional children will be described, and their implications for administrators and supervisors will be discussed.

541. General Case Practice and Field Work (3) F,S Kampwirth

Prerequisites: ED P 305, 311, 350, 419, 420, 430, 301 or 302 or all of aforementioned equivalents; 631 or 632 or 539; 533; concurrent enrollment in 536, and consent of Pupil Personnel Services Committee. Application for field work should be made no later than March 1 for the following summer/fall semester and October 1 for the following spring semester. Practical experiences in counseling and guidance activities under supervision in approved settings. CR/NC only.

545. Pupil Personnel Practicum (3) F,S Kampwirth

Prerequisites: ED P 532, 537 or 538 and concurrent enrollment in 536, if not already taken, ED P 541 and consent of Pupil Personnel Services Committee. Application should be made by March 1 for the following summer/fall semester and October 1 for the spring semester. Continued field experiences under licensed/credentialed supervisors. CR/NC only.

546A,B. Practicum in Special Education (3,3) F,S Kokaska

Prerequisites: ED P 350 and consent of Special Education Committee. Supervised experience with exceptional children in schools, clinics, hospitals, workshops and residential settings; assessment, identification and remediation of learning disabilities. Application should be made by March 1 for the fall semester and October 1 for the spring semester.

549. Management of Student Personnel Services (3) S, even years Demos

Prerequisite: Consent of instructor. Psychological techniques for improving managerial and organizational effectiveness of student personnel services in higher education.

550. Cultural Perspectives of Special Education (3) F Hamel

Prerequisite: ED P 350. Social, philosophical and historical foundations of special and compensatory education.

554. Principles of Educational Remediation (3) F,S Kampwirth, Maslow

Prerequisites: ED P 451 and consent of instructor. Special curriculum needs of exceptional children; strategies in meeting special problems; emphasis on implementing research in a classroom. Field work or clinical experience required as appropriate.

555. Education and Counseling in a Cross-Cultural Setting (3) F,S Noble

Examination of discriminatory attitudes and practices and their historical antecedents. Problems of minority students in a school setting. Two additional hours per week for field observation.

560. Management of Emotionally Handicapped Child (3) S Faculty

Prerequisites: ED P 311, 604. Etiology and characteristics of disturbed emotional behavior in the pre-school and school-age child, management of such children in school and home.

561. Developmental Disabilities (3) F,S Kokaska, Schmidt

Prerequisite: Advancement to the Severely Handicapped Area in the Special Education Specialist Credential Program or consent of instructor. Assessment of learning and developmental disabilities in severely handicapped students as related to etiology and diagnosis. Identification of current issues and trends and the utilization of research findings in program-implementation. Review of theoretical instructional systems used to design programs for the severely handicapped. Field work.(Not open to students with credit in ED P 461.)

563. Teaching Severely Handicapped Individuals (3) F,S Kokaska, Schmidt

Prerequisite: Advancement to the Severely Handicapped Area in the Special Education Specialist Credential Program or consent of instructor. Methods of teaching the severely handicapped including the utilization of systematic observation, academic assessment and prescriptive procedures. Identification of specific implication of handicapped conditions in relation to learning and maturational growth sequences, including career preparation, in the special instructional program. Techniques for counseling severely handicapped students and their parents will be explored. Field work. (Not open to students with credit in ED P 463.

565. Teaching Learning Handicapped Individuals (3) F,S Schmidt

Prerequisite: Advancement to Learning Handicapped Area in the Special Education Specialist Credential Program or consent of instructor. Methods of teaching the learning handicapped including the utilization of systematic observation, academic assessment and prescriptive procedures. Identification of specific implication of handicapped conditions in relation to learning and maturational growth sequences, including career preparation, in the special instructional program. Techniques for counseling learning handicapped students and their parents will be explored. (Not open to students with credit in ED P 465.)

566. Career Planning for the Exceptional Individual (3) F Kokaska

Prerequisite: ED P 350 or consent of instructor. Review of the career, leisure time, adult, family and community needs and problems of the exceptional individual. Emphasis will be upon the cooperative role of the school, public and private community agencies and organizations including parent groups and associations comprised of exceptional (handicapped, disabled or gifted) individuals.

568. Evaluation of Bilingual/Multicultural Exceptional Children (3) F Berdan

Prerequisite: Admission to the Learning Handicapped Internship Program. Working with bilingual/multicultural children who are classified as exceptional in the school system. Includes review of fundamentals of measurement, non-biased assessment procedures, and instruments and techniques developed to assess bilingual/multicultural exceptional children. [Seminar]

570. Role of the Resource Specialist (3) F Faculty

Prerequisite: ED P 350. The concepts of the resource program as related to the aspects of consultation, program coordination, legal consideration, staff development and parent education programs. Instruction in developmental processes and skills for planning individual programs for students with special needs.

572A,B,C,D. Internship With Learning Handicapped Individuals (3,3,3,3) F,S Kokaska

Prerequisites: Admission to the Learning Handicapped Internship Program, possession of a basic teaching credential, and demonstration of specified competencies. The student will be involved in a paid employment situation five days a week for the equivalent of four semesters. School district and university faculty will supervise the student. The student will demonstrate competencies for the specialist credential in prior or concurrent credential courses. In addition, the student will demonstrate advanced professional development. [Supervision] CR/NC grading only.

574. Sociological Foundations of Education (3) S Haglund

Relationships between society and the schools — local/national ideologies and political/economic influences; education as a social function; current trends and issues as they affect education. (Not open to students with credit in ED P 480.)

575. Philosophical Foundations of Education (3) S Hamel

Examination and evaluation of major contemporary educational philosophies.

576. Historical Foundations of Education (3) F Hamel

Historical and ideological foundations of education, from ancient times to the present. (Not open to students with credit in ED P 470.)

580. Vocational Work Evaluation Systems (3) F,SS Noble

Prerequisites: ED P 305, 350, 420, 430 or equivalents, and consent of instructor. Concepts and processes of vocational work evaluation systems as they pertain to the assessment of occupationally disabled clientele. The role and functions of work evaluators in industry, private and public vocational rehabilitation agencies, schools, and personnel/training activities will be examined in regard to their theoretical and situational applications.

582. Comparative Education (3) F, even years Hamel

Comparative study of present educational systems, educational problems and policies, in selected regions of the contemporary world.

586B,C. Advanced Field Study with Exceptional Individuals (10) F,S (5) SS Schmidt

Prerequisites: Advancement to a specific area in the Special Education Specialist Credential and demonstration of specified competencies. Application for this course should be made by October 1 for the spring semester and by March 1 for the following summer session or fall semester. Students will be assigned to field sites five days a week for the equivalent of one semester under the supervision of a field-site specialist. Advanced field study including student teaching in a public or private school or facility serving handicapped or exceptional students. Application of specialist training competencies demonstrated in prior or concomitant specialist credential courses. In addition, opportunities will be provided for the student to demonstrate competencies in (1) the analysis and evaluation of all program elements; (2) the application of appropriate intervention to extend interaction among exceptional or handicapped pupils, their peers and adults; (3) planning and conducting parent meetings; (4) utilization of ethical practices in communication to others about exceptional or handicapped pupils; and (5) the initiation and pursuit of a program of self-assessment and professional improvement. CR/NC only.

586B. Advanced Field Studies with Learning Handicapped (10) F,S (5) SS

586C. Advanced Field Studies with Severely Handicapped (10) F,S (5) SS

590. Special Problems in Educational Psychology (1-3) F,S

Prerequisite: Consent of instructor. Advanced study of special topics and problems in educational psychology. A student may enroll for one-three units to a maximum of six units for certificate and degree purposes, subject to suitable change in course content. Non-degree and non-certificate students may enroll for additional units subject to suitable change in course content.

604. Seminar in Human Development (3) F,S Haglund, Maslow, Orpet

Prerequisites: ED P 301 or 302, and 419, 420. Theories and issues in developmental psychology. Cognitive, linguistic, perceptual, psychomotor, social and emotional development; nature-nurture and individual differences.

605. Seminar in School Learning (3) F,S Harris

Prerequisites: ED P 305, 419, 420. Research in the area of learning problems in the classroom; recent experimentation and theory in the field of educational psychology.

615. Seminar in Home-School-Community Relations (3) F,S Gibbs

Prerequisite: ED P 430. Theory and research into the social influence of home, school and community on child behavior; techniques to foster close home-school relations and use of community agencies.

631. Seminar in Elementary School Counseling (3) F Faculty

Prerequisite: ED P 533. Theory, research and techniques of counseling with emphasis on elementary school students; use and analysis of case studies. Clinical work is required.

632. Seminar in Secondary School Counseling (3) S Faculty

Prerequisite: ED P 533. Research in and study of the techniques and tools used by the school counselor with emphasis at the secondary level; theory and practice in counseling. Clinical work is required.

633. Seminar in Marital, Family, Child Counseling (3) F,S Noble

Prerequisites: ED P 434, 532, 533, PSY 473, consent of instructor. Theories, research, and techniques of marriage, family, child (MFC) counseling, and the major psychotherapeutic approaches relating to family relationships, family systems, and communications theory as applied to relationship units. Includes supervised experiences in applied psychotherapeutic techniques including assessment, diagnosis, and treatment of premarital, marital, family, and child relationship dysfunctions. [Seminar]

634. Family Systems Therapy: Theory and Practice (3) F

Prerequisites: ED P 430 or 434, 533, 539 or 631 or 632 or equivalents and consent of instructor. Major family systems therapy theories, research issues, and techniques for counseling families.

639. Seminar in Organization of Pupil Personnel Services (3) F Noble

Prerequisite: ED P 430. Practices and problems in organizing, administering, supervising and evaluating pupil personnel programs at various educational levels.

640. Computer Applications in Counseling and Human Services (3) F,SS Cash, Orpet

Prerequisite: IM 340 or 341. Application of computer technology to the delivery of mental health, school counseling, school psychology and other human services. Emphasis on developing competencies in the use of computer-assisted guidance and counseling materials that relate to specific professional career goals. (Lecture 2 hours, laboratory 2 hours)

642A. Field Work-School Psychology (1-6) F,S Noble, Kampwirth

Prerequisites: ED P 541, 545, enrollment in ED P 527 and consent of Pupil Personnel Services Committee. Application for field work should be made by October 1 for spring semester or by March 1 for the summer or fall semester. Two units of field work is generally recommended per semester. CR/NC only.

642B. Field Work-Counseling (1-3) F,S Noble

Prerequisites: ED P 541, 545, consent of Pupil Personnel Services Committee. Application for field work should be made by October 1 for spring semester or by March 1 for the summer or fall semester. Each area of specialization may be taken for one, two or three units per semester for a maximum of four units total. CR/NC only.

650. Seminar in Special Education (3) S Kokaska

Prerequisites: ED P 350 and consent of instructor. Studies of current problems and issues in special education relating research to practice in the areas of mentally exceptional children.

677. Seminar in Curriculum Development (3) F Haglund

Psychological, sociological and philosophical foundations of principles of curriculum patterns and development at both elementary and secondary levels.

680. Seminar in Current Problems and Issues in Education (3) F, odd years Haglund

Current developments in education; problems and issues in classroom teaching and school administration.

686A. Advanced Field Studies with Communication Handicapped (5,5) F,S Craven

Enrollment by application only. Assignments to one or two settings with a commitment of 2-1/2 or 5 days a week, depending on credential. Monthly seminars with University coordinator. Students opt for work toward various credentials. CR/NC only. (1) The Specialist in Special Education — Communication Handicapped: students register for 686A and 686B and are assigned to two separate field sites five days a week for the equivalent of one semester and earn 10 units of field study. One field site is a self contained language handicapped classroom; one site is an itinerant speech and language setting. (2) Clinical Rehabilitative Services-Language, Speech and Hearing Specialist: students register for 686A only and are assigned to one field site 2-1/2 days a week for the equivalent of one semester and earn 5 units of field study. The field site is an itinerant speech and language setting. (3) Clinical Rehabilitative Services-Language, Speech and Hearing Specialist with Aphasia Authorization: students register for 686A and 686B and are assigned to two separate field sites five days a week for the equivalent of one semester and earn 10 units of field study. One field site is a self-contained language handicapped classroom; one site is an itinerant speech and language setting.

686B. Advanced Field Studies with the Severe Language Handicapped/Aphasia Classroom (5) F,S Craven

Enrollment by application only. Assignments to one or two settings with a commitment of 2-1/2 or 5 days a week, depending on credential. Monthly seminars with University coordinator. Students opt for work toward various credentials. CR/NC only. (1) The Specialist in Special Education-Communication Handicapped: students register for 686A and 686B and are assigned to two separate field sites five days a week for the equivalent of one semester and earn 10 units of field study. One field site is a self contained language handicapped classroom; one site is an itinerant speech and language setting. (2) Clinical Rehabilitative Services-Language, Speech and Hearing Specialist: students register for 686A only and are assigned to one field site 2-1/2 days a week for the equivalent of one semester and earn 5 units of field study. The field site is an itinerant speech and language setting. (3) Clinical Rehabilitative Services-Language, Speech and Hearing Specialist with Aphasia Authorization: students register for 686A and 686B and are assigned to two separate field sites five days a week for the equivalent of one semester and earn 10 units of field study. One field site is a self-contained language handicapped classroom; one site is an itinerant speech and language setting.

695A,B. Seminar in Professional Development in Counseling and Human Services (2,3) F,S Cash, Noble, Swan

Prerequisites: Advancement to candidacy, completion of all prerequisites for ED P 545, and written application to Graduate Office. A seminar stressing integration of counselor roles and specializations. The student will demonstrate knowledge of the field along with selected skills.

696. Thesis Study: Methodology, Organizational and Research Aspects (3) F,S Maslow

Prerequisite: ED P 419. Analysis and definition of problems in education in the context of thesis research. Reference techniques and survey of literature, research design and procedure, data analysis and inference, interpretation and generalization of research findings. Designed for students planning to do a thesis. No work on a thesis may be done in this course. Thesis work must be initiated and completed in 698 only.

697. Directed Research (1-3) F,S Denham

Prerequisites: Consent of instructor, department Chair and associate Dean. Individual research or intensive study under the guidance of a faculty member. A student may enroll for one-three units to a maximum of three units for certificate and degree purposes, subject to suitable change in course content. Application for enrollment must be made by March 1 for the fall semester or by October 1 for the spring semester.

698. Thesis (1-6) F,S Denham

Prerequisites: Advancement to candidacy, ED P 519 or 520 or 696, approval by director, department Chair and associate Dean. Planning, preparation and completion of a thesis under supervision of a faculty committee. Must be taken for a minimum of four units. Application for enrollment must be made by March 1 for the fall semester or by October 1 for the spring semester.

Instructional Media

Graduate School Of Education

Department Chair: Richard J. Johnson
Department Office: LAI-209
Telephone: 498-4966
Faculty: Professors: Richard J. Johnson; Associate Professors: Joseph A. Lea, Richard C. McLaughlin, Barbara A. Ward

Instructional Media Advisory Council

The Advisory Council is composed of students and professional people whose position indicates an involvement with media as a means of instruction in public schools, business and industry. The purpose of this group is to examine and recommend changes in the existing program and assist the department in future planning.

Theresa Goeckner, Student, CSULB; Jill Henricks, Director of Media Services, Long Beach Unified School District; Robert C. Johnson, Personnel Representative Hughes Aircraft Company; Greg Killingsworth, Owner, Killingsworth Presentations; Jean Pointer, Administrator, Norwalk, La Mirada Unified School District; Aldo S. Romiti; Gordon Rozan, Regional Training Center Coordinator, J.C. Penney; Gilbert Taylor, Director of Educational Services, Long Beach Memorial Hospital; Rosemary Taylor, Reference Librarian, El Segundo Public Library; Linda Thompson, President/Secretary, Association of Instructional Media Students; William Zabel, Training Development/Parts Manager, Nissan Motor Corporation, USA.

The Department

The Department of Instructional Media offers courses meeting the requirements for the M.A. in Education with an option in instructional media, the Library Services Credential for the State of California, and a specialist certificate program in instructional and library media.

Objectives of the programs are to (1) provide opportunities for advanced study, experience and research in practical and theoretical aspects of instructional design and the preparation, selection, circulation and implementation of instructional materials and methods, including computer applications; (2) qualify those students desiring advanced professional preparation for instructional media and communication phases of school, health, business, industry, and governmental institutions; (3) prepare students for an advanced degree in which a significant prerequisite for employment is professional competency in instructional communications; (4) provide theory and experience in the organization, leadership and administration of learning resource centers and media programs; and (5) provide opportunities for teachers, administrators and training directors to become acquainted with new communicative techniques for effective instruction.

Students desiring information should contact the department office for referral to one of the faculty advisors.

Master of Arts in Education with an Option in Instructional Media (Code 5-3150)

Admission and Advancement to Candidacy

Please consult the "Graduate School of Education" section of the catalog for information on admission criteria and advancement to candidacy.

Option Prerequisites

A. For Design and Development, 15 units of upper division course work in education.
B. For Library Media only, all of the following (9 units): I M 300, LI 413, 420.

Option Requirements:

A minimum of 30 units with a 20 unit concentration in education is required. 18 units must be in the 500/600 level series taken at this University.

A. Core Requirements:
   1. Two of the following — 6 units: EDEL 430, ED P 400, 419, 420, 574, or 576 (library media specialization requires EDEL 430 for one of the two courses);
   2. One of the following (3 units): EDP 500 or 696;
   3. One of the following: I M 697 (1 unit) or I M 698 (4-6 units).

B. Option Requirements by Specialization
   Design and Development:
   a. Both of the following (6 units): I M 300 and 501;
   b. A minimum of 7 courses chosen from (1) and (2)
      (1) Production: 3 or 4 of the following (9-12 units): I M 410, 411, 441, 510, 511, 512, 515;
      (2) Applied and Theoretical: 3 or 4 of the following (9-12 units): I M 301, 342, 440, 500, 501, 520, 630;
      (3) Electives to total 30 units.

   Library Media:
   a. All of the following (12 units): I M 501, LI 510, 540, 550;
   b. One of the following (3 units): I M 410, 411, 441, 510, 511;
   c. One of the following (3 units): I M 440, 442, LI 570;
   d. Electives to total 30 units selected from the following in consultation with an advisor: EDEL 520, 540, 551, 552, 553; ED P 520, 582, 677, 680; I M 500, 512, 513, 630; LI 490.

Library Services Credential

The program in Library Media prepares students for service as a professional in School library media centers, grades K-12, in the State of California.

Prerequisites:

1. Admission to the University;
2. Admission to the library services credential program;
3. Completion of a bachelors degree, preferably with an academic subject major;
4. Possession of an overall 3.0 gpa in the last sixty units of undergraduate work and in all graduate work;
5. Passage of CBEST prior to admission to program;
6. Possession of a valid teaching credential.

Requirements:

Foundation Courses (12 units) - I M 300, LI 413, 420, EDEL 430;
Procedures and Policies (9 units) - LI 510, 540, 550;
Design and Development (3 units) - choose one of the following: I M 410, 411, 510, 511;
Theoretical (3 units) - choose one of the following: I M 440, 501, LI 570;
Field Experience (4 units) - LI 581 (Candidates must pass fieldwork with a grade of "B" or above in order to be recommended for the credential);

Electives as needed — Recommended courses include:
EDEL 520, 540, 551, 552, 553; ED P 520, 582, 677, 680; I M 500, 512, 513, 630,; LI 490.

With careful planning and advisement, students may complete course requirements for the Master of Arts in Education with Instructional Media option, with the library services credential program. The Library Media specialization of the Master's program is correlated with the credential program.

Certificate Program in Instructional Media

The Certificate Program in Instructional Media is interdisciplinary and is open to students in any field where communication and/or library media skills are important. The program is open to undergraduate or graduate students, but may be earned only concurrently or following award of a baccalaureate degree.

Admission to the program is through application to the Department of Instructional Media.

Requirements for the Certificate in Instructional Media

1. A bachelor's degree with an approved major.
2. 21 to 24 units selected from the three disciplines listed below and completion of one of the four programs listed, chosen in consultation with an adviser and determined by class level and student objectives.
   (1) Industrial Employee Development Personnel and Public School Administrators
   (2) Instructional Materials Resource Center Personnel: Audio Visual or Library
   (3) General Media Specialist
   (4) Library Specialist

Approved courses:

I M 300, 301, 340, 341, 342, 410, 411, 440, 441, 442, 490, 491, 497, 500, 501, 510, 511, 512, 515, 520, 590, 630, 697. LI 413, 420, 490, 510, 540, 550, 570, 581. SPCH 332, 333, 352, 358, 448, 449/549, 451/551.

Courses in Instructional Media (I M):

Lower Division

140. Lifelong Computing (3) F,S McLaughlin
A first course in computer literacy. Learning about the effects of computer technology in our world. Getting comfortable with a computer environment through hands on experience with a computer. Using computers to your own advantage. Elementary computer programming. (Lecture 2 hours, laboratory 2 hours.)

Upper Division

***300. Instructional Media (3) F,S Johnson**
Resource materials and technological advancements related to instructional theory and practice. Laboratory experience includes preparation of instructional media and equipment operation. (Lecture 2 hours, laboratory 2 hours.)

***301. Instructional Design (3) F Johnson**
Prerequisite: I M 300 or consent of instructor. Instructional systems design applied to educational and training programs.

340. Computer Literacy (3) F,S McLaughlin
Not open to students with credit in an introductory course in computing. Application of computer technology in an organizational setting. Getting comfortable with a computer environment through hands-on experience. Selecting computer hardware and software. Elementary computer programming. Student projects in own areas of specialization. (Lecture 2 hours, laboratory 2 hours.)

341. Personal Computer Applications (3) F McLaughlin
Application of standard software, including word processing, spreadsheet and database techniques. Installation and modification of software packages. Optimization of command language capabilities. Student projects in own areas of specialization. (Lecture 2 hours, laboratory 2 hours.)

***342. Personal Computer Programming (3) S McLaughlin**
Prerequisite: I M 140 or equivalent. Advanced programming techniques, structured programming, files handling and custom input/output routines. Student projects in own areas of specialization. (Lecture 2 hours, laboratory 2 hours.)

***410. Preparation of Graphic Media (3) F,S Lea**
Prerequisite: I M 300 or consent of instructor. Advanced problems in visualization including the preparation of transparency materials, charts and graphs, and use of mechanical lettering devices, layout, design, paste-up and high contrast photography. (Lecture 2 hours, laboratory 2 hours.)

***411. Designing Self-Paced Instruction (3) F McLaughlin**
Prerequisites: ENGL I00 and I M 300 or consent of instructor. Development of materials for individualized learning. Student projects in own areas of specialization. (Lecture 3 hours.)

***440. Information Systems (3) F McLaughlin**
Introduction to information retrieval systems for individual researchers. Information science techniques applied to manual and on-line databases. Student projects in own areas of specialization. (Lecture 2 hours, laboratory 2 hours.)

***441. Designing Computer Assisted Instruction (3) S McLaughlin**
Prerequisite: I M 411 or consent of instructor. Development of materials for interactive computer-based learning. Student projects in own areas of specialization. (Lecture 2 hours; laboratory 2 hours.)

***442. Personal Computer Data Bases (3) S McLaughlin**
Prerequisite: I M 340 or equivalent. Planning, building, using, modifying and maintaining data bases on personal computers. (Lecture 3 hours.)

***490. Special Topics in Instructional Media (1-3) F,S Faculty**
Prerequisite: Consent of instructor. Topics of current interest in instructional media selected for intensive study. May be repeated under different topics for a maximum of six units. Topics will be announced in the Schedule of Classes.

***491. Internship (3) F,S Johnson**
Prerequisites: Consent of department Chair and senior standing. At least 120 hours with cooperating organizations. Work to be directed and evaluated by supervisors of the participating organizations. Three classroom meetings per semester. Assignments will be varied and within the area of instructional communications.

***497. Independent Study (1-3) F,S Faculty**
Prerequisites: Consent of instructor and department Chair. Independent study undertaken under the supervision of a faculty member. May be repeated for credit to a maximum of six units, with no more than three units applicable to credential or major requirement.

Graduate Division

500. Instructional Systems (3) S Faculty
Prerequisite: I M 300 (may be taken concurrently) or consent of instructor. Analysis and design of instructional systems related to the conceptual framework of a system.

501. Theoretical Models Applied to Media (3) F Faculty
Prerequisites: EDP 305, I M 300. Theoretical models of communication, information, learning and perception applied to the design and utilization of instructional media.

510. Preparation of Photographic Media (3) F Lea
Prerequisite: I M 300 or consent of instructor. Design and production of photographic story board formats, slides and filmstrips. (Lecture 2 hours, laboratory 2 hours.)

511. Preparation of Audio Media (3) S Lea
Prerequisite: I M 300 or consent of instructor. Planning and producing the sound track for instructional/informational media presentations. (Lecture 2 hours, laboratory 2 hours.)

512. Instructional Film Production (3) F Lea
Prerequisite: Consent of instructor. Planning, producing and directing the instructional/informational film. Script to screen production procedures will be emphasized.

515. Multi-Media Message Design (3) S Johnson
Prerequisites: I M 300, 410, 510, 511, 512, and consent of instructor. Advanced study and laboratory experiences in designing, producing and presenting educational multi-media messages. (Lecture 2 hours, laboratory 3 hours.)

520. Administration of Learning Resource Centers (2) S McAnlis
Prerequisite: I M 300 or consent of instructor. Functions and operation, qualifications and duties of staff, selection and evaluation of materials and equipment, unit cost. Integrated field work.

590. Special Problems in Instructional Media (1-3) F,S Faculty
Prerequisite: Consent of instructor. Advanced study of special topics and problems in instructional media. A student may enroll for one-three units to a maximum of six units for certificate and degree purposes, subject to suitable change in course content. Non-degree and non-certificate students may enroll for additional units subject to suitable change in course content.

630. Seminar in Educational Technology (2) F Faculty
Prarequisite: I M 300 or consent of instructor. Analysis of experimental techniques, theory and research in learning, motivation and audience.

697. Directed Research (1-3) F,S Denham
Prerequisites: Consent of instructor, department Chair and associate Dean. Individual research or intensive study under the guidance of a faculty member. A student may enroll for one-three units to a maximum of three units for certificate and degree purposes, subject to suitable change in course content. Application for enrollment must be made by March 1 for the fall semester or by October 1 for the spring semester.

698. Thesis or Project (16) F,S Denham
Prerequisites: Advancement to candidacy, EDP 696 for thesis, or EDP 500 for project, approval by director, department Chair and associate Dean. Planning, preparation and completion of a thesis or project under supervision of a faculty committee. Must be taken for a minimum of four units. Application for enrollment must be made by March 1 for the fall semester or October 1 for the spring semester.

Courses in Library Education (LI):

Lower Division

100. Introduction to Library Use (1) F,S Faculty
Introduction to the use of libraries, library tools, materials and services. Particular emphasis on the college library.

Upper Division

***413. Library Materials for K-12 (3) F Ward**
Fiction and non-fiction books and related materials of interest to children and adolescents; criteria and tools for selection and use; current issues. [Seminar] Traditional grading only.

***420. Basic Reference (3) F, Even years Ward**
Philosophy of reference service; criteria for evaluation, study, and use of selected basic reference tools; overview of computer technology as it applies to reference work.

***490. Special Topics in School Librarianship (1-3) F,S Faculty**
Prerequisite: Consent of instructor or library education coordinator. Topics of current interest in school librarianship selected for intensive development. May be repeated under different topics for a maximum of six units.

***497. Independent Study (1-3) F,S Faculty**
Prerequisites: Consent of instructor and department Chair. Independent study undertaken under the supervision of a faculty member. May be repeated for credit to a maximum of six units, with no more than three units applicable to credential or major requirement.

Graduate Division

510. Selection of Materials and Information Sources (3) F, Odd years Ward
Prerequisites: I M 300, LI 413, 420. Criteria, tools, procedures and policies for evaluating and selecting book and non-book materials appropriate to use in various types of libraries.

540. Organization and Cataloging of Materials (3) S, odd years Faculty
Prerequisites: I M 300, LI 413, 420. Rationale and use of card, book, and computer catalogs. Principles and practice in classification and cataloging applied to school libraries; processing and organization of information.

550. School Library Media Center Management (3) S, even years Faculty
Prerequisites: I M 300, LI 413, 420. Philosophy, principles, and problems of planning, organizing, supervising and managing a school library media center program.

570. Library Media Technologies (3) F Ward
Prerequisite: I M 341. Computer, video, and other technologies used by school librarians. Analysis of available equipment and software. Productivity skills and use of technology in K-12 library settings. [Seminar]

581. Field Work in the School Library Media Center (4) F,S Ward
Prerequisite: Completion of the courses required for the library media credential program or permission of the program adviser. Applications for spring semester must be in the office of the Library Education Adviser by October 1 and for fall semester and summer by March 1. Students will receive practice in administering a library program and services under the supervision of a credentialed librarian.

Teacher Education

Graduate School of Education

Department Chair: Robert A. Roth
Department Office: ED1-13
Telephone: 498-4506
Faculty: Professors: V. Yvonne Gold, Harold V. Graham, J. Francisco Hidalgo, George B. Jamgochian, Patricia D. Jersin, Rita H. Jones, Albert H. Koppenhaver, Marina C. Krause, Mary Jo Lass, Leland M. Perry, Clare R. Rodney, Robert A. Roth, Doris D. Tabor, Norma B. Tarrow; Associate Professors: Louis L. Beck, Herbert K. Brunkhorst, Richard F. Marrs, Frank S. Morris, Helen P. Newcastle, Consuelo Nieto, Leonard Olguin, Roy A. Sugimoto,
Department Secretary: Joann Parker

Early Childhood Education Advisory Committee

The Advisory Committee for the Early Childhood Education Program is composed of school personnel, community leaders, students and graduates. The purpose of the advisory committee is to confer with faculty of the Early Childhood Education Credential Program and make recommendations to improve the preparation of teachers for grades 3 and below.

Mary Ann Billings, Supervisor, Child Development Center, Mt. San Antonio School District; Kathryn Brickey, Learning Center Director, Fountain Valley — Huntington Beach Girls Boys Club; Janet Brown, Child Development Specialist, Long Beach Day Nursery; Dedra Cannon, Director, Compukids of Seal Beach; Karen Crummer, Director, Child Development Center, L. A. Harbor College; Lillian Escobar, Professor, Early Childhood, Cerritos College; Naomi Fern, Principal, Compton Unified School District; Margaret Johnson, Teacher, Hacienda/La Puente Unified School District; Trudy LeClair, Teacher, Long Beach Unified School District; Karen Lindstrom-Titus, Chair, Home Economics Department, Fullerton College; Pam Macdonald, Director, Isabel Patterson Child Development Center; Rhonda Marikos, Program Director, Isabel Patterson Child Development Center; Carl Martin, Director, Child Development Centers, Long Beach Unified School District; Teresa Osburn, Program Specialist, Long Beach Unified School District; Helen Pasley, Director, Isabel Patterson C.D.C., Infant/Toddler Division; Cheryl Ruszat, Director, Village Montessori School of Irvine; Sheri Senter, Director, Step-by-Step Early Learning Enrichment Center; Mary Weir, Instructor, Long Beach Community College District; Dia Zambas, Instructor, Compton Community College.

Multiple Subjects Advisory Committee

The Advisory Committee for the Multiple Subjects Credential Program is composed of school personnel, community leaders, students and graduates. The purpose of the advisory committee is to confer with faculty of the Multiple Subjects Credential Program and make recommendations to improve the preparation of teachers in self-contained classrooms for grades 12 and below.

Donald Ashley, Assistant Superintendent, Long Beach Unified School District; Dr. Richard Bertain, Superintendent, El Segundo Unified School District; Pamela Blackett, Teacher, Fountain Valley School District; Ronald Brown, Assistant Superintendent, Personnel, Huntington Beach Elementary School District; Robert Burroughs, Retired Principal, Irvine Unified School District; Kenneth Calkins, Assistant Superintendent, Personnel Services, Garden Grove Unified School District; Melanie Champion, Facilitator, Long Beach Unified School District; Joseph Condon, Personnel Director, Ocean View School District; Willa Dulin, Alumni; Barbara Flynn, Teacher, Ocean View School District; Sheila Gibbons, Teacher, Long Beach Unified School District; Beverly Goode, Teacher, Fountain Valley School District; Mary Herbold-Tamaki, Teacher, Long Beach Unified School District; Carla B. de Herrera, Teacher, ABC Unified School District; Trudy LeClair, Teacher, Long Beach Unified School District; Pam Macdonald, Director, Isabel Patterson Child Development Center; Deborah McIntire, Teacher, Placentia School District; Dorothea Maas, Principal, Irvine Unified School District; Dr. Robert O'Hare, Executive Director, SWRL; Nancy Phillips, Teacher, Garden Grove Unified School District; Thomas J. Reince, Teacher, Long Beach Unified School District; Dolores Rice, Teacher, El Monte Elementary School District; Tom Thompson, Principal, Fountain Valley School District; Robert Vouga, Principal, Ocean View School District; Elizabeth W. Wallace, Board Member, Long Beach Unified School District.

Reading Specialist Advisory Council

The Advisory Council for the Reading Specialist Credential Program is composed of school personnel, community leaders, students and graduates. The purpose of the advisory council is to confer with faculty of the Reading Specialist Credential Program and make recommendations to improve the preparation of reading teachers for grades 12 and below.

Patsy Barry, Reading Specialist, Saddleback Community College; Ruth Cady, Librarian/Media Specialist, St. Anthony High School; Jean Casey, Reading Specialist, Fountain Valley Elementary School District; Melanie Champion, Program Facilitator, Long Beach Unified School District; Louis Cook, Public Relations Officer, Memorial Hospital, Long Beach; Barbara Cutler, Reading Specialist, Torrance Unified School District; Margarette Dean, Reading Teacher, Compton Unified School District; Helen Duncan, Secondary Reading, Lynwood Unified School District; Adrienne Escoe, Reading Consultant and Researcher, Southwest Regional Laboratory, Los Alamitos; Kirk Fujikawa, Reading Specialist, Long Beach Unified School District; Mary Ann Irey, Miller Unruh Teacher, Bellflower Unified School District; Lionel Joubert, Secondary Principal, Los Angeles Unified School District; Yuki Kuno, English Teacher, Palos Verde Peninsula Unified School District; Jean McClaren, Reading Specialist, Anaheim Unified School District; Suzanne Maiden, Reading/Language Arts Resource Teacher, Compton Unified School District; Joyce Mirakian, Administrative Assistant, Casa de Bienvenida, Private School Los Alamitos; Doris Nakakura, Reading Specialist, Torrance Unified School District; Cecilia Osborn, Reading Specialist, Long Beach Unified School District; Dorothy Prince, Anesthesiologist, Long Beach; Nancy Seferian, Private Reading Clinic, Manhattan Beach; Billie Telles, Curriculum Specialist, Orange County Department of Education; Joyce Toth, Reading and English Instructor, Long Beach Community College; Amy Tsubokawa, Reading Teacher, Norwalk/La Mirada School District; Anne Tubridy, Program Facilitator, Long Beach Unified School District; Raul J. Villarreal, Professional Staff, Reading, Southwest Regional Lab, Los Alamitos; Jill White, Teacher, Long Beach Unified School District; Kathleen York, Reading Teacher, Placentia Unified School District.

The Department

The Department of Teacher Education offers professional education coursework that leads to the (a) Multiple Subjects Credential (elementary) and the (b) Single Subject Credential (secondary). In addition, programs are provided for advanced credentials in specializations of (a) Early Childhood Education, (b) Bilingual and Cross-Cultural and (c) Reading — for grades 12 and below. Students desiring information should contact the department office for referral to one of the faculty advisors.

The faculty in the Teacher Education Department, although having diverse opinions and philosophies, share the desire to train and develop superior teacher educators by emphasizing teaching methods and field experiences. Emphasis is placed in the areas of mathematics, reading, social studies, and language arts for the preliminary credential, students are encouraged, and in some cases required, to complete methods courses in Art, Music, Science, Physical Education, Civics, and other appropriate disciplines prior to their life credential.

Coursework is available both during the day and evening, at least one methods course must be taken on campus and one taken off campus during public school hours. Student teaching is normally full-day for one semester, infrequently half-day both semesters, and is not available during the summer months. Paid internships are available for qualified students in selected districts.

Early Childhood Education (ECE) Programs

The faculty in the ECE program area work cooperatively with the Isabel Patterson Child Development Center as well as the Departments of Home Economics and Human Development, and have an interdisciplinary approach to the prerequisite for the Specialist Credential and the Master of Arts in Education specialization available under the Elementary option. Courses are offered during the evening, and fieldwork is available during the year and during summer session for students not available daytime hours during the academic year.

Reading Programs

Faculty in the reading program believe that a variety of approaches to reading should be learned and mastered by future reading specialists. Course offerings are at night to accommodate practitioners, but most fieldwork assignments require daytime availability during the school year.

Master of Arts in Education with Options in Elementary and in Secondary Education

Master of Arts in Education degree options in Elementary Education and in Secondary Education are available. The Elementary option offers the following specializations: (a) Curriculum Instruction, (b) Early Childhood Education, and (c) Reading. The Secondary option offers specializations in the following: (a) Curriculum, Instruction and Evaluation, and (b) Reading.

Admission and Advancement to Candidacy

Please consult the "Graduate School of Education" section of the catalog for information on admission criteria and advancement to candidacy.

Option in Elementary Education (Code 5-3110)

Option Prerequisites:

Curriculum and Instruction and Elementary Reading Specializations: 15 units of approved upper division education courses to include EDEL 440, 450, 460, 470, and 481 or equivalents.

Early Childhood Specialization: EDEL 420, 422, 450, 460, 481 (or two years of documented preschool teaching), ED P 301, 400 or 419 and 420, or equivalents.

Option Requirements:

A minimum of 30 units is required with at least 18 units in the 500/600 level series taken at this University.

A. Core Requirements
   1. One of the following (3 units): EDEL 421, EDEL 430, EDEL 451, EDP 420, 574 or 576 (Note: Both EDEL 421 and EDEL 430 are required for the Early Childhood Specialization — 6 units);
   2. One of the following (3 units): EDEL 655, EDP 575, 582, EDP 604, EDP 605, 677, or 680 (Note: EDP 604 is required for the Early Childhood Specialization);
   3. One of the following (3 units): EDP 500 or 696;
   4. One of the following: EDEL 695 (3 units) or EDEL 698 (4-6 units).

B. Option Requirements by Specialization

Curriculum and Instruction:
   a. All of the following (9 units): EDEL 550, 560, and 540 or 570;
   b. Electives to total 30 units.

Early Childhood Education:
All of the following (15 units): EDEL 520, 522, 523, 526, and 621.

Reading:
   a. All of the following (9 units): EDEL 551, 552, and 651;
   b. Select from the following to total 30 units: EDEL 550, 553, 556, 558, or 655.

Option in Secondary Education (Code 5-3140)

Option Prerequisite:

Bachelor's degree with basic California teaching credential or equivalent.

Option Requirements:

A. 30 units of upper division and graduate courses. 18 units must be in the 500/600 level series taken at this University.
B. Core Requirements
   1. One of the following (3 units): EDP 500 or 696;
   2. One of the following: EDSE 695 (3 units), or EDSE 698 (4-6 units).
C. Department Requirements by Specialization
   1. Curriculum, Instruction, and Evaluation
      a. All of the following (9 units): EDSE 520, 540, and 560;
      b. One of the following alternatives:

(1) Alternative 1

(a) Two of the following (6 units): ED P 400, 574, or 576;
(b) One of the following (3 units): EDP 575, 582, 604, 605, 677, or 680;

(c) Electives chosen in consultation with an advisor to total 30 units;

(2) Alternative 2

(a) 12 units of advanced coursework in the Single Subject area of concentration. The area of selection is limited to the areas identified as appropriate by the Commission on Teacher Credentialing;
(b) IM 300 (3 units);
(c) Electives chosen in consultation with an advisor to total 30 units.

2. Reading
   a. One of the following (3 units): EDEL 451, ED P 420, 574, or 576;
   b. One of the following (3 units): EDSE 520, 540, or 560;
   c. All of the following (12 units): EDSE 459, 555, 557, and 657;
   d. Electives chosen from the following to total 30 units: EDEL 450, 553, 556, 558, or 655.

The Multiple Subjects Credential Program

Admission Requirements

Students may be admitted to the program only after a completed application has been submitted to the Multiple Subjects Credential Admissions and Standards Committee, Department of Teacher Education, and approved. Students must have clear Junior standing to enroll in the required professional education courses. Graduate students, with specific permission, may enroll in methods courses for one semester while their applications are being processed. Applicants must meet the following criteria and requirements:

1. Have a grade point average meeting the requirements of the Chancellor, CSU System. Consult the Department of Teacher Education for current GPA requirements for each major;
2. Complete the prerequisite course - EDEL 380;
3. Pass the CBEST;
4. Demonstrate competency in mathematics, verified by coursework (MATH 110 or EDEL 360), or equivalent;
5. Proficiency in speech, certified by a speech test given on our campus or in a speech course taken at CSULB;
6. Submission of an "Application for Certificate of Clearance" to the California Commission on Teacher Credentialing;
7. Personal interview with an advisor from the Department of Teacher Education to select a professional program option.
8. Submit a written statement of professional goals or philosophy;
9. Passing a university level course or examination on the U.S. Constitution;
10. Passing National Teachers Examination (NTE) prior to student teaching, when appropriate.

Subject Matter Requirements

To meet the subject matter requirement, undergraduate students may elect to take the CSULB Liberal Studies Major or pass the subject matter examination. Graduate students may elect to take the subject matter examination or complete the Liberal Studies Certificate Program. A grade point average of 3.0 or above must be maintained for all professional education courses.

Program Options

Credential program guidelines emphasize field experience in the professional program, therefore, a minimum of one methods course from the professional sequence shall be taken in a field setting off campus. Some sections of each methods course (EDEL 440, 450, 460, 470) are taught at a public school site with concurrent field experiences in elementary classrooms. A minimum of one course must be taken on the CSULB campus. The required education courses must be completed with a minimum grade of "C". A grade point average of 2.75 must be maintained in all courses applicable to the credential.

Option One — Regular Program (An Open Track Option — No Limit On Enrollment)

Core (12 Units): EDEL 440, 450, 460, 470;

Student Teaching (12 units): EDEL 481.

Option Two — Bilingual/Cross-Cultural Emphasis (English/ Spanish)

Students in this program must be admitted to the Bilingual-Cross/Cultural Spanish Emphasis Program. Ability to converse fluently in Spanish and in English is required. Undergraduates should complete the Liberal Studies baccalaureate program with a Bilingual or Mexican American Studies Concentration which is to be determined by Concentration advisor.

The Core courses should be taken as follows: Fall semester EDEL 450, 460; Spring semester EDEL 440, 470, and 3rd semester EDEL 481. (Students must enroll in bilingual sections of these courses.)

Language Component: Candidates for the Bilingual Emphasis Credential are expected to achieve and demonstrate the ability to perform the duties of a credentialed teacher equally well in both Spanish and English. The program administers an assessment for all candidates in both languages and provides advisement based on the result of that assessment. The Bilingual Proficiency assessment is administered on the first Saturday of March and October. Additionally all candidates are required to complete 3 units in classroom vocabulary for the bilingual teacher (SPAN 320).

Culture/History Component: Candidates must successfully complete a written assessment for competency in the target culture. The Culture/History assessment is administered on the third Saturday of March and October.

Bilingual/Cross-Cultural Specialist Credential

This credential is to certify those teachers who complete an advanced study and practice in Bilingual/ Cross-Cultural Education.

Admission Requirements:

1. Admission to the University.
2. Hold valid basic California teaching credential.
3. Current or past bilingual classroom experience.
4. Current teaching employment in public or private school offering bilingual education.
5. Language proficiency equal to exit level of Bilingual Emphasis program.
6. MEXA 300 or 340, EDSE 581A.
7. A 2.75 minimum overall GPA in all college and university work.

Program Requirements:

Personal assessment with faculty advisor;

Courses:

MEXA 350, 400(or 380 by permission); MEXA 402 (or SPAN 425 and 427); MEXA 403 and practicum in applied linguistics; EDSE 435, 436; ENGL 429; MEXA 445 or EDEL 558; EDSE 581B, 581C; bilingual proficiency assessment.

Language Component:

Entry: Candidates are expected to demonstrate proficiency equivalent to exit level for the Bilingual Emphasis Credential in general language skills: speaking, reading, writing, listening comprehension; professional vocabulary required.

Exit: Candidates are expected to demonstrate knowledge of the Linguistic and dialectal features of Spanish of Mexico and the bilingualism of the Southwest, and the ability to apply that knowledge to classroom language situations.

Culture/History Component:

Candidates must successfully complete a writing assessment for Competency in the target culture. The Culture/History assessment is administered on the third Saturday of March and October.

Early Childhood Specialist Credential

This child centered, competency based program is integrated with varied field experiences and parallels the masters degree program with specialization in Early Childhood.

Admission Requirements:

1. Admission to the University.
2. An overall GPA of 2.75 or eligible for admission to the Graduate School of Education master's degree program.
3. Hold a valid basic California teaching credential.
4. Verification of successful experiences with young children.
5. Passing the CSULB Writing Proficiency Examination or passing the California Basic Education Skills Test (CBEST).

Prerequisites:

ED P 301, EDEL 450, 460;

Program Requirements (37 units):

EDEL 420, 421, 422, 424, 430, 520, 522, 523, 526, 621, 681 (4 units), and ED P 604. Demonstrations of competency must be at the pre-school level, and kindergarten or primary level, one of which must be a multi-cultural setting.

Reading Specialist Credential

This advanced credential (K-12) program provides clinical and field experience as well as theory and research in teaching reading. Many of the requirements are applicable to the master's degree specialization in reading.

Admission Requirement:

1. Admission to the University.
2. A GPA of 3.0 in all upper-division and graduate-level coursework.
3. A valid basic California teaching credential.
4. One full year of teaching, or 180 days of substitute teaching within the past three years, verified in writing.
5. Passing the CSULB Writing Proficiency Examination.

Prerequisites:

EDEL 450, EDSE 459, EDEL 554 or EDSE 554.

Program Requirements:

Core: EDEL 451, 553, 556, 558, 655.

Emphasis: Elementary - EDEL 551, 552, 651, 660; Secondary-EDSE 555, 557, 657, 660; Final Assessment; two years of successful teaching experience.

Courses in Elementary Education (EDEL):

Lower Division

292. Exploring Elementary Education (3) F,S Faculty

Prerequisites: Paid work as an aide at a local school site in a participating school district and consent of instructor. Designed to acquaint the student with the responsibilities and activities of teachers in the elementary classroom. (A minimum of 15 hours of paid experience and one and a half hours of lecture/discussion per week is required.) May not be repeated. CR/NC only.

Upper Division

360. Mathematical Concepts of Number and Geometry (3) F,S Perry

Not open to students with credit in EDEL 361 or EDEL 362. Unifying concepts of mathematics for elementary teachers. Includes the development of concepts of number, number operations, number properties, problem solving, geometric configurations, constructions, relationships and applications with metric measures. Traditional grading only.

380. Directed Participation in the Elementary School (3) F,S Nieto, Tabor

Participation in all aspects of the daily program in an elementary classroom for one full morning each week in a selected public School, with two assignments of seven weeks at two different grade levels, plus a two-hour weekly seminar with a university advisor. This course is required for admission to the Multiple Subjects Credential program. CR/NC only.

***420. Teaching Strategies for Young Children (3) F,S Jones**

Strategies for providing learning environments conducive to creative expression, problem solving and developmental activities appropriate for children five to eight years of age. Analysis of books, materials and equipment suitable for young children. Field work.

***421. History and Philosophy of Early Childhood Education (3) F Jones**

Historical, philosophical and psychological foundations of early childhood education and their relationships to current trends. Overview of the field of early childhood education. Analysis of various programs. Field Work.

***422. Curriculum for Young Children (3) S Faculty**

Curriculum and teaching-learning processes for children from infancy to age five in a variety of early childhood settings. Establishment of optimal environments; varied activities appropriate to developmental age; selection and creation of materials. Field work.

***423. Supervision of Preschool Programs (3) S Faculty**

Supervision of early childhood programs and personnel in such settings as child development centers, nursery schools, Headstart and infant programs. Explore duties and qualifications of staff, financial procedures, maintenance, equipment, individual records, health and nutrition.

424. Assessment of Competency in Early Childhood Education (3) F,S Faculty

Prerequisite: Admission into Early Childhood Specialist Credential Program. Specialized course required for candidates in the Early Childhood Specialist Credential Program. Individualized program for each candidate based on assessment of performance of knowledge and application for the competencies encompassed in the Early Childhood Specialist Credential Program. CR/NC only.

***430. Teaching in Cross-Cultural Settings (3) S Olguin**

Teaching strategies and activities for children of varied sociocultural backgrounds with emphasis on problem solving, self concept, language, and cognitive development. Planning appropriate learning environments. Development and evaluation of multi cultural materials. Techniques in dealing with conflict in effective ways. Field work. This course meets the requirements of Article 3.3 of the State Education Code.

***440. Language Arts in the Elementary School (3) F,S Gold, Jamgochian**

Prerequisite: Admission to elementary teacher education. Objectives, trends, teaching procedures and evaluation related to oral and written expression. Includes handwriting, spelling, listening, creative writing, linguistics, usage and vocabulary. Five hours of field work required. Traditional grading only.

***450. Reading in the Elementary School (3) F,S Jones, Koppenhaver, Newcastle, Tabor**

Prerequisite: Admission to elementary teacher education. Objectives, principles, materials and teaching procedures of modern developmental reading programs. Includes word recognition, phonics and structural analysis, comprehension and interpretation, locational skills, personal reading, evaluation and the use of adopted texts. Ten hours of field experience required. Traditional grading only.

*451. Measurement and Evaluation in Reading (3) F,S Koppenhaver, Perry

Prerequisites: EDP 400, and EDEL 450 or EDSE 459. Practical, instruction-directed analysis, interpretation of existing measures and instruments in reading; effects of cross-cultural differences on test performance; formal, informal, individual and group diagnostic procedures will be stressed. Methods of appraising reading needs of a total class are emphasized.

458. Newspaper in Education (3) SS Faculty

Use of the daily newspaper as an instructional tool in the classroom. Newspaper articles, features and editorials as a means of providing current content and bases for improvement of reading skills, interests, critical thinking and problem-solving. Understanding mass media.

*460. Mathematics in the Elementary School (3) F,S Krause, Lass, Perry

Prerequisite: MATH 110 or equivalent. Admission to elementary teacher education. Concepts and principles of modern school mathematics. Includes methods and media that contribute to its meaning and understanding. Five hours of field experience required.

*470. Social Studies in the Elementary School (3) F,S Beck, Jamgochian, Jones

Prerequisite: Admission to elementary teacher education. Objectives, content, scope, sequence, materials and teaching procedures in the social studies. Includes analysis of the trends, research and evaluative devices utilized in the social studies. Five hours of field experience required. Traditional grading only.

*475. Teaching Science in the Elementary School (3) F,S Brunkhorst

Prerequisites: Six units of science and admission to Teacher Education. Objectives, principles, materials, and teaching procedures of elementary school science programs. Includes strategies for teaching science concepts to children selected from the biological, physical and earth sciences. Traditional grading only.

481. Student Teaching in the Elementary Grades (2-12) F,S

Prerequisites: EDEL 440, 450, 460, 470 and official admission by the Elementary Teacher Education Committee. All day for one semester or five mornings per week for two semesters in a public school elementary classroom, with assignments in two grade levels and a weekly seminar with a college adviser. Application should be made by March 1 for the fall semester and October 1 for the spring semester. CR/NC only.

*490. Special Topics in Elementary Education (1-3) F,S

Topics of current interest in elementary education selected for intensive study. May be repeated under different topics but only six units may be applied toward advanced degrees. Topics will be announced in the Schedule of Classes.

497. Independent Study (1-3) F,S Faculty

Prerequisites: Consent of instructor and department Chair. Independent study undertaken under the supervision of a faculty member. May be repeated for credit to a maximum of six units with no more than three units applicable to credential or major requirement.

Graduate Division

520. Individualization of Learning, Organization and Management (3) S Jones, Tarrow

Prerequisites: EDP 301, EDEL 420, teaching experience or consent of instructor. Diagnosis and prescription in cognitive, affective and psychomotor areas. Formal and informal assessments. Alternative activities appropriate to the development of students. Development of an individualized education program. Continuous progress record keeping, evaluation and differentiated staffing are studied. Field work.

522. Parent Education and Involvement in Educational Environments (3) F Beck

Analysis of trends, issues, programs and practices pertaining to parent education and involvement. Emphasis on early childhood and multi-cultural environments. Field work.

523. Supervision of Early Childhood Programs (3) F Faculty

Prerequisite: Consent of instructor. Supervision and coordination of early childhood education (E.C.E.) programs:, staffing and in-service development; directing total program; preparing budgets and program proposals, working with parents and community resources. Field work.

526. Advanced Study of Infant and Toddler Programs (3) F

Prerequisites: EDP 301, EDEL 422 or consent of instructor. Curriculum and teaching of infant and toddler programs; analysis and application of current research on infant and toddler development to group learning settings. Field work required. Traditional grading only.

540. Advanced Studies in Teaching Language Arts (3) F Gold

Prerequisites: EDEL 440, teaching experience or consent of the instructor. Advanced study and research in the teaching of language arts. Emphasis on integration and theory and application of the teaching of language arts in the elementary and junior high classroom with focus on content, methods and materials. Includes individual research.

550. Problems of Teaching Reading (3) F Lass

Prerequisites: EDEL 450, teaching credential or consent of instructor. Advanced study of teaching procedures, materials, trends, evaluation, with emphasis upon research. Designed for classroom teachers as well as reading specialists.

551. Diagnosis of Reading Disabilities (3) F Koppenhaver, Tabor

Prerequisites: EDEL 450 or EDSE 459, credentialed teaching experience or consent of instructor required of all students. Administration of formal and informal diagnostic procedures useful in prescription and remediation. An intensive study of a disabled reader, culminating in a case report with recommendations for remediation.

552. Remediation of Reading Disabilities K-12 (3) S Newcastle

(Not open to students with credit in EDEL 653.) Prerequisites: EDEL 551 or EDSE 555, credentialed teaching experience or consent of instructor. Examination and evaluation of procedures, strategies and materials useful in the remediation of reading disabilities. Involves the implementation of a prescriptive remedial program for students with reading disabilities. Traditional grading only.

553. Reading Instruction Through Literature and Language (3) S Newcastle, Tabor, Ward

Prerequisites: EDEL 450 or EDSE 459 and graduate standing. Principles and practices of reading instruction through literature and language. Focuses on personal reading interests, biblio-therapy, and selected children's and adolescents' books which reflect our nation's multicultural heritage.

554. Assessment and Orientation to the Roles of Special Reading Personnel (3) F Koppenhaver, Newcastle, Tabor

Prerequisite: EDEL 450 or EDSE 459. An appraisal of each candidate's present competence in teaching reading, the identification of roles and responsibilities of special reading personnel in a school or clinical setting, and the development of an individual program for completion of the competencies needed for a Reading Specialist Credential. CR/NC only.

556. Nature of the Reading Process (3) S Newcastle, Tabor

Prerequisites: EDEL 450 or EDSE 459, and a valid California teaching credential. Examination and analysis of the interrelationships between physiological, psychological, linguistic, intellectual and environmental correlates of the reading-learning process. Survey and analysis of research, reading theories, and reading models.

558. Linguistics for Reading Teachers (3) F,S Lass, Olguin

Prerequisites: EDEL 450; EDSE 459, and a valid California teaching credential. The study of linguistics as related to reading instruction including the integration of theory and application of linguistics in the classroom with focus on phonology, morphology, syntax, semantics and suprasegmentals as they relate to reading instruction. Examination of pertinent research, small discussion groups, resource persons, lectures, field trips and audiovisual presentations will be utilized.

560. Problems of Teaching Elementary Mathematics (3) F Krause, Perry

Prerequisites: EDEL 460, teaching experience. Advanced study and research in elementary school mathematics. Emphasis on content, methods and materials. Includes individual research.

570. Problems of Teaching the Social Studies in the Elementary School (3) S Jones

Prerequisites: EDEL 470, teaching experience. Advanced study of teaching procedures, materials, research, trends, and problems in the social studies. Includes individual research.

572A,B,C,D. Cooperative Teaching Program (3/6,3/6,3,3) F,S Faculty

Prerequisite: Admission to the Early Entry Multiple Subjects Program by the Teacher Education Admissions Standards Committee. Participants teach on salary in an approved school district while enrolled in a minimum of three units of EDEL 572 and other required course work. Application should be made by March 1 for the fall semester and October 1 for the spring semester. CR/NC only. [Supervision]

590. Special Problems in Elementary Education (1-3) F,S Faculty

Prerequisite: Consent of instructor. Advanced study of special topics and problems in elementary education. A student may enroll for one-three units to a maximum of six units for certificate and degree purposes, subject to suitable change in course content. Non-degree and non-certificate students may enroll for additional units subject to suitable change in course content.

621. Research Seminar in Early Childhood Education (3) S Tarrow

Prerequisites: EDP 301 or equivalent, EDEL 420, 520, teaching experience. Advanced study of research in early childhood education, infancy to eight years. Relevant research pertaining to child development, curriculum and related areas. Knowledge of appropriate evaluation for young children in the cognitive, affective and psychomotor domains. Interpretation of testing protocols. Field work.

651. Seminar and Clinical Experiences in Reading Disabilities, K-12 (3) F Koppenhaver, Newcastle, Tabor

(Not open to students with credit in EDEL 653.) Prerequisites: EDEL 551 or EDSE 555, EDEL 552 or EDSE 557, and consent of instructor. Seminar and clinical experience in diagnosis and remediation of reading disabilities. An additional eight to ten hours per semester outside of scheduled class meetings in a client/clinician setting are required. Traditional grading only.

655. Seminar in Reading Curriculum and Supervision (3) F,S Koppenhaver, Newcastle

Prerequisites: EDEL 551 or EDSE 555, credentialed teaching experience, acceptance into the Reading Specialist Program. Advanced study and research concerning curriculum development and supervision of instruction with emphasis on program and staff development.

660. Advanced Field Work in Reading (3) F,S Koppenhaver, Newcastle, Tabor

Prerequisite: Completion of all other required courses in the Reading Specialist Credential Program. Applications should be made by March 1 for the fall semester and October 1 for the spring semester. In-the-field participation, individual conferences and seminars directed toward the solution of problems evolving from reading programs, instruction and supervision.

681. Advanced Field Experiences in Early Childhood (4) F,S Beck, Jones

Prerequisite: Approval by Early Childhood Education area committee. Written application should be made by October 1 for spring semester and March 1 for fall semester and summer. Supervised field experiences with children. Experiences will be offered at pre-kindergarten, kindergarten and primary levels and in multi-cultural settings as needed. Meets requirement for Early Childhood Specialist Credential. A maximum of four units only allowable toward master's degree program. May be repeated for a maximum of 16 units. CR/NC only.

695. Seminar in Elementary Education (3) S Faculty

Prerequisites: Advancement to candidacy, permission of graduate adviser and written application. Consideration of curriculum, role of the school, and topics related to effectiveness and excellence in education. For qualified candidates preparing to write the comprehensive examination.

697. Directed Research (1-3) F,S Denham

Prerequisites: Consent of instructor, department Chair and Associate Dean. Individual research or intensive study under the guidance of a faculty member. A student may enroll for one-three units to a maximum of three units for certificate and degree purposes, subject to suitable change in course content. Application for enrollment must be made by March 1 for the fall semester and summer session or by October 1 for the spring semester.

698. Thesis (1-6) F,S Denham

Prerequisites: Advancement to candidacy, ED P 696, approval by director, department Chair and associate Dean. Planning, preparation and completion of a thesis under supervision of a faculty committee. Must be taken for a minimum of four units. Application for enrollment must be made by March 1 for the fall semester or by October 1 for the spring semester.

Courses in Secondary Education (EDSE):

Lower Division

157. Critical Thinking and Analytical Reading (3) F,S Faculty

Prerequisite: ENGL 100 or equivalent (may be taken concurrently). Critical thinking and advanced reading comprehension. Includes laboratory experience and access to resource materials.

Upper Division

*310. Secondary Schools and Students (3) F,S Morris, Sugimoto

Prerequisite: EDSS 300. Secondary school pupil development, effects of culture, sociological factors affecting schools, curriculum, controversies about education, problems of secondary education. Cross-cultural field experience is included. Traditional grading only.

*401. Principles of Adult Education (3) F Morris

Scope and functions of adult education, characteristics of the adult learner, philosophical and historical perspectives, future trends. Meets the requirement for the Designated Subjects Credential in Adult Education.

*402. Methods and Materials of Adult Education (3) S Marrs

Objectives, curriculum, methods and materials used in teaching adult education. Meets the requirement for the Designated Subjects Credential in Adult Education.

*421. Learning and Instruction (3) F,S Jersin, Marrs, Morris

Prerequisite: EDSS 300. This is a competency-based course in systematic instruction which combines theories and conditions of learning with teaching strategies and evaluation of student progress. Cross-cultural field experiences are required. Traditional grading only.

*435. Cross-Cultural Education in United States Society (3) F,S Hidalgo, Nieto

Prerequisite: EDSS 300. Concurrent language training recommended. Survey of language variations, socioeconomic differences and educational equality in a pluralistic society. Introduction to bilingual and intercultural curriculum alternatives in public Schools. Treatment of educational philosophies and inter-racial attitudes of prospective teachers. Analysis of minority adolescent characteristics. Bilinguality not required. (Lecture-discussion 3 hours.) Traditional grading only.

*436. Instruction and Evaluation in a Cross-Cultural Setting (3) F,S Hidalgo

Prerequisite: EDSS 300. Concurrent enrollment in EDSE 435 recommended but not required. Application of learning theories to learning styles of minority adolescents. Planning and evaluation methods for bilingual/cross cultural instruction. Orientation to interaction and management practices for effective interracial relationships. Bilinguality not required. (Lecture-discussion 3 hours. Traditional grading only.

*457. Developmental Reading in the Secondary School (3) F,S Marrs, Morris, Sugimoto

Prerequisite: EDSS 300. Principles, materials and evaluation in a developmental reading program in junior and senior high schools. Special attention to the application of word and basic study skills in the content areas; practical classroom methods of diagnosis and remediation. Includes individualized instruction for students enrolled. Traditional grading only.

*458. Newspaper in Education (3) SS Faculty

Use of the daily newspaper as an instructional tool in the classroom. Newspaper articles, features and editorials as a means of providing current content and bases for improvement of reading skills, interests, critical thinking and problem-solving. Understanding mass media.

*459. Methods of Teaching Reading in the Secondary Schools (3) F

Methods of teaching reading in junior high school, senior high school and community college. Shall not be substituted for EDSE 457 in the single subject credential program. Must be completed before student teaching in reading.

*490. Special Topics in Secondary Education (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in secondary education selected for intensive study. May be repeated under different topics for a maximum of six units. Topics will be announced in the Schedule of Classes.

*497. Independent Study (1-3) F,S Faculty

Prerequisites: Consent of instructor and department Chair. Independent study undertaken under the supervision of a faculty member. May be repeated for credit to a maximum of six units, with no more than three units applicable to credential or major requirement.

Graduate Division

520. Advanced Studies in Secondary School Instruction (3) F Jersin

Prerequisites: EDSE 421, or equivalent, teaching experience. Intensive study of current problems in secondary school teaching, emphasizing applications of research. Includes analysis of new emphases, media and techniques.

536. Bilingual Curriculum Development (3) F Hidalgo

Prerequisites: Admission to Bilingual Specialist Program or consent of instructor, current employment in bilingual education. Analysis of the ideological basis for bilingual education. Survey of bilingual instructional modes. Update on related legislation. Critique of language dominance and proficiency assessment. Conducted in Spanish.

540. Advanced Studies in Secondary School Curriculum (3) S

Prerequisites: EDSE 310, 421 or equivalent, teaching experience. Individual and group investigation of recent literature, research, and courses of study in various curricula. Includes examination of experimental programs, trends and forces in secondary education and work in curriculum laboratory.

554. Assessment and Orientation to the Roles of Special Reading Personnel (3) F,S Graham, Tabor

Prerequisites: EDEL 450, EDSE 459. An appraisal of each candidate's present competence in teaching reading, the identification of roles and responsibilities of special reading personnel in a school or clinical setting, and the development of an individual program for completion of the competencies needed for a Reading Specialist Credential. CR/NC only.

555. Reading Diagnosis and Remediation (3) S Faculty

Prerequisites: EDSE 459, consent of instructor. Experience in using modern techniques to diagnose and treat reading disabilities at the secondary level and higher. Both group and individual, formal and informal tests are studied. Opportunity is given to diagnose and treat a reading disability case under supervision.

557. Problems in Secondary Reading Instruction (3) S Faculty

Prerequisites: EDSE 459 or equivalent, teaching experience. Advanced study of teaching procedures in secondary, college and adult reading programs. Individual investigation of specific classroom problems. Emphasis upon research, trends and current issues.

560. Evaluation of Curriculum and Instruction (3) F Marrs

Prerequisites: EDSE 421 or equivalent, teaching experience. Methods of evaluating the effectiveness of curriculum and instruction which will include the assessment and improvement of teacher achievement.

581A,B,C. Directed Field Experiences in Bilingual Cross-Cultural Education (3,3,3) F,S Hidalgo, Nieto, Olguin

Prerequisite: Admission to the Bilingual/Cross-cultural Specialist Credential Program. Supervised field experience with minority youth in the public school and community setting. Application should be made by March 1 for the fall semester and October 1 for the spring semester. 581A CR/NC only.

590. Special Problems in Secondary Education (1-3) F,S

Prerequisite: Consent of instructor. Advanced study of special topics and problems in secondary education. A student may enroll for one-three units to a maximum of six units for certificate and degree purposes, subject to suitable change in course content. Non-degree and non-certificate students may enroll for additional units subject to suitable change in course content.

657. Clinical Practices in Secondary Reading (3) F Faculty

Prerequisites: EDSE 555, consent of instructor. Practice in working with individual cases or small groups of retarded readers in classroom and laboratory settings. Clinical study of reading problems including perceptual, neurological, psychological and educational factors. Critical appraisal and practice with current recommended methods.

660. Advanced Field Work in Reading (3) F,S Faculty

Prerequisite: Completion of all other required courses in the Reading Specialist Credential Program. Applications should be made by March 1 for the fall semester and October 1 for the spring semester. In-the-field participation, individual conferences and seminars directed toward the solution of problems evolving from reading programs, instruction and supervision.

695. Seminar in Secondary Education (3) F,S Jersin, Marrs

Prerequisites: Advancement to candidacy, and consent of graduate adviser. Advanced studies in secondary education including library research, research papers and oral examinations required of all master's degree candidates preparing to write the comprehensive examination for the M.A. degree in Education — Option in Secondary Education.

697. Directed Research (1-3) F,S Denham

Prerequisites: Consent of instructor, Department Chair and associate Dean. Individual research or intensive study under the guidance of a faculty member. A student may enroll for one-three units to a maximum of three units for certificate and degree purposes, subject to suitable change in course content. Application for enrollment must be made by March 1 for the fall semester and summer session or by October 1 for the spring semester.

698. Thesis (1-6) F,S Denham

Prerequisites: Advancement to candidacy, EDP 696, approval by director, department Chair and associate Dean. Planning, preparation and completion of a thesis under supervision of a faculty committee. Must be taken for a minimum of four units. Application for enrollment must be made by March 1 for the fall semester and summer session or by October 1 for the spring semester.

School of Engineering

Dean: J. Richard Williams
Associate Dean for Instruction: Timothy Jordanides
Associate Dean for Research:
Administrative Program specialist: Mary Osinga-Difilippo
School Office: Vivian Engineering Center
School Secretary: Linda Magnani
Telephone: 498-5121

Engineering Advisory and Development Council

The Engineering Advisory and Development Council for the School of Engineering consists of outstanding engineers and executives from industry and government in Southern California. Its function is to afford a liaison between the University and industry and to keep the administration and faculty informed of modern engineering practices. This ensures that the curricula are kept abreast of the times. It also advises on placement opportunities before and after graduation. The council membership consists of the following:

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The School of Engineering offers four-year curricula leading to bachelor of science degrees in engineering disciplines and in technology which provide broad education and training for entry to the engineering and technology professions and for continuing academic work toward advanced degrees. Master of science degrees are offered in civil, electrical and mechanical engineering, and an interdisciplinary degree, the master of science degree in engineering, is offered also. Undergraduate programs provide opportunity to specialize in the areas of biomedical, chemical, civil, computer, electrical, industrial management, mechanical, industrial technology and ocean engineering. The curricula in chemical, civil, computer, electrical, mechanical and ocean engineering are accredited by the Accreditation Board for Engineering and Technology (ABET), and the Industrial Technology program is accredited by the National Association for Industrial Technology (NAIT). Many of the engineering courses are available in evening or on Saturday primarily for those employed in local industries.

The high school student planning to enter engineering or technology is advised to pursue a program with courses in biology, physics, chemistry, advanced algebra, trigonometry and one year of mechanical drawing in addition to the general requirements for admission to the University. Deficiencies in some of the above areas may result in an extension of the time required to complete a program in engineering or technology.

The curricula are also designed to accommodate students transferring from other colleges such as the community colleges and liberal arts colleges. Transfer students should note and follow, where possible, the appropriate curriculum as outlined in later sections.

Engineering Facilities

The engineering and industrial technology buildings house the School of Engineering and permit all engineering laboratory and design facilities, School and departmental offices and faculty offices to be grouped together. A five-story engineering building is named the Vivian Engineering Center after our first Dean, Robert Evans Vivian, whose engineering career spanned five decades. Dean Vivian was the Founding Dean of Engineering at C.S.U.L.B. in 1958 and his expertise and efforts in the early formative years of our School were responsible for our existence as a high quality engineering school today.

General Regulations

A grade of "C" or better must be achieved in all prerequisites for all courses required of all engineering majors.

Admission to any one of the graduate degree programs in the School of Engineering requires a minimum GPA of 2.7 in the last 60 units taken.

Engineering Liaison Undergraduate Committee Statement:

The School of Engineering subscribes to the following statement approved by the Engineering Liaison Committee of the State of California:

Based on the 1970-71 requirements, any student of a California community college, with a stated major in engineering, who presents a transcript showing satisfactory completion of the following proposed core program in the lower division, will be able to enroll in this institution with regular junior standing; and further, assuming normal progress, said student can complete an engineering program in four additional semesters with a regular bachelor's degree, presuming, upon transfer, that the student has completed at least 50 percent of the graduation unit requirement in that program. Completion of a specific program of the student's choice will be dependent upon the proper selection of elective courses.

Subject Area	Semester Units	Quarter Units
Mathematics (beginning with analytical geometry and calculus and completing a course in ordinary differential equations)	16	24
Chemistry (for engineers and scientists)	8	12
Physics (for engineers and scientists)	12	18
Statics	3	4
Graphics and descriptive geometry	3	4
Computers (digital)	2	3
Orientation and motivation	1	1
Properties of materials	3	4
Electric circuits	3	4
Electives	11-15	17-23

Concurrent and/or Summer Enrollment in Another College

Students who wish to take course work in a community college or another college to meet curricular requirements while enrolled as an undergraduate in the School of Engineering must petition the appropriate department for prior approval to enroll in specific courses. This policy is for either concurrent enrollment or summer enrollment. University policy must also be complied with. (See "Concurrent Enrollment" and "Transfer of Undergraduate Credit" in this Bulletin.) Courses not receiving prior approval will not be accepted for credit by the department.

Dual Degree Program

Students wishing to combine a professional engineering education with one in business, education, fine arts, humanities or the sciences may enter the Dual Degree Program. The School of Engineering at CSULB has agreements with other Schools within the University and with other institutions which allow students to do this. After three years at the first institution, students transfer to CSULB as juniors to complete the two final years of engineering study. At the end of the first year at CSULB, students who have completed all of the requirements for their first degrees are awarded those degrees by the appropriate School or institution. At the end of their fifth year students who have completed all engineering requirements receive their engineering degrees.

Degree Programs

See Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, Computer Science and Engineering and Industrial Technology.

Based on the recent history of applications and student progress through the curricula, the School of Engineering expects to receive more applications from admissible students than it will be able to accept. Therefore students should submit applications early in August for the following Spring Semester and November for the following Fall Semester.

Master of Science Degree in Engineering (code 64301)

Graduate Adviser: Tim Jordanides
Graduate committee: Alexander, Gilpin, Stefani

The School of Engineering offers graduate study programs for the master of science in engineering. Typical tasks and responsibilities undertaken by students training in this curriculum would not fall within one of the traditional specialties in engineering, e.g., civil, electrical and mechanical engineering. The student may pursue an interdisciplinary program selecting courses from the various departments of engineering. Additional information concerning the programs, special facilities, laboratories and research possibilities is obtainable from the School of Engineering.

Prerequisites

1. A bachelor's degree in an accredited curriculum in engineering, or:
2. A bachelor's degree in engineering, mathematics or a natural science or other appropriate discipline with the requirement that essential undergraduate prerequisites in engineering be satisfied.
3. Graduate students must consult with the graduate adviser for information concerning procedures and requirements for appropriate approval of their courses of study prior to enrolling in their graduate programs.

Advancement to Candidacy

1. Removal of all undergraduate deficiencies as determined by the School Graduate Study Committee.
2. Students, at the discretion of the School of Graduate Study Committee, may be required to take examinations in their chosen areas.
3. Passing the WPE.

Requirements for the Master of Science

1. Completion of a minimum of 30 units beyond the bachelor's degree in upper division and graduate courses approved by the student's School of Engineering Graduate Study Committee, including:
   a. A minimum of 15 units of 500 and/or 600 level courses in engineering.
   b. Electives selected from approved upper division or graduate courses from appropriate areas.
   c. A thesis or project and/or comprehensive examination.

Graduate Courses

See graduate courses listed under civil, electrical and mechanical engineering.

School-Based Courses

Lower Division

090. Special Topics in Engineering (1) F,S

Faculty Selected topics from recent advances of interest to beginning engineering students. Course content will vary from year to year and may be repeated to a maximum of three units. (Lecture-problems 1 hour.)

282. Critical Thinking and Analysis (3) F,S

Prerequisite: MATH 122, PHYS 151. The interrelations of language, abstract symbolism and analysis are considered. The procedures for arriving at conclusions from various starting points are considered. Programming as a critical thinking tool, evaluation of various programming languages as aiding in logic, statistical generalizations, truth tables, structured programming as critical-thinking techniques. (Lecture-problems 3hours).

Chemical Engineering

School Of Engineering

Department Chair: Lloyd R. Hile
Department Office: Industrial Technology, Room 233.
Telephone. 498-4909
Faculty: Professors: Lloyd R. Hile, Shirley C. Tsai; Associate Professors: Hamid Kavianian, Ashok Naimpally; Assistant Professor: Larry K. Jang
Emeritus Professor: John M. Lenoir

Students desiring information should contact the department office for referral to one of the faculty advisors.

Chemical engineering is concerned with the conversion of chemical materials into products of increased economic utility and benefit to consumers. The chemical engineering curriculum gives the student a thorough background in chemistry, mathematics, physics, engineering science, and engineering design and analysis for application to current technical problems as well as potential technical problems that might arise in the future. The objectives are to serve as preparation for immediate employment as a chemical engineer in industry, to provide a basis for later graduate study and research or to offer a background for possible advanced study in business administration, marketing or law.

Students wishing to pursue advanced study may be interested in the Engineering School's Master of Science in Engineering degree. Graduate study leading to the MSE can be tailored to the goals of a student with a background in chemical engineering by taking advanced course work in the interfacing areas of chemistry, civil engineering (environmental area), electrical engineering (control and computer areas), mechanical engineering (thermal, fluids and materials areas) and mathematics in addition to chemical engineering. Thesis work may be done with chemical engineering faculty. Requirements for the MSE are specified in the preceding section.

All chemical engineering students must have received a minimum grade of C in each of the prerequisites for any chemical engineering course.

Chemical Engineering Professional Advisory Council

The Chemical Engineering Professional Advisory Council has been established in the belief that it would provide a positive influence in maintaining and further developing a program that reflects a consciousness of the need for technical excellence and a realistic view of industrial needs. Current members of the council are:

Jack Brocoff, Ralph M. Parsons, Co.; Richard G. Ischinger, Air Quality Management; Michael Eigen, Atlantic Richfield Co.; John G. Kunesh, Fractionation Research, Inc.; John R. Williams, Atlantic Richfield Co.; Stanley Che, Kinetics Technology International; Myrrl Santy, TRW

Bachelor of Science In Chemical Engineering (code 34320)

Lower Division:

CHE 200, 210; CHEM 111A, 111B, 251; C E 205; E E 211 or 212; MATH 122, 123, 224; PHYS 151, 152

Upper Division:

CHE 310, 320, 330, 410, 420, 430, 440, 450, 460, 470; CHEM 321A, 371A ; three units from CHEM 322, 371B or 372; MATH 370A; M E 425 or 426; three units from CHE 300, 385, 425, 465, 475, 480, 490; three units of approved science electives; three units of approved engineering electives; a course in economics.

Courses: (CH E)

Lower Division

200. Chemical Engineering Fundamentals (3) F,S Faculty

Prerequisites: CHEM 111A, MATH 123, PHYS 151. Dimensional analysis of units, steady and transient balances of mass, momentum and energy, the mathematical solution of chemical engineering problems. (Lecture-problems 3 hours.)

210. Computer Methods in Chemical Engineering (3) F,S Hile

Prerequisites: CHEM 111A, MATH 122, PHYS 151. Beginning Fortran programming and techniques of numerical analysis applied to typical problems in chemical engineering. (Lecture- problems 2 hours, laboratory 3 hours.)

Upper Division

300. The Chemical Industry (3) F, Odd years Kavianian

Prerequisites: CH E 200, CHEM 321A or consent of instructor. Survey of industrial chemical processing techniques and the activities of engineers in this area, illustrated by field trips, speakers, professional society meetings, films, readings, etc. (Lecture-problems 2 hour, laboratory 3 hours.)

310. Chemical Engineering Thermodynamics I (3) F,S Naimpally, Tsai, Kavianian

Prerequisites: CHE 200, CHEM 371A. Thermodynamics of real gases and liquids, thermodynamic functions, relations between heat and work, application to chemical engineering processes. (Lecture-problems 3 hours.)

320. Fluids (3) F,S Naimpally, Jang, Kavianian, Tsai

Prerequisites: CH E 200, C E 205. Study of the deformation and flow of fluids, both liquids and gases, with applications to chemical engineering. (Lecture-problems 3 hours.)

330. Separation Processes (4) F,S Hile, Jang, Tsai

Prerequisites: CHE 200, 210, CHEM 371A. Computation methods for predicting the separation of materials by distillation, absorption, extraction and other methods. (Lecture-problems 3 hours, laboratory 3 hours.)

385. Semiconductor Processing (3) S Naimpally, Tsai

Prerequisites: CHEM 111A; PHYS 154 or consent of instructor. Application of chemical engineering principles of diffusion, reaction, heat transfer, etc. to processes used in semiconductor device manufacture. Examination of crystal structure, film growth, doping techniques, chemical vapor deposition, and other topics related to microelectronic device fabrication. (Lecture-Problems: 3 hours)

410. Chemical Engineering Thermodynamics II (3) F,S Naimpally, Tsai, Kavianian

Prerequisites: CHE 210, 310. Multiphase properties including advanced equations of state. Thermodynamics of reactive systems and flow processes. (Lecture-problems 3 hours.)

420. Heat and Mass Transport (3) F,S Hile, Jang, Kavianian

Prerequisites: CHE 210, 320. Heat exchange by conduction, convection and radiation. Diffusion in fluids and solids. Simultaneous heat and mass transport. (Lecture-problems 3 hours.

425. Polymer Synthesis and Characterization (3) S Hile, Kavianian

Prerequisite: CHEM 321A or consent of instructor. Physical and chemical concepts in the production of polymers. Relation of the chemical structure to bulk properties of plastics. Laboratory synthesis of polymers and their mechanical, thermal and molecular characterization. (Lecture-problems 2 hours, laboratory 3 hours.)

430. Chemical Reactor Kinetics (3) F,S Hile, Jang, Kavianian

Prerequisites: CHE 210, CHEM 371A. Homogeneous and heterogeneous reactions and application to reactor design, catalysts. (Lecture-problems 2 hours; laboratory 3 hours.)

440. Chemical Engineering Laboratory I (2) F Faculty

Prerequisites: CH E 310, 320, 330, pass Writing Proficiency Exam. Laboratory study of fluid mechanics, separation processes and thermodynamics. Experimental design and analysis and preparation of engineering reports. (Laboratory 6 hours.)

450. Chemical Engineering Laboratory II (2) S Faculty

Prerequisites: CHE 420, 430, 440, 460. Laboratory study of heat and mass transport, chemical kinetics and control theory. Experimental design and analysis and preparation of engineering reports. (Laboratory: 6 hours)

460. Chemical Process Control (3) F,S Naimpally, Jang

Prerequisites: CH E 420; MATH 370 A. Control theory and practice, instrumentation, system responses, transfer functions, feed-back control, and stability as applied to chemical engineering processes. (Lecture-problems 3 hours.)

465. Biochemical Engineering (3) F Jang

Prerequisites: CHE 420, 430; BIOL 200 or MICRO 100 or consent of instructor. Study of chemical modification and purification of biological materials to produce biochemicals (pharmaceuticals, proteins, solvents, etc.) through fermentation, enzyme catalysis, genetic engineering, etc. Biological treatment of wastes. Grading: Traditional only. (Lecture-problems: 3hours)

470. Chemical Engineering Design (4) F,S Kavianian

Prerequisites: CH E 310, 330, 420, 430, CHEM 321A. Design based upon economics and chemical engineering design and analysis. (Lecture-problems 3 hours, problem-design session 3 hours.)

475. Environmental Pollution (3) F Hile, Naimpally

Prerequisites: CHEM 111A-B. Recommended: Chemistry 321A, 371A. Application of chemistry to the problems of pollution. (Lecture-problems 3 hours.)

480. Theoretical Methods in Chemical Engineering (3) F, Even years Hile

Prerequisites: CH E 210, 310, 420, 430. Simulation and optimization of chemical engineering processes by mathematical formulation and computer modeling. (Lecture-problems 3 hours.)

490. Special Problems (1-3) F,S Faculty

Prerequisite: Consent of instructor. Assigned topics in technical literature or laboratory projects and reports on same.

Graduate Courses:

510. Multiphase Flow and Interfacial Phenomena (3) F,S Faculty

Prerequisites: CHE 320 or consent of instructor. Equation of motion in multiphase systems such as slurries and fluidized beds involving bubbles, drops, and particles. Effects of interfacial tension, particle-surface and interparticulate interactions. (Lecture-Problems: 3 hours)

520. Advanced Transport Phenomena (3) F,S Hile, Jang, Kavianian, Naimpally, Tsai

Prerequisites: CHE 320, 420, 430. Application of differential and integral mass, momentum and energy balances to chemical engineering processes. Analysis of fluid flow, heat transfer, diffusion and chemical reaction in various unit operations. (Lecture-Problems: 3 hours)

530. Advanced Reactor Kinetics (3) F,S Hile, Kavianian, Jang

Prerequisites: CHE 430. Modeling of chemical reactors; effects of multiple phases, mixing, adsorption, diffusion and catalysts on reactor performance. (Lecture-Problems: 3hours)

540. Energy Conservation (3) F,S Naimpally, Kavianian

Prerequisites: CHE 410, 420, 430. Improving the efficiency of industrial processes involving heat exchange, distillation, chemical reaction and other unit operations through application of thermodynamic analysis. Pinch technology, cogeneration, exergy and other topics are examined. (Lecture-Problems: 3 hours)

550. Alternate Energy Sources (3) F,S Kavianian

Prerequisites: Consent of instructor. Examination of processes to economically produce energy or fuel from various raw materials (coal, oil shale, tar sands, biomass, solar, wind, etc.) (Lecture-Problems: 3 hours)

697. Directed Research (1-3) F,S,SS Hile

Prerequisites: Graduate standing. Individual research or intensive study under the guidance of a faculty member on theoretical or experimental problems in chemical engineering. [Independent Study]

698. Thesis (2-6) F,S,SS Hile

Planning, preparation and completion of a thesis in chemical engineering.

Civil Engineering

School Of Engineering

Department Chair: Hsiao-Ling Chu
Department Office: Engineering 2, Room 101
Telephone: 213-498-5118
Faculty: Professors: Kamal T. Al-Chalabi, Robert L. Alexander, C. V. Chelapati, H. L. Chu, Ali Eshett, M. Gamal Mostafa, Joseph M. Plecnik, J. K. Sridhar Rao, Willard H. Reed, Chan-Feng Tsai, Bing C. Yen, William H. Ying, Elena Zagustin; Associate Professors: Peter A. Cowan, Richard F. Nguyen.
Emeritus Faculty: Cecil V. Armour, John H. Dudley, William D. McIlvaine, Harold T. Miller, Carl A. Neidengard
Department Secretary: Crandolyn Smith

The Civil Engineering Professional Advisory Council provides a link between the department and the community served by the University. It provides for an exchange of ideas related to the engineering profession and education. The council assists the department as appropriate and recommends on matters pertinent to the graduate and undergraduate programs. Current members of the council are:

Mihran S. Agbabian, President, Agbabian Associates, El Segundo; Edward D. Allen, Director of Engineering, Port of Long Beach; Thomas Dawes, Deputy Chief Engineer, County of Sanitation, District of Orange County; Roy G. Johnston, Brandow and Associates, Los Angeles; John Kincaid, Vice President, Boyle Engineering Corporation, Costa Mesa; Dennis D. Lambert, Lambert and Associates, Montrose; Fred D. MacMurdo, The Irvine Co., Newport Beach; Earth Technology Corporation; Geoffrey R. Martin, Vice President, Engineering Earth Technology Corporation, Long Beach; Ray Moresco, General Manager, IT Corporation, Irvine; Alfonso Robles, Jr., Department of the Army, Corps of Engineers; Michael Schneider, Senior Vice President, Parsons Brinkerhoff, Santa Ana; William J. Soto, Project Manager for Orange County - The William Lyon Company, Newport Beach; Roy F. Stephenson, Executive Vice President, Berryman and Stephenson, Inc., Santa Ana; Dorothy M. Weisz, Environmental Management Agency, Orange County; Dennis Williams, Assistant in Charge, Los Angeles Aquaduct Division, Los Angeles Department of Water and Power, Robert S. Wright, Consulting Engineer, Santa Ana.

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisor: W. H. Ying; Graduate Advisor: C.F. Tsai.

The Department of Civil Engineering offers an option designed to give the students a broad educational background essential to modern civil engineering practice. The program is built around a basic core of mathematics, natural and engineering sciences common to accredited professional engineering programs. It is planned to give a selection of basic engineering-science education to enable the graduate to begin a career in any of the various fields of practice in civil engineering or to prepare for graduate study in related engineering majors. It makes possible a systematic and integrated foundation in the principles of structural analysis and design, transportation systems, environmental systems, geotechnical engineering, water resources engineering, construction materials and urban engineering. Opportunity to explore a particular area of interest is offered in the wide selection of civil engineering electives to permit students a sequence of courses related to the area of their choice.

The four engineering buildings house laboratory facilities in fluid mechanics and hydraulics, materials of construction, soils and foundations, structures, surveying, urban and environmental engineering. The Department of Civil Engineering offers graduate study programs leading to the degrees of master of science in civil engineering (M.S.C.E.) and the advanced degree of civil engineer (C.E.). These programs provide opportunities for graduate students to develop as civil engineers capable of competent research, design, and application through integrated curricula of engineering and science while permitting a concentration in the student's area of interest. Areas of specialization include: environmental engineering, water resources engineering, geotechnical engineering, and structural engineering. Additional information concerning the programs, special facilities, laboratories and research possibilities is contained in the Civil Engineering Department brochures.

Some graduate laboratory and teaching assistantships are available to qualified graduate students. Applications should be sent to the department chair.

Bachelor of Science in Civil Engineering (code 3-4325)

A grade of "C" or better must be achieved in all prerequisites for all Civil Engineering courses.

Lower Division:

BIOL 200 or MICR 100; CHEM 111A; C E 205, 206, 225; E E 211; MATH 122, 123, 224; M E 172; PHYS 151, 152.

Upper Division:

GEOL 370; C E 300, 335, 345, 346, 359, 364, 406, 426, 437, 459, 481, 490; ECON 300; MATH 370A; C E 306 or 407; M E 330, 371, 373; nine units of technical electives from: C E 427, 438, 445, 455, 456, 457, 466, 492, 495; two laboratories from: C E 336, 356, 464, 491, M E 331, 374; three units of technical electives from: C E 429, 435, 446, 458, 460.

Master of Science in Civil Engineering (code 6-4325)

Prerequisites

1. A bachelor's degree in an accredited curriculum in civil engineering, or:
2. A bachelor's degree in engineering, a natural science or other appropriate discipline with the requirement that essential undergraduate prerequisites in civil engineering be satisfied.
3. Graduate students must consult with the graduate adviser for information concerning procedures and requirements for appropriate approval of their courses of study prior to enrolling in their graduate programs.

Advancement to Candidacy

1. Removal of all undergraduate deficiencies as determined by the Department Graduate Study Committee.
2. Students may, at the discretion of the Department Graduate Study Committee, be required to take examinations in their chosen areas.
3. Passing the Writing Proficiency Examination.

Requirements for the Master of Science (code 6-4324)

1. Completion of a minimum of 30 units beyond the bachelor's degree in upper division and graduate courses as follows:
   a. A minimum of 24 units in engineering, probability and statistics and mathematics courses with 18 units of 500 and/or 600 level courses in civil engineering. Within these 18 units a student may include six units of CE 698, Thesis, or three units of CE 697, Directed Studies. No student may include more than three units of CE 602 within these 18 units.
   b. Six units of electives selected from approved upper division or graduate courses from appropriate areas.
   c. Fulfill the requirements in option 1 or 2.

   Option 1 — Write and present orally a thesis to be approved by the thesis committee.

   Option 2 — Pass a comprehensive examination on course work in her/his graduate program.

Civil Engineer Degree (code 7-4324)

The program leading to the civil engineer degree offers the qualified student professionally oriented courses with greater concentration in civil engineering than is required by the master of science in civil engineering. This program encourages appropriate advanced studies in other disciplines of the University.

Prerequisites

1. A master of science degree in civil engineering from an accredited institution with a minimum GPA of 3.5; or
2. A bachelor of science degree in civil engineering from an accredited institution with a minimum GPA of 3.0; or
3. A bachelor of science degree in engineering, mathematics, physical sciences or other appropriate disciplines from an accredited institution with a minimum GPA of 3.0 with the requirement that essential undergraduate prerequisites in civil engineering will be satisfied prior to commencing the student's civil engineering degree program.
4. The graduate student must consult with the graduate adviser and Civil Engineering Department graduate brochure for information concerning departmental procedures and requirements and for appropriate approvals of the course of study prior to enrolling in courses in the student's graduate program.

Exceptional cases not meeting the above minimum GPA may be considered by the Department Graduate Studies Committee.

Advancement to Candidacy for the Civil Engineer Degree

1. A Department Graduate Study Committee, consisting of the graduate student's adviser and at least two other faculty members, will be responsible for the formulation and supervision of each individual graduate student's program.
2. The committee shall determine candidacy admission, and requirements as to removal of undergraduate and/or graduate prerequisite deficiencies.
3. Prior to determining advancement requirements the committee may, at its discretion, require the student to take an examination in the chosen area.

Requirements for the Civil Engineer Degree (C.E.)

1. Completion of a minimum of 60 units beyond the bachelor's degree in upper division and graduate courses, approved by the student's Department Graduate Study Committee including:
   a. A minimum of 36 units of 500 and 600 level civil engineering courses including a thesis of nine units to be written and presented orally.
   b. Twenty-four units of 400, 500 and 600 level approved electives.
2. No more than 30 units completed before advancement to candidacy may be used in completing the requirements for the CE degree.

Courses: (C E)

Lower Division:

205. Analytical Mechanics I (Statics) (3) F,S Faculty
Prerequisite: PHYS 151; prerequisite or corequisite: MATH 123. Application of the mechanics of equilibrium to force systems using analytical and graphical solutions of problems involving structures and machines. (Lecture-problems 3 hours.)

206. Computer Programming and Civil Engineering Applications I (2) F,S Chelapati, Ying
Prerequisites: MATH 122, PHYS 151. Introduction to Fortran programming and application of computers to elementary civil engineering problems. (Lecture-problems 1 hour, laboratory 3 hours.)

225. Surveying and Mapping (2) F,S Faculty
Prerequisite: M E 172. Theory and practice of plan surveying including the use of instruments, measurement and keeping field notes of distances, angles, elevations, traversing and plane tabling. Plotting of surveying data as related to profiling contours and topography. Study and interpretation of maps relating to civil cartography. (Lecture-problems 1 hours, fieldwork 3 hours.)

Upper Division

300. Engineering Materials Laboratory I (1) F,S Alexander
Prerequisites: CHEM IIIA, PHYS I5I. Prerequisite or Corequisite: C E 205. Course covers the basic properties of civil engineering construction materials. (Laboratory 3 hours.)

305. Technical Communications (3) F,S Alexander
Prerequisite: English composition. Various oral, written, symbolic and numerical methods of recording, processing and transmitting technical information. (Lecture-problems 3 hours.)

306. Computer Programming and Civil Engineering Applications II (2) F,S Chelapati, Ying
Prerequisite: CE 206. Application of numerical methods and computer programming to the solution of civil engineering problems. (Lecture-problems 2 hours.)

335. Fluid Mechanics (3) F,S Chu, Eshett, Mostafa
Prerequisites: MATH 224, CE 205 or consent of instructor. Properties of fluids, fluid statics, fluid dynamics, dynamic similitude, flow of compressible and incompressible fluids in closed conduits, uniform flow in prismatic open channels. (Lecture-problems 3 hours.)

336. Fluid Mechanics Laboratory (1) F,S Faculty
Prerequisite: ENGL 100 or equivalent. Prerequisite or corequisite: CE 335. Experiments in and study of the phenomena of fluid flow. (Laboratory 3 hours.)

345. Geotechnical Engineering I (3) F,S Al-Chalabi, Yen
Corequisites: M E 373; GEOL 370. Soil mechanics applied to engineering structures. Soil exploration, identification, classification, drainage, stability and bearing capacity. (Lecture-problems 3 hours.)

346. Geotechnical Engineering Laboratory (1) F,S Al-Chalabi, Tsai, Yen.
Prerequisite or corequisite: C E 345. Laboratory investigation and experiments in the phenomena of soil mechanics. (Laboratory 3 hours.)

356. Engineering Materials Laboratory II (1) F Alexander

Prerequisites: C E 300; ENG 100 or equivalent. Advanced studies of the properties of civil engineering construction materials. (Lecture, laboratory 3 hours.)

359. Structural Analysis I (3) F,S Faculty

Prerequisite: ME 373. Analysis of structures including trusses, beams, and frames; conjugate beam, virtual work, energy methods, approximate methods, and influence lines. (Lecture-problems 3 hours.)

364. Environmental Engineering (3) F,S Cowan

Prerequisite or corequisite: CE 335. Study, simulations and design of the environmental elements of a community. Special emphasis is made in the field of water quality. General planning and environmental impact analysis. (Lecture-problems 3 hours.)

370. Analytical Mechanics (3) F,S Faculty

Prerequisites: Physics 151; Prerequisite or corequisite: MATH 123. Fundamental principles of statics, kinematics and kinetics, with application to idealized structures and systems. Intended for Electrical Engineering majors. Not open to Civil, Mechanical or Ocean Engineering majors. (Lecture-problems 3 hours.)

403. Applications of Statistical Methods (3) S Eshett, Rao

Prerequisite: MATH 370A. Civil engineering applications of nondeterministic model land decision theory. (Lecture-Problems: 3 hours)

*404. Laboratory Techniques (1) F,S Faculty

Prerequisites: ENGL 100 or equivalent, senior standing in civil engineering and consent of instructor. Study in the techniques of organizing and directing of the civil engineering laboratory. May be repeated for maximum credit of 3 units. (Conference 1 hour, laboratory 3 hours.)

*405. Special Topics in Civil Engineering (3) F,S Faculty

Prerequisite: Senior standing in civil engineering or consent of instructor. Selected topics from recent advances in civil engineering. Course content will vary from year to year. Specific topic will be recorded on the student's transcript. (Maximum credit 6 units. Lecture problems 3 hours.)

*406. Engineering Economy and Administration (3) F,S Al-Chalabi, Eshett, Rao

Prerequisite: Senior standing or consent of instructor. Engineering management principles and economic analysis with emphasis on time value of money. (Lecture-problems 3 hours.)

407. Civil Engineering Systems (2) F,S Rao

Prerequisites: MATH 370 A and senior standing. Mathematical techniques associated with operations research and systems engineering and their applications to the planning and design of civil engineering systems. (Lecture-problems 2 hours.)

408. Special Problems (1-3) F,S Faculty

Prerequisite: Senior standing in civil engineering. Assigned topics in technical literature or laboratory projects and report on same.

*409. Computer Methods in Civil Engineering (3) S Ying

Prerequisite: CE 206 or consent of instructor. Numerical analysis and computer methods applied to various branches including special problem oriented languages. (Lecture- problems 3 hours.)

*426. Transportation Engineering (3) F,S Alexander

Prerequisites: C E 406 and Senior standing, or consent of instructor. Theory, design and operation of various modes of transportation. (Lecture- problems 3 hours.)

*427. Highway Design (3) S Faculty

Prerequisite: CE 345. Design problems in highway engineering. Design project. (Lecture problems 3 hours.)

*429. Traffic Engineering (3) F Faculty

Prerequisite: CE 426 or consent of instructor. Traffic engineering as related to studies, planning, operation and administration. (Lecture-problems 3 hours.)

*435. Hydrology and Water Resources Engineering (3) F Chu, Eshett

Prerequisite: CE 335. Fundamental surface and ground water hydrology concepts and quantitative methods. Selected topics and procedures of the hydrological cycle. Planning, development and management of water resource surface systems. (Lecture-problems: 3 hours.)

*437. Engineering Hydraulics (3) F,S Chu, Mostafa

Prerequisites: CE 335, MATH 370 A. Theory and analysis of steady uniform and non-uniform flow in open conduits. Energy and momentum principles, critical flow computations and applications, design of channels, computations of gradually varied, spatially varied and rapidly varied flows. (Lecture-problems 3 hours.)

*438. Hydraulic Engineering Design I (3) S Chu, Mostafa

Prerequisite: CE 335. Application of hydraulic principles to the design of dams, water courses, water systems and their related structures and devices. (Lecture-problems 3 hours.)

*439. Marine Civil Engineering (3) F Faculty

Prerequisite: Senior standing with a background in natural science or engineering. Introduction to the application of engineering principles to problems of the coastal and estuarine environments. (Lecture-problems 2 hours, sea laboratory 3 hours.)

*445. Geotechnical Engineering II (3) F,S Yen

Prerequisites: C.E. 345, 346 or consent of instructor. Methods of design and construction of various soil engineering projects utilizing theory of soil mechanics. (Lecture problems 3 hours.)

446. Geotechnical Projects (3) F,S Tsai, Yen

Prerequisite: CE 345. Design and problem solving oriented geotechnical projects using soil mechanics theory and experimental methods according to the current state-of-the art practice. Emphasis is placed on the fields of slope stability, pile foundation, seepage, and soil dynamics. (lecture-problems 3 hours.)

*455. Structural Steel Design (3) F,S Chelapati, Nguyen

Prerequisite: CE 458. Detailed design of components with typical codes and specifications. (Lecture-Problems 3 hours.)

*456. Timber Design (3) F,S Faculty

Prerequisite: CE 359. Design of stressed skin panels, supporting members, frames and their connections. Applications to timber structures and concrete formwork. (Lecture-problems 3 hours.)

*457. Reinforced Masonry Design (3) F,S Plecnik

Prerequisite: CE 359. Theory, design and application of reinforced masonry (brick and block) in compliance with the Uniform Building Code. Earthquake provisions. Construction and specifications. Design of high rise buildings, industrial buildings, retaining walls. (Lecture-Problems 3 hours.)

458. Structural Analysis II (3) F,S Faculty

Prerequisite: CE 359. Solution of indeterminate truss and frame structures using moment distribution and slope deflection methods. Introduction to matrix methods. Computer solutions. Energy theorems and virtual work principles. (Lecture-Problems 3 hours.)

*459. Reinforced Concrete Design I (3) F,S Nguyen, Rao, Ying

Prerequisite: C E 300 and C E 359. Theory and design of structural elements of reinforced concrete, analysis by working stress and ultimate strength design theories. (Lecture-Problems 3 hours.)

*460. Environmental System Planning (3) F Faculty

Prerequisite: CE 364 or consent of instructor. Planning and evaluation of systems for management of water supply, wastewater, stormwater, air quality, and solid and hazardous waste, considering system performance, legislation and regulations, environmental impacts, and socioeconomic factors. Selected case studies. (Lecture-problems 3 hours.)

464. Environmental Engineering Laboratory I (1) F,S Cowan

Prerequisites: C E 364 or consent of instructor; ENG 100 or equivalent. Standard laboratory methods of water and wastewater analysis. (Laboratory 3 hours.)

466. Environmental Systems Design (3) S Faculty

Prerequisites: CE 364, 437 or consent of instructor. Design of systems for management of water supply, wastewater, stormwater, air quality, and solid and hazardous waste, with emphasis on the physical and hydraulic aspects. (Lecture-Pproblems 3 hours.)

*468. Marine Pollution Control (3) F,S Cowan

Prerequisite: CE 384 or BIOL 353. Marine and domestic pollution of coastal and estuarine waters. (Lecture-problems 3 hours.)

*470. Engineering Contracts and Specifications (3) F

Prerequisites: C E 300. Principles of contracts and specifications, codes, drawings and estimates. Applications of business law to engineering. (Lecture-problems 3 hours.)

*471. Cost Estimating and Bidding (3) S Faculty

Prerequisites: CE 426, 459. Construction cost estimating of large engineering projects and the preparation of appropriate bids. (Lecture problems 3 hours, field trips.)

*473. Project Management (3) S Faculty

Prerequisites: Senior standing or consent of instructor. Theory and application of logic and current techniques in the planning, scheduling and managing of engineering projects. Techniques of construction. (Lecture-problems 3 hours.)

481. Professional Practice In Civil Engineering (1) F,S

Prerequisite: Senior standing. Topics related to practice of civil engineering profession. Professional society meetings and readings. (Lecture-problems 1 hour.)

490. Senior Design Project (3) F,S Faculty

Prerequisites: Completion of all 300-level engineering courses and consent of Department. Normally taken in the last year of the undergraduate program. A supervised laboratory design of an individual or group project incorporating all aspects from concept to completed design and presentation. (Lecture-problems 2 hours, design laboratory 3 hours.)

*491. Structures Laboratory (1) F Nguyen, Plecnik

Prerequisite: C E 359 and ENGL 100 or equivalent. Pre-requisites or co-requisites C E 455, C E 459; Laboratory examination of structural concepts. (Laboratory 3 hours.)

*492. Reinforced Concrete Design II (3) F Plecnik

Prerequisites: CE 458, 459. Complete integrated design of structural systems in concrete. Code provisions. (Lecture-problems 3 hours.)

494. Finite Element Methods I (3) S Nguyen, Plecnik

Prerequisite: CE 458 or consent of instructor. Introduction to finite element methods for structural and stress analysis and design. Applications using computer program SAP and various elements are emphasized. (Lecture problems 3 hours.)

495. Seismic Design I (3) F Chelapati, Rao, Ying

Prerequisites: CE 455, 459. Elements of lateral-force design in steel, concrete, masonry and timber structures. Application of current building codes. (Lecture-Problems: 3 hours)

Graduate Division:

500. Engineering Analysis I (3) F Eshett

Prerequisites: MATH 370A. Application of analytical methods to engineering problems. Differential equations and series solutions, Bessel functions and Legendre polynomials, boundary value and eigenvalue problems, Fourier series, partial differential equations, vector analysis. (Lecture-problems 3 hours.)

501. Engineering Analysis II (3) S Eshett

Prerequisites: MATH 370A. Analysis of engineering mechanics by matrix theory and complex variables; introduction to numerical techniques. (Lecture-problems 3 hours.)

502. Finite Element Methods II (3) F Nguyen, Plecnik

Prerequisite: CE 494 or consent of instructor. Theory of finite element methods. Discretization of continuum, element stiffness matrices and direct stiffness formulation. Application to frame, plane stress and strain, plate and shell problems using SAP. (Lecture-Problems 3 hours.)

504. Advanced Topics in Civil Engineering (3) F,S Faculty

Prerequisite: Consent of instructor. Selected topics from the most recent developments in civil engineering. Course content will vary from year to year and the specific topic will be recorded on the student's transcript. May be repeated once for credit. No more than six units of CE 405 and/or CE 504 may be counted for the master's degree. (Lecture-problems 3 hours.)

506. Engineering Economy for Complex Systems (3) S Rao

Prerequisite: CE 408 or consent of instructor. Principles and techniques useful to engineers in formulating rational requests for the allocation of capital and other resources to complex programs. Model formulation, systems analysis and design. Applications to public engineering systems. Risk uncertainty, decision theory and intangibles will be emphasized. (Lecture-Problems: 3 hours.)

507. Operations Research Techniques in Engineering (3) F,S Faculty

Prerequisite: CE 407 or equivalent or consent of instructor. An analytical and numerical optimization technique for constrained and unconstrained operations research problems. Calculus of variations and optimal control methods as used in project management engineering and systems analysis. (Lecture problems 3 hours.)

520. Airport and Harbor Engineering (3) F Faculty

Prerequisite: CE 426 or consent of instructor. Engineering planning and design of urban airports and harbors. (Lecture-Problems: 3 hours)

522. Transportation Planning (3) F Faculty

Prerequisite: CE 426 or consent of instructor. Planning of fixed facilities for various modes of transportation in urban areas. Engineering administration and integration of transportation systems. (Lecture-problems 3 hours.)

526. Pavement Engineering (3) S Alexander

Corequisite: CE 427 or consent of instructor. Aggregate, binder systems. Theory and design of pavement structures. (Lecture-Problems 3 hours.)

530. Mathematical Models in Hydraulic Engineering (3) F Chu

Prerequisite: CE 437 or consent of instructor. Numerical techniques for solving hydraulic problems in water supply, waste water disposal and storm drainage systems. Prediction of important parameters by mathematical modeling on problems encountered in artificial channels, rivers, estuaries and marine environments. (Lecture-Problems 3 hours.)

531. Groundwater and Seepage (3) S Eshett

Prerequisites: CE 335, 345 or consent of instructor. Theory and application of groundwater flow and seepage through earth structures. (Lecture-Problems 3 hours.)

532. Sediment Transportation (3) F Mostafa

Prerequisite: CE 437. Phenomena of sediment transportation related to streams and marine environments. (Lecture-Problems 3 hours.)

534. Hydraulic Models (3) S Mostafa

Prerequisite: CE 336, 437 or consent of instructor. Hydraulic measurement and principles of hydraulic similitude as applied to stream, esturine and coastal environments. (Lecture-Problems: 3 hours.)

538. Hydraulic Engineering Design II (3) F Mostafa

Prerequisites: CE 437, 438 or consent of instructor. Design of water supply networks, hydraulic transitions, controls and structures. Hydraulic power conversion. River engineering. Water resources systems. (Lecture-Problems: 3 hours.)

539. Coastal Engineering (3) S Chu

Prerequisite: CE 439 or consent of instructor. Wave mechanics, tides, surge, wave refraction, diffraction and reflection, application to design of coastal and off shore structures and to the study of beach erosion problems. (Lecture-problems 3 hours.)

545. Rock Mechanics in Engineering Practice (3) F Yen

Prerequisites: CE 345, 348. Principles of rock mechanics with emphasis on engineering practices for problems of slopes, foundations and tunnels. Same course as GEOL 545. (Lecture- problems 3 hours.)

546. Theory and Design of Foundation Structures (3) F Al-Chalabi

Prerequisite: CE 345. Foundation, explorations, stress and deformation relationships and design of various footings, piles, piers and caissons. Analysis of lateral loads and design of retaining structures, machinery foundations and foundation dewatering. (Lecture-Problems: 3 hours.)

547. Soil Dynamics (3) S Tsai

Prerequisites: CE 345, 401 or consent of instructor. Theories and field behaviors of dynamically loaded foundation systems and soil responses with emphasis on engineering application. (Lecture-Problems: 3 hours.)

548. Geotechnical Engineering III (3) Tsai, Yen

Prerequisite: CE 345 or consent of instructor. Stress-strain time relationship of soils. Theory and methods of analysis with special emphasis on the applications and limitations in soil engineering. (Lecture-Problems 3 hours.)

549. Advanced Soil Mechanics Techniques (3) F Tsai, Yen

Prerequisite: CE 548 or consent of instructor. Current theories on soil mechanics topics and advanced testing techniques. (Lecture-Problems 2 hours, laboratory 3 hours.)

550. Behavior and Design of Concrete Structures (3) F Nguyen, Rao

Prerequisite: CE 459. Behavior of plain, and partially prestressed concrete members and structures, theories of composite action, structural safety, code provisions and applications to advanced design of concrete structures. (Lecture-Problems 3 hours.)

551. Prestressed Concrete (3) S Rao

Prerequisite: CE 459. Principles of prestressed concrete, materials used, applications to structural design, review of existing specifications. (Lecture-Problems 3 hours.)

552. Theory of Plates and Shells (3) F Ying

Prerequisite: Completion of CE Graduate Math Requirement. Review of theory of elasticity; formulation of general equation of bending of thin elastic plates; methods of obtaining exact and approximate solutions; membrane and bending theories of shells with emphasis on cylindrical shells and shells of revolution. (Lecture-Problems 3 hours.)

553. Behavior and Design of Steel Structures (3) S Nguyen

Prerequisite: CE 455. Study of torsion, unsymmetrical bending, stability. Plastic design, code provisions and commentary. Design of complete structural systems in steel. (Lecture-Problems 3 hours.)

555. Seismic Design II (3) S Chelapati

Prerequisite: CE 495 or consent of instructor. Characteristics of earthquakes and seismicity response spectra, modal methods of analysis, practical examples of elastic and inelastic response of structures to earthquake motions. New development in codes, computer applications. (Lecture-Problems: 3 hours.)

557. Advanced Structural Analysis (3) S Ying

Prerequisite: CE 458 or consent of instructor. Virtual forces and displacements, strain energy and complementary energy. Force and displacement matrix methods. Computer applications to planar and space frames, trusses, floor beams and shear wall systems. (Lecture-Problems: 3 hours.)

558. Dynamics of Structures (3) F Zagustin

Prerequisite: CE 455 or consent of instructor. Response of structures and structural components having one or many degrees of freedom. Damping and inelastic action; earthquake and nuclear blasts, dynamic resistance of structural elements and structures, elastic and inelastic response of structures to earthquake force and blasts. (Lecture-Problems: 3 hours.)

560. Environmental Engineering Laboratory II (3) F Cowan

Prerequisites or corequisites: CE 364, 464 or consent of instructor. Sensing, sampling and laboratory analysis of the physical, chemical, biological, and radiological properties of waters, wastewaters, wastes, and air. (Lecture-Problems: 2 hours, Laboratory 3 hours.)

562. Water and Wastewater Treatment Design I (3) F Cowan

Prerequisite: CE 364, 484 or consent of instructor. Design of physical and chemical processes for water and wastewater treatment, with emphasis on water treatment plants. (Lecture-Problems 3 hours.)

563. Water and Wastewater Treatment Design II (3) S Cowan

Prerequisite: CE 562 or consent of instructor. Design of chemical and biological processes for water and wastewater treatment with emphasis on wastewater treatment. (Lecture-Problems: 3 hours.)

564. Environmental Health Engineering (3) F Faculty

Prerequisite: CE 364, 464 or consent of instructor. Health and safety aspects of environmental quality and related engineering systems. (Lecture-Problems: 3 hours.)

565. Environmental Wastes and Resources (3) S Faculty

Prerequisites: CE 364, 464 or consent of instructor. Generation, treatment, resource recovery, and disposal of industrial wastes, solid wastes, and hazardous materials. (Lecture-Problems: 3 hours.)

573. Engineering Management Network Analysis and Planning (3) F,S Faculty

Prerequisite: CE 473 or equivalent or consent of instructor. Methods in network analysis maximal flow, shortest path, scheduling, critical path methods, PERT diagrams, applications to project management and engineering, systems analysis. (Lecture-Problems: 3 hours.)

602. Seminar in Civil Engineering (3) F,S Faculty

Prerequisite: Consent of instructor. Presentation of research in special fields: structures, transportation, environmental, urban, geotechnical and water resources engineering. (May be repeated once for credit.) (Lecture-Problems: 3 hours)

696. Research Methods (1) F,S Alexander

Prerequisite: Candidacy or consent of instructor. Bibliographical and library techniques and resources. Preparation and presentation of theses and directed studies technical papers.

697. Directed Studies (1-3) F,S Faculty

Prerequisite: Admission to candidacy for an M.S. degree. Corequisite: CE 696 or written consent of directed studies adviser. Theoretical and experimental problems in civil engineering requiring intensive analysis.

698. Thesis (2-6) F,S Faculty

Prerequisite: Admission to candidacy for degree of master of science in civil engineering. Corequisite: CE 696 or written consent of faculty adviser. Planning, preparation and completion of a thesis and/or project in the field of civil engineering.

699. Thesis (3-9) F,S Faculty

Prerequisite: Admission to candidacy for degree of Civil Engineer. Corequisite: CE 696 or written consent of faculty adviser. Planning, preparation and completion of a thesis in the field of civil engineering practice.

Computer Science and Engineering

School of Engineering

Department Chair: H. John Lane
Department Office: Vivian Engineering Center 424
Telephone: 213-498-4285
Faculty: Professors: Edward Evans, John Lane, Dar-Biau Liu, Morton Schwartz; Associate Professors: Joel Carissimo, Sandra Cynar, Long Nguyen
Undergraduate Advisor: Joel Carissimo

Students desiring information should contact the department for referral to one of the faculty advisors.

Bachelor of Science Degree in Computer Science

The School of Engineering and the School of Humanities jointly offer a degree: Bachelor of Science in Computer Science. Students desiring this degree must select one of two options:

(A) Option in Computer Science and Engineering, offered by the Computer Science and Engineering Department (School of Engineering)
(B) Option in Computer Science and Mathematics, offered by the Mathematics and Computer Science Department (School of Humanities).

Information on option (A) is given in this section of the Bulletin. For information on option (B) consult the section of this Bulletin for the Mathematics and Computer Science Department.

The Computer Science and Engineering option is an engineering oriented computer science degree and is accredited by ABET (Accreditation Board for Engineering and Technology). The Computer Science and Mathematics option is a more mathematically oriented degree. The goal of both degrees is to prepare graduates for a wide variety of computer- related careers by providing a balance between the theoretical and practical aspects of computer science, and between hardware and software.

Option in Computer Science and Engineering

The option in Computer Science and Engineering is an engineering oriented computer science program which allows the student to acquire substantive competence in computer sciences and related fields. The program builds upon a strong base of mathematics, physics and engineering science. It includes a core of standard electrical engineering courses as well as courses in digital systems and circuitry; computer organization and design; programming and software systems; theoretical computer science; and computer applications. Opportunity to explore a particular area of interest is provided by elective units in the senior year.

The School of Engineering requires that all engineering majors must receive a grade of C or better in any course which is a prerequisite for a course required in an engineering program. No required engineering courses may be taken credit/no credit.

Requirements for the Option in Computer Science and Engineering (code 3-4010)

Lower Division:

CHEM 111A; CSE 201, 242; E E 211; MATH 122, 123, 224, 233; PHYS 151, 152, 154.

Upper Division:

CSE 301, 301L, 340, 342, 346, 347L, 440, 442, 444, 494; E E 310, 330, 380 (or MATH 345); MATH 321, 370A (or MATH 364A); plus approved electives to total 135 units.

Each of the following courses is cross listed with a corresponding course in the Electrical Engineering Department. Corresponding courses differ only in their prefixes (e.g. CSE 346 and EE 346 both refer to the same course): CSE 201, 301, 301L, 346, 347L, 440, 441, 446, and 449.

Courses: (CSE)

Lower Division:

201. Digital Logic Design (4) F,S,SS Lane

(Same course as E E 201.) Prerequisites: MATH 122. Basic topics in combinational and sequential switching circuits with applications to the design of digital devices. A materials fee may be charged. (Lecture - problems, 4 hours.)

242. Computer Methods I (3) F,S,SS Cynar

Prerequisite: MATH 122. Introduction to computer programming using FORTRAN. Structured programming with applications to scientific and engineering problems. (Lecture-Problems: 2 hours, Laboratory: 3 hours.

Upper Division:

301. Digital Devices and Systems (3) F,S Cynar

(Same course as E E 301.) Prerequisites: CSE 201. Sequential logic, programmable controller design, hardware design languages. Integrated circuit families. A materials fee may be charged. (Lecture - problems, 3 hours.)

301L. Digital Devices and Systems Laboratory (1) F,S Lobodzinski

(Same course as EE 301 L.) Corequisite: CSE 301. Design and implementation of digital systems using MSI and LSI circuits. A materials fee may be charged. (Laboratory 3 hours.)

340. Data Structures (4) F,S Carissimo

Prerequisites: MATH 233, CSE 342. Data structures including algorithms and applications. Topics include stacks, queues, lists, trees, recursion, searching and sorting. A materials fee may be charged. (Lecture-problems 3 hours, computer laboratory 3 hours.)

342. Computer Methods II (3) F,S Cynar

Not open to students with credit in EE 341. Prerequisites: MATH 370A or 364A, CSE 242. Introduction to PASCAL and continuation of applications of computers to the solution of engineering and scientific problems. A materials fee may be charged. (Lecture-problems 2 hours, laboratory 3 hours).

345. Computers' Roles in Today's Society (3) F,S Carissimo

Prerequisite: CSE 242. Study of the impact of computer technology on contemporary society. Introduction to the technology: hardware and software. Perceptions of computers. Applications surveyed in various areas. Design of systems with consideration of human factors. A materials fee may be charged. (Lecture-problems computer projects 3 hours.)

346. Microprocessor Applications I (3) F,S,SS Schwartz

(Same course as E E 346.) Prerequisites: CSE 201, 242. Study of available microprocessors and microcomputer elements for applications of these devices to practical problems. Design of microprocessor-based systems including hardware and software details. A materials fee may be charged. (Lecture-problems 2 hours, laboratory-projects 3 hours.)

347L. Microprocessor Laboratory (2) F,S Evans

(Same course as EE 347 L.) Prerequisite: CSE 346. Design and construction of a microprocessor system. A materials fee may be charged. (Lecture-problems 1 hour, laboratory 3 hours.)

*405. Special Topics in Computer Science (3) F,S

Prerequisite: Senior standing in a computer science major. Selected topics from recent advances in computer science and technology. Course content will vary from year to year and course may be repeated once for credit with the consent of the department. Specific topic will be recorded on student's transcript. (Lecture-problems 3 hours.)

*406. Special Topics in Computer Science (3) F,S,SS Faculty

Prerequisites: Senior standing in a computer science program. Each offering is based on an area in computer science and technology in which recent advances have been made. The course may be repeated once for credit with the consent of the department. Specific topic will be recorded on student's transcript. A materials fee may be charged. (Lecture-problems 2 hours, laboratory 3 hours.) Repeatable to a maximum of 6 units with different topics.

*422. C A D and Semicustom IC Design (3) F,S Evans

(Same course as E E 448.) Prerequisites: CSE 301, 346. CAD design methodologies as they apply to board level and semicustom integrated circuit design. Topics include schematic entry, available part libraries, simulation, routing, fabrication and testing. Individual design projects are required using available CAD software tools. A materials fee may be charged. (Lecture-problems 2 hours, laboratory 3 hours.)

*440. Computer Organization (3) F,S Lane, Faculty

(Same course as EE 440.) Prerequisite: CSE 301 and 346 (or MATH 325). Basic machine organization and architecture including studies of the arithmetic logic unit, the control unit, input/output processes, and memory organization. (Lecture-problems, 3 hours.)

*441. Computer Applications in Electrical Engineering (3) F Paal

(Same course as EE 441.) Prerequisite: CSE 342. Advanced numerical methods applied to engineering problems not readily solvable by analytical methods. Ordinary differential equations, partial differential equations, eigenvalues, simulation. (Lecture problems 3 hours.)

*442. Operating Systems (4) F,S Carissimo,

Prerequisite: CSE 340. Operating systems analysis and design. Advanced I/O programming. Memory management and CPU scheduling in a multiprogramming environment. A materials fee may be charged. (Lecture-problems 3 hours, laboratory 3 hours.)

*444. Compiler Construction (4) F,S Lane, Faculty

Prerequisite: CSE 340 or Mathematics 325. Syntax directed compiler study. Organization of a compiler and overall design: parsing, semantic analysis, optimization and code generation. A materials fee may be charged. (Lecture-problems 3 hours, laboratory 3 hours).

445. Structured Programming with Ada (3) F,S Carissimo

Prerequisite: CSE 342 or MATH 272. Structured programming techniques using the Ada programming language. Ada syntax, semantics and environment. Several programming projects required. (Lecture - 2 hours, computer laboratory - 3 hours.)

*446. Microprocessor Applications II (3) F,S Evans,

(Same course as E E 446.) Prerequisites: CSE 301 (or consent of instructor), CSE 346. Computer system design using microprocessors including the use of multiple CPUs and bit-slice processors. A materials fee may be charged. (Lecture-problems 2 hours, laboratory 3 hours.)

449. Computer Graphics with Engineering Applications (3) F,S Schwartz

(Same course as EE 449.) Prerequisite: CSE 342 or MATH 272. Introduction to the basic software and hardware concepts in computer graphics. A materials fee may be charged. (Lecture-problems 2 hours, laboratory 3 hours.)

*450. Applied Artificial Intelligence (3) F,S Nguyen

Prerequisites: CSE 340 or MATH 274. Introduction to artificial intelligence and its internal representation. Basic concepts in search, logic and deduction. Applications in vision, natural languages and expert systems. (Lecture-Problems: 3 hours)

*472. Distributed Computing Systems (3) F,S Liu

Prerequisites: CSE 442 (or MATH 326) and CSE 440. Distributed systems overview. Distributed data bases, communication levels and protocols. Process scheduling and synchronization. Resource allocation. A materials fee may be charged. (Lecture-Problems-Computer projects: 3 hours)

490. Special Problems (1-3) F,S Faculty

Prerequisite: Consent of instructor. Assigned study in topics in current computer literature or computer-related projects with a final report. May be repeated for a total of 6 units with written permission of the Department Chair.

*494. Capstone Seminar in Computer Science (3) F,S Nguyen

Prerequisite: Senior standing. Intensive study of selected conceptual and theoretical problems in computer science. Student design project required.

543. Software Engineering (3) F,S Liu

(Same course as E E 543.) Prerequisites: Study of software engineering as a broad, problem-solving discipline and includes structured programming and software project management. A materials fee may be charged. (Lecture-Problems, 3 hours.) Same course as E E 543.

544. Programming Languages: Design and Implementation (3) S Liu

Prerequisites: CSE 442 (or MATH 326), CSE 444, E E 540. General concepts of programming languages and their processors. Several languages will be examined through data types, subprograms, control features, storage management, and system environments. A team project is required. A materials fee may be charged. (Lecture-Problems, 3 hours.)

550. Pattern Recognition using Artificial Intelligence (3) F Evans, Nguyen

Prerequisites: CSE 450. Discussion and laboratory implementation of current research in artificial intelligence applied to pattern recognition. Topics include edge detection, fuzzy logic, applied expert systems, parallel algorithms and autoregressive modeling. A materials fee may be charged. (Lecture 2 hours, laboratory 3 hours.)

552. Computer Simulation and Modeling (3) F Cynar

Prerequisites: E E 480 (or MATH 480) and CSE 449. Studies of general purpose and special simulation software. Model verification including graphical models. Applications in various areas. A materials fee may be charged. (Lecture-problems 3 hours.)

590. Special Topics in Computer Science (3) F,S Faculty

Prerequisites: Graduate standing and consent of instructor. Each offering is based on an area in computer science and technology in which recent advances have been made. The course may be repeated once for credit with the consent of the department. Specific topic will be recorded on student's transcript. A materials fee may be charged. (Lecture-problems 3 hours.) Repeatable to a maximum of 6 units with different topics.

697. Directed Research (1-3) F,S,SS Faculty

Prerequisites: Classified Graduate standing. Theoretical and experimental problems in computer science and engineering requiring intensive analysis. (Independent Study)

698. Thesis (2) F,S,SS Faculty

Prerequisite: Advancement to candidacy. Planning, preparation and completion of a thesis in computer science and engineering. (Independent Study)

Electrical Engineering

School of Engineering

Department Chair: Michael Hassul
Department Office: Vivian Engineering Center, Room 415
Telephone: (213) 498-5102/5103
Faculty: Professors: John Beljan, Radhe Das, Christopher Druzgalski, Edward Evans, Michael Hassul, Tim Jordanides, Frank Paal, Nick Panagiotacopulos, Raymond Stefani; Associate Professors: James Ary, Rajendra Kumar, Kenneth James, Slawomir Lobodzinski, Barry Shahian, Bahman Shahzadi, Cheng Wang, Stanley Wolf, Henry Yeh; Lecturers: Hassan Babaie, Gordon Carpenter, Paul D'Carpio, Reza Houshiarnejad, Jordan Isailovic, Nicholas Komaroff, Francis McCarthy, Mohammad Talebi, Parviz Talebi, Brewer Ward.
Emeritus Faculty: Guy Cain, L. Boyd Kendall, Rodney Lewis, Harold Washburn, Robert Winchell.
Undergraduate Advisor: Kenneth James; Graduate Advisor: Raymond Stefani
Department Secretary: Jane Docherty

Advisory and Development Council:

Mr. Malcom K. Beyer, Jr., Executive Vice President, Advanced Programs and Product Development, Command Control and Communications Corp.; Mr. A. J. Brann, President, Guidance and Control Systems, Litton Industries; Mr. Richard Chang, Manager, Training and Development, Archive Corp.; Mr. John Davis, Senior Staff Engineer for Research, Information Systems Division, Eaton, Inc.; Mr. Paul F. Glaser, Senior Vice President, Citibank; Mr. Robert S. Goodell, President, Teledyne Inet; Mr. John Heft, Sales Unit Manager, Digital Equipment Corp.; Mr. Jim Hembd, Vice President and General Manager, Ball Aerospace Systems Divison, Western Laboratory; Mr. Bill Hitchcock, Area Sales Manager, Computer Systems, Hewlett Packard· Dr. James Hoffman, Vice President, Director of Programs, Teledyne Systems Co.; Mr. Kenneth Isaac, Vice President, Engineering, Century Data Systems; Mr. Richard Jamison, Vice President, Engineering, Hughes Aircraft Co.; Mr. Sheldon Jones, President, Aerojet Electro Systems Co.; Mr. Gunars Kemanis, Group Vice President, Hughes Aircraft Co.; Mr. H. Dean McKay, Vice President and Director, Aerojet ElectroSystems Co.; Mr. Frederick McKee, President, Datapower Inc.; Mr. Leonard McKenzie, President, General Automation, Inc.; Mr. Paul McNamara, President, Data Design Labs, Aeroscientific Corp.; Mr. Jerry Muench, Vice President, Sales and Marketing, Odetics, Inc.; Dr. Richard Nesbit, Vice President, Research and Development, Beckman Instruments, Inc.; Mr. Edward E. Noneman, Vice President and General Manager, TRW Operations and Support Group; Mr. John Petersen, Vice President, Engineering, Western Digital Corp.; Mr. Donald Savitt, Vice President, Engineering, Point 4 Data Corporation; Dr. Ben C. Wang, President, Rexon Business Machines; Mr. Pat Webb, District Sales Manager, Electronics Instruments, Hewlett-Packard; Mr. E. A. Weideman, President, Anaconda Advanced Technology, Inc.; Mr. Harold Wilson, Senior Project Engineer, TRW; Dr. Nicholas Yaru, Senior Vice President, Hughes Aircraft.

Bachelor of Science in Electrical Engineering

The degree in electrical engineering is designed to prepare graduates for responsible engineering positions in design, development, research, applications and operation in the fields of communication systems, control systems, electromagnetics, digital and analog electronic circuits, physical electronics, computer-aided design and power systems. The curriculum is built around a strong basic core of mathematics, physics and engineering science. This is followed by intermediate courses in electrical engineering topics and finally a specialized elective sequence terminating in a capstone design course.

A choice of senior elective sequence allows a comprehensive coverage of any of the above fields. Emphasis on computer software or computer hardware is also provided.

Laboratory facilities are available in the engineering building, and include basic as well as more advanced laboratory instruction in advanced electronics, digital signal processing, control systems hybrid circuitry, electric machinery, and computer systems.

Requirements for the Bachelor of Science in Electrical Engineering (code 3-4330)

Core:

CHEM 111A; CSE 242; EE 201, 212, 230, 310, 330; MATH 122, 123, 224, 370A; PHYS 151, 152, 154. Each of the foregoing courses must be completed with a grade of "C" or better. Students requesting transfer credit for EE 201 or EE 212 must pass a qualifying examination in these areas. CSE 342; EE 330L, 346, 347L, 350, 370, 370L, 380, 430, 430L, 460; MATH 370B, ME 330 or CE 370; plus approved elective sequence with capstone senior project as follows:

Analog Elective Sequence

EE 410, 420, 420L, 432; plus approved analog electives* to at least 137 units.

Communications Elective Sequence

EE 382, 482, 488; plus approved communications electives* to at least 137 units.

Controls Elective Sequence

EE 411, 470, 471; plus approved controls electives* to at least 137 units.

Digital Elective Sequence

EE 301, 301L, 431, 446; plus approved digital electives* to at least 137 units.

Power Elective Sequence

EE 452, 452L, 453, 458; plus approved power electives* to at least 137 units.

*See undergraduate advisor for list of approved electives. Bachelor of Science in Engineering Option in Biomedical and Clinical Engineering

Bachelor of Science in Engineering Option in Biomedical and Clinical Engineering

The Department of Electrical Engineering offers an Option in Biomedical and Clinical Engineering that has a curriculum similar to the electrical engineering degree, but allows the student to acquire substantive competence in biomedical engineering and biology. The program builds upon a strong base of biology, mathematics, physics, chemis-

try and engineering science to develop a clinically oriented biomedical engineer to serve in community medicine. It includes a core of standard electrical engineering courses as well as courses and laboratories in biomedical engineering, anatomy, physiology and biology. Elective units are available in the senior year to explore individual areas of interest.

Laboratory facilities in the field of biomedical engineering are available in engineering and laboratory facilities for anatomy and physiology are available in biology. The campus computer center laboratory computer systems are available to simulate biological systems and to collect, process and display physiological data.

Requirements for the Bachelor of Science in Engineering Option in Biomedical and Clinical Engineering (code 3-4336)

CHEM 111A; CSE 242; EE 201, 212, 230, 310, 330; MATH 122, 123, 224, 370A; PHYS 151, 152, 154. All of the foregoing courses must be completed with a grade of "C" or better. Students requesting transfer credit for EE 201 and/or 212 must pass qualifying exams in these areas. A/P 207; CSE 342, EE 330L, 346, 347L, 350, 370, 370L, 380, 406, 406L, 407, 430, 460; MATH 370B, ME 330 or CE 370; plus approved biomedical electives to at least 137 units.

Certificate Program In Energy and Power Systems Engineering

The 27-unit Certificate Program in Energy Conversion and Power Systems Engineering is an undergraduate program designed to prepare electrical and mechanical engineering students to become proficient in the analysis and design of power generating systems, such as direct conversion, coal burning, hydraulic, nuclear, solar, wind and various other types of power plants.

For certificate requirements see the Mechanical Engineering Department section of this Bulletin.

Master of Science in Electrical Engineering (code 6-4330)

This program affords an opportunity for graduate electrical engineers to improve their competency in analysis and design to better meet the high technology needs of local industry. Each student selects three graduate courses in one area of emphasis where the remaining courses must augment and support that area of emphasis. Some current examples of areas of emphasis are optimal control and estimation, communication theory and signal processing, computer engineering, integrated circuit design and biomedical engineering. Students may create other areas of emphasis with approval of the graduate advisor. Some laboratory and teaching assistantships are available to qualified graduate students. Applications should be sent to the department office.

Prerequisites

1. A bachelor's degree from an accredited curriculum in electrical engineering or a bachelor's degree from an accredited engineering, natural science, or other appropriate curriculum with the requirement that essential undergraduate deficiencies in electrical engineering are identified and are completed prior to Advancement to Candidacy.
2. Graduate students must consult with the graduate advisor and obtain the MSEE handbook which covers procedures and requirements. A tentative program must be approved by the graduate advisor. That program must exhibit an area of emphasis comprised of at least three related graduate courses (500 or 600 level).
3. The prospective graduate student must have attained a GPA of at least 2.7 for the last 60 semester units (90 quarter units) attempted prior to entry into the MSEE program. The GPA is determined by Admissions.

Advancement to Candidacy

1. Removal of all undergraduate deficiencies as determined by the graduate advisor. The GPA must be at least 3.0 for all such courses attempted.
2. Demonstration of competence in electrical science by passing the departmental qualifying exam.
3. Demonstration of competence in technical writing by passing an approved technical writing course with a grade of C or better, or by providing acceptable proof of technical writing ability.
4. Passing the Writing Proficiency Exam.
5. Completion of at least 12 units as a graduate student while maintaining an overall GPA of at least 3.0 and a major GPA of at least 3.0.

Requirements For the Master of Science

Completion of a minimum of 30 units in 400, 500, or 600 level courses as approved in advance by the Graduate Advisor. Students must follow one of the following options:

Thesis Option

EE 550/600 including EE 505 (12 units)
EE 697 (2 units)
EE 698 (4) units)
EE 400/500/600 including EE 201 (12 units)
Comprehensive Oral Exam on Thesis

Non-Thesis Option

EE 500/600 including EE 505 (18) units)
EE 400/500/600 including EE 201 (12) units
Comprehensive Oral Exam on MSEE Program

Courses (EE):

The following courses were formerly in the Electrical Engineering Department (with prefix EE) but have been transferred into the Computer Science and Engineering Department (with prefix CSE): CSE 242, 340, 342, 346, 442, 444, 494. In making the transfer of courses only the prefixes were changed (e.g., CSE 242 was formerly EE 242).

Each of the following courses is cross listed with a corresponding course in the Computer Science and Engineering Department. Corresponding courses differ only in their prefixes (e.g. CSE 346 and EE 346 both refer to the same course): EE 201, 301, 301L, 346, 347L, 440, 441, 446, and 449.

Lower Division

201. Digital Logic Design (4) F,S Druzgalski (Same course as CSE 201.)
Prerequisites: MATH 122. Basic topics in combinational and sequential switching circuits with applications to the design of digital devices. A materials fee may be charged. (Lecture-problems 4 hours.) Grading: Traditional only.

211. Fundamentals of Electric Circuits (3) F,S Hassul
Prerequisites: PHYS 152, MATH 224. Linear circuit analysis techniques including Kirchoff's laws, network, theorems, mesh and nodal analysis, Thevenin and Norton equivalents. Simple RL and RC circuits. Phasors, balanced 3-phase systems and power. (Lecture-problems 3 hours) Grading: Traditional only.

212. Electric Circuits I (4) F,S Jordanides
Prerequisites: PHYS 152, MATH 224. Linear circuit analysis techniques including Kirchoff's laws, network theorems, mesh and nodal analysis, Thevenin and Norton equivalents. Simple RL and RC circuits. Phasors, balanced 3-phase systems and power. (Lecture-problems 3 hours; laboratory 3 hours) Grading: Traditional only.

212L. Electric Circuits I Laboratory (1) F,S Wolf
Prerequisites: E E 212. Laboratory study of electric and electronic circuits and instrumentation. Introduction to transformers and rotating machinery. A materials fee may be charged. (Laboratory 3 hours).

230. Solid State Electronic Devices (3) F,S James
Prerequisites: CHEM 111A. Co-requisites: MATH 370A, PHYS 154. Introduction to solid state electronic devices and models: diodes, transistors, micro-electronics. Not open to students with credit in E E 320. (Lecture-problems 3 hours). Grading: Traditional only.

Upper Division

301. Digital Devices and Systems (3) F,S Lobodzinski
Prerequisites: E E 201. Sequential logic, programmable controller design, hardware design languages. Integrated circuit families. (Lecture-problems 3 hours)

301L. Digital Devices and Systems Laboratory (1) F,S Lobodzinski
Co-requisite: E E 301. Design implementation and verification of digital systems using MSI and LSI circuits. A materials fee may be charged. (Laboratory 3 hours).

310. Electric Circuits II (3) F,S Jordanides
Prerequisites: E E 211 or E E 212, MATH 370A. Continuation of circuit analysis including Fourier series, Fourier and Laplace transform techniques, two port networks. (Lecture-problems 3 hours).

330. Engineering Electronics I (3) F,S Ary
Prerequisites: E E 211 or E E 212, E E 230, or consent of instructor. Non electrical engineering majors may enroll with consent of instructor.) Analysis and design of diode, transistor, and operational amplifier circuits. (Lecture-problems 3 hours)

330L. Engineering Electronics I Laboratory (1) F,S Ary
Prerequisites: E E 330. Transistor and operational amplifier circuit design laboratory. (Laboratory 3 hours)

346. Microprocessor Applications I (3) F,S Evans,
(Same course as CSE 346.) Prerequisites: E E 201, CSE 242 or MATH 270. Study of available microprocessors and microcomputer elements for applications of these devices to practical problems. Design of microprocessor based systems including hardware and software details. A materials fee may be charged. (Lecture-problems 2 hours; laboratory 3 hours)

347L. Microprocessor Laboratory (2) F,S Evans,
(Same course as CSE 347 L.) Prerequisite: EE 346. Design and construction of a microprocessor system. A materials fee may be charged. (Lecture-problems 1 hour, laboratory 3 hours.)

350. Energy Conversion Principles (3) F,S Das
Prerequisites: E E 211 or E E 212. Energy conversion processes and systems. Energy storage. Energy issues. Components of electrical energy systems in generation, conversion, control, transmission, distribution and utilization. Power electronics in energy conversion and control. (Lecture-problems 3 hours)

370. Control Systems I (3) F,S Hassul
Prerequisites: E E 310. Principles of analysis, block diagrams, signal flow graphs, stability criteria, root loci, frequency domain analysis, examples of classical control system design. (Lecture-problems 3 hours)

370L. Control Systems I Laboratory (1) F,S Hassul
Prerequisite: E E 370. Study of analog simulation and servomotor control systems. (Laboratory 3 hours)

380. Engineering Probability and Stochastic Processes (3) F,S Panagiotacopulos
Prerequisites: E E 310. Introduction to probability, statistics, random variables and their application. A materials fee may be charged. Not open to students with credit in E E 480. (Lecture-problems, computer projects 3 hours) Grading: Traditional only.

382. Communication Systems I (3) F,S Kumar
Prerequisites: E E 310. Review of Fourier series and transforms. Introduction to passive, active and digital filters. Basic elements of probability theory, concept of white noise, AM, DSB, SSB and vestigial modulation - narrowband and wideband FM. Not open to students with credit in E E 482. (Lecture problems 3 hours) Grading: Traditional only.

401. Advanced Engineering Mathematics I (3) F,S Panagiotacopulos
Prerequisite: MATH 370 A. Corequisite: EE 310. Analytic techniques relevant to electrical engineering. (Lecture- problems 3 hours.)

***405. Special Topics in Electrical Engineering (3) F,S Druzgalski**
Prerequisites: Senior standing in electrical engineering or consent of instructor. Selected topics from recent advances in electrical engineering. Course content will vary from year to year and may be repeated once for credit with the consent of the department undergraduate advisor. (Lecture-problems 3 hours)

***406. Biomedical Engineering (3) F Ary**
Prerequisites: Senior standing in engineering, natural science, nursing, or consent of instructor. Application and design of medical electronic instruments and automated systems. (Lecture-problems 3 hours)

***406L. Biomedical Engineering Laboratory (1) F Ary**
Pre or corequisite: EE 406. Laboratory study of medical- instrumentation, transducers and computer data processing. A materials fee may be charged. (Laboratory 3 hours.)

***407. Computers in Medicine (3) S Lobodzinski**
Prerequisite: Senior standing in engineering, natural science or nursing. Principles of analysis and design for computers and data collection equipment for real time, on line medical systems. A materials fee may be charged. (Lecture.problems. computer projects 3 hours.)

408. Biomedical Controls and Systems (3) F,S Ary
Prerequisites: E E 370. Physiological and health care systems: identification, modelling and analysis. (Lecture-problems 3 hours)

410. Analog Filter Design (3) F,S Shahzadi
Prerequisites: E E 310. Theory and design of active filters using operational amplifiers. Emphasis is placed on low-pass filters. (Lecture-problems 3 hours)

411. System Analysis I (3) F,S Shahian
Prerequisites: E E 310. Fundamental concepts of system analysis for continuous and discrete time systems. State space analysis. Linearization, controllability, observability, stability, Z-transforms. (Lecture-problems 3 hours)

***420. Microelectronics (3) F James**
Prerequisites: E E 301, E E 330. Microelectronic fabrication processes and characterization of devices. Full custom design examples with small scale integration of bipolar, NMOS and CMOS devices, both analog and digital formats. (Lecture-problems 3 hours)

***420L. Microelectronics Laboratory (1) F James**
Co-requisite: E E 420. Laboratory evaluation of IC process steps. Wafer probe, packaging, and final test. Empirical device model formulation from test data. (Laboratory 3 hours)

430. Engineering Electronics II (3) F,S Hassul
Prerequisites: E E 330, E E 330L, E E 370. Analysis and design of advanced operational amplifiers and other linear-integrated circuits and systems. Not open to students with credit in E E 433. (Lecture-problems 3 hours)

430L. Engineering Electronics II Laboratory (1) F,S Hassul
Co-requisite: E E 430. Advanced transistor, operational amplifier, and linear-integrated circuits and systems design laboratory. A materials fee may be charged. Not open to students with credit in E E 433L. (Laboratory 3 hours)

***431. Design of Digital Systems (3) F,S Lobodzinski**
Prerequisites: E E 301, E E 346. Design of medium and large scale digital systems. Hardware design languages, programmable logic design, custom LSI circuits. Hardware compilers. (Lecture-problems 2 hours; laboratory 3 hours)

***432. Design of Analog Systems (3) F,S Hassul**
Prerequisites: E E 410, E E 430. Theory of design. Trade-offs to meet specifications, e.g. performance, economics, noise, and sensitivity. Design of analog phase-locked loops, A/D and D/A converters. Computer-aided analysis of system design. (Lecture-problems 2 hours; laboratory 3 hours)

***440. Computer Organization (3) F,S Lane, Druzgalski**
(Same course as CSE 440.) Prerequisite: EE 301 and 346 or MATH 325. Basic machine organization and architecture including studies of the arithmetic logic unit, the control unit, input/output processes, and memory organization. (Lecture-problems,3 hours.)

***441. Computer Applications in Electrical Engineering (3) F Paal**
(Same course as CSE 441.) Prerequisite: CSE 342. Advanced numerical methods applied to engineering problems not readily solvable by analytical methods. Ordinary differential equations, partial differential equations, eigenvalues simulation. (Lecture-problems 3 hours.)

***446. Microprocessor Applications II (3) F,S Evans**
Prerequisites: E E 346. Computer system design using microprocessors including the use of multiple CPU's and bit-slice microprocessor. A materials fee may be charged. (Lecture-problems 2 hours; laboratory 3 hours)

448. CAD and Semicustom IC Design (3) F Evans
(Same course as CSE 422.) Prerequisites: E E 346, E E 301 or consent of instructor. CAD design methodologies as they apply to board level design and semicustom integrated circuit design. Topics include schematic entry, available part libraries, simulation, routing, fabrication and testing. Individual design projects are required using available CAD software tools. A materials fee may be charged. (Lecture-problems 2 hours; laboratory 3 hours)

449. Computer Graphics with Engineering Applications (3) F Panagiotacopulos

(Same course as CSE 449.) Prerequisite: EE 342 or MATH 272. Introduction to the basic software and hardware concepts in computer graphics. A materials fee may be charged. (Lecture problems 2 hours, laboratory 3 hours.)

*452. Electric Power Systems Analysis (3) F Das

Prerequisites: E E 310, E E 350. Elements of power systems, transmission line parameters and performance. Load flow. Symmetrical components, symmetrical and unsymmetrical faults, power system control, stability and protection. Economic dispatch. HVDC transmission. (Lecture-problems 3 hours)

*452L. Power Electronics Laboratory (1) S Das

Prerequisites: E E 452. Testing and performance validation of electric, electronic, electrochemical and electromechanical components and apparatus. (Laboratory 3 hours)

*453. Industrial Power Systems (3) S Das

Prerequisites: E E 310, E E 350. Electrical design, specification, selection, protection and control of electrical apparatus. Power distribution wiring diagrams. Design calculations and examples, codes and standards. (Lecture-problems 3 hours)

455. Space Electric Power Systems (3) S Das

Prerequisites: E E 330, E E 350. A comprehensive treatment of characteristics of and requirements imposed by missions on spacecraft power systems, power sources, power conversion and control. Energy storage, electrical equipment, power converters and loads, power management. Effects of environment, future space missions and technological needs. (Lecture-problems 3 hours)

458. Design of Power System Components (3) F,S Das

Prerequisites: E E 330, E E 452. Design of electrical, electronic and electromechanical components required for power conversion, control, transmission, distribution, protection and measurements in terrestrial and space electric power systems. (Lecture-problems 2 hours; laboratory 3 hours)

460. Electromagnetic Fields (3) F,S James

Prerequisites: PHYS 152, MATH 370A. Electric and magnetic field theory including propagation of planewaves in lossless and dissipative media. Maxwell's equations. Transmission lines. Not open to students with credit in E E 462. (Lecture-problems 3 hours)

*463. Microwave Engineering (3) S James

Prerequisites: E E 460. Propagation of guided waves in lossless and dissipative media. Radiation and antenna design. Waveguides, microwave tubes, microwave circuits. (Lecture-problems 3 hours)

465. Fields and Waves in Electro-Optics (3) S James

Prerequisites: E E 460. Electromagnetic field theory from Maxwell's equation viewpoint. Description of optical components. Lasers, optical waveguide and fiber optics, acousto-optic modulation. (Lecture-problems 3 hours)

470. Digital Control (3) F Hassul

Prerequisites: E E 370, E E 411. Analysis and synthesis of digital control systems. General application of both the Z-transform and the state-space approach for discrete system design. A materials fee may be charged. (Lecture-problems 3 hours)

470L. Digital Control Laboratory (1) F Stefani

Prerequisite: EE 470. Laboratory study of digital control systems. Simulation. Stability analysis. A materials fee may be charged. (Laboratory 3 hours.)

*471. Design of Control Systems II (3) F,S Stefani

Prerequisites: E E 470. Design of compensators using root-locus and Bode-plot methods. Design of state-space control systems and observers. Computer-aided design. (Lecture-problems 2 hours; laboratory 3 hours)

*482. Communication Systems II (3) F Kumar

Prerequisites: E E 380, E E 382 and E E 411. Classification of information sources, information measure, orthogonal series representation of signals including Fourier series, sampling theorem and dimensionality theorem, representation of modulated signals, baseband pulse and digital signaling. Pulse code modulation (PCM) signaling formats, PCM, PSK, FSK etc. Satellite communication and television. (Lecture-problems 3 hours)

485. Digital Signal Processing (3) F,S Yeh

Prerequisite: EE 411. Introduction to analysis and design of digital filters and other related signal processors. Sampling theorems, Z- transform analysis, analog-digital conversion approximation and design aliasing and quantization. (Lecture- problems 3 hours.)

*490. Special Problems (1-3) F,S Hassul

Prerequisite: Consent of instructor. Assigned topics in technical literature or laboratory projects and reports on same. May be repeated for a total of six units.

Graduate Division

505. Advanced Analytical Methods for Electrical Engineering (3) F,S Panagiotacopulos

Prerequisite: EE 401. Recapitulation of the wide variety of mathematical techniques used in electrical engineering. Emphasis is on the application of these techniques to physical problems. (Lecture-problems 3 hours.)

506. Theory and Practice of Biomedical Instrumentation (3) F Druzgalski

Prerequisites: Graduate standing in Engineering, Health Science, Natural Science, Nursing or consent of instructor, EE 406 or departmental equivalent. Practical utilization of biomedical instrumentation and theoretical basis for physiological parameter measurement. (Lecture-problems, project 3 hours.)

507. Advanced Topics in Biomedical Systems (3) S Druzgalski

Prerequisites: Graduate standing in Engineering, Health Science, Natural Science, Nursing or consent of the instructor, EE 406 or departmental equivalent. Design and organization of modern hospital systems and utilization of advanced technologies. Modeling and simulation of physiological and medical systems. A materials fee may be charged. (Lecture- problems, project computer projects 3 hours.)

510. Passive Filter Design (3) F Jordanides

Prerequisite: EE 410. The principles of synthesis of linear passive networks to realize specified input and transfer characteristics. (Lecture-problems 3 hours.)

511. Active Filter Design (3) S Faculty

Prerequisite: EE 410. Frequency and time domain analysis: delay, dominant pole-zero response, Elmore's and Valley-Wallman results. Classical filter response, active filter classification, gain sensitivity, limitations, active lowpass filter design, active filter components including op amps. (Lecture-problems 3 hours.)

512. Advanced Active Filter Design (3) F Faculty

Prerequisite: EE 511. Flow graphs and Blackman's in pedance relation. Optimum filter response, frequency transformations, design of active high-pass, band-pass, band-stop and all-pass filters, tuneable filters, frequency discriminators and oscillators. (Lecture-problems 3 hours.)

513. Digital Filter Design (3) S Yeh

Prerequisites: E E 410, E E 485. General concepts, frequency and time domain analysis using FFT, ideal filter response including adaptive filters, digital and frequency transformations. FFT, FIR, IIR and digital filter design techniques. (Lecture-problem 3 hours)

520. VLSI Design (3) S Wolf

Prerequisites: E E 430. Techniques for designing Very Large Scale Integrated (VLSI) circuits using n-channel metal oxide semiconductors (n-MOS). (Lecture-problems 3 hours)

530. Digital Integrated Circuits (3) S Wang

Prerequisites: E E 430. Circuit analysis and design of monolithic bipolar and MOS digital integrated circuits with emphasis on computer-aided design techniques. (Lecture-problems 3 hours)

540. Advanced Computer Architecture (3) F,S Lane, Lobodzinski

Prerequisite: EE 440 or 446. High level computer ar chitectures including studies of supercomputers, parallel processing, direct-execution computers, custom VLSI designs and large-scale computer systems. (Lecture-problems 3 hours.)

541. Computer Arithmetic Unit Design (3) F Paal

Prerequisite: EE 446 or 540. Study of computer arithmetic algorithms. Complexity-speed tradeoffs. Special purpose, high-speed, arithmetic processors. Fault-tolerant arithmetic. (Lecture-problems 3 hours.)

542. Specialized Processor Design (3) F Evans, Lobodzinski

Prerequisites: E E 446 or E E 540. Design of specialized processors for floating-point arithmetic, faculty-tolerant computing, input/output, and high-level languages. Case studies A materials fee may be charged. (Lecture-problems-computer projects 3 hours)

543. Software Engineering (3) F Evans

Prerequisite: EE 442 or MATH 326. Study of software engineering as a comprehensive, broad problem-solving discipline and includes structured programming and software project management. A materials fee may be charged. (Lecture problems computer projects 3 hours.)

545. Computer Networks (3) S Lobodzinski

Prerequisites: EE 482 and 540. Design and analysis of computer communication networks including their topologies, architectures, protocols and standards. Local area, baseband and broadband networks are covered as well as the use of fiber optics. A materials fee may be charged. (Lecture problems- computer projects 3 hours.)

550. Power Electronics and Applications (3) F Das

Prerequisites: E E 350, E E 431. AC-DC and DC-AC power converters, choppers, cycloconverters. PWM and PFM techniques. Harmonics and filters. Magnetics. New advances. Applications in motor controls in industrial applications, energy conversion, HVDC transmission and aircraft and spacecraft systems. (Lecture-problems 3 hours)

570. Optimal Controls (3) F Stefani

Prerequisite: EE 471. The applications of continuous and discrete optimization techniques to control problems. Calculus of variations. Pontryagin's minimum principle. Optimal trajectory, open-loop control, and closed-loop control. Numerical solutions. (Lecture-problems 3 hours.)

571. Estimation and Identification (3) S Kumar

Prerequisites: E E 471. Theory of estimation, identification and filtering. Parameter estimation, system identification, state estimation and prediction. Kalman filtering and nonlinear filters. (Lecture-problems 3 hours)

572. Systems Analysis and Optimization (3) S Jordanides

Prerequisite: EE 471. An introduction and survey of methods for the analysis, design, and optimization of large scale systems. Decentralize control and hierarchial system analysis. (Lecture-problems 3 hours.)

580. Statistical Communication Theory (3) F,S Kumar

Prerequisites: E E 380, E E 482. Communication systems in the presence of noise. Performance and design. Stochastic processes. (Lecture-problems 3 hours)

581. Satellite Data Communications (3) F,S Kumar

Prerequisite: EE 580. Theory and practice of satellite communications. Topics covered include propagation effects, modulations and detection schemes, earth terminals, transponders, and multiple access techniques. (Lecture-problems 3 hours.)

583. Digital Image Processing (3) F,S Panagiotacopulos

Prerequisites: E E 201. Digital image representation. Image transforms. Image enhancement and restoration techniques. Image encoding, segmentation and description. Application of digital image processing. (Lecture-problems 3 hours)

585. Advanced Digital Signal Processing (3) S Yeh

Prerequisites: E E 485. A study of advanced topics in digital signal processing. State-space description of linear discrete-time system. Realization and applications. (Lecture-problems 3 hours)

590. Special Topics in Electrical Engineering (3) F,S Hassul

Prerequisite: Graduate standing in electrical engineering and consent of instructor. Selected topics from recent advances in electrical engineering. Course content will vary from year to year. Topics will be announced in the Schedule of Classes. May be repeated for a maximum of six units. (Lecture- problems 3 hours.)

610. Seminar in Filter Theory (3) S Faculty

Prerequisite: EE 510 or 511 or 512 or 513. Intensive study of current professional literature and recent techniques related to filter theory.

640. Seminar in Digital Computer Systems (3) S Lobodzinski

Prerequisites: EE 540 and at least one of the following: EE 541, 542, 543, or 545. Study of selected topics in computer systems in which recent significant advances have been made.

650. Seminar in Power Conversion and Controls (3) S Das

Prerequisites: E E 570 or consent of instructor. Study of selected advanced topics in the areas of energy conversion, power conversion, utility power systems and energy storage.

670. Seminar in Control Systems (3) F Stefani

Prerequisite: EE 570 or 571 or 572. Study of selected topics in the areas of synthesis and design of optimum control systems.

697. Directed Research (1-3) F,S Stefani

Prerequisite: Graduate standing. Theoretical and experimental problems in electrical engineering requiring in tensive analysis.

698. Thesis (2-4) F,S Stefani, Faculty

Planning, preparation and completion of a thesis in electrical engineering.

Engineering and Industrial Technology

School Of Engineering

Department chair: Arthur W. Grossman
Department Office: Industrial Technology Building, Room 101
Telephone: 498-4271
Faculty: Professors: Arthur W. Grossman, Glenn E. Hayes, Stephen Heineman, Jay Webster; Associate Professors: Tesfai Goitom, Emanuel Jarasunas, Henry J. Krauser, Ray R.T. Wang, Norman L. Williamson; Assistant Professor: William Welch.
Emeritus Faculty: Robert C. Brice, Paul L. Kleintjes, H. Burgess Robinson, James L. Young
Secretary: Eleanor L. Caplan

Engineering and Industrial Technology Advisory Council

The advisory council, composed of leaders actively engaged in areas of technology with which the program is concerned, continually provides information and guidance about industrial developments in methods, materials and techniques so that the program reflects the best of current practices. The members examine various aspects of the program and make recommendations for changes in course content, methods and/or facilities. Present membership in the council is made up of representatives from the following industries or corporations.

Carl Brooks, President, Carl Brooks, Inc.
Dr. Michael J. Daugherty, Director, Electronics Research Laboratory, The Aerospace Corporation
William F. Ensley, Director of Palmdale Facilities, Rockwell International Corporation
Bruce Feldman, Vice President - Industrial Relations, N.I. Industries
Capt. Joseph A. Fink, Commander, Long Beach Naval Shipyard Guy J. Gagnon, President, Guy Gagnon Construction Co. Inc.
Lee B. Gray, Vice President, Corporate Quality and Development, Leach Corporation
William L. Healey, Vice President, Manufacturing; Silicon Systems
Walter L. Hurd, Vice President of Quality Assurance and Safety, Lockheed Corporation
Norman M. Kellett, Vice President of Industrial Relations, Norris Industries
Donald W. Leyman, Vice President, Swinerton and Walberg Company
T. C. McDermott, Jr., Vice President, Quality and Reliability Assurance, Rockwell International
Jay Perry, Sr., Director of Quality Assurance, Douglas Aircraft
B.J. Rankine, President, Pacific Valves, Long Beach
Leonard O. Romines, President and C.E.O. Ferro Cast Co.
Jack L. Schram, President, Schram Construction Company
Maxwell Starkman, A.I.A., President, Maxwell Starkman Associates
Lee Tollefson, President, Tectron, Inc.
Stuart C. Warrick, Jr., President, Flight Systems, Inc.
Berry Yolken, Staff to the Division Vice President, Manufacturing;TRW

Students desiring information should contact the department office for referral to one of the faculty advisors.

The programs in Engineering and Industrial Technology are designed for students who demonstrate an aptitude and promise for high level technical work with related administrative and management responsibility. Leadership awareness and ability are integral to the curricula and accomplished through a combination of lectures, seminars, discussions and workshops which expose the student to the real world of industry and the leadership challenges that it offers. Emphasis is placed on the technological as well as the sociological and managerial aspects of modern industry.

The EIT programs have been designed to accommodate students who may wish to enter the University in a four-year program, or who may wish to transfer credits earned at other colleges or approved technical or military service Schools. It is recommended that prospective students, prior to submitting an application for admission, be advised by a member of the Engineering and Industrial Technology faculty to discuss departmental requirements and the admission requirements of the University.

There are four options in Industrial Technology:

Construction Management: Prepares a student for responsible positions in project management, contracting, estimating, costs and scheduling, inspection, proposals and specification writing, and facilities planning and development in the construction and manufacturing industries.

Electronics: Prepares a person to serve in methods, planning, facilities, development, production and quality control and specification and proposal writing in areas of the electronic and control industries.

Manufacturing: Prepares a person to serve in tooling, methods, facilities planning and development, specification and proposal writing, and liaison and management aspects of production in manufacturing industries.

Quality Assurance: Qualifies a person to serve in reliability, quality control, quality assurance, inspection, metrology, configuration management and testing aspects of manufacturing enterprises.

Engineering and Industrial Technology Facilities

The multimillion dollar building for engineering and industrial technology is designed with laboratories and modern equipment for instruction in planning and scheduling, foundry and patternmaking, metallurgy and heat treating, metrology, quality assurance, construction and industrial materials testing, structures and environment; and modern processes, including electronic systems and testing, electrochemical processes, microelectronics industrial electricity, plant layout and computers.

Bachelor of Science in Industrial Technology

All Engineering and Industrial Technology students must have received a minimum grade of "C" in each of the prerequisites for any Engineering and Industrial Technology course. In addition to any other All-University requirements regarding grade point averages for graduation, an Engineering and Industrial Technology student must achieve a minimum of 2.0 average in all Engineering and Industrial Technology courses.

Students enrolled in the Industrial Technology B.S. program must complete a minimum of 132 units. These courses cover the broad disciplines and functions of technical management.

Requirements for the Bachelor of Science in Industrial Technology

Core:

CHEM 200, PHYS 100A,B, MATH 120, (the preceding courses apply toward General Education Breadth requirements); EIT 170, 211, 215, 215L, 300, 309, must be taken by all Industrial Technology students; Additional requirements for each option are indicated below.

Field Work Requirements:

Field work experience is required, consisting of no less than three months (or equivalent part time) of employment in an approved industry or governmental agency. The student must continuously hold a position equivalent to a technician or higher which affords the opportunity to exercise responsibility usually given to those who have completed two years of college. The field work must be completed prior to graduation, be certified and approved by the faculty of the department.

Option in Construction Management (code 3-4080)

Lower Division:

E T 200, 225, 225L, 240, 245, 245L, ACCT 205, MATH 180;

Upper Division:

E T 304, 317, 322, 325, 330, 412, 417, 420, 422, 423, 424, 425, 435, and nine units of approved electives selected in consultation with at advisor from E T 316, 316L, 326, 405, 409, 415, 416L, FIN 342, 492.

Option in Electronics Option (code 3-4081)

Lower Division:

E T 244, 244L, 250, 255, 255L, 260, 260L, and ACCT 205 or FIN 222.

Upper Division:

E T 301, 301L, 307, 312, 340, 340L, 350, 350L, 372, 375, 375L, 406, 412, 442, 442L, 443, 443L, 445, 445L, 463, 463L, 480, 480L, and 8 units of approved electives to be selected in consultation with an advisor from E T 306, 380, 380L, 409, 444, 490, 490L, 492.

Option in Manufacturing (code 3-4082)

Lower Division:

E T 203, 203L, 244, 244L, and ACCT 205 or FIN 222;

Upper Division:

E T 301, 301L, 302, 304, 305, 306, 307, 312, 313, 313L, 351, 351L, 361, 361L, 364, 364L, 369, 402, 406, 408, 412, 466, 466L, 470, 470L, and ten units of electives selected in consultation with an advisor from E T 362, 362L, 403, 405, 407, 409, 492.

Option in Quality Assurance (code 3-4083)

Lower Division:

E T 230, 244, 244L, ACCT 205 or FIN 222, and 6 additional units of introductory Quality Control courses, Upper Division: E T 301, 301L, 306, 307, 312, 313, 313L, 361, 361L, 369, 402, 403, 406, 412, 469, 470, 470L, MGMT 406 and eight units of approved electives selected in consultation with an advisor from E T 408, 480, 480L, 493, M E 390, MGMT 425.

Industrial Facilities Operations Certificate:

The Certificate Program in Facilities Operations is designed to qualify the graduate to serve in plant engineering, industrial construction coordination, Facilities development and design, plant layout, and facilities project management. Examples of the myriad positions available to the graduate of this program include facilities planner, construction supervisor, facilities or plant supervisor, facilities project engineer, and facilities design engineer.

This program provides the Industrial Technology graduate with a depth of technical knowledge in facilities. operations oriented technical courses, as well as the knowledge of behavioral sciences essential for managing technical functions.

Requirements for the Certificate in facilities operations

1. The Certificate in Facilities Operations may be earned concurrently with or subsequent to the baccalaureate degree.
2. This program is open to all majors who have fulfilled the prerequisites as stated in item 3 a.
3. The program requires a total of 24 units as specified in items 3 b and 3 c.
   a) The completion of supporting technical courses chosen in consultation with an adviser; PHYS 100 A-B, CHEM 200, MATH 102, E T 200 and lower division construction requirements.
   b) The following 21 units of facilities- operations- oriented courses are required: E T 307, 321, 322, 402 407, 408 and 422.
   c) Completion of three units selected in consultation with advisor from the following: CRIM 431, E T 306, 403, 405.
4. Any deviation from this program requires the written permission of the program advisor.

Industrial Safety Operations Certificate:

The Certificate Program in Safety Operations is designed to prepare students for safety positions that require a strong background in the technology of sale industrial environments. Examples of this kind of position on are manufacturer's safety representative, manufacturing facilities safety analyst, traffic safety analyst, and representative of California or Federal agencies involving public safety (e.g. OSHA). This interdisciplinary program provides the student with a depth of technical training in safety, and related technical courses, including the experiences in human resources management necessary to effectively supervise safety programs.

Requirements for the Certificate in Safety Operations

1. The Certificate in Safety Operations may be earned concurrently with or subsequent to the baccalaureate degree.
2. This program is open to all majors who have fulfilled the required prerequisites as stated in item 3 a.
3. The program requires a total of 24 units as specified in items 3 b and 3 c.
   a) The completion of supporting technical courses chosen in consultation with an adviser; PHYS l00A B, CHEM 200, ACCT 205, and MATH 102
   b) The following 21 units of safety operations oriented courses are required: E T 301, 307, 308, 310, 369, 402, and EIT 309.
   c) Completion of three units selected in consultation with an adviser, from the following: Consumer Health, FIN 222, HRM 360 or 361, or E T 306.
4. Any deviation from this program requires the written permission of the program adviser.

Engineering Technology Courses (E T):

Lower Division:

200. Construction Drafting (2) F Faculty
Prerequisites: EIT 170. Architectural, structural, topographic plans, profile and surveying drawing practices. Use of drafting machines, office practices, and detail blueprint reading. (Lecture-laboratory 6 hours.) Grading: Traditional only.

203. Solidification Technology (1) F,S Faculty
Prerequisites: EIT 170. Solidification practices used in industry for production purposes. (Lecture-problems 1 hour.) Grading: Traditional only.

203L. Solidification Technology Laboratory (1) F,S Faculty
Prerequisites: EIT 170; corequisite E T 203. Laboratory in solidification techniques. (Laboratory 3 hours.) Grading: Traditional only.

225. Plane Surveying (1) F,S Goitom, Williamson
Prerequisites: EIT 170, Algebra and Trigonometry. Fundamentals of surveying methods as applied to construction layout. Selection, care, and use of tapes, levels and transits. (Lecture-problems 1 hour.) Grading: Traditional only.

225L. Plane Surveying Laboratory (1) F,S Goitom, Williamson
Prerequisite: EIT 170; corequisite: E T 225. Introduction to land measurement by tape; differential and profile leveling and the plotting profiles. Introduction to leveling, transit measurements. (Laboratory 3 hours.) Grading: Traditional only.

240. Fundamentals of Construction (2) F,S Faculty
Prerequisites: EIT 211. An overview of construction trends. Effects of scientific and engineering advancements on the building team acting as consultants to the architect. Field trips. (Lecture-discussion 2 hours.) Grading: Traditional only.

245. Concrete Construction (1) F,S Williamson
Prerequisites: PHYS 100A, CHEM 200, E T 240. Basic course in concrete terminology, properties of concrete, mix design, formwork fundamentals, placing, finishing, curing, and hot weather concreting. Basic take-off and concrete production units. (Lecture-discussion 1 hour.) Grading: Traditional only.

245L. Concrete Construction Laboratory (1) F,S Williamson
Prerequisites: PHYS 100A, CHEM 200, E T 240. Corequisite: E T 245. Laboratory in support of E T 245, Concrete Construction. Develop concrete mix designs and prepare concrete samples for testing, such as compressive strength, slump and air retainment, and aggregate testing. (Laboratory 3 hours.) Grading: Traditional only.

250. AC and DC Theory (2) F,S Krauser
Prerequisites: MATH 120. Fundamentals of AC and DC theory, including phasors, power dissipation, and network analysis. (Lecture-problems 2 hours.) Grading: Traditional only.

250L. AC and DC Theory (1) F,S Krauser
Prerequisites: MATH 120, corequisite E T 250. Laboratory experiments will be conducted on AC and DC circuits using proto boards and power supplies, multi-meters, function generators, oscilloscopes and frequency controls. (Laboratory 3 hours.) [Laboratory] Grading: Traditional only.

255. Introduction to Digital Electronics (2) F,S Wang
Prerequisites: E T 250, E T 250L, PHIL 170. Combination logic utilizing Boolean algebra and the binary numbering system as applied to industrial controls and control computers. This beginning course includes Karnaugh maps, truth tables, coding, switching circuits, converters and logic circuit elements. (Lecture-problems 2 hours.) Grading: Traditional only.

255L. Introduction to Digital Electronics (1) F,S Wang
Prerequisites: E T 250, E T 250L, PHIL 170; corequisite E T 255. Laboratory experience in basic logic circuits. Topics included are breadboarding, basic gates, and combinational circuits. A materials fee may be charged. (Laboratory 3 hours.) Grading: Traditional only.

260. Solid State Electronics I (2) F,S Faculty
Prerequisites: E T 250, E T 250L. Analysis and design of solid-state electronic circuits using diodes, bipolar, unijunction and field-effect devices. (Lecture-problems 2 hours.) [Lecture - Problems] Grading: Traditional only.

260L. Solid State Electronics I Laboratory (1) F,S Faculty
Prerequisites: E T 250, E T 250L; corequisite E T 260. Breadboarding and measurements of solid-state circuits utilizing all types of electronic measuring equipment. (Laboratory 3 hours.) Grading: Traditional only.

Upper Division

301. Materials of Industry (2) F,S Jarasunas
Prerequisites: PHYS 100 B, CH EM 200. Properties and applications of industrial materials. (Lecture 1 hour, activity 2 hours.)

302. Industrial Electricity (3) F,S Krauser
Prerequisite: PHYS 100B. Current practices in transmission, utilization and application of electrical power in industry. (Lecture-discussion 2 hours, problem session 2 hours.)

304. Mechanics of Materials (3) F,S Goitom, Jarasunas
Prerequisites: MATH 120, PHYS l00A. Study of the basic laws of statics, analysis of failures, stresses and deformation of structural and machine members.

305. Kinematics and Machine Design (1) F,S Grossman, Jarasunas
Prerequisites: EIT 170, PHYS 100A. Analysis and design of mechanisms through the study of displacement, velocity and acceleration of gears, cams, linkages; fundamentals of hydraulics, pneumatics and power train. (Lecture-problems 1 hour.) Grading: Traditional only.

305L. Kinematics and Machine Design Laboratory (1) F,S Grossman, Jarasunas
Prerequisites: EIT 170, PHYS 100A; corequisite: E T 305. Laboratory course applying graphical analysis to design of mechanical systems. (Laboratory 3 hours.) Grading: Traditional only.

306. Processes of Industry (3) F,S Heineman
Prerequisite: E T 301. A survey course of the variety of methods used in industrial manufacturing and fabrication to form, finish, and fasten industrial products. (Lecture 2 hours, problems/activities 2 hours.)

307. Industrial Safety (3) F,S Welch
Industrial safety management and administration, including economic factors such as direct and indirect costs and workmen's compensation; accident investigation; survey of governmental regulations such as the Occupational Safety and Health Act (O.S.H.A.).

308. Systems Safety (3) F Faculty
Prerequisite: E T 307. Safety assurance as it relates to management policies, work planning, design, manufacturing methods and the implementation of safety procedures.

312. Statistical Quality Control (3) F,S Hayes
Statistical quality control; control chart principles and techniques, sampling procedures; military standards, and reliability theory and applications. (Lecture-discussion 3 hours.)

313. Metrology (1) F Faculty
Prerequisite: E T 306. Instrument calibration, standards and precision measurement for quality assurance and reliability. (Lecture-discussion 1 hour.)

313L. Metrology Laboratory (1) F Faculty
Prerequisite or corequisite: E T 313. Instrument calibration, standards and precision measurement for quality assurance and reliability. (Laboratory 3 hours.)

316. Soils Mechanics Technology (1) F,S Goitom, Williamson
Prerequisites: E T 304. Soil composition, description, and classification; soil compaction; determination of physical properties of soils by laboratory experiments. (Lecture-Problems 1 hour.) Grading: Traditional only.

316L. Soils Mechanics Technology Laboratory (1) F,S Goitom, Williamson
Prerequisites: E T 304; corequisite: E T 316. Laboratory investigation and experiments in the phenomena of soil mechanics. Field trips. (Laboratory 3 hours.) Grading: Traditional only.

317. Construction Safety (2) F,S Faculty
Prerequisites: Lower division construction classes. Terminology, safety functions, accident costs, workman's compensation and liability laws, O.S.H.A., and many other governmental and nongovernmental codes, regulations and field safety methods pertinent to the construction industry. Field trips. (Lecture-discussion 2 hours.)

322. Mechanical Equipment for Buildings (3) F,S Faculty
Prerequisites: Lower division requirements. Principles and current practices in water supply, waste disposal, heating, ventilating, air conditioning and fire protection. (Lecture 2 hours, activity 2 hours.)

324. Industrial ElectroChemical Processing (2) F,S Faculty
Prerequisites: E T 301, 308. Theory and practice in electrochemical processes to include chem-milling, electroforming, electroplating and metal coloring. (Lecture 1 hour, activity 2 hours.)

325. Construction Materials and Methods (3) F,S Faculty
Prerequisites: E T 245, E T 245L, E T 316, E T316L. Properties and applications of materials for the construction industry. Current practices in fabrication, and erection methods used in industrial, commercial and heavy construction. Field Trips. (Lecture-Problems 3 hours.) Grading: Traditional only.

326. Structural Analysis and Design for Technology (3) F Goitom
Prerequisite: E T 304. Analysis and design of reinforced concrete, steel, wood and reinforced masonry buildings in compliance with the Uniform Building Code. (Lecture 2 hours, activity 2 hours.)

330. Construction Estimating I (3) F,S Faculty
Prerequisites: E T 325. Theories and systems of building estimating. Quantity survey techniques, standard formats, classification and analysis of work, organization of detail, unit cost determination simulated bids. (Lecture-activity 3 hours.) Grading: Traditional only.

340. Solid State Electronics II (3) F,S Faculty
Prerequisites: E T 260, E T 260L. Decibel, Millers Theorem, integrated circuits, feedback, operational amplifiers, Fourier series, distortion, modulation and phase-locked loops. (Lecture-Problems 2 hours.) Grading: Traditional only.

340L. Solid State II Laboratory (1) F,S Faculty
Prerequisites: E T 260, E T 260L; corequisite: E T 340. Design and measurement of various circuits using operational amplifiers, comparators, regulators, silicon controlled rectifiers, frequency mixers and phase-locked loops. (Laboratory 3 hours.) Grading: Traditional only.

344. Machine Tools (1) F,S Jarasunas
Operations and use of the conventional and non-conventional machine tools. Not open to students with previous machine tools credit. (Lecture 1 hour.)

344L. Machine Tools Laboratory (1) F,S Jarasunas
Corequisite: EIT 344. Operations and use of conventional and nonconventional machine tools. Not open to students with previous machine tools experience. (Laboratory 3 hours.)

350. Motors and Generators (1) F,S Faculty
Prerequisites: E T 250, E T 250L. Study of electric rotating machinery, its theories, principles, design, and applications in automation industries. (Lecture-Problems 1 hour.) Grading: Traditional only.

350L. Motors and Generators Laboratory (1) F,S Faculty
Prerequisites: E T 250, E T 250L; Laboratory experience in applications and design of rotating machines. Topics covered are DC machines, synchronous machines, servomotor, step motor, and control circuits. (Laboratory 3 hours.) Grading: Traditional only.

351. Industrial Fluid Power (1) F,S Jarasunas
Prerequisites: PHYS 100A, E T 302. Fundamentals and application of hydraulic, pneumatic and vacuum power as used in current manufacturing plants. (Lecture 1 hour.) Grading: Traditional only.

351L. Industrial Fluid Power Laboratory (1) F,S Jarasunas
Prerequisites: PHYS 100A, E T 302; corequisite: E T 351. Theory and method application in hydraulic and pneumatic flow characteristics. Solution and prediction of internal flows, small disburbances, and nature of turbulent flows. Exact and approximate potential-flow methods with emphasis on industrial application. (Laboratory 3 hours.) Grading: Traditional only.

361. Industrial Metallurgy (1) F,S Jarasunas
Prerequisites: E T 301, E T 301L. Physical metallurgy including plastic deformation of metals, power metallurgy, metallurgy of machining. Current and emergent applications of metallurgy to manufacturing of modern hardware. (Lecture 1 hour.) Grading: Traditional only.

361L. Industrial Metallurgy Laboratory (1) F,S Jarasunas
Prerequisites: E T 301, E T 301L; corequisite: E T 361. Metallographic specimen preparation techniques, etching, and microscopic examination of metallic structures. Metallurgical examination of special industrial alloys. Heat treatment properties, and testing of metals. (Laboratory 3 hours.) Grading: Traditional only.

362. Heat Treating (1) F Jarasunas
Prerequisite: E T 361. Theory and applications of thermal treatment processes to non- ferrous and ferrous metals with resulting changes in properties as used in current production. (Lecture 1 hour.)

362L. Heat Treating Laboratory (1) F Jarasunas
Prerequisite: E T 362. Metallographic study of heat effects of thermal treatments of metals, and mechanical properties of metals. (Laboratory 3 hours.)

364. Industrial Tooling (1) F,S Heineman
Prerequisites: E T 305, E T 305L. Design and fabrication of tools for production. Typical tooling problems include working drawings and hardware. (Lecture 1 hour.) Grading: Traditional only.

364L. Industrial Tooling Laboratory (1) F,S Heineman
Prerequisites: E T 170; corequisite: E T 364. Generation of tooling drawings relative to mass part production. Determination of processes, equipment and tools to be used in production processes with emphasis on cost. (Laboratory 3 hours.) Grading: Traditional only.

369. Quality Assurance I (3) F,S Hayes
Prerequisite: E T 308. An overview of quality assurance principles and practices in industry, including management concepts, inspection practices, costs of quality and testing functions. (Lecture-discussion 3 hours.)

370. Food, Drug and Cosmetic Quality Control (3) F Hayes
Technical disciplines and requirements for the control of quality of foods, drugs and cosmetics; regulatory laws governing these fields as well as the accepted practices of quality control are covered. (Lecture-discussion 3 hours.)

372. Circuit Analysis (3) F,S Wang
Prerequisites: E T 250, E T 250L, MATH 120. Study of circuit analysis techniques on AC/DC circuits and networks. (Lecture-Problems 3 hours.) Grading: Traditional only.

375. Control Instrumentation (1) S Krauser
Prerequisites: E T 340, E T 340L. Techniques used in the design of servo-mechanism systems with emphasis on methods and equipment used in current industrial control and processing systems. (Lecture-problems 1 hour.) Grading: Traditional only.

375L. Control Instrumentation Laboratory (1) F,S Krauser
Prerequisites: E T 340, E T 340L; corequisite: E T 375. Development and measurement of various control systems utilizing operational amplifiers, transducers, thermocouples, bridges, and various pressure devices. (Laboratory 3 hours.) Grading: Traditional only.

380. Graphics Tooling (1) F,S Heineman, Krauser
Prerequisites: EIT 170, EIT 215, EIT 215L. Advanced study in the use of PC-computers to solve graphics communication problems. (Lecture-discussion 1 hour.) Grading: Traditional only.

380L. Graphics Tooling Laboratory (1) F,S Heineman, Krause
Prerequisites: EIT 170, EIT 215, EIT 215L; corequisite: E T 380. Laboratory study and use of PC-computer applications for tool design and graphics communication. (Laboratory 3 hours.) Grading: Traditional only.

402. Production Analysis (3) F,S Hayes
Prerequisite: E T 308. Simplification of manufacturing operations; motion and time study, standards, planning and control; emphasis on operations analyses for optimum production economy. (Lecture 3 hours.)

403. Procurement (3) F Faculty
Prerequisites: E T 301 and accounting. Examination of the acquisition function within the industrial complex. (Lecture-discussion 3 hours.)

405. Plant Planning and Layout (3) S Faculty
Prerequisite: EIT 170 (306 recommended). Planning practices, procedures and requirements for laying out industrial facilities. (Lecture-discussion 2 hours, laboratory 2 hours.)

406. Proposals and Specifications (3) F,S Jarasunas, Welch
Prerequisite: EIT 300. Development of the technical knowledge necessary to structure an industrial proposal in logical stages. An analysis of the different forms of letters of transmittal, inquiry, bidding specifications and a diagnosis of the financial, technical and management aspects of a proposal, leading to a contract. (Lecture-activities 3 hours.)

407. PERT/CPM (3) F,S Grossman
Prerequisites: E T 306, 315 and a course in logic. Project planning, scheduling and control by critical path method, work breakdown structure, master and control level schedules and milestone charts. Cost optimization through resource allocation. Computer and noncomputer methods presented. (Lecture 2 hours, activity 2 hours.)

408. Production Control (3) F,S Faculty
Prerequisites: E T 402, 406. Application of analytical, planning and control techniques to the resources of industry including the physical plant, equipment, inventories, personnel and supplies used in the production of products and services. (Lecture-discussion 3 hours.)

412. Industrial Costs (3) F Goitom, Jarasunas
Prerequisite: Accounting. Introduction to the concepts of capital and operations budgets, capital acquisitions, economic evaluations of capital alternatives and factors of the time value of money in industrial operations and construction industries. (Lecture-discussion 2 hours, laboratory 2 hours.)

415. Construction Cost Control (3) F,S Goitom
Prerequisites: E T 412, Senior standing. Basic application of construction cost control systems and the use of cost information and associated reports. (Lecture-activity 3 hours.) Grading: Traditional only.

416L. Computer Applications for Construction Management Laboratory (1) F,S,SS Goitom
Prerequisites: EIT 170, EIT 215, EIT 215L. Application of computer systems to control construction operations in the building industry. Development of construction management games. Grading: Traditional only.

417. Construction Planning and Scheduling (3) F,S Goitom, Grossman
Prerequisites: E T 325, E T 330. Project planning, scheduling and control by critical path method (ADM and PDM), work breakdown structure, master and control level schedules and milestone charts. Cost optimization through resource allocation. Computer and noncomputer methods presented. (Lecture-problems 3 hours.) Grading: Traditional only.

420. Construction Law (3) F,S Faculty
Prerequisites: EIT 300, Junior standing. Forms of business enterprises and real estate interests; contractor licensing laws and enforcement procedures; types of liabilities arising from design and construction; handling labor disputes; anti-discrimination laws; public contract bidding laws and private bidding procedures; liability for misleading plans, site information, and defective products and construction; liabilities and damages for delays; mechanic's lien, stop notice, bond rights and enforcement procedures; understanding, negotiating and drafting general contracts and subcontracts. (Lecture-discussion 3 hours.) Grading: Traditional only.

422. Electrical Equipment for Buildings (3) F,S Faculty

Prerequisites: PHYS 100A, PHYS 100B. Principles and current practices in the application of electrical equipment and material practices in the application of electrical equipment and material utilization, sound and signal systems. (Lecture-activity 3 hours.) Grading: Traditional only.

423. Site Analysis (3) F,S Grossman

Prerequisites: Lower division requirements, E T 225. Detailed analysis and investigation of construction sites. Economics and feasibility of land development. Field trips. (Lecture-discussion 2 hours, activity 2 hours.)

424. Construction Equipment (3) F,S Grossman

Prerequisites: E T 225, E T 417. Characteristics, capabilities, limitations, economics and utilization of general building and heavy construction equipment. (Lecture-discussion 2 hours, activity 2 hours.)

425. Construction Proposals and Specifications (3) F,S Faculty

Prerequisite: E T 420. Principles of the administration of the construction contract with the owner; types of contracts and contract documents, writing construction proposals, and managing the construction sub-contract. Writing sub-contracts, purchase orders and construction specifications for project managers. (Lecture-discussion 3 hours.) Grading: Traditional only.

435. Construction Project Management (3) F,S Grossman

Prerequisites: E T 330, 417, 427, senior standing. Theory and techniques of managing construction projects and Contractors State License Board requirements for California. (Lecture-discussion 3 hours.)

442. Computer Circuits (2) F,S Wang

Prerequisites: E T 255, E T 255L. Sequential logic circuits and systems and applications of integrated circuits to log controls. Counters, data storage, registers, circuit synthesis, and analysis. (Lecture-problems 2 hours.) Grading: Traditional only.

442L. Computer Circuits Laboratory (1) F,S Wang

Prerequisites: E T 255, E T 255L; corequisite: E T 442. Laboratory study of digital computer circuits design and implementation. Standard designing and troubleshooting procedures will be discussed. Topics covered are multivibrators, registers, counters, decoders, arithmetic circuits, and memory. (Laboratory 3 hours.) Grading: Traditional only.

443. Microcomputer Systems (2) F,S Wang

Prerequisites: EIT 215, 215L, E T 442, E T 442L. Microprocessors and microcomputer systems. Topics include microcomputer architecture, software structure, assembly language, central processing unit, input/output, memory manipulation, and interfacing. (Lecture-problems 2 hours.) Grading: Traditional only.

443L. Microcomputer Systems Laboratory (1) F,S Wang

Prerequisites: E T 335, E T 335L, E T 442, E T 442L; corequisite: E T 443. Laboratory experience in microcomputer architecture, assembly language programming, and interfacing. Topics covered are central processing unit function, memory organization, and input/output operation. (Laboratory 3 hours.) Grading: Traditional only.

444. Advanced Electronic Communications (3) F,S Faculty

Prerequisite: E T 340. Advanced communications, telemetry, radio, radar, microwave, navigational and laser systems. (Lecture-discussion 3 hours.)

445. Micro-electronics (1) F Faculty

Prerequisite: E T 340. Design, processing and applications of monolithic and hybrid microcircuits for analog and digital systems. (Lecture 2 hours.)

445L. Microelectronics Laboratory (1) F,S Faculty

Prerequisite: E T 340; recommended: concurrent enrollment in E T 445. Laboratory experience in the processing of thick-film materials, ultrasonic and thermocompression wire bonding and laser resistive trimming. Practical application and equipment utilization is emphasized. (Laboratory 3 hours.)

466. Welding Metallurgy (1) S Jarasunas

Prerequisite: E T 361. Theory and applications of current and emergent joining processes with consideration of weldability of metals and thermal effects on properties. (Lecture 1 hours.)

466L. Welding Metallurgy Laboratory (1) S Jarasunas

Prerequisite: E T 466. Applications of current and emergent joining processes with considerations of weldability of metals and thermal effects on properties. Welding techniques in selected processes exercised in laboratory. (Laboratory 3 hours.)

469. Quality Engineering (3) S Hayes

Prerequisite: E T 369 or consent of instructor, and 312. Theory and applications of experimental design, advanced statistical analysis and problem-solving techniques as they apply to quality; reliability analysis. (Lecture-discussion 3 hours.)

470. Testing of Materials (1) S Jarasunas

Prerequisite: E T 389. Testing of materials, including both destructive and non-destructive procedures. (Lecture 1 hour.)

470L. Testing or Materials Laboratory (1) S Jarasunas

Prerequisite: E T 470. Laboratory exercises in the use of test equipment, both destructive and non-destructive. (Laboratory 3 hours.)

480. Computer-Aided Design/Computer-Aided Manufacturing (1) F,S Krauser, Wang

Prerequisites: EIT 215, EIT 215L. Design and applications of CAD/CAM systems for the electronics, manufacturing, and construction industries. Topics include hardware requirements and software applications. (Lecture-problems 1 hours.) Grading: Traditional only.

480L. Computer-Aided Design/Computer-Aided Manufacturing Laboratory (1) F,S Krauser, Wang

Prerequisites: EIT 215, EIT 215L; corequisite: 480. Laboratory experience in Computer-Aided Design and Computer-Aided Manufacturing. Covers points and lines, text writing, hatching and filling, dimensioning, layering, multiple imaging, pictorial drawing, and parts/materials analysis. (Laboratory 3 hours.) Grading: Traditional only.

490. Electronic Packaging and Design (3) S Faculty

Prerequisites: E T 301, 306. An in-depth study of the techniques, processes and materials used in the design and packaging of electronic systems. Covers the fabrication of printed circuit assemblies, conformal coating techniques and materials, automated system assembly of electronic equipment, potting and encapsulating techniques for electronics. (Lecture-discussion 2 hours, laboratory 2 hours.)

492. Advanced Studies in Technology (3) F Faculty

Prerequisite: Consent of instructor. Advanced work done within the area of specialization designed for the industrial technologist who desires upgrading in his or her field of concentration. Covers new information in or related to industrial technology. May be repeated for a maximum of six units provided the subjects are not the same.

493. Problems in Production Technology (1-3) F,S Grossman, Hayes

Prerequisites: E T 402, 406; senior standing, recommended industrial experience. Problems in production technology: current production technology problems in industry will be identified, solutions proposed and evaluated and recommendations developed and presented. (Discussion to be arranged.)

Engineering and Industrial Technology Courses (EIT)

Lower Division

170. Industrial Drafting (2) F,S Heineman

Prerequisites: None. Graphic communications, visualization, orthographic projection, auxiliary views, dimensions, working drawings and descriptive geometry, using drafting equipment and computer-aided techniques. One-half of the laboratory time will be spent in the computer laboratory. (Lecture-laboratory 6 hours.) Grading: Traditional only.

211. Introduction to Industrial Technology (1) F,S Hayes

Survey of the professional activities and environments of the industrial technologist. Course covers the role of the technologist in American industry, the history of technology and the growth and future of those professionals who hold the bachelor of science degree in Industrial Technology. CR/NC grading. (Lecture-discussion 1 hour.)

215. Computer Applications (2) F,S, SS Krauser, Wang

Prerequisite: PHIL 170. Survey of computer applications to problems in business, manufacturing, research, and simulation. (Lecture-discussion 2 hours.) Grading: Traditional only.

215L. Computer Applications Laboratory (1) F,S,SS Krauser, Wang

Prerequisite: PHIL 170; corequisite: EIT 215. Laboratory study of computer applications to solution of problems in business, manufacturing, research, and simulation. A computer high level language will be used. (Laboratory 3 hours.) Grading: Traditional only.

Upper Division

300. Industrial Communications (3) F,S Jarasunas, Welch

Prerequisites: English composition and industrial drawing. Accurate, economical, rapid transmission and interpretation of information.

309. Industrial Supervision (3) F,S Hayes

Types of industrial organizations and supervisory systems; responsibilities, duties and qualifications of the supervisor.

310. Industrial Hygiene (3) S Faculty

Prerequisite: E T 307. Detection, analysis and control of health hazards that affect the body and the atmosphere in the industrial environment.

320. Materials Handling (3) S Hayes

Prerequisite: E T 306. Work simplification in movement of materials in production.

343. Electronics Testing and Troubleshooting (2) F,S Faculty

Modern testing requirements, procedures and instrumentation; logical troubleshooting of industrial electronic circuitry. (Laboratory included.)

409. Senior Problems In Industrial Technology (1-3) F,S Grossman

Prerequisites: Senior standing in industrial technology, consent of instructor. Advanced work of a technical nature within an area of specialization done on an experimental or research basis. (A) Construction Technology, (B) Electronics Technology, (C) Manufacturing Technology, (D) Quality Assurance.

Mechanical Engineering

School Of Engineering

Department Chair: Hillar Unt
Department Office: Vivian Engineering Center, VEC-217
Telephone: 498-4407
Faculty: Professors: Tuncer Cebeci, Mihir Kumar Das, Simon deSoto, Walter E. Edelman, Jr., C. Barclay Gilpin, Ernest R. Mijares, Edward Miller, Leonardo Perez y Perez, Bruce J. Torby, Hillar Unt, Richard Williams; Associate Professors: Min-ten Jahn, Ortwin Ohtmer, ; Assistant Professors: Hasun Hu Chen, Hsin-Piao Chen, Hamid Hefazi, Jalal Torabzadeh; Adjunct Faculty: Lee S. Akin, Emanuel S. Diamant, Richard R. Gold, Chester R. Kyle, Milton Randle.
Emeritus Faculty: Ernest G. Brind, Chester R. Kyle, Herluf P. Nielsen, Richard C. Potter, Sabri Sungu, Ching H. Tsao, Hans H. Vandermeyden.
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Mechanical Engineering Advisory and Development Council:

Rhonda Herman Ahmad, Vice President, Westmont Management Corp.; William J. Burbridge, Supervising Engineer, Instruments Control Power Design and Construction Division, City of Los Angeles Department of Water and Power; Raymond Derby, President, California Industrial Products, Inc.; E. R. Elko, President, Aerojet General Ordnance, Co.; Keith English, Engineer, Jet Propulsion Laboratory; Richard R. Gold, General Partner, Mariani- Buss Associates; Martha Hardwick, Manager, Research Development Pressure Monitoring, Critical Care Division American Edwards Laboratories; Loren Hinkelman, Vice President and General Manager, Los Angeles Power Division, Bechtel Power Corp.; Arne Kalm, President, First Arcadia Corp., John E. Marriner, Naval Architect and Marine Engineer, John E. Marriner Associates; Thomas Murtaugh, Attorney, Buck, Moloney, Minno Ammirato; Robert Milo, President, EECO, Inc.; D. Anthony Petkelis, President, Fairchild - Stratos; John W. Porter, Vice President THUMS Long Beach Company; W. C. Smith, Vice President and General Manager, Micronics International, Inc.; Bodh R. Subherwal, President BR Laboratories; Leonard Tachner, Patent Attorney, Fischer, Tachner and Strauss; Charles Taylor, President, Tayco Engineering, Inc.; William T. Thompkins, Jr., Manager, Computer Design Technology, Northrop Corporation; Len M. Thorell, Vice President and General Manager, Todd Pacific Shipyard Corp.; Donald Wagner, President, Trico Industries, Inc.; Dale S. Warren, Director, Design and Technology, McDonnel Douglas Corp; Marvin E. White, Manager, Projects, Engineering Test Division, TRW.

Petroleum Engineering Advisory and Development Council:

Rhonda Herman Ahmad, Vice President-Manager of Engineering, Westmont Management Corporation; Leonard Brock, Consultant; Charles L. DesBrisay, Assistant Manager — Petroleum Engineering, Occidental Exploration Production Co.; Gene F. Clarke, Division Manager, Production, Western United States-TEXACO, Inc.; Xenophen C. Colazas, Director, Department of Oil Properties, Tidelands Agency; David Combs, President, Termo Company; John Diller, Division Engineer, Halliburton Services; Edward Freeburg, President, Tempros International; Verne Gaede, Deputy Director-The Resources Agency, Department of Conservation, Division of Oil and Gas; Jack L. Goolsby, Area Production Manager, Gulf Oil Exploration; David Goodwill, Vice President, Petroleum Industry Consultants, Inc.; Robert E. Irelan, Division of Production, Conoco, Inc.; Charles H. Jones, Jr., General Manager, Long Beach Oil Development Co.; Arne Kalm, President, First Arcadia Corporation; John Kemp, Division Manager- Production, Ventura Division-Conoco, Inc,; J. P. Lester, Division Manager-Production, Southern California Division, Chevron U.S.A., Inc.; William Macrate, Partner, Macrate Oil; William E. Nicolai, Senior Vice President-Oil Operations, Transierra Exploration Corporation; Winfield S. Payne, Jr., President, Franwin Oil and Gas Company; Frank X. Pendarvis, President, THUMS Long Beach Company; Matt Riordan, Director of Research Development, Petroleum Services Division-Petrolane; Harry R. Rothschild, Chief Executive and Chairman of the Board, Powerine Oil Company; Robert L. Schmidt, Division Production Engineer, Southern California Division, Chevron U.S.A., Inc.; Richard J. Stegemeier, Director and Senior Vice President, Unocal; Robert A. Teitsworth, Chairman of the Board and CEO, Occidental Exploration and Production Company; Wilbur M. Thompson, Chief Extractive Development Program, State Lands Commission; Darrell G. Warner, Division Manager, Exxon Company; Wm. Jim Weaver, Jr., President, Wentex International, Inc.

Students desiring information should contact the department office for referral to one of the faculty advisors: Industrial-Management Engineering Coordinator, Materials Engineering Coordinator. Ocean Engineering Coordinator, Certificate in Industrial Plastics Processing and Design Director, Certificate in Energy Conversion and Power Systems Engineering Director, Undergraduate Advisor, Graduate Advisor.

All upper division Mechanical Engineering courses require proficiency in FORTRAN programming. Before attempting any upper division courses, students are expected to have completed satisfactorily all lower division major courses. It is a departmental policy that a grade of "C" or better must be achieved in all prerequisites to all departmental courses.

Admission to any of the graduate programs requires a minimum grade point average of 2.7 in the last 60 units attempted.

Bachelor of Science in Engineering Degree Option in Materials Engineering

Modern engineering applications in all fields require new materials with properties well beyond those obtainable with the alloys available several years ago. New materials are needed for such diverse applications as the supersonic air transports, undersea deep submergence vessels, magnetic and semiconducting devices. Scientific knowledge in this area has expanded recently at a rate comparable to that experienced by the field of electronics. The materials option is offered to meet the demand for materials oriented engineers.

Course work is directed toward understanding of the properties of materials in terms of their atomic structure, and emphasis is placed on the behavior of materials in engineering applications. The laboratories have excellent equipment for studies in this field and include facilities for the determination of crystal structure, microscopic and X-ray diffraction examination of solids, thermal and mechanical treatment and the determination of properties at low and high temperatures.

Requirements for the Option in Materials Engineering (code 3-4352)

Lower Division:

M E 172, 205, 272; C E 205; E E 212, 230; MATH 122, 123, 224; CHEM 111A; PHYS 151, 152.

Upper Division:

M E 305, 322, 323, 330, 371, 373, 374, 375, 376, 459, 476; C E 406; CHEM 371A; ECON 300; MATH 370A; approved electives to total at least 135 units.

For information concerning admission to this program, please contact Dr. Hillar Unt, Chair, Department of Mechanical Engineering.

Bachelor of Science in Engineering Degree

Option in Industrial-Management Engineering

This is an interdisciplinary degree in which both the Schools of Business Administration and Engineering provide courses which will enable the student to have a technical engineering background plus a good foundation in business and management practices. The option consists of the core engineering courses through the junior year with an addition of business courses in accounting, business law, management, inventory practices and operations research. The elective structure within this option is such that the student may specialize in either engineering, or a combination of both engineering and business.

Requirements for the Option in Industrial-Management Engineering (code 3-4342)

Lower Division:

M E 172, 205; C E 205; E E 212; MATH 122, 123, 224; ACCT 201; FIN 222; CHEM 111A; PHYS 151, 152.

Upper Division:

M E 305, 322, 330, 331, 371, 373, 376, 390, 459, 476, 490; C E 406; MATH 370A; ECON 300; FIN 324; MGMT 300, 310; Q S 410; and approved electives to total at least 135 units.

For information concerning admission to this program, please contact Dr. Hillar Unt, Chair, Department of Mechanical Engineering.

Bachelor of Science in Engineering Degree

Option in Ocean Engineering

Administered by the Mechanical Engineering Department, the ocean engineering option is designed to provide students with an understanding of the ocean environment and knowledge of the drastic effects this environment can have upon engineering endeavors. The curriculum is built around a strong basic core of mathematics, physics and engineering science. This is followed by more advanced courses in electronics, analytical mechanics, fluid mechanics, thermodynamics, materials and corrosion, ocean environment and underwater systems.

Laboratory facilities consist of a 40-foot research vessel "Enginuity" operated by the School of Engineering. A larger ocean-going ship is available to the ocean engineering students, plus an inventory of modern electronic, acoustic systems and ocean measurement instruments for study and experience afloat.

This University is a member of the Southern California Ocean Studies Consortium of The California State University.

Requirements for the Option in Ocean Engineering (code 3-4358)

Lower Division:

CHEM 111A; C E 205; E E 212; MATH 122, 123, 224; M E 172, 205, 265; PHYS 151, 152.

Upper Division:

C E 335, 336, 406; ECON 300; GEOL 465; MATH 370A; M E 305, 330, 331, 365, 366, 371, 373, 374, 376, 407, 426, 459, 463, 465, 467, 468, 469, 476, to total at least 135 units.

Bachelor of Science in Mechanical Engineering

The realm of mechanical engineering is so extensive that training must be broad and basic, providing grounding in fundamentals which an engineer requires in order to gain competence in any specialized field. In view of this, mechanical engineering curriculum includes ample foundation courses in mathematics, physics, chemistry, and design graphics. These are followed by courses in energy conversion, thermodynamics, fluid mechanics, mechanics and strength of materials, metallurgy, and design. Opportunity to explore further a particular area of interest is provided by elective course units in the senior year.

The laboratories of the department are provided with modern equipment for undergraduate instruction in the following areas: instruments and measurements, fuels and lubricants, materials and metallurgy, thermodynamics and heat power, vibration, design, and acoustics.

Industry sponsored scholarships (Alcoa Foundation) are available to upper division mechanical engineering students. Further information is available in the department office.

Requirements for the Bachelor of Science in Mechanical Engineering (code 3-4350)

Lower Division:

CHEM 111A; C E 205; E E 212; MATH 122, 123, 224; M E 172, 205, 272; PHYS 151, 152.

Upper Division:

C E 335, 336, 406; ECON 300; MATH 370A; M E 305, 322, 323, 330, 331, 336, 337, 371, 373, 374, 375, 376, 405, 409, 431, 459, 471, 472, 476, to total at least 135 units.

Certificate in Industrial Plastics Processing and Design

Director; Dr. Edward Miller.
Professors; Edelman, Gilpin, Miller, Unt.

The Certificate Program in Industrial Plastics Processing and Design is an interdisciplinary program sponsored by the Industrial Education, Mechanical Engineering and Chemical Engineering Departments. For additional information and requirements refer to the Industrial Education Department.

Certificate Program in Energy Conversion and Power Systems Engineering

Director: Dr. Hillar Unt.
Professors; R.S.L. Das, deSoto, Jordanides, Mijares, Unt.

The 27-unit Certificate Program in Energy Conversion and Power Systems Engineering is an undergraduate program designed to prepare electrical and mechanical engineering students to become proficient in the analysis and design of power generating systems, such as direct conversion, coal burning, hydraulic, nuclear, solar, wind and various other types of powerplants.

Requirements for the Certificate in Energy Converstion and Power Systems

1. Consultation with program advisers in Electrical or Mechanical Engineering Departments.
2. Completion of the following core courses: CE 335, EE 350, 452; ME 330, 431.
3. Completion of 12 units from the following list of electives: EE 453; ME 405, 510, 511, 512, 532, 538.
4. Completion of a bachelor's degree. The certificate may be awarded concurrently with the degree.

Master of Science in Mechanical Engineering (code 6-4350)

Built on a broad and basic undergraduate instruction, the graduate level courses and the graduate degree, Master of Science in Mechanical Engineering, develop competence in the fields of aeronautics and astronautics, engineering mechanics and design, thermodynamics and fluid flow. Modern laboratories in CAD, aerodynamics, thermodynamics, heat power, metallurgy, and mechanical properties of materials are maintained for undergraduate and graduate instruction, and graduate research. Design rooms, excellent laboratories within the other engineering departments, computer facilities, and good machine shops supplement the mechanical engineering facilities.

Additional details may be found in the Schedule of Classes. For further information and complete degree requirements contact the Chair, Mechanical Engineering Department.

Some graduate laboratory and teaching assistantships are available to qualified graduate students. Applications should be sent to the department office.

Prerequisites

1. A bachelor's degree in an accredited curriculum in mechanical engineering, with a minimum GPA of 2.70, or:
2. A bachelor's degree in engineering with a minimum GPA of 2.70, a natural science or other appropriate discipline with the requirement that essential undergraduate prerequisites in mechanical engineering be satisfied.
3. Graduate students must consult with the graduate adviser for information concerning procedures and requirements for appropriate approval of their courses of study prior to enrolling in their graduate programs.
4. The Writing Proficiency Examination (WPE) must be taken and passed during the first semester in residence. Failure to pass WPE will prevent registration in engineering courses in subsequent semesters. Courses taken after the semester without having passed the WPE will not be counted toward any graduate engineering degree.

Advancement to Candidacy

1. Removal of all undergraduate deficiencies as determined by the Department Graduate Advisor;
2. Students may, at the discretion of the Department Graduate Advisor be required to take examinations in their chosen areas.

Requirements for the Master of Science

1. Completion of a minimum of 30 units beyond the bachelor's degree in upper division and graduate courses approved by the student's Department Graduate Study Committee including:
   a. A minimum of 21 units in engineering or mathematics courses with 18 units of 500 and/or 800 level course mechanical engineering.
   b. Six units of electives selected from approved upper division or graduate courses from appropriate areas.
   c. Completion of an acceptable thesis. A thesis may be required if the candidate has published a technical paper of a quality equivalent to a thesis.

Courses (M E):

Lower Division

172. Engineering Design Graphics I (3) F,S Das

Principles of graphical expression through sketching, instrumental drawing, orthographic projection, auxiliary views, dimensions, working drawings. Descriptive geometry; methods of points, lines, planes warped surfaces, intersections and development. Elementary computer-aided drawing. (Lecture-laboratory 6 hours.)

205. Computer Methods in Mechanical Engineering (2) F,S Faculty

Prerequisites: MATH 122, PHYS 151. Digital computer programming with applications to mechanical engineering problems. Introduction to computer graphics. (Lecture-problems 2 hours, laboratory 3 hours.)

265. Engineering in an Ocean Environment F,S Perez y Perez

Prerequisites: Sophomore Standing. Study of problems involved in engineering projects in, on and under the ocean. Environmental considerations and engineering contributions to development and use of ocean resources. (Lecture-problems 3 hours).

272. Design Graphics II (2) F,S Faculty

Prerequisite: ME 172. Graphical expression with emphasis on sketching, machine drawing, (detail and assembly) standards, tolerances, surface finished, gears, cams, fastenings, piping, and welding. Introduction to CAD/CAM. (Lecture-laboratory 6 hours.)

Upper Division

305. Numerical Methods in Mechanical Engineering (3) F,S Torby, Unt

Prerequisites: M E 205, MATH 370A. Application of numerical methods to the solution of mechanical engineering problems. Roots of algebraic and transcendental equations. Solution of simultaneous linear algebraic equations. Numerical integration and differentiation. Numerical integration of ordinary differential equations: initial-value problems, boundary-value problems. Partial differential equations. (Lecture - problems 3 hours)

322. Metallurgy and Materials Processes I (3) F,S Jahn, Gilpin, Miller

Prerequisite: CHEM 1IIA; MATH 123; ME 172. Machines and processes for modern manufacturing. Structure and properties of crystalline materials, crystal lattices, phase equilibria and transformations nucleation and grain growth. Heat treatments and mechanical working. (Lecture-problems 3 hours.)

323. Engineering Metallurgy I Laboratory (1) F,S Jahn

Prerequisites: ME 322; ENGL 100 or equivalent. Metallographic study of the effects of thermal treatments on the structures and mechanical properties of metals and alloys. (Laboratory 3 hours.)

330. Engineering Thermodynamics I (3) F,S Faculty

Prerequisites: MATH 224, PHYS 151 and approved chemistry. First and second laws of thermodynamics; properties of liquids, gases and vapors; sources of energy and conversion to work. Introduction to heat transfer and psychometry. (Lecture-problems 3 hours.)

331. Engineering Thermodynamics I Laboratory (1) F,S Faculty

Prerequisites: ME 330; ENGL 100 or equivalent. Measurements of thermodynamic properties, fluid flow and heat transfer; calorimetry. (Laboratory 3 hours.)

336. Power Plant Design (3) F,S deSoto

Prerequisites: ME 330. Design of power production systems, including steam power plants, gas turbines and auxiliary power units. Survey of alternate power sources including wind, solar, geothermal, ocean thermal and biomass. (Lecture problems 2 hours, design laboratory 3 hours.)

337. Engineering Thermodynamics II Laboratory (1) F,S Faculty

Prerequisite: ME 336. Measurements of energy and power. Testing and evaluation of the performance of thermodynamic equipment. (Laboratory 3 hours.)

365. Ocean Engineering I (3) F Perez y Perez

Prerequisite: MATH 370A and ME 265 or consent of instructor. Probabilistic methods in ocean engineering. Spectral methods, introduction to wave theories; transfer function concepts; applications in ocean engineering design. (Lecture-problems 3 hours.)

366. Ocean Engineering II (3) S Perez y Perez

Prerequisites: MATH 370A and M E 265 or consent of instructor. Major elements in ocean engineering design. Theory and problems relating to ocean vehicles; marine acoustics; elements in the design of positioning and mooring systems. (Lecture-problems 3 hours).

371. Analytical Mechanics II (Dynamics) (3) F,S Faculty

Prerequisites: CE 205. Newton's Laws and the principles of work energy and impulse and momentum applied to the study of particle and rigid body motion. Engineering applications with emphasis on plane motion problems. (Lecture-problems 3 hours.)

373. Mechanics of Deformable Bodies (3) F,S Faculty

Prerequisite: CE 205. Application of the principles of mechanics to design of structural and machine members and connections; stress analysis of beams and columns. Properties and strength of engineering materials. (Lecture-problems 3 hours.)

374. Mechanical Properties of Materials (1) F,S H.P.Chen

Prerequisites: ME 373; ENGL 100 or equivalent. Laboratory course in the physical and mechanical properties of engineering materials, and the relationship of structure to these properties. (Laboratory 3 hours.)

375. Kinematics and Dynamics of Mechanisms (4) F,S Edelman

Prerequisites: ME 272, 322, 371. Fundamentals of linkages, cams, gears and gear trains. Velocity and acceleration analysis of machines. Static and inertia loading of machine parts. Dynamic analysis. (Lecture-problems 3 hours, design application 3 hours.)

376. Introduction to Engineering Vibrations and Acoustics (3) F,S Faculty

Prerequisites: MATH 370A, M E 305, 371, C E 335. Application of Fourier series and transforms, Laplace transforms, complex analysis to engineering acoustics and vibrations. (Lecture-problems 3 hours)

390. Safety and Reliability in Systems Design I (3) S Faculty

Prerequisites: ME 205, MATH 370A or consent of instructor. Introduction to probabilistic design analysis; setting probabilistic design criteria; safety and reliability analyses and tools to assess the adequacy of the designs; identification of critical elements of the design and practical design guidance; compliance with the requirements. Coherent use of reliability concepts, reliability tools, and reliability programs to produce reliable and safe systems designs. (Lecture-problems 3 hours)

*405. Special Topics in Mechanical Engineering (3) F,S Unt

Prerequisite: Senior standing in mechanical engineering or consent of instructor. Selected topics from recent advances in mechanical engineering. Course content will vary from year to year and may be repeated once for credit with the consent of the department. (Lecture-problems 3 hours.)

407. Modern Developments in Ocean Engineering (1-3) F,S Perez y Perez

Prerequisite: Senior standing in Ocean Engineering or consent of instructor. Selected topics on recent advances in Ocean Engineering. Content will vary. May be repeated once for credit to a maximum of six units with consent of the department. (Lecture-problems 1 to 3 hours)

409. Modern Computational Aspects In Mechanical Engineering (1-3) F,S Gilpin

Prerequisite: Senior standing or consent of the instructor. Computational aspects of various branches of Mechanical Engineering. Content will vary. May be repeated once for credit to a maximum of six units with the consent of the department. (Lecture-problems 1 to 3 hours)

425. Chemical and Electrochemical Manufacturing Processing (3) F Miller

Prerequisites: ME 322, 330; or CH E 372 or equivalent. Theory of electrochemical processing. Electroplating and electroless plating solutions, processes and equipment. Anodizing and other surface treatments. Carburizing, nitriding atmospheres and equipment. Diffusion in solids. The effect of surface treatments on mechanical properties. (Lecture-problems 3 hours.)

*426. Corrosion Engineering (3) S Gilpin

Prerequisite: ME 322 or CHEM 372 or consent of instructor. Principles of oxide film growth and electrochemical corrosion, corrosion testing, environmental and metallurgical effects on corrosion, environmental stress crackling, corrosion control and prevention. (Lecture-problems 3 hours.)

431. Heat Transfer Systems Design (3) F,S deSoto

Prerequisites: ME 305, 330; CE 335; MATH 370A; WPE. Analysis of heat transfer by conduction, convection and radiation. Investigation of steady state and transient heat transfer systems. Computer methods. Design of heat exchangers and other heat transmission devices. (Lecture-problems 2 hours, laboratory 3 hours.)

450. Special Problems (1-3) F,S Unt

Prerequisite: Senior standing. Assigned topics in technical literature or laboratory projects and reports on same.

459. Professional Practice Seminar (1) F,S Unt, Mijares, Gilpin

Prerequisite: Senior standing in Industrial-Management, Ocean, Materials or Mechanical Engineering. Professional practice of engineering, graduate studies, recent developments, ethics, legal requirements, impact of governmental regulations, professional societies. Oral and written presentation of engineering reports. (Lecture-problems 1 hour)

463. Principles of Naval Architecture I (3) F Perez y Perez

Prerequisites: ME 366 or consent of instructor. Basic principles and design calculations in naval architecture; terminology, hull form geometry, buoyance, stability, trim, stability in damaged condition, load line and tonnage rules and introduction to design of ship structures.

464. Principles of Naval Architecture II (3) S Faculty

Prerequisite: ME 463 or consent of instructor. Fundamentals of the resistance and propulsion of ships, model testing. Theory and practice of propeller design. Fundamentals of ship maneuvering and control. Behavior of ships in waves. (Lecture-problems 3 hours.)

465. Ocean Engineering Laboratory I (1) F Faculty

Prerequisites: M E 365, 463, WPE or consent of instructor Ocean engineering experimentation both in the laboratory (wave tank) and at sea on board the Mechanical Engineering research vessel ENGINUITY. (Laboratory 3 hours)

467. Current Developments in Ocean Engineering (3) S Faculty

Prerequisite: ME 465. Study of ocean engineering developments and ocean environmental problems as they occur. Analysis of real and hypothetical ocean systems design projects. Current events in the field will be used to illustrate and amplify realistic design experience for the student. (Lecture-problems 3 hours.)

468. Design of Ocean Engineering Systems (3) S Faculty

Prerequisites: Senior Standing in Engineering, WPE. Project approach to ocean engineering systems design stressing creative and methodical techniques in problem definition, design conception and problem solutions. (Lecture-problems 3 hours)

469. Ocean Structures (3) S Faculty

Prerequisites: ME 365, 373 and CE 335 or consent of instructor. Introduction to hydrodynamic forces due to wave excitation; random process and ocean wave spectrum methods; ocean structure response prediction by response transfer function techniques, applications to design. (Lecture-problems 3 hours.)

471. Analysis and Design of Machine Components (3) F,S Mijares

Prerequisites: ME 373, 374, 375; WPE. Application of the principles of mechanics and physical properties of materials to the proportioning of machine elements, including consideration of function, production and economic factors. (Lecture-problems 2 hours, design application 3 hours.)

*472. Design or Mechanical Engineering Systems (3) F,S Edelman

Prerequisites: ME 322, 336, 373, 375; CE 335; WPE. Project approach to mechanical engineering systems design stressing creative and methodical techniques in problem definition, design conception and problem solution. (Lecture-problems 2 hours, design application 3 hours.)

476. Mechanical Control Systems (4) F,S Faculty

Prerequisites: M E 376. Principles and modeling of electrical, mechanical, hydraulic and pneumatic power systems. Control circuits theory and design using microprocessors and programmable controllers. (Lecture-problems 3 hours, laboratory 3 hours)

480. Petroleum Engineering (3) S Torakzadeh

Prerequisites: Senior standing in engineering or science. Overview of petroleum engineering operations, properties of petroleum reservoir rocks, single-phase and multiphase fluid flow through porous media. Properties of reservoir fluids. Field trips. (Lecture-problems 3 hours)

*490. Safety and Reliability In Systems Design II (3) F

Prerequisites: M E 390 or consent of instructor. Application of the probabilistic design analysis and theory to real case studies of system design using safety and reliability tools and analyses to set design criteria, assess the system design , determine failure modes and critical elements, provide practical design experience and demonstrate compliance with the requirements. (Lecture-problems 2 hours, design laboratory 3 hours)

Graduate Division:

501. Engineering Analysis I (3) F,S H.H.Chen

Prerequisite: MATH 370 A. Vector analysis, series solutions of differential equations (special functions), boundary value problems and characteristics function representation, partial differential equations, methods of formulating and solving problems in engineering. (Lecture-problems 3 hours.)

502. Engineering Analysis II (3) F,S Torby

Prerequisite: MATH 370A. Analysis of mechanical engineering problems by matrix theory and complex variables; numerical techniques. (Lecture-problems 3 hours.)

503. Introduction to Computer Simulation of Mechanical Systems (3) S Torby

Prerequisites: M E 305 or consent of instructor. Introduction to simulation and modeling of mechanical systems, classical theory, modal analysis and numerical methods. Simulation languages. Model construction. Computer exercises and examples. (Lecture-problems 3 hours)

505. Linear and Dynamic Programming for Engineering Applications (3) F,S Faculty

Prerequisite: EE 480. The principles of linear programming, transportation and assignment problems, dynamic programming, deterministic inventory models, probability amd stochastic processes and Markov chains for engineering applications. (Lecture-problems 3 hours.)

506. Engineering Management and Policy (3) F,S Faculty

Prerequisite: Graduate engineering standing. Analysis of the principles and theory of engineering administrative organizations, information systems, management functions, decision making tools, strategies and administrative policy formulations. (Lecture-problems 3 hours.)

507. Engineering Project Management (3) F,S Faculty

Prerequisite: Graduate engineering standing. Theory and philosophies of project management, principles of internal and industrial organization planning and control systems, motion in time study, industrial statistics, industrial research as aid to decision making. (Lecture-problems 3 hours.)

508. Engineering Management Integration (6) F,S Faculty

Integration of engineering project management techniques through the development of a management operating document, including consideration of constraints, parameters, technical skills, milestone schedules, interfaces, cost estimates and budgets. (Lecture-problems 6 hours)

510. Solar Engineering (3) F Faculty

Prerequisite: ME 336, 431. Origin, nature and availability of solar energy. Review of the fundamentals of radiation heat transfer. Solar energy thermal processes. Radiation characteristics of opaque materials. Flat-plat collectors. Focusing collectors. Energy storage-solar energy applications. Design of: (1) solar water heating systems, (2) solar heating and cooling systems, (3) solar power generation systems. (Lecture-problems 3 hours.)

511. Energy Selection and Conversion (3) S Faculty

Prerequisite: ME 336. Conversion of thermal to electrical energy, available energy, selection of energy sources, examination of alternative energy sources and resources. (Lecture-problems 3 hours.)

512. Nuclear Power Engineering (3) S Faculty

Prerequisite: ME 336, 431. Power production by nuclear methods, core engineering, heat transfer, reactor control and safety, fusion systems. (Lecture-problems 3 hours.)

521. Engineering Metallurgy II (3) F Gilpin

Prerequisite: ME 322. Properties and uses of structural steels, heat treatable steels, titanium alloys, nickel and cobalt base alloys; refractory metals, ultra high strength steels, stainless steels and metal matrix composite materials. Introduction to designing for fracture resistance. (Lecture-problems 2 hours, laboratory 3 hours.)

523. Crystallography of Materials (3) F Faculty

Prerequisites: ME 322. Perfect and in perfect crystalline states in metals; point, line and aggregate defects, including dislocation defects; preferred orientation, pole figures, ordering. Problems relating to metals, plastics and ceramics. (Lecture-problems 3 hours.)

524. Engineering Principles and Properties of Plastics (3) S Miller

Prerequisite: ME 373. Nature of polymers, physical and mechanical properties of plastics. Polymerization reactions and production. Properties of co-polymers, polymer solutions. Visco-elastic properties of polymerics. (Lecture-problems 3 hours.)

527. Metals and Plastics Manufacturing Processes (3) S Faculty

Prerequisite: ME 322. Theory of metal forming and plastics processing. Includes metal forging and rolling, metal and plastics extrusion, plastics injection molding, casting. Discussion of appropriate manufacturing methods. (Lecture-problems 3 hours.)

529. Composite Materials (3) F Miller

Prerequisites: M E 305, 322, 373, 524. Manufacturing and production of composite materials and structure selection of appropriate materials, stress-strain relationships, stiffness, strength of components. (Lecture-problems 3 hours) Grading: Traditional only.

532. Fluid Machinery (3) F Faculty

Prerequisites: ME 330, 371; CE 335. Design, analysis and selection of pumps, fans, blowers, compressors, turbines, fluid actuators, control and metering devices. The solution of practical engineering problems especially in the area of turbomachinery. Suitable field trips will be taken to observe manufacture and operation of equipment. Laboratory demonstrations will be made of selected items discussed in the course. (Lecture-problems 3 hours.)

536. Statistical Thermodynamics (3) S Faculty

Prerequisite: ME 330, 501 or equivalent. Fundamentals of statistical mechanics; quantum mechanics and statistics as applied to thermodynamics; behavior of gases and solids; chemical equilibrium. (Lecture-problems 3 hours.)

537. Intermediate Fluid Mechanics (3) S Faculty

Prerequisites: CE 335, MATH 370A. Dynamics of ideal and real fluids; potential flow, vortex flow; the Navier-Stokes equations; boundary layer theory, turbulence; compressible flows; applications of theory to practical systems involving fluid motion. (Lecture-problems 3 hours.)

538. Air Conditioning and Refrigeration (3) F Sungu

Prerequisite: ME 336, 431. Basic concepts in air conditioning psychrometry; calculation of heating and cooling loads in buildings; design of heating and air conditioning systems; principles of refrigeration and cryogenic engineering. (Lecture-problems 3 hours.)

539. Introductory Gas Dynamics (3) F Faculty

Prerequisites: ME 336, CE 335. Basic concepts of gas dynamics. Steady and unsteady compressible flow, basic wave phenomena. (Lecture-problems 3 hours).

540. Experimental Fluid Mechanics (3) S Faculty

Prerequisites: ME 537 or consent of instructor. Dimensional analysis and modeling, testing principles, wind tunnels and test rigs, measurement of pressure, temperature, velocity forces, fluctuating velocities. Thermal and laser doppler anemometers. (Lecture 2 hours, laboratory 3 hours.)

541. Aerodynamics of Vehicles and Structures (3) F Faculty

Prerequisite: CE 335. Theoretical and experimental aerodynamics applied to surface and flight vehicles such as automobiles and trains, conventional VTOL and STOL aircraft, parachutes and hang gliders; also applications to buildings, bridges and sailboats. Wind tunnel testing techniques. (Lecture-problems 2 hours, Laboratory 3 hours.)

543. Finite Element/Boundary Element Methods II (3) S Ohtmer

Prerequisites: M E 405 or consent of instructor. Advanced analysis of linear static, dynamic, heat transfer, and fluid flow problems applying finite element, boundary element methods. Orthotropic materials, rigid bodies in an elastic environment, substructures, condensation, modal analysis, special finite/boundary elements, pre-postprocessing application of STRUDL, NASTRAN, ANSYS. (Lecture-problems 3 hours)

544. Control of Mechanical Systems (3) F Mijares

Prerequisites: EE 370, ME 371. Derivation of equations of motion for mechanical systems. Design of mechanical elements, with emphasis on linear components, based on stability and transient analysis. (Lecture-problems 3 hours.)

551. Biomedical Applications in Mechanical Engineering (3) S

Prerequisite: Graduate standing in engineering. Techniques, applications and research findings, with emphasis on human capabilities and limitations in the design and use of man-machine systems. (Lecture-problems 3 hours.)

561. Automotive Engineering (4) S Edelman

Prerequisites: ME 330, 371, 373 or consent of instructor for non-engineering majors. Analysis and design of automotive equipment. Theoretical and practical aspects of combustion, fuels, power plants, drivetrains, vehicles, performance testing, safety, maintenance and economics. Correlation of design with performance. Laboratory testing will be conducted to verify theoretical developments. (Lecture-problems 3 hours, Laboratory 3: hours.)

574. Advanced Design and Manufacturing (3) S Das

Prerequisites: M E 472 or consent of instructor. Creative design: formulation, analysis and search for alternatives. Manufacturing and productivity: methods and value engineering. Latest computer-aided techniques: group technology, CAD/CAM, robotics and manufacturing resource planning (MRP). (Lecture-problems 3 hours)

575. Analytical Mechanics III. Advanced Dynamics (3) F Mijares, Torby

Prerequisites: M E 371, MATH 370A. Detailed study of particle and rigid body mechanics. Three dimensional analysis. Lagrange's equations and variational principles. Vibrating systems, variable mass problems, Euler's equations and gyromechanics. Introduction to simulation and numerical methods. (Lecture-problems 3 hours)

576. Engineering Vibrations I (3) S Unt

Prerequisites: ME 371, MATH 370A. Introduction to fundamentals of mechanical vibrations, types of oscillatory motions. Free, forced and transient vibrations; damping, vibration isolation, vibration measuring instruments. Coupled oscillations of lumped systems; use of Lagrange's equations; Rayleigh and matrix iteration method. (Lecture-problems 2 hours, Laboratory 3 hours.)

577. Advanced Mechanics of Deformable Bodies (3) F Tsao

Prerequisites: M E 373, 374, 471 or consent of instructor. Analysis of stress and deflection in unsymmetrical bending, shear center for beams, curved beams. Stress concentration, deformation beyond the elastic limit. Energy method; Castigliano's Theorem; Rayleigh-Ritz technique. (Lecture-problems 3 hours)

578. Creep and Fatigue (3) F Faculty

Prerequisites: ME 322, 373, or consent of instructor. Phenomena of creep and fatigue; effect on stress distribution in structural elements; buckling caused by creep; effects of space environment on fatigue; cumulative fatigue damage at normal and elevated temperatures. (Lecture-problems 3 hours.)

579. Engineering Acoustics (3) F Unt

Prerequisites: MATH 370A, EE 310, ME 371. Theory and application of acoustical principles to generation, transmission, measurement and control of sound. (Lecture-problems 2 hours, Laboratory: 3 hours.)

603. Advanced Engineering Analysis (3) S Faculty

Prerequisites: ME 501, 502 or equivalent. Solution of engineering problems by methods of asymptotic expansions, variational calculus and integral transforms. Selected topics of advanced analytical methods in engineering including partial differential equations, integral equations, distribution theory and non deterministic mathematics. (Lecture-problems 3 hours.)

621. Advanced Materials Engineering (3) F Miller

Prerequisite: ME 527 or consent of instructor. Imperfection in metals, dislocation theories of strength of metals, cold working, preferred orientation and texture due to deformation and recrystallization, transformation. (Lecture-problems 3 hours.)

622. Fracture of Engineering Materials (3) S Jahn

Prerequisite: ME 527 or 577 or consent of instructor. Mechanics of fracture, fracture toughness in brittle and ductile materials, macroscopic and microscopic aspects of crack propagation, stress corrosion cracking, hydrogen embrittlement, fatigue, creep, rupture and designing for fracture resistance. (Lecture-problems 3 hours.)

629. Design of Composite Structures (3) S Miller

Prerequisites: M E 529. Fatigue and creep of components, design guidelines for composite structures. Bolted and bonded joints. Design of selected configurations. (Lecture-problems 3 hours)

631. Viscous Flow Theory I (3) F Cebeci

Prerequisites: ME 431, 537. Development of equations for mass, heat and momentum transfer. Uncoupled laminar and turbulent shear flows, including buoyancy effects. Transport processes in laminar and turbulent fluid flows. Free and forced convection. (Lecture-problems 3 hours.)

632. Inviscid Flows I (3) F Faculty

Prerequisite: ME 537 or consent of instructor. Incompressible inviscid flow equations. Singularities: source, vortex, doublet. Flow about bodies by superposition of singularities. Conformal mapping solutions. Introduction to numerical solution procedures. (Lecture-problems 3 hours.)

633. Viscous Flow Theory II S Cebeci

Prerequisite: ME 631 or consent of instructor. Development of equations for mass, heat and momentum transfer of compressible flows. Coupled laminar and turbulent shear flows. Prediction of external, internal and free shear flows. Shock-wave/boundary-layer interaction. (Lecture-problems 3 hours.)

636. Analytical Thermodynamics (3) F Faculty

Prerequisites: ME 536, 539 or consent of instructor. Non-equilibrium thermodynamics, kinetic theory of gases; transport process; shock waves; chemical rate processes and radiative gas dynamics. (Lecture-problems 3 hours.)

637. Gas Dynamics II (3) S Faculty

Prerequisites: ME 539, 632. Conservation equations, one-dimensional compressible flow, shock waves, one-dimensional unsteady flow, method of characteristics for plane and axisymmetric flows, slender-body theory. (Lecture-problems 3 hours.)

640. Inviscid Flows II (3) S Faculty

Prerequisites: ME 632 or ME 637 or consent of instructor. Compressible inviscid flow equations, flow equation for small perturbations; Prandtl-Glauert transformation, small-disturbance, full potential and Euler equations for transonic flows. (Lecture-problems 3 hours.)

642. Advanced Inviscid Flows I (3) F Faculty

Prerequisites: ME 632 or consent of instructor. Singularity solutions of low-speed flow equations. Exact and approximate potential-flow methods with emphasis on lifting bodies. Thin-airfoil theory. Lifting-line and vortex lattice thin-wing theory. Panel methods for two- and three-dimensional flow. Slender-body theory for bodies of revolution. (Lecture-problems 3 hours.)

643. Finite Element/Boundary Element Methods III (3) S Ohtmer

Prerequisites: M E 543, 577. Nonlinear finite element/boundary element methods in engineering. Nonlinear static and dynamic analysis of aerospace structures applying STRUDL, NASTRAN, ANSYS. Large deformations, stress concentrations, elastic-plastic deformations, collapse and nonlinear buckling, creep and fatigue analysis, optimization. Random and nonlinear vibrations. (Lecture-problems 3 hours)

645. Advanced Inviscid Flows II (3) S Faculty

Prerequisites: ME 637, 640 or consent of instructor. Finite-difference solution of compressible inviscid flow equations. Line relaxation methods, finite-volume scheme, grid generation techniques, artificial viscosity, shock-point operators. (Lecture-problems 3 hours.)

648. Engineering Calculation Methods for Turbulent Flow (3) S

Prerequisites: ME 631, 633 or consent of instructor, Introduction to numerical methods for the solution of boundary- layer equations. Solution of two-dimensional internal and external boundary-layer problems. Unsteady flows, Calculation of stability and transition. (Lecture-problems 3 hours.)

649. Turbulence (3) F Faculty

Prerequisites: ME 631 or consent of instructor. Nature of turbulent flows, dynamics of turbulence, statistical description, homogeneous turbulence and spectral dynamics characteristics of turbulent shear flows. (Lecture-problems 3 hours.)

671. Random and Nonlinear Vibrations (3) S Unt

Prerequisite: ME 576. Characterization and transmission of random vibration; failure due to random vibration. Classification of nonlinear problems; exact, graphical and approximate solutions, singular points, stability. (Lecture-problems 3 hours.)

672. Stress Analysis in Design (3) S Faculty

Prerequisites: M E 577. Modes of failure and failure criteria. Stability of mechanical models, elastic bars and frames by kinetic and energy approaches; design of columns, beam columns and framed columns. Plastic collapse and limit analysis. Experimental methods of stress analysis. (Lecture-problems 3 hours)

673. Theory of Elasticity (3) F Faculty

Prerequisite: ME 577. Fundamental equations of the mechanics of elastic bodies. Plane problem. Bending, torsion and extension of Prismatic Bodies. Three-dimensional problem. Propagation of waves in elastic media. Approximate methods. Introduction to theory of plasticity. (Lecture-problems 3 hours.)

676. Engineering Vibrations II (3) F Unt

Prerequisite: ME 576. Theory of mechanical vibrations. Linear systems and self-excited vibrations. Methods of Newton, Lagrange, Stodola and Rayleigh-Ritz applied to distributed and complex lumped systems. Practical computational methods. (Lecture-problems 3 hours.)

677. Digital Simulation in Engineering (3) F Ohtmer

Prerequisites: M E 503. Numerical computation of displacements, stresses, eigenfrequencies, response displacements, velocity, pressure, and temperature distributions to optimize structures. 3D-Modeling of real structures. Animation of real structures, mechanisms, robots, streamlines, stress, pressure, and temperature distributions generated as 3D-models. Applying a "program-bank" at an engineering workstation. (Lecture-problems 3 hours)

691. Directed Studies (1-3) F,S Unt

Study of information in engineering and scientific literature on a current topic under the direction of a faculty member. Preparation of a written report based on this reading.

695. Seminar in Mechanical Engineering (3) F,S Faculty

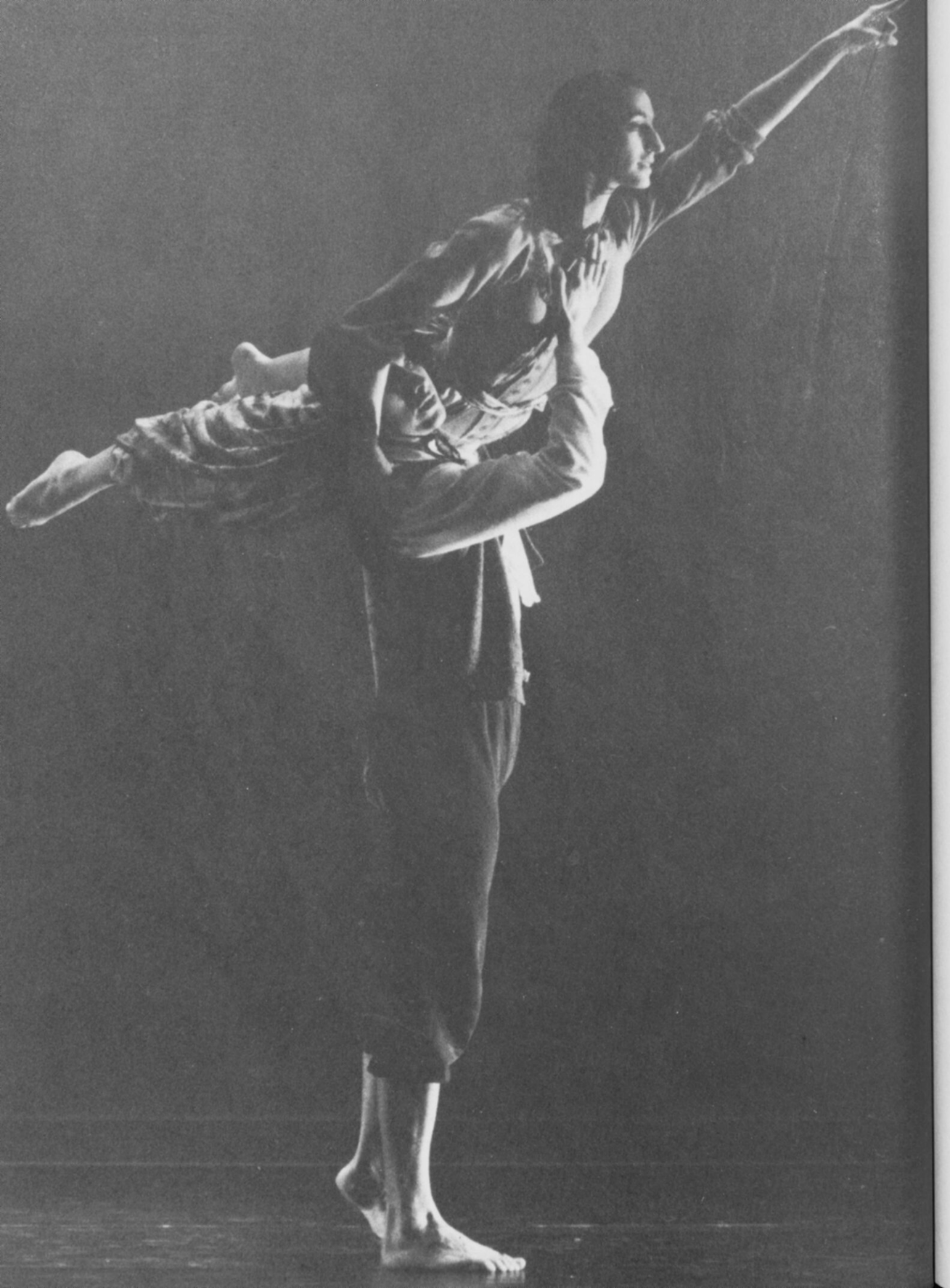
Prerequisite: Consent of instructor. Presentation of research in special fields: (a) engineering mechanics (b) heat transfer and thermodynamics (c) fluid mechanics (d) aeronautics and astronautics. May be taken in different areas for a maximum of six units of credit.

697. Directed Research (1-3) F,S Unt

Prerequisite: Graduate standing in mechanical engineering. Theoretical and experimental problems in mechanical engineering requiring extensive analysis.

698. Thesis (2-6) F,S Unt

Planning, preparation, and completion of a thesis in mechanical engineering.



School of Fine Arts

Dean: Dr. Wayne M. Sheley
Associate Dean: Thomas Ferreira
School Office: Lib E-112
Telephone: 498-4364

The learning opportunities within the School of Fine Arts reflect its commitment to the arts in all forms. For performers, artists and scholars, the School of Fine Arts provides an environment designed for individual achievement. It offers programs to meet the needs of students who wish to:

pursue professional careers in art, dance, design, music or theatre arts;
teach one or more of the arts;
follow a degree program that provides a broad education in the arts;
learn about the history and nature of the arts to complement studies in other disciplines;
develop appreciation of the art forms and their lasting value to the quality of life.

The School of Fine Arts offers a variety of degree programs designed to meet high standards of excellence and to provide our students with appropriate backgrounds consistent with their academic objectives. These include professionally oriented degrees for those who plan to become visual or performing artists (the Bachelor of Fine Arts Degree and Master of Fine Arts Degree in the Departments of Art, Design, and Theatre Arts and the Bachelor of Music and Master of Music in the Department of Music.) In addition, the Department of Dance offers a Bachelor of Arts Degree which provides an equally rigorous undergraduate program.

For those students who are planning careers in secondary teaching, or wish to pursue the arts in a more scholarly, rather than performance oriented direction or prefer to obtain a more liberal education with the arts as a central component, all of the departments offer appropriate Bachelor of Arts degree options. The Departments of Art, Design, Music and Theatre Arts also offer the Master of Arts Degree.

The quality of the programs in the School of Fine Arts is evidenced by the fact that each department in the School has met the standards and is an accredited institutional member of the major accrediting agency for that discipline: The National Association of Schools of Art and Design, The National Association of Schools of Dance, The National Association of Schools of Music and The National Association of Schools of Theater.

Other special programs include certificates in Biomedical Illustration, Music Therapy and Museum Studies. The University Art Museum presents exhibitions of professional stature focusing primarily on contemporary artists.

Major performance facilities include the University Theatre, Studio Theatre and the Recital Hall of the new University Music Center. Additionally, an exceptional Theatre Arts complex and classroom and art studio space to serve almost any creative purpose provide the setting for the work of the School. The extensive performance calendar generated from the wide. ranging curriculum — concerts, theatre productions, dance performances and art exhibitions — has become a highly visible part of the campus, as well as an important cultural resource in the Long Beach/Los Angeles and Orange County areas. A growing Summer Festival of the Arts creates opportunities for special workshops and seminars, as well as attracting noted professional artists to the CSULB campus.

The nearly 200 faculty of the School of Fine Arts are themselves accomplished scholars, artists or performers who bring their expertise and experience to their teaching assignments.

Interaction between students is vital to the life of the School of Fine Arts; students join together in such pursuits as the bands, choirs, ensembles and orchestras of the Music Department, in the many-faceted production efforts behind each theatre performance, in the choreography, performance and technical support that bring together a dance concert.

The School also enjoys the support of two long-established community organizations: Fine Arts Affiliates and Dramatic Allied Arts Guild. These groups award student scholarships and provide assistance for special projects and events within the School of Fine Arts.

Art

School of Fine Arts

Department Chair: Robert W. Ramsey
Department Office: Fine Arts 4, Room 106
Telephone: 498-4376; 498-4377
Faculty: Professors: Ingrid Aall, Blair C. Archer, David C. Borders, Robert E. Click, Gene R. Cooper, Donald Dame, John deHeras, Betty A. Edwards, A. Thomas Ferreira, Constance W. Glenn, Kenneth Glenn, Herman H. Graff, Jennifer J. Grey, Calvin D. Gross, Howard G. Hitchcock, Joseph H. Krause, Mary Jane Leland, Neil Lieberman, John R. Lincoln, Diane L. Martel, C. Douglas Moryl, Dieter Muller-Stach, Richard S. Oden, Cynthia A. Osborne, Alvin A. Pine, Robert W. Ramsey, John J. Shaak, John C. Snidecor, Richard Swift, Charles M. Thompson, Eugene C. Wallin, Stephen G. Werlick; Associate Professors: Domenic Cretara, Kristi E. Slayman Jones; Assistant Professor: David J. Hadlock, Thomas J. Krumpak, Peter Mendez.
Emeritus Faculty: Bela L. Biro, James S. Crafts, Orval Dillingham, Beatrice M. Greer, John Martin, Maxine Merlino, Jane Purcell, Josephine Schultz, L. Ward Youry
Administrative Aide: Patricia M. Alemán

Students desiring information should contact the department office for referral to one of the faculty advisors: Director, The University Art Museum; Credential Advisor; Undergraduate Advisor; Graduate Advisor.

In recognition of the quality of its programs and the standards it maintains, the Art Department is an accredited institutional member of the National Association of Schools of Art and Design.

The Art Department at California State University, Long Beach, is one of several campuses in the California State University system authorized to offer the master of fine arts degree in art with a large number of specializations. The diversity of its programs, the quality of instruction, and the professional calibre of its faculty all combine to provide an exceptional opportunity and challenge to students seeking meaningful educational experiences and careers in the visual arts.

The Art Department has curricular programs leading to the following undergraduate degrees: (1) bachelor of arts (general art); (2) bachelor of arts (art history); (3) bachelor of arts (teacher preparation); (4) bachelor of fine arts in seven specializations (ceramics, drawing/painting, illustration, metalsmithing/jewelry, printmaking, sculpture, and textile design).

At the graduate level the Art Department offers both the master of arts degree and the master of fine arts degree. As the terminal degree for studio artists, the master of fine arts degree requires a minimum of two years and provides eight professional specializations as follows: ceramics, drawing/painting, general crafts, illustration, metalsmithing/jewelry, printmaking, sculpture, and textile design.

The master of arts degree, designed as a one-year program, is offered by the Art Department in ten specializations; in addition to the eight studio areas listed above, the M.A. degree is granted in art history and art education. The department also offers a graduate-level Certificate Program in Museum Studies and an interdisciplinary program leading to a Certificate in Biomedical Art.

As is customary in most schools, the Art Department reserves the right to keep for a period of up to three years work or projects completed by students for class credit.

Students majoring in Design should contact the Design Department Chair for specific course offerings and degree requirements.

Admission to Baccalaureate Degree Programs in Art

Since requests for admission to Art Department programs (10021) may exceed the capacity to accommodate, all applicants are encouraged to apply during the first month of any initial filing period. When the initial application is received, an Art Department questionnaire will be sent to each applicant for designation of the specific degree and specialization desired. Applicants must return this form by the stated deadline directly to the Art Department or they will be considered only for the B.A. in General Art. Applicants for admission to the B.A. degree programs (General Art, Teacher Preparation or Art History) must meet all entrance requirements of the University.

Admission to the Bachelor of Fine Arts Degree

Students seeking admission to the B.F.A. program must:

1. Meet entrance requirements of the University.
2. Provide a transcript of all college level credits. This is in addition to any transcript submitted to the University Admissions Office.
3. Submit a portfolio of creative work to the Art Department.

Students who have not yet achieved sufficient specialization to prepare a portfolio or otherwise demonstrate their qualifications for the B.F.A. program are advised to seek admission to the B.A. program in art. Once in residence, the B.A. student may take more specialized work and apply at a later date to change to the B.F.A. program.

Admission Procedures for Change of Major

Currently enrolled students who are undeclared or majors in other departments and who wish to apply for admission to degree programs in art must:

1. Submit a Change of Degree Objective form to the Art Department Office during the months of November or August for Drawing and Painting and Illustration only, all others check with Art Department.
2. Students applying for the B.F.A. degree programs in Art must also supply transcripts of college-level academic work attempted in addition to a portfolio of their creative work.

Bachelor of Arts in Art (General Art) (code 2-5850)

This program is for students who seek a broad understanding and appreciation of art. Total art/design units required: 47 (23 lower division, 24 upper division).

Requirements for the Bachelor of Arts in Art (General Art):

Lower Division Requirements:
ART 111 or 161, 112A, 112B, 131, 181, 184 and 187; DESN 121.

Upper Division Requirements:
A minimum of 24 units of upper division art which must include:

1) two courses from art history, only one of which may be in ART 438 or 439;
2) three courses from drawing, painting, illustration or printmaking;
3) three courses from crafts or sculpture.

Bachelor of Arts Degree in Art (Art History) (code 2-5857)

This program is for students who wish to specialize in the study of the history of art.

Lower Division:
ART 112A, 112B, 113A, 113B, 181,187, 263; DESN 121; HIST 131A,B.

Upper Division:
ART 307, 308,309, 334, 335 and 497; one course selected from five of the following seven groups: I: ART 408, 409, 410; II: ART 423, 424,425; III: ART 401, 426, 427, 436; IV: ART 437, 438, 439; V: ART 465, 466, 467; VI: ART 468, 469, 470; VII: ART 455, 456, 457. Other: A score of 450 in either French or German on the Graduate School Foreign Language Test or complete two years of French or German with an average grade of B or better.

Bachelor of Arts Degree in Art (Art Education) (code 2-5867)

The bachelor of arts (teacher preparation) degree is a four-year art major degree program required of those students seeking a single subject teaching credential in art (K-12) under the Teacher Preparation and Licensing Act of 1970 (Ryan Act).

Requirements for the Bachelor of Arts in Art (Art Education):

Lower Division:
ART 111, 112A, 112B, 131, 181, 184, 187; DESN 121.

Upper Division:
ART 438 or 439, and one course selected from ART 455, 456, 457, 466, 467, 468, 469 or 470. ART 385A and one course other than 385B in drawing or painting or printmaking or illustration. Two courses in Design Department selected from DESN 322A, 327A, 331A, 341A, 344A. ART 354A and one course in ceramics of jewelry or metalsmithing or sculpture or ART 328 or 428A. ART 300 and 407.

Single Subject Credential —

The Single Subject Credential in Art requires 30 units of upper division or graduate course work beyond the B.A. However, some or all of the professional education courses and student teaching may be taken in the B.A. program or within the fifth year. These courses are EDSS 300A (recommended for the junior year); ENGL 300; H SC 411; EDSE 310 and 421 or 435 and 436; EDSS 450A; EDSE 457, and EDSS 470A and B, Final Directed Field Experiences (Student Teaching). For information concerning requirements for the B.A. program, teacher preparation, as well as the fifth year for the credential, consult the art education faculty.

Bachelor of Fine Arts Degree

The bachelor of fine arts degree is offered for the student eventually seeking a master of fine arts degree, the position of a professional artist or designer, and for the student seeking a career of teaching studio art within a selected specialization. The B.F.A. degree program is demanding, requiring high quality performance in order to develop the professional competence of talented students toward successful entrance into the professional art field. There are seven professionally-oriented specialized programs leading to the B.F.A. degree. Total art and support units required: 70 (29 lower division, 41 upper division). Total units for graduation: 132.

Requirements for the Bachelor of Fine Arts in Art: Programs of Specialization:

Option in Ceramics (code 4-5852)

Lower Division:
ART 111 or 161, 112A, 112B, 131, 151A, 151B, 181, 184, 187, DESN 121.

Upper Division:
ART 320, 341A, 341B, 343A, 343B, 352A, 451A, 451B; ART 364 and six additional units of art history; nine additional units of art outside specialization.

Option in Drawing and Painting (code 4-5858)

Lower Division:
ART 112A, 112B, 131, 161, 181, 184, 187, 281, 284, 287; DESN 121.

Upper Division:
ART 320, 381, 384A or 384B, 385A, 387A or 387B, 389, 487A or 487B, 499K; six units of art history, only three of which may be in ART 438 or 439; 12 units of art outside the specialization; special emphasis in Drawing and Painting: Intermedia. Upon approval of the intermedia faculty, nine units of ART 499T, Intermedia, will be substituted for nine required upper division units in drawing and painting.

Option in Illustration (code 4-5855)

Lower Division:
ART 111 or 161, 112A, 112B, 131, 181, 184, 187, 271, 284; DESN 121, 223.

Upper Division:
ART 320, 371A, 371B, 372; a minimum of four units from 373, 385A, 385B or 389; 471A, 471B, 499F or 374A; six units of art history, only three of which may be from ART 438 or 439; ART 387A; ART 382A and six additional units of art outside specialization.

Option in Metalsmithing and Jewelry (code 4-5860)

Lower Division:
ART 111 or 161, 112A, 112B, 131, 181, 184, 187, 271; DESN 121; IA 101, 282.

Upper Division:
ART 320, 357A, 357B, 358A, 358B and nine units selected from ART 355, 356, 359, 458A, 458B or 499J; six units of ART history, only three of which may be in ART 438 or 439; 12 units of art outside the specialization.

Option in Printmaking (code 4-5861)

Lower Division:
ART 111, 112A, 112B, 131, 181, 184, 187,281; ART 284 or 287; DESN 121; IA 101.

Upper Division:
ART 320, 370; eighteen units from ART 376, 377, 378, 379, 475, 480 and 499R; ART 365, 439 and three additional units of art history; ART 381 and six additional units of art outside specialization.

Option in Sculpture (code 4-5862)

Lower Division:
ART 112A, 112B, 131, 161, 181, 184, 187, 263; DESN 121; four units of art electives.

Upper Division:

ART 320, 361, 362A, 362B, 363, 459, 461, 463, six units of art history only three units of which may be in ART 438 or 439; 12 units of art outside specialization.

Option in Textile Design (code 4-5863)

Lower Division:

ART 111, 112A, 112B, 131, 181, 184, 187; DESN 121; 6 units selected from ART 271, 281, 287; DESN 223

Upper Division:

ART 320, 327A, 327B, 328, 428A, 428B, 428C, 499N; ART 366, DESN 368 and three additional units of art history; nine additional units of art outside the specialization.

Concentration in Art for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required; 15 of which are upper-division courses.

Lower Division:

DESN 121, ART 181, 131 or 187 (ART 110 recommended).

Upper Division:

One course from ART 436, 437, 438, or 439, four courses from ART 300, 302, 306A, 327A, 348A, 354A, 355, 356, 357A, 380A, 380B, 381, 385A, 387A, 402, 404, 405, 407.

Certificate Program in Biomedical Art

The Certificate Program in Biomedical Art is an interdisciplinary program sponsored by the Art and Biology Departments.

Biomedical art is commissioned principally by (1) hospitals or individual researchers for publication, (2) by publishers and film producers serving the biomedical professions, (3) by producers of educational aids for biomedicine. Therefore, proficiency in commercial art and printing procedures including photography and typography is required.

Special permission is not required for a student to pursue the Certificate in Biomedical Art. The student may apply for certification upon completion of the following CSULB course work and conditions:

Requirements for the Certificate in Biomedical Art:

1. A major in art or biology.
2. A 2.75 overall GPA and 3.25 in the major.
3. Forty-eight units as listed: ART 181, 184, 271, 372, 374A, 374B, 499F; DESN 121; BIOL 208, 212, 216, 313 or 324, 327 or 331, 364, 365. (Although CHEM 111A is a prerequisite for BIOL 216, this may be waived for art majors in the biomedical art program by consent of the instructor concerned.)

Co-directors of the CSULB biomedical art program are in art: Richard Oden, professor, and Peter Mendez, assistant professor, and in biology: Dr. Hiden T. Cox, professor, and Dr. Kenneth Gregory, associate professor. Questions may be addressed to them during office hours which are listed in the respective departmental offices.

Certificate Program in Museum Studies

The Certificate Program in Museum Studies is open to graduate students in museum related fields including the visual arts, science, history, but does not exclude other fields. The initial program is to be devoted primarily to art museum studies.

Admission to the program is by permission of the museum studies faculty within the Art Department. Interested students should apply to the Director, The University Art Museum.

Requirements for the Certificate in Museum Studies:

A total of 30 units to include: DESN 344A or B; ART 345, 445A-B taken consecutively beginning in the spring semester, 442Q in museum internship; ART 307 and 12 additional units selected from ART 499Q, Art History, Anthropology, Business Administration, English, Instructional Media, Journalism or Public Policy and Administration, subject to approval of the director of the program at the time of admission to ART 445A.

Master of Arts in Art (code 5-5850)

The Art Department master of arts degree program provides 11 professional specializations under the following categories: art education, art history, pictorial arts (drawing and painting, sculpture, printmaking), illustration, crafts (general crafts, textiles, ceramics, metalsmithing/jewelry).

Prerequisites:

1. A bachelor's degree from an accredited institution with a minimum of 24 units of upper division art comparable to those required of a major in art at this University.
2. Completion of 16 units minimum of upper division work in the area of specialization for the Master of Arts degree program. If the area of specialization is Art Education, the 16 units will consist of art and education courses approved by the Art Education graduate faculty.
3. Completion of a minimum of 12 units in Art History, six units of which must be upper division. (Not applicable to the M.A. in Art History.)
4. Presentation to the student's specialization faculty of a portfolio of representative studio work with emphasis in the area of specialization. Reviews are completed by the first week in October for the following spring semester, by the first week in March for the following fall semester.

In lieu of a portfolio, Art History students must: (a) present college transcripts to the Art History graduate advisor; (b) pass the Graduate School Foreign Language Examination in French or German with a minimum score of 450, or complete two years of French or German with an average grade of B or better; (c) have completed ART 307 (Historiography), 308 (Art Theory), 309 (Art Criticism), 335 (Classical Concepts), ART 335 ("Primitive") or their equivalents.

5. A grade point average of 3.0 or better in upper division Art. Students who do not meet the minimum 3.0 grade point average within the required 24 units as an undergraduate may count units taken as a post-baccalaureate student to meet this grade point average. Course work taken as a graduate to validate undergraduate preparation may not be used to satisfy any requirement in the student's M.A. program.

All pre-requisites must be fulfilled before a student can become classified in a graduate degree program.

Advancement to Candidacy

Approval of the graduate program by the student's graduate advisory committee, the Graduate Adviser, Art Department Chair and Dean of the School of Fine Arts. Art history students must (1) secure approval of a qualifying paper demonstrating potential for success in thesis research and writing. The qualifying paper is written in residency in conjunction with any art history course. This requirement may be met while completing prerequisites; (2) complete course work of comparable distribution to that required for the B.A. in Art History at CSULB (a course or its equivalent at another institution in five of seven categories; (3) achieve a score of 600 in either French or German on the Graduate School Foreign Language Examination or pass an art history Language Competency Test in reading French or German. Students may seek approval from the art history faculty to substitute tested competency in another language for French or German if their graduate studies would justify the alternative language.

Advancement to Candidacy Requirements:

1. Classified Graduate standing.
2. A graduate program approved by the student's committee, the Graduate Advisor, the Art Department Chairman, and the Dean of the School of Fine Arts.
3. A grade point average of 3.0 or higher in all work undertaken for the program.
4. The removal of any Incompletes.
5. Successful completion of the Advancement Review.
6. Complete minutes of graduate committee meetings with the student which total a minimum of one meeting for each semester of program units.

Advancement to Candidacy requirements for the M.A. in Art History also include:

1. Approval of a qualifying paper demonstrating potential for success in thesis and research writing.
2. A distribution of course work in prerequisite and completed graduate units comparable to that required of the B.A. in Art History at CSULB (a course or its equivalent at another institution, in five of seven categories. A minimum of one course in Eastern Art, whether in lower or upper division prerequisite or upper division graduate course work will be expected of all students).
3. A minimum score of 600 in either French or German on the Graduate School Foreign Language Exam or pass an Art History language competency test in reading French or German. Students may seek approval from the Art History faculty to substitute tested competencies in another language for French or German if their graduate studies would justify the alternative language.

Requirements for the Master of Arts:

Completion of all requirements as established by the graduate advisory committee to include:

1. A minimum of 30 units of approved upper division and graduate courses with a minimum of 18 units in the area of specialization. At least 15 of these 18 units in the area of specialization must be 500-600 series courses taken at this University. Art education students must satisfy credential English requirements.
2. Not more than eight units of approved upper division work outside the area of art.
3. A thesis or studio project. All students completing a studio project for ART 698 are required to exhibit the work done for the project and complete a studio thesis before the master's degree is granted, in accordance with the Art Department Guide for Master's Exhibitions.
4. A minimum of six units of upper division or graduate art history or related history beyond the 12 units listed as prerequisites, taken prior to or as part of the graduate program.

Requirements for the Master of Arts — Studio:

Degree Requirements

Completion of all program requirements as established by the student's graduate committee to include:

1. A minimum of 30 units of approved upper division and graduate courses with a minimum of 18 units in the area of specialization. At least 15 of those 18 units in the area of specialization must be 500-600 series courses taken at this University. (6 units may be transfer.)
2. Not more than 8 of the 30 units may be from approved upper division work outside the department, "approved" indicated by an asterisk preceding the course number in the University Catalog.
3. A studio project and project report. All students completing a studio project for ART 698 are required to exhibit the work done for the project before the master's degree is granted, in accordance with the Art Department Guide for Master's Exhibitions.
4. A minimum of 6 units of upper division or graduate art history or related history beyond the 12 units listed as prerequisites, taken prior to or as part of the master's program.

Requirements for the Master of Arts — Art History:

Degree Requirements

Completion of all requirements as established and approved by the student's graduate committee to include:

1. A minimum of 30 units of approved upper division and graduate courses with no less than 18 of these units in Art History. (6 units may be transfer.)
2. A minimum of 15 units of the 30 must be 500 or 600 level Art History units taken at this University.
3. No more than 8 units of the 30 may be outside the Department.
4. A thesis which constitutes 6 of the 15 units of graduate level Art History.

Master of Fine Arts in Art (7-5850)

The Art Department master of fine arts degree program provides 8 professional specializations under the following categories: Pictorial Arts (drawing and painting, sculpture, printmaking), Illustration, Crafts (general crafts, textiles, ceramics, metalsmithing/jewelry).

Prerequisites:

1. A bachelor's degree from an accredited institution with a minimum of 24 units of upper division art comparable to those required of a major in art at this University.
2. Completion of 18 units of upper division work in the area of specialization for the proposed M.F.A.
3. Completion of a minimum of 12 units of Art History, six units of which must be upper division.
4. Successful completion of the Writing Proficiency Examination.
5. Presentation of a portfolio of representative studio work to the faculty in the student's area of specialization, with emphasis on work in that specialization. Reviews are completed by the first week in October for the following spring semester, by the first week in March for the following fall semester.
6. A grade point average of 3.0 or better in upper division art. Students who do not meet the minimum 3.0 grade point within the required 24 units as an undergraduate may count units taken as a post-baccalaureate student to meet this grade point average. Course work taken as a graduate

to validate undergraduate preparation may not be used to satisfy any requirements in the student's M.F.A. program.

All prerequisites must be fulfilled before a student can become classified in a graduate degree program.

Advancement to Candidacy Requirements:

1. Classified graduate standing.
2. A graduate program approved by the student's committee, the Graduate Advisor, the Department Chairman, and the Dean of the School of Fine Arts.
3. A grade point average of 3.0 or higher in all work undertaken for the program.
4. The removal of any Incompletes.
5. Successful completion of the Advancement Review.
6. Complete minutes of graduate committee meetings with the student which total a minimum of one meeting for each semester of program units.

Requirements for the Master of Fine Arts in Art:

A minimum of 60 units of approved coursework including:

1. At least 36 units in the area of specialization. Thirty of these must be in graduate level courses (500-600 series) which must include: 690A-3, 690B-3, 692-3 and 699-6.
2. Six units of approved upper division or graduate course work outside of art.
3. A comprehensive review administered by the student's graduate committee after the completion of 21 units of studio course work. This review is to determine whether the candidate will continue in the M.F.A. program. Transfer students or returning M.A. graduates who are awarded 21 or more units toward the M.F.A. for previous graduate work by their respective committees are considered to have met this requirement.
4. A minimum of six units of upper division or graduate art history or related history beyond the 12 units listed as prerequisites, taken prior to or as a part of the graduate program. Art history units taken as part of the graduate program must be at the 500/600 level.
5. Twelve units of upper division or graduate elective courses in art.
6. Studio project. All students must complete a studio project for ART 699 and are required to exhibit the work done for the project and complete a studio thesis before the M.F.A. degree is granted in accordance with Art Department Guide for Masters' Exhibitions.

M.F.A. Transfer and Residence Policy:

1. Transfer credit allowable toward the M.F.A. is normally not to exceed 30 units.
2. M.F.A. candidates must complete a minimum of 18 specialized units with graduate numbers in residence.
3. All transferred credit used in the M.F.A. must be determined by the student's master's graduate committee and approved by the department Graduate Advisor.
4. The CSULB Master of Arts degree will normally count for a maximum of 30 units (18 in the specialization) toward the M.F.A. degree. Exceptions up to an additional 6 units may be approved for outstanding students by the Art Department Graduate Committee.

Courses (ART):

Lower Division

100. Introductory Studio Art for Non-Art Majors (3) F,S Edwards

Basic theory and concepts in drawing, painting, color and two-dimensional design. Use of various media with emphasis upon developing perceptual skills. (Lecture 2 hours, laboratory 3 hours.)

110. Introduction to the Visual Arts (3) F,S Shaak

Analysis, interpretation and evaluation of art forms; styles and themes in art; influences motivating art expression. Illustrated lectures with supplemental visits to art galleries and museums. For non-art majors.

111. Fundamentals of Art (2) F,S Faculty

Comparative study, through lecture, discussions and readings, of the considerations which are basic to an understanding of art and its relation to society.

112A,B. Survey of Western Art (3,3) F,S Faculty

Chronological survey of art as an integral part of Western culture. 112A: From prehistory through the Middle Ages; 112B: From Proto-Renaissance to 1945.

113A,B. Survey of Eastern Art (3,3) F,S Faculty

Survey of art as an integral part of Eastern culture. Art 113A; India and Southeast Asia; 113B; China, Japan and Korea.

131. Three-Dimensional Form (3) F,S Faculty

Prerequisites: ART 181; DESN 121. Investigation and problems in the organization of three-dimensional phenomena.

151A. Beginning Ceramics:Handbuilding (3) F,S Faculty

Prerequisites: None. Introduction to ceramics as an art making material using handbuilding techniques such as slab, coil, and molding, including glazing and firing processes.

151B. Beginning Ceramics: Wheel Throwing (3) F,S,SS Faculty

Prerequisites: None. Introduction to ceramics as an art making material emphasizing the use of the potters wheel to develop forms. Includes glazing and firing.

161. Beginning Life Sculpture (2) F,S Faculty

Prerequisites: ART 181, 184. Modeling from the human figure with emphasis on composition.

181. Beginning Drawing (3) F,S Faculty

Introduction to drawing with emphasis on perspective, light, shadow, and volume in composition using a variety of media.

184. Beginning Life Drawing (3) F,S Faculty

Prerequisites: ART 181 or concurrent enrollment in 181 and 184. Introduction to drawing from the human figure.

187. Beginning Painting (3) F,S Faculty

Prerequisites: ART 181; DESN 121. Introduction to painting problems using opaque media.

220. Principles of Color (2) F Faculty

Prerequisite: DESN 121. Study of the physical, physiological and psychological aspects of color through lecture and studio projects. An investigation of the various methods (Munsell, Ostwald, etc.) used to catalog color. (Same course as Design 220.)

254. Introduction to Crafts (3) F,S Faculty

Crafts processes, techniques, materials and concepts as related to the design and making of utilitarian objects. Designed for non-art majors. Not open to art majors.

263. Beginning Sculpture (2) F,S Faculty

Principles of sculpture expressed through basic experiences in modeling, carving, construction and mold making.

271. Rendering (2) F,S Faculty

Prerequisites: ART 181; DESN 121. Graphic visualization for convincing representation.

281. Intermediate Drawing (2) F,S Faculty

Prerequisite: ART 181. Drawing in various media with emphasis on space and form.

284. Intermediate Life Drawing (2) F,S Faculty

Prerequisites: ART 181, 184. Drawing from the human figure with an emphasis on representation.

287. Beginning Life Painting (2) F,S Faculty

Prerequisites: ART 184, 187. Painting from the human figure with an emphasis on representation.

Upper Division

303. Introduction to Art Therapy (3) Faculty

An introductory overview of the theory, literature and practice of art therapy for those interested in this field as a potential career choice or as a personal therapeutic process.

310. Creativity and Cognition for Non-Art Majors (3) F,S Edwards

Prerequisite: none. A course designed for students from any major field, technical or non-technical. No special training in art or special capability in art is required. Emphasis is on creative problem-solving and on bringing the process of creative thinking under better control.

320. Issues in the Arts (2) F,S Faculty

Comparative examination, discussion and study of major issues in the arts with special emphasis on issues that face the artist in our contemporary society. Evaluation on a Credit/No Credit basis.

348A-B. Stained Glass (3,3) Faculty

A: The study of basic stained glass techniques involved with glass bonding, leaded glass and the copper foil process. An emphasis on design application and color theory will be stressed.

B: Prerequisite: Art 348A. Advanced techniques relating to the art of stained glass. Sandblasting, glass slumping, glass painting, lead casting, glass sculpture and frame making will be among the techniques covered.

349A-B. Microcomputer Art Studio (3,3) F,S Moryl

Prerequisite: Art 181, 187. Basic theory and instruction in the utilization of microcomputer graphics as a studio art tool. Hands-on use of microcomputers employing graphics in "Paint Programs" with color hardcopy output and animation production on video tape. Emphasis on computer graphic applications in students' individual studio art disciplines. [Art activity: 6 hours]

360IC. Mythic Visions into Art (3) F Jones

Thematic polarities in art will be examined: Chaos and Cosmos; Microcosm and Macrocosm; Life and Death; Sacred and profane in relation to expression of the same in mythology. For I.C. credit, must be taken concurrently with Comparative Literature 452IC.

375IC. The Avant-Garde: Radical Change in Art and Music in the 20th Century (3) F Matthews Gross

An examination of some of the major 'modern' or avant-garde styles and movements in art and music in Europe and America from about 1900 to the present. The course aims not only to characterize these styles and their practitioners but to relate them to major changes in modern society.

***459. Sculpture Foundry: Shell Casting (3) F,S Hitchcock**

Prerequisite: Consent of instructor. Lost-wax casting of expressive and/or functional art forms in bronze using ceramic shell molds. Limited to six units.

***460. Women Artmakers (3) S Faculty**

Exploration of unique aspects of the work of women artists past and present. Emphasis on direct experiences with art and artists through gallery and studio visits, presentations of film and video, performances and discussions with artists as well as slide lectures. Opportunity for field research and personal interviews.

***489. Special Topics in Visual Art (1-3) F,S Faculty**

Prerequisite: Consent of instructor. Topics of current interest in the visual arts will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. Topics will be announced in the Schedule of Classes.

***490. Special Topics in Studio Art (1-3) F,S Faculty**

Prerequisite: Consent of instructor. Special topics of current interest in studio art will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. Topics will be announced in the Schedule of Classes.

***495. Field Studies in Art (1-6) F,S Faculty**

An opportunity to study artistic monuments, objects, theories, techniques at appropriate off-campus locations. Up to six units of cumulative credit may be earned in ART 495.

***499T. Special Studies in Intermedia (3) S Faculty**

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual and group projects. Projects may be interdisciplinary and include performance, process and concept art, and the application of materials and technology to new forms of art. Limited to six units in one semester and a total of nine units.

***499V. Special Studies in Art Photography (3) F,S Moryl, Routh**

Prerequisite: Consent of instructor. Opportunity for extensive work, with faculty supervision, on individual problems in photography as an art form. Limited to six units in one semester and a total of nine units. [Art activity: 6 hours]

Art Education courses:

[ART 403, 404, 405, 407 and 499P are acceptable for the M.A. with a specialization in Art Education.]

300. Child Art (3) F,S Faculty

Planning, developing and evaluating objectives and procedures for teaching the visual arts in the elementary school which includes experiences appropriate to child growth and development. Not open to students with credit in ART 300A.

302. Child Crafts (3) F,S Faculty

Planning, developing and evaluating objectives and procedures for teaching the visual arts in the elementary school. Experiences in crafts, sculpture and printmaking processes appropriate to child growth and development. Not open to students with credit in ART 300B. (Not applicable to craft requirement under General Art.)

304. Art for Recreational Programs (2) F,S Archer

Prerequisite: ART 100 or consent of instructor. Art and craft media, techniques and processes in recreation and leisure studies. For programs which reach diverse age and interest levels.

306A,B. Arts and Crafts for Exceptional Children (2,2) F,S

Methods and materials for teaching arts and crafts to mentally retarded, educationally handicapped, visually impaired, aurally impaired, multi-handicapped, orthopedically impaired and disadvantaged children.

402. Art Therapy: Theory and Practice (3) S Faculty

Prerequisite: ART 303. Study of the theory of art therapy as revealed through case histories exploring art products in relation to therapeutic process involved. Emphasis on school and clinical settings ranging from pre-school to geriatric levels.

403. Crafts for Secondary Schools (3) F,S Faculty

Experience with a variety of craft processes using materials and equipment appropriate for junior and senior high school art programs. Consideration of objectives and procedures for teaching crafts. Not open to students with credit in ART 303. (Not applicable to craft requirement under General Art.)

404. Ceramics for School Programs (3) F,S Faculty

Experience with ceramic processes, materials and equipment appropriate to school art programs. Consideration of objectives and procedures for teaching ceramics. Not open to students with credit in ART 305A-B. (Not applicable to craft requirement under General Art.)

405. Drawing and Painting for School Programs (3) F,S Faculty

Experiences with a variety of drawing and painting techniques and materials appropriate for school art programs. Consideration of objectives and procedures for teaching drawing and painting. Not open to students with credit in ART 308A-B.

407. Art Practicum (3) F,S Faculty

Prerequisite: Consent of instructor. Development of attitudes and skills required for the production, evaluation and appreciation of the visual arts. Consideration of the value of the art process and product to the individual and to society.

499P. Special Studies in Art Education (3) F,S Faculty

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in art education. Limited to six units in one semester and a total of nine units.

Art History courses:

***307. Historiography in Art (3) S Krause**

Prerequisite: ENGL 100. Consideration of standard research techniques and resources as well as composition and documentation of written reports specifically related to the study of art. Not open to students with credit in ART 496.

***308. Art Theory (3) F Krause**

Consideration of historic and contemporary theories and aesthetic frames of reference whereby what has been, or is, identified as art is so identified.

***309. Art Criticism (3) F Gross**

An examination of a variety of critical approaches to modern art. Discussions will be based upon the writings of 19th and 20th century art theorists and professional art critics.

***334. Concepts of the Classical Tradition (3) F Faculty**

Examination of Greek Classical art forms and aesthetic theories and their reinterpretations and revivals in the history of art, as exemplified in art and literature about art. Begins with Ancient Greece and ends with 20th century reinterpretations of Classical form.

335. Introduction to 'Primitive' Art (3) S Slayman-Jones

Introduction to and critical examination of the conceptions, misconceptions, attitudes and judgments which have attended the artifacts of African, Oceanic and Native American manufacture since their 'discovery' as art early in the 20th century. Grading: Traditional only.

364. History of Ceramics (3) S Ramsey

Materials and techniques as they relate to the historical development of pottery styles and forms. Not open to students with credit in ART 416.

365. History of Prints and Drawings (3) F Faculty

Prerequisites: None. Historical survey of prints and drawings, with emphasis on technical and stylistic developments and on the role played by these media in relation to other arts through the 20th century. [Lecture] Grading: Student Option.

366. History of Textiles (3) F Leland

Historical survey textile structure and design as they relate to use, materials and invention of processes in determining character, quality and stylistic concepts. Not open to students with credit in ART 419.

401./598A. American Art (3) S Gross

A survey of American art from 1760 to 1945. Emphasis will be given to painting from Colonial portraiture to 20th century Abstract Expressionism. Not open to students with credit in ART 413A or 413B.

408./598B Early Christian and Byzantine Art (3) F, 1984 Martel

Architecture, mosaics and sculpture of Rome, Ravenna and Constantinople from the decline of the Roman Empire to the end of the Byzantine era. Not open to students with credit in ART311.

409./598C. Romanesque Art (3) S,1984 Martel

Arts of Northern Europe from Merovingian through the Romanesque periods. Not open to students with credit in ART 313A.

410./598D. Gothic Art (3) F, 1985, S, 1987 Martel

Stylistic analysis in the historical content of the architecture, sculpture and stained glass of the great cathedrals of Europe. Not open to students with credit in ART313B.

423./598F. Early Renaissance Art in Italy (3) F Faculty

Painting, sculpture and architecture in Italy during the 14th and 15th centuries: Giotto to Botticelli: Pisano to Verrochio. Not open to students with credit in ART314A.

424./598G. High Renaissance Art in Italy (3) S Faculty

Painting, sculpture and architecture in Italy during the 16th century. Classical High Renaissance and Mannerists styles; Leonardo da Vinci, Michelangelo, Bramante; Titian and Venetian painters, Sansovino and Palladio. Florence, Venice and Rome. Not open to students with credit in ART314C.

425./598H. Northern Renaissance Painting (3) S Faculty

Renaissance painting in Northern European Netherlands, Burgundy, France, Germany and Austria between 1400-1570. From French manuscript illuminators (Limbourg Brothers), Van Eyck to Breughel, Durer to Holbein, Fouquet to Clovet. Special attention to iconography. Not open to students with credit in ART 314B.

426./598J. Baroque and Rococo Trends in Art (3) F Martel

Mainstreams of art in Italy, Holland and Germany in the 17th and 18th centuries. Emphasis on art of Berinini, Borromini, Carravagio, Rembrandt, Vermeer, Piranese, Guardi. Examination of representative examples of the art of the period in the Norton Simon and Getty Museums. Not open to students with credit in ART315A.

427./598K. Baroque Art: Court and Middle Class (3) S Martel

Palace of Versailles and its influence on the court art of Germany and Austria in the 17th and 18th centuries. Paintings of Poussin, Rubens, Velasquez, Gainsborough and their followers. Influence of Caravaggio upon the bourgeois art of the period. Examination of representative examples of art of the period in the Norton Simon and Getty Museums. Not open to students with credit in ART315B.

436./598M. Neo-Classicism to Romanticism, 1789-1850 (3) F Cooper

Examination of Neo-Classicism, Realism, Romanticism, photography and the academic tradition in art and culture of Europe from 1789-1850. Not open to students with credit in ART316A.

437./598N. Impressionism to Post-Impressionism, 1850-1900 (3) S Cooper

Analysis of the development of Impressionism and Post-Impressionism in France from 1850-1900. Not open to students with credit in ART316B.

438./598P. Twentieth Century Art to 1945 (3) F Gross

Examination of Abstraction, Non-Objective art, Expressionism, Dada and Surrealism. Not open to students with credit in ART317A.

439./598Q. Twentieth Century Art from 1945 (3) S Gross

Examination of Pop Art, Happenings, Minimal Art, Art and Technology, Environmental, Concept, Performance and Video Art. Not open to students with credit in ART317B.

455./598R. Traditional Art of Africa: A Thematic Approach (3) F Slayman Jones

Prerequisite: ART 335 or consent of instructor. Exploration from a Western perspective of the conceptual, expressive and aesthetic aspects of traditional African art as related to its cultural context and to Western concepts of art. Focus on West Africa. Not open to students with credit in ART 411A.

456./598S. American Indian Art: Western Perspectives (3) S Slayman Jones

Prerequisite: ART 335 or consent of instructor. Exploration from a Western perspective of the historically various and changing frames of reference surrounding perception, interpretation and consideration of Native American art through focus on selected traditions. Not open to students with credit in ART411C.

457./598T. Pre-Columbian Mexican Art (3) F Slayman Jones

A survey from the Olmec to the Aztec of the art and architecture of Mexico and adjacent areas prior to the Spanish conquest. Not open to students with credit in ART393A.

465./598U. Ancient Art of the Near East (3) S,1985 and alternate years Krause

Prehistoric, Near Eastern, Egyptian and Aegean art. Not open to students with credit in ART312.

466./598V. Buddhist Art of India and S.E. Asia (3) F Aall

The formation and development of Buddhist art in India and its subsequent metamorphoses in Cambodia, Thailand and Indonesia will be examined. Not open to students with credit in ART415A.

467./598W. Hindu and Islamic Art of India (3) S Aall

The formation and development of Hindu Art in India and the genesis as well as transformation of Islamic art of India compared to pan-Islamic characteristics will be examined. Not open to students with credit in ART415B.

468./598X. Early Chinese Art (3) F Aall

The formation and development of Chinese art from the third millenium to the 10th century A.D. Not open to students with credit in ART319A.

469./598Y. Later Chinese Art (3) S Aall

Development of Chinese Art from the 11th century A.D. through the culmination of the tradition and its transformation in the 20th century will be explored. Not open to students with credit in ART319B.

470./598Z. Japanese Art (3) F Aall

The characteristics of Japanese art from 10,000 B.C. to the present will be examined and the development and transformation of native styles studied in relation to influences from Buddhist, Chinese, Korean and Western Art, respectively. Not open to students with credit in ART 494A or B.

***497. Special Studies in Art History (3) F,S Faculty**

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in art history. Limited to six units.

***498. Independent Studies in Art History (3) F,S Faculty**

Prerequisite: Senior Art History Major and consent of instructor. Opportunity for outstanding students to undertake independent art historical investigations. Limited to three units in one semester and a total of six units.

Ceramics

***341A. Intermediate Ceramics: Handbuilding (3) F,S Faculty**

Prerequisites: ART 131, 151A. Design problems with handbuilt ceramic forms with emphasis on surface.

***341B. Intermediate Ceramics: Wheel Throwing (3) F,S Faculty**

Prerequisites: ART 131, 151A. Design problems with handbuilt ceramic forms with emphasis on surface.

***343A. Advanced Ceramics: Handbuilding (3) F,S Faculty**

Prerequisites: ART 341A. Advanced studies in ceramic sculpture. Introduction to ceramic sculpture.

***343B. Advanced Wheel Throwing (3) F,S Faculty**

Prerequisites: ART 341B. Advanced studies in ceramic form employing the potters wheel. [Activity]

***352A. Ceramics: Glaze Technology (3) F Ramsey**

Prerequisite: ART 151A or 151B. Nature of raw materials as they relate to the development of clay bodies and ceramic glazes.

***352B. Ceramics — Plaster Shop (3) S Ramsey**

Prerequisites: ART 151A or 151B. The use of plaster molds for making ceramic art including press molds, slip casting, and jiggering.

***450A-B. Glassblowing (3,3) F,S Faculty**

Prerequisite: ART 131, 450A: Introduction to basic techniques of glassblowing including a brief history of glass. 450B: More advanced techniques of offhand glassblowing with greater emphasis on form.

***451A-B. Advanced Ceramics (3,3) F,S Ferreira, Ramsey**

Prerequisite: A: ART 343A or 343B. Individual problems in ceramics. B: Prerequisites: ART 451A. Individual problems in ceramics.

***452. Ceramic Shop Planning and Kiln Design (3) F Ferreira**

Prerequisites: ART 341A or 341B. Ceramic equipment including kilns, their design and construction.

***499A Special Studies in Ceramics (3) F,S Ferreira**

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in ceramics. Limited to six units in one semester and a total of nine units.

Drawing and Painting

***381. Drawing (3) F,S Faculty**

Prerequisite: ART 181. Problems and concepts in drawing using a variety of media.

***384A-B. Advanced Life drawing (3,3) F,SS Faculty**

Prerequisite: ART 284. Continued study in drawing from the human figure.

***385A,B. Watercolor Painting (3,2) F,S Faculty**

Prerequisites: ART 181, 187; DESN 121. Nature and use of the watercolor media. ART 385B, for students requiring a 2-unit course in watercolor.

***387A,B. Painting (3,3) F,S Faculty**

Prerequisites: ART 181, 187; DESN 121. Painting with emphasis on representation, organization and expression.

***389. Materials and Craft of Drawing and Painting (3) F,S**

Prerequisites: ART 181, 187; DESN 121. Theory and practice in the craft of drawing and painting. Limited to three units in one semester and a total of six units.

***487A,B. Advanced Life Painting (3,3) F,S Faculty**

Prerequisites: ART 287, 384A or B, 387A or B. Continued study in painting from the human figure.

***499D. Special Studies in Drawing (3) F,S Faculty**

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in drawing. Limited to six units in one semester and a total of nine units.

***499I. Special Studies in Life Drawing (3) F,S Faculty**

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in life drawing. Limited to six units in one semester and a total of nine units.

***499K. Special Studies in Painting (3) F,S Faculty**

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in painting. Limited to six units in one semester and a total of nine units.

General Crafts

***354A-B. General Crafts (3,3) F,S Faculty**

Prerequisites: Art 131, 181; DESN 121. Crafts processes, techniques and concepts in the design and making of utilitarian art objects.

***454A-B. Handcrafted Furniture (3,3) F,S Faculty**

Prerequisites: ART 354A and B. Concepts and skills necessary for the production of handcrafted furniture. Emphasis on the use of hand techniques as a means of understanding the philosophy and aesthetics of handcrafted furniture.

***499B. Special Studies in General Crafts (3) F,S Snidecor**

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in general crafts. Limited to six units in one semester and a total of nine units.

General Studies in Art

380A. Perceptual Skills in Drawing for Non-Art Majors (3) F,S Dame, Edwards

Use of various drawing media with an emphasis upon developing drawing skill.

380B. Perceptual Skills in Painting for Non-Art Majors (3) F,S Dame

Use of various painting media with an emphasis upon developing a personal approach.

400. Studio Art for Non-Art Majors (3) F,S Faculty

Basic studies in color, drawing, painting and design. Emphasis on development of creativity and personal style.

Illustration

***371A-B. Illustration (3,3) F,S Oden, Mendez**

Prerequisites:(371A) ART 111 or 161, 112A,B, 131, 181, 184, 187, DESN 121; (371B) ART 271, 284, DESN 223. Editorial and advertising drawing; professional media, skills and techniques survey.

***372. Anatomy for Artists (2) F,S Oden, Mendez**

Prerequisites: ART 181, 184. Skeletal and muscle structure emphasizing the development of skill in depicting the human figure.

***373. Fashion Illustration (2) S Mendez**

Prerequisites: ART 371A, 372. Fashion drawing for reproduction.

***374A-B. Biomedical Rendering (3,3) F,S Oden, Mendez**

Prerequisite: Consent of instructor. Introduction to and practice in techniques of descriptive drawing and press reproduction of drawing. Emphasis on skill.

382A-B. Production for Fine Art (3,3) F,S Hadlock

Prerequisites: Art 371B or instructor permission. Exploration of printing and reproduction process related to the needs of the artist, illustrator and museum professional and an introduction to the skills and vocabulary necessary for the preparations of art for print and electronic media. Emphasis is on direct interaction with the various commercial production professionals. [Art activity: 6 hours]

***471A-B. Advanced Illustration. (3,3) F,S Oden, Mendez**

Prerequisite: ART 371B. Illustration in part from live models. Each course 1/2 live model fee.

***499F. Special Studies in Illustration (3) F,S Oden,Mendez**

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in illustration or biomedical art. Limited to six units in one semester and a total of nine units.

Metalsmithing and Jewelry

***355. Enameling (3) S Muller-Stach,Pine**

Prerequisite: DESN 121 or consent of instructor. Techniques, materials and concepts of enameling on metals. Introduction to tools and metalworking techniques associated with making enameled metal objects. Emphasis on the exploration of characteristics of enamels and metals, stressing individual advancement of interest and expression. May be repeated once for credit.

***356. Jewelry Casting (3) S Muller-Stach,Pine**

Prerequisite: Consent of instructor. The design and creation of jewelry through lost-wax casting techniques and processes. May be repeated once for credit.

***357A-B. Jewelry (3,3) F,S Muller-Stach,Pine**

Prerequisite: ART 131. The design and creation of jewelry.

***358A-B. Metalsmithing (3,3) F,S Muller-Stach,Pine**

Prerequisites: ART 357A, IA 282. The design and creation of flatware and hollowware.

***359. Architectural Metalwork and Blacksmithing (3) F Muller-Stach**

Prerequisites: ART 131,DESN 121. Techniques, materials and concepts of the metal craft for developing art forms in larger scale and in an architectural context. Hot forging and fabricating with ferrous metals. Basic techniques of cutting, forming, joining, welding and surface design of metals. Making of tools. May be repeated once for credit.

***458A-B. Advanced Metalsmithing and Jewelry (3,3) F,S Muller-Stach,Pine**

Prerequisites: ART 357B or 358B and consent of instructor. Individual problems in metalsmithing and jewelry.

***499J. Special Studies in Metalsmithing and Jewelry (3) F,S Muller-Stach,Pine**

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in metalsmithing and jewelry. Limited to six units in one semester and a total of nine units.

Museum Studies

***345. Introduction to Museums (3) F,S Faculty**

Designed for students interested in pursuing the Museum Studies Certificate: also open to art majors and students from other disciplines. Study of current museums, their functions, services, audience and ethics. Field trips to local museums are included.

***422Q. Internship in Museum Studies (3) F,S C.Glenn**

Prerequisites: ART 345, 445A-B and consent of instructor. Student internship experience in selected museums, college and community art centers appropriate to the student's particular academic interest. Opportunity to work under supervision of museum professionals in the field to expand student understanding of the complexities, discipline and challenges in the profession. Limited to six units in one semester and a total of nine units.

***445A-B. Museum-Gallery Practices (3,3) F,S C.Glenn**

Prerequisites: ART 345, consent of instructor. Pre-professional training in museum-gallery techniques: administration, exhibition, budget planning, curatorial problems, public relations, insurance, packing and shipping. The University Gallery will be the laboratory for practical experience; students will assist in conceiving and realizing exhibitions.

***499Q. Special Studies in Museum Studies (3) F,S C.Glenn**

Prerequisites: ART 345, 445A and consent of instructor. Opportunity for extensive individual work with faculty supervision on problems in museum studies, including utilizing the resources of The Center for Southern California Studies in the Visual Arts. Limited to six units in one semester and a total of nine units.

Printmaking

370. Printmaking (3) F,S Osborne

Prerequisites: ART 112A, 112B, 181, 187; DESN 121. A studio course exploring a range of printmaking techniques and imagery, selected from the areas of etching, lithography, silkscreen, relief and monoprinting. Not open to students with credit in ART 277.

***376. Printmaking: Relief Printing (3) F,S Faculty**

Prerequisites: ART 112A, 112B, 181, 187; DESN 121. Instruction in relief printing techniques and image development, including woodcut, wood engraving, collagraphy and alternative print surfaces. [Activity]

*377. Printmaking: Silkscreen (3) F,S Faculty

Prerequisites: ART 112A, 112B, 181, 187; DESN 121. Instruction in fine art screen printing techniques and image development, including glue, tusche glue, paper, film, emulsion and alternative stencil methods.

*378. Printmaking: Etching (3) F,S Faculty

Prerequisites: ART 112A, 112B, 181, 187; DESN 121. Instruction in intaglio printing techniques and image development, including etching, engraving, drypoint, aquatint and alternative platemaking methods.

*379. Printmaking: Lithography (3) F,S Faculty

Prerequisites: ART 112A, 112B, 181, 187; DESN 121. Instruction in stone lithography techniques and image development, including crayon drawing, flats, washes, transfers and alternative drawing methods.

*475. Printmaking: Photo Processes (3) F,S Faculty

Prerequisites: ART 370; IA 101. Instruction in the photo printmaking processes for lithography, etching and silkscreen using copy camera and experimental techniques to explore photographic and non-photographic imagery.

480. Advanced Printmaking (3) F,S Osborne

Prerequisites: One of the following: ART 376, 377, 378, 379 or consent of instructor. Continued study in one of the four areas of printmaking, with emphasis on technical and conceptual development. Limited to six units. Repeatable to a maximum of 6 units in different topics.

*499R. Special Studies in Printmaking (3) F,S Osborne, Swift

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in printmaking. Limited to six units in one semester and a total of nine units.

Sculpture

*361. Life Sculpture (3) F,S Lieberman

Prerequisite: ART 161. Intensive study of the figure through individual student concepts. Mold and casting techniques and direct plaster parging.

*362A. Sculpture Foundry — Investment Casting (3) F,S Werlick

Prerequisites: ART 131, 161, 181. The traditional lost wax techniques of casting non-ferrous metal. Wax formation and manipulation, gating theory and practice. Investment procedures, foundry management, metal casting, patination and tool making.

*362B. Sculpture:Molding and Reproduction (3) F,S K. Glenn

Prerequisites: ART 131, 161, 181. Construction and use of flexible and plaster molds.

*363. Sculpture:Carving and Fabrication (3) F,S Lieberman

Prerequisites: ART 131, 161, 181 or consent of instructor. Composition in sculpture utilizing stone and woodcarving, metal and wood fabrication.

*461. Advanced Life Sculpture (3) F,S Werlick

Prerequisites: ART 361, 362A and B. Large-scale sculpture from the model emphasizing expressive content. Work in clay and plaster, armature and stand construction, oil-clay formulation and advanced moldmaking techniques.

*463. Advanced Sculpture (3) F,S Lieberman

Prerequisites: ART 361, 362A,B, 363 or consent of instructor. Advanced composition in sculpture.

*499M. Special Studies in Sculpture (3) F,S K.Glenn, Lieberman,Werlick

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in sculpture. Limited to six units in one semester and a total of nine units.

Textile Design

*327A-B. Surface Design (3,3) F,S Leland,Faculty

Prerequisites:ART 181, 187; DESN 121. Variety of design concepts in relation to media and processes appropriate to both hand and commercial application to textile and other surfaces.

*328. Structures in Fiber (3) F,S Faculty

Prerequisites: ART 131, 181, 187; DESN 121. Concepts and development in non-loom fiber structure.

*428A-B-C. Weaving (3,3,3) F,S Leland,Faculty

Prerequisites: ART 131, 181, 187; DESN 121. Weaves, techniques and materials of structural textile design with emphasis divided between commercial application and personal expression within the contemporary idiom. ART 428B and 428C require consent of the instructor.

430. Fiber Art: Paper (3) F,S Leland, Faculty

Prerequisites: ART 121, 131, 328. Basic materials and techniques of papermaking and molding, including emphasis on concept and form development. Limited to six units. [Activity] Repeatable to a maximum of 6 units.

*499N. Special Studies in Textile Design (3) F,S Leland

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in textile design. Limited to six units in one semester and a total of nine units.

Graduate division

509A-B. Studio Problems in Art Education (2,2) F,S Faculty

Prerequisite: Consent of instructor. Advanced individual graduate problems in art education with projects related to specific learning situations.

551A. Advanced Ceramics-Graduate (3) F,S Ferreira, Ramsey

Prerequisite: Art 451B. Opportunity for beginning graduate students to do research employing various ceramics materials, processes and visual solutions in preparation for a more narrow and concentrated study.

551B. Advanced Ceramics — Graduate (3) F,S Ferreira, Ramsey

Prerequisite: Art 551A. Selection of a specific area of concentration in ceramics, limiting the materials and processes to develop a project which will reflect a predetermined statement.

554A-B. Handcrafted Furniture (3,3) F,S Faculty

Prerequisites: Art 454B or consent of instructor. Advanced concepts and skills necessary for the production of handcrafted furniture. Emphasis on the use of hand techniques as a means of understanding the philosophy and aesthetics of handcrafted furniture.

559. Sculpture Foundry — Advanced Shell Casting (3) S Hitchcock

Prerequisite: ART 459. Lost-wax casting of art forms in various metals using advanced techniques of ceramic shell moldmaking. Limited to nine units.

564A,B. Advanced Crafts Studio (3) F,S Snidecor, Moryl

Prerequisites: ART 354A and 354B. Advanced craft processes, techniques, and concepts used to make utilitarian objects. In conjunction with object making, research will be required in various aspects of the crafts field.

575. Printmaking: Advanced Photo Processes (3) F,S Osborne

Prerequisite: Consent of instructor. Graduate level work in one or more of the photo printmaking processes, with emphasis on photographic or non-photographic imagery. Limited to six units. Repeatable to a maximum of 6 units in different topics.

580. Printmaking: Advanced Studio (3) F,S Osborne

Prerequisites: Consent of instructor. Graduate level work in one of the four areas of printmaking, stressing directed individual research and image development. Repeatable to a maximum of 6 units with different topics.

590. Special Problems in Studio Art (1,3) F,S Faculty

Prerequisite: Consent of instructor. Special problems of current interest in studio art will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. Topics will be announced in the Schedule of Classes.

598A./401. American Art (3) S Gross

A survey of American art from 1760 to 1945. Emphasis will be given to painting from Colonial portraiture to 20th century Abstract Expressionism. Not open to students with credit in ART 413A or 413B.

598B./408. Early Christian and Byzantine Art (3) F, 1984 Martel

Architecture, mosaics and sculpture of Rome, Ravenna and Constantinople from the decline of the Roman Empire to the end of the Byzantine era. Not open to students with credit in ART 311.

598C./409. Romanesque Art (3) S, 1984 Martel

Arts of Northern Europe from Merovingian through the Romanesque periods. Not open to students with credit in ART 313A.

598D./410. Gothic Art (3) F, 1985,S,1987 Martel

Stylistic analyses in the historical content of the architecture, sculpture and stained glass of the great cathedrals of Europe. Not open to students with credit in ART 313B.

598F./423. Early Renaissance Art in Italy (3) F Faculty

Painting, Sculpture and architecture in Italy during the 14th and 15th centuries: Giotto to Botticelli; Pisano to Verrochio. Not open to students with credit in ART 314A.

598G./424. High Renaissance Art in Italy (3) S Faculty

Painting, sculpture and architecture in Italy during the 16th century. Classical High Renaissance and Mannerist styles: Leonardo da Vinci, Michelangelo, Bramante; Titian and Venetian painters. Sansovino and Palladio. Florence, Venice and Rome. Not open to students with credit in ART 314C.

598H./425. Northern Renaissance Painting (3) S Faculty

Renaissance painting in North European Netherlands, Burgundy, France, Germany and Austria between 1400-1570. From French manuscript illuminators (Limbourg Brothers), Van Eyck to Breughel, Durer to Holbein, Fouquet to Clovet. Special attention to iconography. Not open to students with credit in ART 314B.

598J./426. Baroque and Rococo Trends in Art (3) F Martel

Mainstreams of art in Italy, Holland and Germany in the 17th and 18th centuries. Emphasis on art of Bernini, Borromini, Carravaggio, Rembrandt, Vermeer, Piranese, Guardi. Examination of representative examples of the art of the period in the Norton Simon and Getty museums. Not open to students with credit in ART 315A.

598K./427. Baroque Art: Court and Middle Class (3) S Martel

Palace of Versailles and its influence on the court art of Germany and Austria in the 17th and 18th centuries. Paintings of Poussin, Rubens, Velasquez, Gainsborough and their followers. Influence of Carravaggio upon the bourgeois art of the period. Examination of representative examples of art of the period in the Norton Simon and Getty Museums. Not open to students with credit in ART 315B.

598M./436. Neo-Classicism to Romanticism, 1789-1850 (3) F Cooper

Examination of Neo-Classicism, Realism, Romanticism, photography and the academic tradition in art and culture of Europe from 1789-1850. Not open to students with credit in Art 316A.

598N./437. Impressionism to Post-Impressionism, 1850-1900 (3) S Cooper

Analysis of the development of Impressionism and Post-Impressionism in France from 1850-1900. Not open to students with credit in Art 316B.

598P./438. Twentieth Century Art to 1945 (3) F Gross

Examination of Abstraction, Non-Objective art, Expressionism, Dada and Surrealism. Not open to students with credit in ART 317A.

598Q./439. Twentieth Century Art from 1945 (3) F Gross

Examination of Pop Art, Happenings, Minimal Art, Art and Technology, Environmental, Concept, Performance and Video Art. Not open to students with credit in ART 317B.

598R./455. Traditional Art of Africa: A Thematic Approach (3) F Slayman Jones

Prerequisite: ART 335 or consent of instructor. Exploration from a Western perspective of the conceptual, expressive and aesthetic aspects of traditional African art as related to its cultural context and to Western concepts of art. Focus on West Africa. Not open to students with credit in ART 411A.

598S./456. American Indian Art: Western Perspectives (3) S Slayman Jones

Prerequisite: ART 335 or consent of instructor. Exploration from a Western perspective of the historically various and changing frames of reference surrounding perception, interpretation and consideration of Native American art through focus on selected traditions. Not open to students with credit in ART 411C

598T./457. Pre-Columbian Mexican Art (3) F Slayman Jones

A survey from the Olmec to the Aztec of the art and architecture of Mexico and adjacent areas prior to the Spanish conquest. Not open to students with credit in ART 393A.

598U./465. Ancient Art of the Near East (3) S,1985 and alternate years Krause

Prehistoric, Near Eastern, Egyptian and Aegean art. Not open to students with credit in ART 312.

598V./466. Buddhist Art of India and S.E. Asia (3) F Aall

The formation and development of Buddhist art in Indian and its subsequent metamorphoses in Cambodia, Thailand and Indonesia will be examined. Not open to students with credit in ART 415A.

598W./467. Hindu and Islamic Art of India (3) S Aall

The formation and development of Hindu art in India and the genesis as well as transformation of Islamic art of India compared to pan-Islamic characteristics will be examined. Not open to students with credit in ART 415B.

598X./468. Early Chinese Art (3) F Aall

The formation and development of Chinese art from the third millenium to the 10th century A.D. Not open to students with credit in ART 319A.

598Y./469. Later Chinese Art (3) S Aall

Development of Chinese art from the 11th century A.D. through the culmination of the tradition and its transformation in the 20th century will be explored. Not open to students with credit in ART 319B.

598Z./470. Japanese Art (3) F Aall

The characteristics of Japanese art from 10,000 B.C. to the present will be examined and the development and transformation of native styles studied in relation to influences from Buddhist, Chinese, Korean and Western art, respectively. Not open to students with credit in ART 494A or B.

599. Studio Problems in Art (3-12) F,S Faculty

Prerequisite: Consent of art department. Advanced individual graduate projects, with faculty supervision, in an area of art specialization. Limited to six units in one semester and a total of 12 units in any one area. Areas will be designated by letter at the time of registration: (a) ceramics, (b) general crafts, (d) drawing, (f) illustration, (j) life drawing, (j) metalsmithing and jewelry, (k) painting, (m) sculpture, (n) textile design, (q) museum studies, (r) printmaking, and (t) intermedia. Intermedia units will apply to the drawing and painting specialization.

599V. Studio Problems in Art Photography (3) F,S Faculty

Prerequisite: Consent of Art Department. [Advanced individual graduate projects, with faculty supervision, in an area of art specialization. Limited to 6 units in one semester and a total of 12 units.

601A-B. Seminar in Art Education (3,3) F,S Faculty

Prerequisite: Consent of instructor. Special studies, research and evaluation of the role of the art teacher. 601A is required for the M.A. in Art Education; 601B may be required by the student's M.A. committee.

611. Seminar in Art History (3) F,S Faculty

Prerequisite: Consent of instructor. Directed individual research and group discussion concerning a topic in art history. Limited to six units in one semester; may be repeated to nine units.

651. Seminar in Ceramic Art (3) F,S Ferreira, Ramsey

Prerequisite: Consent of instructor. Critical analysis of work of historical and contemporary ceramic artists; the changing role of ceramic art as it becomes part of the contemporary art mainstream. May be repeated for credit with study of different artists each semester up to a maximum of 12 units.

690A. Graduate Seminar in Studio Art (3) F Faculty

Prerequisite: Consent of instructor. Selected reading and writing concerning topics relevant to student's specific disciplines in the visual arts with an opportunity for interdisciplinary discussion.

690B. Graduate Seminar in Studio Art (3) S Faculty

Prerequisite: Consent of instructor. Professional preparation for studio artists stressing practical concerns as well as current trends in art practices, theory and criticism.

691A,B. Teaching Art in Higher Education (2,2) F,S Hitchcock

Prerequisites: Acceptance in graduate program in Art. Teaching Assistants in the Art Department must enroll in 691A concurrently with teaching assignment for the first two semesters. Students who are not teaching enroll in 691B. Analysis of and preparation for teaching the visual arts at the college and university level. Limited to four units. Required for all Teaching Assistants. Repeatable to a maximum of 4 units.

692. Public Exhibition (2-3) F,S Faculty

Prerequisite: Open only to M.A. and M.F.A. candidates with project statement approval and consent of students graduate committee. Open only to those who have been assigned an exhibition date the previous semester. Planning, preparation and administration of a public exhibition of 698 or 699 creative work. Two-unit designation for all M.A. candidates. Three-unit designation for all M.F.A. candidates. The course work will result in a public exhibition by each M.A. and M.F.A. candidate.

694. Directed Studies Studio (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent studies in creative studio.

695. Field Problems in Art (1-6) F,S Faculty

Opportunity to study artistic monuments, objects, theories, techniques or literature at appropriate off-campus locations. Up to six units of cumulative credit may be earned in ART 695.

697. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent studies in technical and/or historical aspects of art.

698. Thesis or Project (1-6) F,S Faculty

Prerequisite: Thesis or project-thesis statement approval by and consent of students graduate committee. Planning, preparation and completion of a thesis or a project and studio-thesis. Open only to students who have been advanced to M.A. candidacy. Studio majors are required to exhibit project work and write a studio-thesis. Required of all candidates for the M.A. in art.

699. Thesis or Project (1-6) F,S Faculty

Prerequisite: Approval of students project-thesis statement and consent of students graduate committee. Planning, preparation and completion of a creative exhibition and a studio-thesis. Open only to students who have been advanced to M.F.A. candidacy or second M.A. candidacy in art. Required of all M.F.A. candidates and all candidates seeking a second M.A. in art.

Dance

School of Fine Arts

Department Chair: Joan Schlaich
Department Office: University Telecommunications Center, Room 104
Telephone: 498-4747
Faculty: Professors: Pat Finot, Joan M. Schlaich; Associate Professors: Celeste K. Kennedy, Tryntje Shapli; Assistant Professor: Jeff Slayton
Department Secretary: Kim Rourke

Students desiring information should contact the department office for referral to one of the faculty advisors.

The Dance Department provides an in-depth dance major program of studies with emphasis on modern dance technique, composition and performance and with supporting course work in ballet, jazz, and tap dance. The curriculum is designed to give students a basic dance background which prepares them as a performer in concert dance companies, television or in films, a choreographer, or as a teacher at the secondary, community college or university level in both public and private schools. The curriculum prepares students for graduate programs in dance. It gives the general education student and the student in closely related areas experience in dance as an art form. Nonmajor studio classes in ballet, modern dance, jazz and tap dance are open to all students on campus. Several courses are offered which meet the General Education requirements in categories C. E. and I.C. The CSULB dance major is one of three dance degree programs approved in the system. A large number of part-time faculty members supplement the expertise of the full-time faculty.

Dance concerts with faculty, students and visiting artists are held in the University Theatre and in dance studios. Dance majors and minors are encouraged to participate in activities of the Dance student organization, "Dancers In Motion."

Students wishing to major or minor in dance must audition for placement prior to starting the program. Auditions are held in November, April and August. Applicants should contact the Department of Dance in advance of enrollment. Nonmajor studio classes are open to all students with no audition.

The department is an accredited institutional member of the National Association of Schools of Dance.

Requirements for the Bachelor of Arts in Dance (code 2-5230)

Lower Division:

DANC 100, 112A, 112B, 114A, 114B, 120, 131, 180A or B, 212A, 212B, 220, A/P 202, 207. One unit of DANC 181 A or B or 381 A or B;

Upper Division:

DANC 320, 331, 350A, 360, 380A or B, 420, 442A-B, 485, 488, 491; DANC 375 or 470.

Electives:

A minimum of six units from DANC 116A, 116B, 117, 180A, 180B, 181A, 181B, 213, 231, 312A, 312B, 316, 350B, 361, 362, 375 or 470, 380A, 380B, 381A, 381B, 398, 399, 400, 412A, 412B, 414A, 414B, 469, 480A, 480B, 482, 490, 491, 492, 495, 499; Six units selected from: C/LT 250, 411, 412, THEA 432, ART 100, ART 112A, ART 112B, 360, PHIL 361, DANC 373.

Requirements for the Minor in Dance (code 0-5230)

Lower Division:

DANC 112A, 112B, 114A, 120, 220.

Upper Division:

DANC 320, 331, 441, 488 and a minimum of one unit of DANC 181A or B or DANC 381A or B.

Teaching Credential

See advisor.

Dance Technique

Note: It is expected that dance majors will take technique courses in sequence. However, major/minor students must screen for level placement in all technique classes. Screening will take place the previous semester and the first day of class. (Non-major technique classes are not screened. They are open to all students.)

Courses (DANC):

Lower Division

All Dance majors must be in a minimum of one modern dance or ballet class daily.

100. Orientation to Dance (2) F,S Schlaich

Co-requisite: DANC 112A. Introductory information, degree requirements, career opportunities, current problems and issues in the field. Student identification of personal learning needs and goals. Evaluation on CR/NC basis.

111A. Beginning Modern Dance (2) F,S Faculty

Basic skills and techniques of modern dance. Not open to dance majors. (Activity 4 hours.)

111B. Intermediate Modern Dance (2) F,S Faculty

Not open to dance majors. Prerequisite: DANC 111A or consent of instructor. Intermediate skills and techniques of modern dance. (Activity 4 hours.)

112A,B. Modern Dance Technique I,II (3,3) F,S Faculty

A: Corequisite: DANC 100. Dance majors and minors. Basic skills and techniques of modern dance. May be repeated once for CR/NC grade. (Activity 6 hours.)

113A. Beginning Ballet (2) F,S Faculty

Basic skills and techniques of ballet. Not open to dance majors. (Activity 4 hours.)

113B. Intermediate Ballet (2,2) F,S Faculty.

Not open to dance majors. Prerequisite 113A or consent of instructor. Intermediate skills and techniques of ballet. (Activity 4 hours.)

114A,B. Ballet Technique I, II (2,2) F,S Faculty

Dance majors and minors. Basic skills and techniques of ballet. May be repeated once for CR/NC grade. (Activity 4 hours.)

115A. Beginning Jazz (2) F,S Faculty

Not open to dance majors. Basic skills and techniques of jazz. May be repeated once for credit. (Activity 4 hours.).

115B. Intermediate Jazz (2,2) F,S Faculty

Not open to dance majors. Prerequisite: 115A or consent of instructor. Intermediate skills and techniques of jazz dance. (Activity 4 hours.)

116A,B. Jazz Technique I,II (2,2) F,S Faculty

Prerequisite: Open to dance majors only. Basic theory and practice of modern jazz dance. May be repeated once for CR/NC grade.

117. Tap Dance I (2) F,S Faculty

Basic technique in the tap dance idiom, time steps, stylistic patterns, rhythmic patterns and tap combinations.

120. Improvisation I (2) F Finot

Use of improvisation as an introduction to structural form; individual and group problems. (Activity 4 hours.)

131. Introduction to Music for Dance (2) F Faculty

Basic music notation, simple and complex rhythmic patterns, poly-rhythms, skill in the use of percussion instruments and a brief survey of the historical periods of music for dance.

180A,B. Dance Performance (1,1) F,S Faculty

Participation as a performer and/or choreographer in Dance Department approved University-sponsored production. Most concert participation is by audition only. A combination of 180A,B/380A,B may be repeated for a total of eight units.

181A,B. Dance Production-Technical (1,1) F,S Faculty

Technical participation in Dance Department-sponsored productions. A combination of 181A,B/381A,B may be repeated for a total of eight units.

200. Viewing Dance (3) F,S Kennedy [C1]

Introduction to contemporary dance theatre through viewing dance films (modern dance, ballet and ethnic), dance performances, and lecture/discussions on dance.

212A,B. Modern Dance Technique III,IV (3,3) F,S Faculty

Dance majors and minors. Increased skill in the techniques of modern dance. May be repeated once for CR/NC grade. (Activity 6 hours.)

213. Workshop in Modern Dance Technique (2-3) F,S Faculty

Prerequisite: Dance major or minor. Exploration of the techniques of modern dance. Must be taken the first time for a grade and may be repeated once for credit/no credit.

220. Elements of Solo Choreography (3) F,S Slayton

Prerequisite or Corequisite: Dance 131. Theory and practice in the basic elements of dance composition. (Lecture 1 hour, activity 4 hours.)

231. Tape Recording Techniques for Dance (2) S Faculty

Technique of the preparation and recording of music and sound for dance performances and classroom use. Practice in editing of recorded tape. Introduction to the techniques of Musique Concrete.

241. History of Dance (3) F,S Faculty

History of dance from primitive to contemporary times. Cultural importance of dance as an art form.

Upper Division

300. Survey of American Show Dance (3) S Faculty

History and development of dance as popular entertainment. Styles and basic vocabulary. Exploration of the choreographic process.

312A,B. Modern Dance Technique V,VI (2-3,2-3) F,S Faculty

Prerequisite: Dance major or minor. Increased skill in the technique of modern dance. May be repeated once for CR/NC grade. (Activity 6 hours.)

316. Jazz Technique III (2) F,S Faculty

Prerequisite: 116B or consent of instructor. Advanced theory and practice in jazz dance. May be repeated once for CR/NC grade.

318. Ethnic Dance Forms (1-3) F,S Faculty

Theory and technique of various ethnic dance forms. May be repeated up to 12 units, provided it is with a different instructor for each time. (Lecture 1 hour, activity 4 hours.)

320. Small Group Composition (3) F Faculty

Prerequisite: DANC 220. Development of theme and style in small group studies. (Lecture 1 hour, activity 4 hours.)

331. Music for Dance (3) S Faculty

Prerequisite or corequisite: DANC 112A or consent of instructor. Theoretical and practical analyses of musical forms and instruments for dance accompaniment related to class work and performance. Includes a music repertoire for dance. (Lecture 1 hour, activity 4 hours.)

335. The History of the American Musical in Film (3) S Faculty

History of film musicals through lectures and feature films. Focus is on the directors/actors and choreographers/dancers in films representative of important historical periods, studios and styles. Same course as THEA 335.

340. Dance Accompaniment (3) F Faculty

The art of musical improvisation for the dance class-modern and ballet. Acquiring the skill of improvising in all periods and styles of music. Knowledge of harmony and basic keyboard training required. Other instrumentalists by consent of instructor.

350A,B. Dance Notation I,II (3,3) F,S Kennedy

A: Prerequisites: DANC 131. Theory and practice of notating movement through labanotation. (Lecture 1 hour, activity 4 hours.)

360. Prevention and Care of Dance Injuries (3) S Faculty

Prerequisite: BIOL 202 Human Anatomy. Factors in injury prevention. Principles of injury care.

361. Body Placement for the Dancer (2) F Shapli

Open to dance majors and minors. Body placement and corrective exercises for modern dance and ballet classes.

362. Dramatic Concepts for Dancers (2) F,S Faculty

Prerequisite: Dance major or minor. Use of acting techniques to provide dramatic content to dance movements.

373IC. Nonverbal Communication: Interaction of Mind and Body (3) S Martyn, Owen

(Same course as ED PSY 473.) History and theories of the development of mind/body integration. Enhancement of personal and interpersonal relations through lectures, discussion, films and movement experiences. Analysis and synthesis of the interdependence of the psychological and physical processes in non-verbal communication.

375. Teaching Dance to Elementary School Children (3) S Faculty

Prerequisites or corequisite: 212A. Practical experience in teaching dance to elementary school children employing improvisational approaches to basic elements of dance as integrated into the total elementary curriculum; as a basic form of communication, as an instrument for the development of individual creativity, as identification of dance as an art form.

380A,B. Dance Performance (1,1) F,S Faculty

Participation as a performer and/or choreographer in Dance Department-approved, University-sponsored production. Most concert participation is by audition only. A combination of 180A,B/380A,B may be repeated for a total of eight units.

381A,B. Dance Production-Technical (1,1) F,S Faculty

Technical production participation in Dance Department sponsored productions. A combination of 181A,B/381A,B may be repeated for a total of eight units.

398. Fieldwork in Dance Elementary (1-3) F,S Schlaich

Supervised teaching experience in dance in an off-campus setting. Practical experience working with students in kindergarten through 6th grade. Credit/no credit only. May be repeated for a maximum of six units.

399. Fieldwork in Dance Secondary (1-3) F,S Schlaich

Supervised teaching experience in dance in an off-campus setting. Practical experience working with students in grades 7 through 12 or Community College. Credit/no credit only. May be repeated for a maximum of six units.

400. Apprenticeship (1-3) F,S Faculty

Prerequisite: Dance major and consent of instructor. Working with a professional dance company.

412A,B. Modern Dance Technique VII, VIII (2-3,2-3) F,S Faculty

Prerequisite: Dance major or minor. Increased skill in the technique of modern dance (activity 4 hours). Must be taken the first time for a grade and may be repeated once for CR/NC.

414A,B. Ballet Technique III,IV (2,2) F,S Faculty

Dance major or minor. Advanced skills in the techniques of ballet. May be repeated once for CR/NC grade. (Activity 4 hours.)

420. Advanced Composition (2-3) S Faculty

Prerequisite: DANC 320 or consent of instructor. Approaches to the development of choreographic materials of extended structure and content.

422. Improvisation II (2) S Finot

Prerequisite: DANC 120. Development of the individual performer's improvisational skills, exploration of a wide range of subject matter and approaches to subject matter, study of techniques of structuring improvisations. [Dance activ. 4 hours]

424. Staging Dance (2) F Faculty

Prerequisites: DANC 120 and 220. Exploration of popular and ethnic dance forms and practice in choreographing in these styles for stage. [Dance activity: 4 hours]

431. History and Literature of Dance Music (2) S Faculty

Prerequisites: DANC 131, 331 or permission of instructor.Development of repertory of music for dance from all historical periods with emphasis on the twentieth century. Score analysis including study of form and style from a dancers viewpoint. [Lecture/discussion: 2 hours]

435. Dance in Film (3) F Faculty

Examination of the relationship between dance and film; study of historical and theoretical connections placed in both aesthetic and cultural contexts.

442A. History of Dance to 1925 (3) F Faculty

Development of dance from primitive origins through Diaghilev.

442B. History of Dance since 1925 (3) S Faculty

Prerequisite: DANC 442A. Development of Dance from the origins of modern dance to the present.

469. Dance Institute: Long Beach Summer School of Dance (4-6) SS

Prerequisite: Previous training in dance. Only qualified students will be accepted. A comprehensive summer course in dance offering students an opportunity to work with professionals artists. Includes theory and practice in dance areas for intermediate and advanced levels. Course may be repeated for credit up to 18 units.

470. Dance Methodology (3) S Faculty

Prerequisite or corequisite: DANC 212A. Methods for teaching dance in order to prepare for teaching in studios, recreation, departments, companies, institutions, public schools, colleges and universities.

480A,B. Performance Tour (3,3) F,S Finot, Shapli

Prerequisite: DANC 120 and audition. Development and performance of informal concerts for elementary schools, middle schools, and secondary schools. Students must enroll in 480A,B in consecutive semesters starting in the Fall. May be repeated once.

482. Intermedia Festival (2-3) S Eisenberg

Prerequisite: Audition. Combination repertory/composition class which culminates in a performance in collaboration with other departments of the School of Fine Arts. Repeatable to a maximum of 6 units with different topics.

485. Contemporary Dance and the Fine Arts (3) S Faculty

Prerequisites: DANC 331. Advanced theory and practice relating contemporary dance to the fine arts.

488. Organization of Dance Production (3) S Finot

Prerequisite: Open to dance majors and minors only. Analysis and practice in the production elements of dance concerts. Course is coordinated with a department concert.

490. Special Topics in Dance (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in the field of dance selected for special presentation and development. May be repeated provided it is a different topic, or with consent of department chair. Topics will be announced in the Schedule of Classes.

491A. Design for Dance Lighting (3) F

Prerequisites: Upper division status or permission of instructor. Techniques of designing lighting for dance. Practical applications include designing and executing lighting for dance for concerts in various settings.

491B. Design for Dance Costuming (3) S

Prerequisites: Upper division status or permission of instructor. Designing and constructing costumes for dance. [Laboratory] Grading: Traditional only.

492. Introduction to Dance Therapy (3) S Faculty

Readings and discussion of the history and philosophy of dance/movement as a therapeutic modality and its role as a profession in the field of mental health.

495. Repertory (1-3) F,S Faculty

Prerequisite: Audition. Students learn and perform works of distinguished choreographers. Leads to performance. May be repeated for credit provided it is with a different instructor each time.

499. Directed Studies in Dance (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent projects and research of advanced nature in any area of dance. May be repeated for a maximum of six units.

Graduate Division

599. Directed Studies (1-3) F,S Schlaich

Prerequisite: Consent of instructor. Individual research or project under the guidance of a faculty member. May be repeated for credit to a maximum of six units.

Design

School of Fine Arts

Department Chair:
Department Office: Fine Arts 3, Room 100
Telephone: 498-5089
Faculty: Professors: Archie Boston, Thomas E. Hall, Michael J. Kammermeyer, Herbert H. Tyrnauer, James J. Van Eimeren, Jerry W. Yates. Associate Professors: E. Stacy Dukes, Bhupendra K. Singhal
Emeritus Faculty: Estelle R. Brisker, Dean W. Myers
Department Secretary: Carolyn Sandusky

The Department of Design was established to provide an administrative and academic framework for professional design training in the fields of Industrial Design, Interior Architectural Design, Visual Communications Design, and Display/Exhibition Design. The degree programs that may be pursued are the Bachelor of Fine Arts, the Master of Arts, and the Master of Fine Arts, with the Bachelor of Science offered in the Industrial Design curriculum.

The faculty of Design believe that an appropriate education for the professional designer must include a comprehensive body of technical knowledge involving historical sources, tools, techniques, and materials; a methodology for encouraging the creative process; and the attainment of the requisite level of skill to express visual ideas with clarity. While being fully equipped to meet the objectives of the marketplace, today's designer must also achieve sufficient educational breadth to adapt successfully to the varying demands imposed on his work by economic, social, and psychological factors.

The academic programs of the Department of Design have been accredited by the National Association of Schools of Art and Design and the Foundation for Interior Design Education and Research. Student demand for these programs is high and "impacted status" has been declared for the Graphic Design (Visual Communications Design) Option in the Bachelor of Fine Arts program. Requirements for admission and degree requirements are given below.

Admission to Baccalaureate Degree Programs

Supplemental Screening Criteria for Admission to the B.F.A. Degree in Graphic Design (code 4-5859)

Applications for the Graphic Design specialization exceed the spaces available; therefore, this program is considered impacted by The California State University.

Supplemental screening criteria will be used to determine which applicants will be admitted into Graphic Design (10091). The criteria for admission to this program are listed below:

1. Return the Design Department questionnaire by the stated deadline.
2. Submit also by the stated deadline a complete set of transcripts for all college-level academic work attempted. These are in addition to the transcripts sent to the University Admissions Office.
3. Have earned a 3.0 grade point average or better in at least 15 units of design/art, which must include the following required design/art courses or their equivalents:

Course Semester Units

Two-Dimensional Design (DESN 121) 3

Beginning Drawing (ART 181) 3

4. In addition, applicants for this B.F.A. degree who have achieved portfolio competency as indicated by major advisor must submit a portfolio of their creative work by the stated deadline for a formal review by the faculty in this specialization.

Bachelor of Fine Arts

The Bachelor of Fine Arts in Art degree is offered as preparation for the student who will eventually seek the Master's degree or a position as a professional designer. The B.F.A. program is a rigorous and competitive one. One hundred and thirty-two semester units are required for the degree, including 70 units for the major and 51 for General Education.

Requirements for the Bachelor of Fine Arts

Option in Graphic Design (code 4-5859)

Lower Division:

ART 112A, 112B, 131, 181, 184, 187, DESN 121, 223, 224, 231, 237.

Upper Division:

DESN 322A, 322B, 323, 327, 421, 422A, 422B, 499S; DESN 368 and three additional units of design or art history; eleven units of design or art or photography outside of graphic design, approved by major advisor.

Option in Interior Design (code 4-5854)

Lower Division:

ART 112A, 112B, 131, 181, 184, 187; DESN 121, 223, 224, 231, 237.

Upper Division:

DESN 332, 341A, 341B, 342A, 342B, 343, 367, 368, 441A, 441B, 499H; eleven units of Design outside of Interior Design approved by a major advisor.

Bachelor of Science in Industrial Design (code 3-5853)

This degree program is concerned with the relationship between technology and the visual arts. It includes background courses in engineering and the sciences. A portfolio review is required for all Industrial Design students prior to enrollment in DESN 331A-B or 333A-B. Portfolio reviews are conducted each semester for all upper division majors as a means of advisement and to insure satisfactory progress.

Requirements for the Bachelor of Science in Industrial Design:

Lower Division:

ART 112A, 112B, 131, 181, 184, 187; DESN 121, 223, 224, 231, 237; IA 281, 282, ME 172.

Upper Division:

DESN 331A, 331B, 332, 333A, 333B, 368, 431A, 431B; twelve units of design/art electives, nine units of which must be outside of Industrial Design. Approved lower and upper division electives to total 132 units.

Master of Arts (code 5-5850)

The Design Department Master of Arts in Art program provides four professional specializations within the degree: Graphic Design, Industrial Design, Interior Design, and Display/Exhibition Design.

Prerequisites

1. A bachelor's degree from an accredited institution with a minimum of 24 upper division units in design/art comparable to those required of a major in Design at this University.
2. Completion of 16 units minimum of upper division course work in the area of specialization.
3. Completion of 12 units of design/art history, six units of which must be upper division.
4. Successful completion of the Writing Proficiency Examination.
5. Presentation, to the student's specialization faculty, of a portfolio of representative studio work with emphasis in the area of specialization. Reviews are completed by the first week in October for the following spring semester, by the first week in March for the following fall semester.
6. A grade point average of 3.0 or better in upper division design/art course work. Students who do not meet the minumum 3.0 grade point average within the required 24 units as an undergraduate may count units taken as a post-baccalaureate student to meet this grade point average. Course work taken as a graduate to validate undergraduate preparation may not be used to satisfy any requirement in the student's MA program.

All prerequisites must be fulfilled before a student can become classified in a graduate degree program.

Advancement to Candidacy Requirements

1. Classified graduate standing. Completion of all prerequisites.
2. A graduate program approved by the student's committee, the Graduate Advisor, the Design Department Chairman, and the Dean of the School of Fine Arts.
3. A grade point average of 3.0 or higher in all work undertaken for the program.
4. The removal of any Incompletes.
5. Successful completion of the Advancement Review.
6. Complete minutes of graduate committee meetings with the student which total a minimum of one meeting for each semester of program units.

Requirements for the Master of Arts

Completion of all requirements established by the student's graduate advisory committee, including:

1. A minimum of 30 units of approved upper-division and graduate-level courses; a minimum of 15 units at the 500- and 600-level; a minimum of 18 units in the specialization.
2. A minimum of six units of design history or related history beyond the twelve prerequisite units.
3. A thesis or studio project. All studio projects must be formally exhibited.

Master of Fine Arts in Art (code 7-5850)

The Design Department Master of Fine Arts degree program provides specializations in: graphic design, interior design, and display/exhibition design.

Prerequisites:

1. A bachelor's degree from an accredited institution with a minimum of 24 units of upper division design course work comparable to those required for the B.F.A. in Design at this University.
2. Completion of a minimum of 18 units of upper division course work in the area of specialization for the proposed M.F.A.
3. Completion of a minimum of 12 units of design/art history, six units of which must be upper division.
4. Successful completion of the Writing Proficiency Examination.
5. Presentation, to the student's specialization faculty, of a portfolio of representative studio work with emphasis in the area of specialization. Reviews are completed by the first week in October for the following spring semester, by the first week in March for the following fall semester. (See M.A. and M.F.A. procedures, "Screening for Acceptance" for details.)
6. A grade point average of 3.0 or better in upper division design/art course work. Students who do not meet the minumum 3.0 grade point average within the required 24 units as an undergraduate may count units taken as a post-baccalaureate student to meet this grade point average. Course work taken as a graduate to validate undergraduate preparation may not be used to satisfy any requirement in the student's MA program.

All prerequisites must be fulfilled before a student can become classified in a graduate degree program.

Advancement to Candidacy Requirements:

1. Classified Graduate standing. Completion of all prerequisites.
2. A graduate program approved by the student's committee, the Graduate Advisor, the Design Department Chairman, and the Dean of the School of Fine Arts.
3. A grade point average of 3.0 or higher in all work undertaken for the program.
4. The removal of any Incompletes.
5. Successful completion of the Advancement Review.
6. Complete minutes of graduate committee meetings with the student which total a minimum of one meeting for each semester of program units.

Requirements for the Master of Fine Arts Specialties

A minimum of 60 units of approved coursework including at least:

1. Thirty-six 36 units in the area of specialization. Thirty of these units must be in the 500- and 600-levels and must include 690A, 690B, 692, and 699.
2. Six units of approved upper-division or graduate coursework outside of design.
3. A comprehensive review, administered by the student's graduate advisory committee, after the completion of 21 units of studio coursework. This review is to determine whether the candidate will continue in the M.F.A. program.
4. A minimum of 6 units of approved upper-division or graduate design/art history beyond that required as prerequisite work.
5. Twelve units of upper division or graduate level elective coursework in design.
6. A studio project, exhibited and described in a studio thesis.

M.F.A. Transfer and Residence Policy

1. Transfer credit allowable on the M.F.A. is normally not to exceed 30 units.
2. M.F.A. candidates must complete a minimum of 18 specialized units with graduate numbers in residence.
3. All transferred credit used in the M.F.A. must be determined by the student's graduate committee and approved by the department Graduate Advisor.
4. The CSULB Master of Arts degree will normally count for a maximum of 30 units (18 in specialization) toward the M.F.A. degree. Exceptions up to an additional 6 units may be approved for outstanding students by the Art/Design Graduate Committee.

Courses (DESN):

Lower Division

121. Two-Dimensional Design (3) F,S Faculty
Investigation and problems in the organization of two-dimensional visual phenomena.

220. Principles of Color (2) S Faculty
(Same course as ART 220.) Prerequisite: DESN 121. Study of the physical, physiological and psychological aspects of color through lecture and studio projects. An investigation of the various methods used to catalog color.

222. Calligraphy (2) F Faculty
Prerequisites: DESN 121; ART 181. Study of letter design and written letter forms utilizing the broad pen. Examines traditional written letter forms and contemporary interpretations of these forms.

223. Lettering and Typography (2) F,S Faculty
Prerequisites: DESN 121, ART 181. Study of historical and contemporary applications of lettering in which letter forms are viewed as design elements that can enhance visual communication. Students examine various letter form styles, design new forms based on existing typography and execute finished letter forms for reproduction.

224. Perspective (2) F,S Faculty
Use of measuring devices and the mechanical development of volume, space and shadow projection.

231. Rendering for Designers (2) F,S Faculty
Prerequisites: DESN 121, 224; ART 181 or consent of instructor. Rendering of accurate and dramatic presentations. Primarily for design students entering the design profession.

237. Applied Design (2) F,S Faculty
Prerequisites: DESN 121; ART 131, ART 181 or DESN 224. Form in design and an introduction to the varying applied aspects of design.

Upper Division

321. Graphic Production (Non-Major) (3) F,S,SS Faculty
Prerequisites: DESN 121, 223, ART 181. Graphic Design production processes, including concept to finished art. Similar to DESN 323 but less "hands-on" oriented. Field trips, lectures, critiques lab sessions.

***322A-B. Visual Communications Design F,S,SS Boston, Hall, Van Eimeren, Faculty**
Prerequisites: DESN 121, 223, 224; ART 131, 181, 184, 187; 322B: DESN 322A and permission of instructor. Design conceptualization and visualization appropriate to communications in print, film and video.

***323. Visual Communications Design/Production (3) F Boston, Hall, Van Eimeren**
Prerequisites: DESN 121, 223, 322A and permission of instructor. Graphic Design production processes, including concept to camera-ready mechanicals and proof processes. Lecture, Lab Field trip. [Activity]

***324. Film Animation (3) F,S Van Eimeren**
Prerequisite: Consent of instructor by drawing portfolio presented at first class meeting. Design and production of color, super 8 mm and sound synchronized 16 mm animated films.

***325. Packaging Design (3) F Van Eimeren**
Prerequisite: Consent of instructor. Materials, processes and the design of packaging.

326. Computer Graphics (3) F,S Faculty
Prerequisite: Permission of instructor. This entry-level survey introduces design and computer-science majors to the basic concepts of computer graphics applications in television, film, print, product, interior and architectural design. Lectures, films and videotapes on applications will complement field trips to local design firms utilizing the computer as a basic tool. A research paper and/or at least one hands-on project on the computer will result from individual and team input.

327. Advertising Design (3) F Boston
Prerequisites: DESN 121, 223, ART 184. Permission of instructor. This course will explore small space advertising, television, and outdoor billboards from the conceptual stage through comprehensive layouts.

330A-B. Computer-Aided Design (3,3) F,S,SS Kammermeyer
Prerequisites: Upper division status in either Industrial, Interior or Visual Communication Design or permission of instructor. Introductory course in PC tools for use in the fields of Industrial, Interior and Visual Communication Design. Includes drafting, 3D modeling and paint programs. [Activity]

***331A-B. Industrial Design F,S Kammermeyer, Tyrnauer**
Prerequisites: DESN 121, ART131, ART181 or DESN 224; DESN 331B: DESN 231, 237. Planning and design of useful products for industrial production.

***332. Rapid Visualization (2) F,S Myers**
Prerequisites: ART 181, DESN 224, 231 or consent of instructor. Visual presentation of concepts with emphasis on qualitative and quantitative techniques of communication as used in contemporary industrial design.

***333A-B. Industrial Design Methodology (2,2) F,S Kammermeyer**
Prerequisites: MATH 100, 101 or consent of instructor. Examination of methods and techniques in design problem solving.

***340. Professional Practices for Interior Architecture (3) S**
Examination of professional practices for commercial (corporate) institutional/public interior architectural design.

***341A-B. Interior Design (3,3) F,S Yates, Singhal**
Prerequisites: DESN 121, ART 112A,B, 131 and 181 or DESN 224, 341B: DESN 224, 231, 237, 332. Design of interior environments emphasizing interrelationships between interior space, architectural form and human factors in design.

***342A-B. Interior Architectural Drawing and Rendering (2,2) F,S Singhal, Yates**
Prerequisites: ART 131, 181, 187, DESN 224, 231: 342B: DESN 332. Drawing, rendering and techniques of graphic expression for interior architectural designers. Includes working drawings.

***343. Materials of Interior Architecture (3) F Singhal**
Prerequisites: ART 131, DESN 121, 224, 231, 237 or consent of instructor. Materials, processes and resources as they relate to interior architecture. Examination of technology and application through lecture, demonstration and field trips.

***344A-B. Display and Exhibition Design (3,3) F,S Dukes**
Prerequisites: ART 111 or 161, 112A,B, 131, 181, 187; DESN 121. Use of materials, processes, and design concepts in the planning and preparation of displays and exhibits.

***367. History and Theory of Architecture (3) F Krause**
Evolution of architecture relative to the human need to shape environment in accordance with governing concerns of specific periods in history. Not open to students with credit in ART 417.

***368. History and Theory of Design (3) S Krause**
Development of design as an independent creative activity including a consideration of both pre-technological and technological culture. Not open to students with credit in ART 418.

420. Visual Communication Design Workshop (3) F,S Faculty
Prerequisite: Consent of instructor. An on-campus design studio experience established to allow outstanding students (selected by portfolio review only) to develop portfolios of printed work in visual communication design. Students work in a professional designer/art director relationship on actual projects with real budgets, deadlines, and clients in the University and community, with responsibility for all phases of each project, from design to production, printing supervision and completion.

421. Visual Communications Design/Comping Skills (3) F,S Faculty
Prerequisites: DESN 121; ART 181. DESN 322 recommended, but not required. Concepts and comping skills from thumbnails through tight comps, emphasizing marker technique. Rendering of various materials, surfaces and type indication stressed.

***422A-B. Advanced Visual Communications Design (3,3) F,S Boston, Hall, Van Eimeren**
Prerequisites: DESN 322A, 323. DESN 422A is a studio course resulting in a multi-color product taken through design, production and marketing. DESN 422B deals with advertising agency art direction and results in a campaign development.

***431A-B. Advanced Industrial Design (4,4) F,S Kammermeyer, Tyrnauer**
Prerequisites: DESN 331B, PHYS 100AB, EIT 301 and 306 or consent of instructor. Advanced planning and design of projects in the area of mass produced objects, packaging, traffic, transportation, mechanical design and shelter.

***432. Advanced Rapid Visualization (3) S Myers**
Prerequisites: DESN 224,231, 332, consent of instructor. Advanced idea generation and visualization for industrial design.

***435. Furniture Design (3) F,S Dukes**
Prerequisites: DESN 121, 237, 331A or 341A, 332; ART 131, 161, 181, 187; IA 281, 282 or consent of instructor. Design of public and private interior furnishings with an in depth study of the potentials of contemporary production methods and materials.

***441A-B. Advanced Interior Design (3,3) F,S Singhal, Yates**
Prerequisites: DESN 341B, 342A-B or consent of instructor. Advanced interior design and space planning problems emphasizing relationships between the built environment and human factors in design.

*442G. Internship in Industrial Design (3) F,S Faculty

Prerequisite: Consent of instructor. Student internship experience in selected industrial design offices. Opportunity to work under supervision of industrial designers in the field to expand student understanding of the complexities, discipline and challenges in the practice of industrial design. May be repeated once for credit.

*442H. Internship in Interior Design (3) F,S Singhal, Yates

Prerequisite: Consent of instructor. Student internship experience in selected interior design offices. An opportunity to work under supervision of interior designers in the field to expand student understanding of the complexities, discipline and challenges in the practice of interior design. Limited to six units in one semester and a total of nine units.

*442S. Internship in Visual Communications (3) F,S Boston, Hall, Van Eimeren

Prerequisite: Consent of instructor. Student internship experience in selected studios, advertising agencies and in-house creative departments. Opportunity to work under supervision of professionals in the field for six hours per week. Limited to three units in one semester and a total of six units.

*443. Building Systems for Interior Architecture (3) F Faculty

Prerequisite: DESN 342B or consent of instructor. Survey of design implications of typical building systems (structural, mechanical, plumbing, electrical, acoustical, energy conservation) as influences on interior architectural design.

*489. Special Topics in Design Theory (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in design will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. Topics will be announced in the Schedule of Classes.

*490. Special Topics in Design (1-3) F,S Faculty

Prerequisite: Consent of instructor. Special topics of current interest in design will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. topics will be announced in the Schedule of Classes.

495. Field Studies in Design (1-6) F,S Faculty

An opportunity to study design movements, objects, theories, techniques at appropriate off-campus locations. Up to six units of cumulative credit may be earned in DESN 495.

497. Special Studies in History of Design (3) F,S Faculty

Prerequisite: Consent of instructor. Opportunity for extensive work under faculty supervision on individual problems in history of design. May be repeated to a total of six units.

*499C. Special Studies in Display and Exhibition Design (3) F,S Dukes

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in display and exhibition design. Limited to six units in one semester and a total of nine units.

*499G. Special Studies in Industrial Design (3) F,S Faculty

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in industrial design. Limited to six units in one semester and a total of nine units.

*499H. Special Studies in Interior Design (3) F,S Faculty

Prerequisite: Consent of instructor. Opportunity for extensive work with faculty supervision on individual problems in interior design. Limited to six units in one semester and a total of nine units.

*499S. Special Studies in Visual Communications Design (3) F,S

Prerequisite: Consent of instructor. Opportunity for extensive contract work with faculty supervision on problems in visual communications design. Limited to six units in one semester and a total of nine units.

Graduate Courses

590. Special Problems in Design (1-3) F,S Faculty

Prerequisite: Consent of instructor. special problems of current interest in design will be selected for intensive study. May be repeated with different topics to a maximum of 12 units. Topics will be announced in the Schedule of Classes.

599. Studio Problems in Design (3-12) F,S Faculty

Prerequisite: Consent of instructor. Advanced individual graduate projects, with faculty supervision, in an area of design specialization. Limited to six units in one semester and a total of 12 units in any one area. Areas will be designated by letter at the time of registration: (c) display and exhibition, (g) industrial design, (h) interior design, and (s) visual communications design (graphic design).

690A. Seminar in Design (3) F Faculty

Prerequisite: Consent of instructor. Selected reading and writing concerning topics relevant to student's specific disciplines in design with an opportunity for interdisciplinary discussion.

690B. Seminar in Design (3) S Faculty

Prerequisite: Consent of instructor. Professional preparation for designers stressing practical concerns as well as current trends in design practices, theory and criticism.

692. Public Exhibition (2-3) F,S Faculty

Prerequisite: Consent of instructor. Planning, preparation and administration of a public exhibition of creative work related to the design field. Two units only for all M.A. candidates. Three units only for all M.F.A. candidates. the course will result in a public exhibition by each M.A. and M.F.A. candidate.

694. Directed Studies — Studio (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent studies in creative studio.

695. Field Problems in Design (1-6) F,S Faculty

Opportunity to study design movements, objects, theories, techniques or literature at appropriate off-campus locations. Up to six units of cumulative credit may be earned in DESN 695.

697. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent studies in technical and historical aspects of design.

698. Thesis or Project (1-6) F,S Faculty

Prerequisite: Advancement to candidacy. Planning, preparation and completion of a thesis or project. Required of all Master of Arts candidates.

699. Thesis or Project (1-6) F,S Faculty

Prerequisite: Advancement to candidacy. Planning, preparation and completion of thesis or project. Required of all M.F.A. candidates and all candidates seeking a second M.A.

Music

School of Fine Arts

Department Chair: Jerry Neil Smith
Department Office: University Music Center (MUC), Room 306
Telephone: 498-4781
Faculty: Professors: Robert E. Anderson, Larry G. Curtis, Akira Endo, Barbara C. Kovalenko, Justus Matthews, Frank M. Pooler, Kay L. Roskam, John H. Prince, Ronald C. Sindelar, Jerry Neil Smith; Associate Professors: Donald G. Andrus, Richard Birkemeier, Marvin Branson, Michael Carney, Michael Carson, Kristine K. Forney, Edith Hirshtal Nahas
Applied Music: David Atkins, Clarinet; John Barcellona, Flute; Richard Birkemeier, Trumpet; Marjorie Call, Harp; Michael Carney, Percussion; Adriana Chirilov, Viola; John Clayton, Double Bass; Kathleen Darragh, Voice; Greg Donovetsky, Oboe; Akira Endo, Violin; Dave Evans, Trumpet; Leaine Gibson, Piano; Greg Goodall, Percussion; Lavoy Halle, Accordion; Elizabeth Holborn, Violin; James Hurd, Organ; Barbara Kovalenko, Piano; Josephine Lott, Voice; Kathleen McIntosh, Harpsichord; Harvey Malloy, Guitar; Kenneth Meyer, Bassoon; Julien Musafia, Piano; Edith Hirshtal Nahas, Piano; John Noschese, Voice; Norman Pearson, Tuba/Euphonium; Arpine Pehlivanian, Voice; Leo Potts, Saxophone; Ken Remo, Voice; Jeffrey Reynolds, Trombone; Steve Santini, Guitar; Victor Sazer, Cello; Wayne Sheley, Trombone; Calvin Smith, Horn; Patricia Smith, Voice; Richard Smith, Guitar; Paul Stroud, Organ; Gerald Thatcher, Horn; Greg Woll, Trombone
Emeritus Faculty: Charles Becker, Leon Dallin, Gerald R. Daniel, Nadyne C. Gibson, Sanford M. Helm, Hans Lampl, Julien Musafia, Clare G. Rayner, Russel N. Squire, Gerald Strang, W. Paul Stroud, Henri Temianka, Robert Tyndall, Robert W. Winslow
Department Secretary: Rachael Jensen

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate advisors-Bachelor of Arts, Commercial, Composition, History and Literature, Performance, Therapy, Music Minor, Music Education (credential); Graduate Advisor.

General Information

The undergraduate music curriculum provides programs for the student who wishes: to become a professional musician; to enter the teaching profession; to use music as a therapeutic tool; for whom music is part of a general education; or, who is intending to pursue an advanced degree in music.

All entering freshmen and transfer students are required to take a theory placement test and performance audition which are regularly administered in May and December and are also available at the beginning of registraton week each semester. Each entering student should inquire at the Music Office for dates and details. In addition, new students are required to meet with an advisor prior to registration.

Each music major must declare a specializaton in some performance area (voice, piano or other instrument), develop ability in this area, appear in student recitals and demonstrate progress to the satisfaction of the faculty.

Each student must pass a piano proficiency examination at an appropriate point while meeting course requirements regardless of the performance area. Detailed information may be obtained in the Music Office.

Participation in one of the principal performance organizations (MUS 100/300) is required of each music major each semester.

Undergraduates carrying six or more units are required to participate in Semester Recital (MUS 110) every semester except the semester of the senior project.

A satisfactory senior project is a prerequisite to graduation.

The Department of Music holds membership in the National Association of Schools of Music. The Bachelor of Music, Bachelor of Arts and Master of Arts degres in music are accredited by the association.

The Department of Music offers graduate study leading to the Master of Arts degree. The candidate should arrange through the department office for counseling with the graduate adviser. Special placement examinations or auditions are required to validate qualifications for graduate work in music.

All general requirements of the University must be met in addition to departmental requirements listed below. California State University, Long Beach is an accredited institutional member of the National Association of Schools of Music.

Requirements for the Bachelor of Arts in Music (code 2-5820)

Lower Division:

MUS 110 (every semester), 100 (every semester), 141A-B, 142A-B, 160, 241, 260, keyboard competency equivalent to 220B, completion of the piano proficiency examination, and individual instruction.

Upper Division:

At least 24 units of upper division music courses, including: MUS 300 (every semester), 341, 342, 360, 423, and individual instruction.

NOTE:

Private instruction is available through Extended Education (X129, X229, X329, X429) limited to a maximum of two semesters.

Bachelor of Music

A minimum of 72 units including the core and one area of concentration is required, which should include at least 24 upper division units in music. Concentrations include Music History and Literature, Composition, Instrumental Music, Choral-Vocal Music and Performance. Admission to the concentration is determined by audition and approval of the chair of the department. Application for admission to concentration should be submitted no later than the beginning of the junior year, and significant progress must be demonstrated during the remaining two years. A Bachelor of Music degree requires a total of 132 units which must include a minimum of 40 upper division units.

Core:

Music history and literature (MUS 160, 260, 360); music theory (MUS 141A-B, 142A-B, 241, 341, 342); music performance (MUS 100 or 300 - one unit each semester in residence); keyboard competency (equivalent to MUS 220B) and completion of the piano proficiency examinations; semester recital (MUS 110 - each semester in residence); senior project (MUS 423).

NOTE:

Private instruction through Extended Education (X129, X229, X329, X429) limited to a maximum of two semesters.

Option in Choral-Vocal Music (code 4-5821)

(This option is intended for single subject teaching credential candidates.)

MUS 129,329, or X129, X329, (must be taken each semester in residence); voice proficiency (equivalent to MUS 222B); MUS 320 or 322, 327, 328A or 328B, 421, 422, 432A or 432B, 465, 483A,B; MUS 125/325, 1 unit in each family of instruments (may be waived in whole or part upon passage of proficiency exams).

Option in Composition (code 4-5822)

Required:

performance level of junior on major performance medium, MUS 200 or 400 New Music Ensemble (must be taken twice), 441, 442, 444, 445 (must be taken three times), 446, six units to be selected from MUS 422, 425B, 443, 491, 499. One course from MUS 375IC, 460, 461, 462, 463, 464, 465, and 469.

Option in History and Literature (code 4-5824)

Required:

performance level of junior on major performance medium, MUS 496 (Research Methods); elect 18 units from MUS 361IC, 375IC, 391IC, 393, 460, 461, 462, 463, 464, 465, 469, 490, MUS 400 (Collegium Musicum must be taken three times). Department of Music Foreign Language Proficiency Examination in French, German, or Italian (may be waived by completion of 101B level course in French, German, or Italian). Recommended courses outside music: ENGL 200, history, art history,theatre history.

Option of Instrumental Music (code 4-5826)

(This option is intended for single subject teaching credential candidates.)

Required:

MUS 129, 329 or X129, X329 (must be taken each semester in residence); MUS 425A,B, 442, 465, 480, 481, 482A,B, 485; 9 units of MUS 125/325 or proficiencies to include brass, woodwinds, strings and percussion.

Option in Performance (code 4-5828)

Individual instruction (MUS 129, 229, 429, or X129, X229, X429) required each semester in residence with an achievement of senior level on major performance medium. Music 335 may be substituted for this requirement in certain concentrations when offered and advised by the department. Junior project (MUS 323) required of all students during their junior year.

Students in commercial music whose primary performance medium is woodwinds will be required for graduation a minimum of 6 units in saxophone, 2 units in clarinet, 2 units in flute, and 4 units consisting of further study in saxophone, clarinet, or flute for a total of 14 units in applied music. Prior to the senior project each student must pass a junior-level proficiency examination on saxophone, clarinet and flute.

Piano:

MUS 200/400 (4 units); MUS 321, 326A-B, 431A-B, 433, 460 or 461; MUS 335 in lieu of individual instruction when approved by department chair.

Organ:

MUS 421, 424A-B, 442, 444, 460 or 461, 484.

String Instruments:

MUS 200/400 (4 units); MUS 425A-B, 460, 464; MUS 335.

Wind Instruments:

MUS 200/400 (4 units); MUS 425A-B, 460, 464.

Voice:

MUS 328 A-B, 332, 421, 426, 432 A-B, 460 or 462. Completion of Department of Music Foreign Language Examination in French, German or Italian (may be waived by completion of 101B level course in French, German or Italian).

Opera:

Mus 328 A-B, 332, 421, 463; completion of the Music Department foreign language examination in French, German, or Italian (may be waived by completion of 101 B-level course in French, German, or Italian); THEA 262 and 331; 3 additional units chosen from DANC 111A or 113A, MUS 130/330 allowed for 4 units of activity credit.

Piano Accompanying:

MUS 200/400 (4 units); MUS 321, 326A-B, 328, 332, 421, 431A-B, 433, 460 or 462.

Piano Pedagogy:

MUS 200/400 (4 units); MUS 326A, 427A-B, 431A-B, 433, 434A-B, 460 or 461

Commercial Music:

MUS 200/400 (at least 4 units, 1 of these in New Music Ensemble); MUS 271, 370, 371, 372, 393, 442, 446, 474.

Requirements for the Certificate in Music Therapy

1. A Bachelor of Arts degree in music may be taken concurrently.
2. Additional courses as listed below.

Lower Division:

MUS 122A or 125 (Guitar), 250A and B; A/P 107; PSY 100, 150; recommended SOC 255.

Upper Division:

MUS 325,350,385A or B, 384, 386, 421 or 425A, 450, 451, 452, 453; A/P 308; ED P 305,311,350; PSY 361,365,370; recommended SOC 461 and ANTH 412.

The Music Therapy Certificate Program is approved by the National Association for Music Therapy. Acceptance to this program is based on a selection process which occurs at the completion of MUS 250A.

Requirements for the Minor in Music (code 0-5820)

A minimum of 20 units, 9 of which must be upper division (300- and 400-level courses). Specific courses are required. A degree plan must be prepared in conference with the appropriate department advisor prior to beginning this program.

Requirements for the Concentration in Music for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required, 15 of which must be upper division. Piano proficiency equivalent to MUS 120B (Class Piano); voice proficiency equivalent to MUS 122A (Class Voice); Proficiency in guitar (recommended for Credential candidates) or another instrument equivalent to MUS 125 (Instruments).

Required courses:

MUS 180, 300, 390 and 490; one course from MUS 363IC, 391IC, 382, 393.

Upper Division Electives:

(Units earned above may not be counted.) MUS 300, 320, 322, 325, 350, 375IC, 382, 385A, 385B, 391IC, 393, 421, 425A, 450, 460, 461, 462, 463, 464, 465, 489, or 495. Note: MUS 390, 490, 385A, and 385B are also available in the Core. MUS 382 is recommended for Credential candidates.

All students with a Music Concentration for the Bachelor of Arts in Liberal Studies must arrange for a couseling appointment with Dr. Robert Anderson of the Department of Music.

Master of Arts in Music (code 5-5820)

The Master of Arts degree in Music provides academic concentrations in Musicology, Music Theory and Music Education.

Prerequisites:

1. A Bachelor of Arts with a major in music or Bachelor of Music degree, or:
2. A bachelor's degree with a minimum of 24 units of upper division courses in music comparable to those required of a major in music at this University;
3. Every student who intends to complete a Master of Arts degree in music must apply to the Office of Admissions and Records to obtain admission to the University. The Office of Admissions and Records will notify the student by mail of the action taken and specify the student's academic classification.
4. The student must request all institutions of higher learning attended to send an official copy of transcripts directly to the Office of Admissions and Records and to the Department of Music Graduate Advisor. Transcripts presented to the Admissions Office by the student are not acceptable. Graduates of California State University, Long Beach, must follow these same procedures when making application to the Master of Arts in music program.
5. All applicants are required to complete the Department of Music Graduate Placement Examination before they register for courses applicable to the Master of Arts degree. (Under special circumstances, a student may take the examination during the first semester in which he or she is registered in courses applicable to the degree.) Applicants for all options of the M.A. degree must present samples of their scholarly writings in music for review by the Graduate faculty. Applicants for the musicology concentration must show evidence of reading and translation ability in one foreign language (French or German).

Advancement to Candidacy

The prerequisites to advancement to candidacy are:

1. Attain fully classified status.
2. Satisfy the CSULB Writing Proficiency Examination.
3. Maintain a 3.0 grade point average or higher in all work (at least 6 units) taken since admission to the program.
4. Remove all undergraduate deficiencies as determined by the departmental Graduate Placement Examination and/or the Dean, School of Fine Arts.
5. Pass the Department of Music Qualifying Examination.
6. Submit a thesis or project proposal approved by the student's thesis committee and the Graduate Advisor.
7. Submit a graduate degree program approved by the Graduate Advisor, Department Chair, the Dean of the School of Fine Arts, and the candidate's thesis committee.

Requirements for the Master of Arts

1. Completion of a minimum of 30 units of approved upper division and graduate courses with at least 24 units in the major. (The program may not include more than six units of transfer graduate credit.)
2. Core courses required by all Master of Arts students, 13-15 units: MUS 696 (should be taken the first time it is offered during the student's residency): MUS 541 or 542; one course from MUS 560, 561, 562, 563, 564, 565; MUS 698 (for 4-6 units, dependent upon concentration).
3. Additional courses for Musicology concentration: 3 units from MUS 560, 561, 562, 563, 564, 565 (other than one taken in core); 6 units elected from MUS 566, 567, 568, 569, 570, 571, 660; 6 units of music electives (students in this concentration are strongly encouraged to elect theory as well as performance classes, especially Collegium Musicum and New Music Ensemble). Thesis is taken for 6 units in this concentration.
4. Additional courses for Music Theory concentration: 3 units from 541 or 542 (whichever not taken in core); 6 units from MUS 543, 544, 545, 546, 548, 645, 646; 6 units of music electives (students in this concentration are strongly encouraged to elect additional history and performance classes, especially New Music Ensemble and Collegium Musicum). Thesis is taken for 6 units in this concentration.
5. Additional courses for Music Education Concentration: MUS 581; 6 units from MUS 486, 550, 580, 584, 585A, 585B, 589, 595 (section by advisement), 680, 681; 6-8 units of electives (students in this concentration are encouraged to elect performance and conducting classes). Thesis is taken for 4-6 units in this concentration, dependent upon project.

Master of Music Degree (code 7-5820)

The Master of Music degree program provides professional concentrations in Composition and in Performance with three options: Conducting, Opera, and Instrumental and Vocal Performance.

Prerequisites:

1. A Bachelor of Music degree, or a Bachelor of Arts degree with a major in Music or the equivalent, from an accredited institution, with a minimum of 24 upper-division units of Music comparable to those required at this University.

2. All applicants are required to complete the Department of Music Graduate Placement Examination before they register for courses applicable to the Master of Music degree. (Under special circumstances, a student may take the examination during the first semester in which he or she is registered in courses applicable to the degree.)
3. Criteria according to concentration:
   a. Composition — submission and approval of a portfolio of representative original scores and evidence of baccalaureate-level competency as required in the Bachelor of Music Composition Option.
   b. Performance —
   Conducting: successful completion of a conducting examination and approval by the conducting faculty.

   Opera and Instrumental / Vocal Performance: an audition both at a performance level and with a repertory on an instrument or in voice acceptable to the faculty of the specific performance medium.
4. A grade point average of 3.00 or better in upper-division Music. Students who do not meet the 3.00 grade point average requirement or specified balance within the required 24 units of upper-division music but who possess outstanding or unusual qualifications that promise a significant contribution to the Master of Music program may petition for a special review from the Department Graduate Advisory Council.

Advancement to Candidacy:

1. Satisfy all the general University requirements, including passing the C.S.U.L.B. Writing Proficiency Examination.
2. Remove all undergraduate deficiencies, which were determined by the departmental Graduate Placement Examination and/or the Dean of the School of Fine Arts.
3. Pass the Department of Music Qualifying Examinations.
4. Submit an approved project or thesis proposal, and a graduate degree program approved by the student's Thesis Committee, the Graduate Advisor, Department Chair, and the Dean of the School of Fine Arts.

Requirements for the Master of Music Degree (code 7-5820)

1. Thirty (30) units are required for the Master of Music degree.
2. Courses required of all Master of Music students, 13 units: MUS 541 or 542; one course from MUS 560, 561, 562, 563, 564, 565, 566; MUS 696 (should be taken the first time it is offered during the student's residency); MUS 698.
3. Additional courses required for the Composition concentration, 17 units: 2 units of MUS 529 (section by advisement); MUS 541 or 542 (whichever was not taken in requirement 2 above); MUS 645 and 646; 6 units of Music electives selected by advisement.
4. Additional courses required in the Performance Option, 17 units:

   Conducting: 2 units of MUS 500 or 600; 2 units of MUS 529 (section by advisement); MUS 520, 595 (section by advisement); 7 units of Music electives selected by advisement.

   Opera: 4 units of MUS 529; 2 units each of MUS 530, 532; 3 units of THEA 331 or other Theatre Arts or Dance course chosen by advisement; 6 units of music electives selected by advisement. Students in this concentration are strongly encouraged to include dance and theatre courses as well as MUS 569.

   Instrumental/Vocal: 4 units of MUS 500 or 600; 4 units of MUS 529; 9 units of Music electives selected by advisement. Keyboard majors are required to take MUS 567 and are strongly encouraged to select their 6 electives from MUS 533 A,B and MUS 526 A,B.
5. An oral examination and defense of the thesis, recital, or project (MUS 698).

Teaching Credentials:

See Instrumental Music and Choral-Vocal Music options under B.M. degree. For further information consult with the Department of Music credential adviser.

Music Performance

Opportunities to participate in various instrumental and vocal ensembles are available to all students. Before enrolling in a performing group students should apply to the director of the organization in which they wish to participate. Music performance courses may be repeated; up to 8 units of credit in MUS 100 or 300 may be counted toward a bachelor's degree. Simultaneous enrollment in more than one organization is permitted.

Courses (MUS):

Lower Division

100. Performance (1) F,S Faculty
Prerequisite: Consent of instructor. Major performance groups, including University Choir, Wind Symphony, University Orchestra, Forty-Niner Chorus, men's chorus, women's chorus, band, orchestra, etc. (See note on music performance.)

101. Marching Band (2) F Branson
Performance in the University Marching Band, half-time shows and other special marching events. Required attendance at all performances (see note on music performance).

110. Semester Recital (1) F,S Faculty
Recital attendance and performance on principal instrument or voice. Required of undergraduate music majors each semester, except for semester enrolled in MUS 423, for a maximum of 7 units.

120A-B. Class Piano (1,1) F,S Faculty
Technique, tone production, rhythm, sight-reading, interpretation and keyboard facility.

122A-B. Class Voice (1-1) F,S Faculty
Fundamental techniques of singing, tone production, voice placement, breathing, diction, repertoire and song interpretation.

125. Instruments (1) F,S Faculty
Prerequisite: Limited to music majors and minors. Class instruction in applied music. Areas include: flute, oboe, clarinet, bassoon, horn, trumpet, trombone, baritone, tuba, percussion, violin, viola, cello, bass, guitar, or groups such as woodwinds, brass, strings. May be repeated for credit.

129. Individual Instruction for Music Majors (1) F,S Faculty
Open to music majors only. Private lessons in their major performance medium. Application must be made to the Chair of the Department of Music during the semester prior to registration. Registration subject to his/her approval. May be repeated for credit.

130. Opera (1) F,S Carson
Preparation, rehearsal and public performance of traditional and contemporary opera. May be repeated for credit.

140. Basic Music Theory (3) F,S Faculty
Notation and reading of music. Written, aural and performance experience with scales, intervals, chords, and melodies. Provides essential background for more advanced courses in music theory.

141A-B. Musicianship (2,2) F,S Faculty
Prerequisites: Music 140 or a satisfactory score on theory placement examination. MUS 142A-B to be taken concurrently. Sight singing, keyboard harmony, melodic and harmonic dictation through modulation and chromatic harmony.

142A-B. Harmony (3,3) F,S Faculty
Prerequisite: MUS 140 or a satisfactory score on a theory placement examination. MUS 141A-B to be taken concurrently. Traditional harmony: chord choice, part-writing and analysis.

160. History of Music: Baroque/Classic (3) F Faculty
Chronological survey of music and musical styles from 1600 to 1750 with selected readings, recordings and scores for in-depth study. Primarily for music majors and minors, but open to others who can read music.

180. Exploring Music (3) F,S Faculty
Fundamentals of music and essentials of music listening. Performance skills in singing and playing music.

190. Listener's Approach to Music (3) F,S Faculty
Non-technical course open to all students except music majors. Materials, forms and styles of music with extensive listening.

200. Performance (1) F,S Faculty
Prerequisite: consent of instructor. Specialized performance groups, such as chamber music, brass or woodwind ensembles, string quartet, etc.

220A-B. Class Piano (1,1) F,S Faculty
Continuation of 120A-B.

222A-B Class Voice (1,1) F,S Faculty
Continuation of 122A-B.

229. Individual Instruction for Music Major (2) F,S Faculty
Open to performance majors only. Private lessons in their major performance medium. Application must be made to the Chair of the Department of Music during the semester prior to registration. Registration is subject to his/her approval. May be repeated for credit.

241. Counterpoint (3) F,S Faculty
Prerequisites: MUS 141B and 142B. Counterpoint in two, three and four parts.

250A. Introduction to Music Therapy (3) F Faculty
Prerequisite: Psychology 100. A course designed to provide a broad overview and introduction to the field of music therapy including history, theory, and current practice.

250B. Introduction to Music Therapy (3) S Faculty
Prerequisites: MUS 250A. This course has been designed for the student accepted into the music therapy program. Focus is on development of entry-level clinical skills, as well as orientation to various pathologies and interventions used in music therapy.

260. History of Music: Nineteenth/Twentieth Centuries (3) S
Chronological survey of music and musical styles from 1800 to the present, with selected readings, recordings and scores for in-depth study. Primarily for music majors and minors, but open to others who read music.

271. Improvisation Techniques I (2) F Carney
Basic techniques in improvisation, beginning with simple question and answer phrases and progressing to extended solos. Detailed and applied knowledge of chord progressions.

290. Music in General Culture (3) F,S Faculty
Artistic and socio-economic bases of music at the present time with consideration of the impact on various cultures within the United States. Not open to music majors.

Upper Division

300. Performance (1) F,S Faculty
Prerequisite: Consent of instructor. Major performance groups, including University Choir, Wind Symphony, University Orchestra, Forty-Niner Chorus, men's chorus, women's chorus, band, orchestra, etc. (See note on music performance.)

301. Marching Band (2) F Branson
Performance in the University Marching Band, half-time shows and other special marching events. Required attendance at all performances (see note on music performance).

320. Intermediate Piano (2) F,S Faculty
Prerequisite: MUS 220B or consent of instructor.

321./521. Theory of Piano Technique (2) S Musafia
Prerequisite: Consent of instructor. Physiological mechanics and psychology of piano playing; theory of fingering; memorization; teaching, with reference to graded materials.

322. Intermediate Voice (2) S Faculty
Prerequisite: MUS 222B or consent of instructor.

323. Junior Project (1) F,S Faculty
Recital of the standard literature for solo instrument or voice in the performance option in the Bacheior of Music degree. Enrollment restricted to music majors passing the Qualifying Examination.

324. Introduction to Organ Technique (2) F Stroud
Prerequisite: MUS 220B or consent of instructor. Acquaints pianists with organ-playing technique; registration, pedal technique, repertoire; performance of simple compositions, accompaniments and hymns.

325. Instruments (1) F,S Faculty
See MUS 125. May be repeated for credit.

326A,B./526A,B. Piano Accompanying (2,2) F,S Kovalenko
Prerequisite: Piano major or consent of instructor. Instruction and training in the art and the techniques of accompanying singers, instrumentalists and ensembles. Students with credit in MUS 228 or 326 may enroll only in 326B. (Lecture 1 hour, activity 3 hours.)

327. Techniques of Choral Singing (2) F,S Pooler
Vocal and aural training of the choral musician.

328A,B. Diction for Singers (2,2) F,S Faculty
Prerequisites: MUS 122A-B or equivalent. Principles of pronunciation and enunciation of English, German, French and Italian texts, with special emphasis on the rhythmic and dramatic aspects of articulation. Use of international phonetic alphabet.

329. Individual Instruction for Music Majors (1) F,S Faculty
Open to music majors only. Private lessons in their major performance medium. Application must be made to the Chair of the Department of Music during the semester prior to registration. Registration subject to his/her approval. May be repeated for credit.

330. Opera (1) F,S Carson
Preparation, rehearsal and public performance of traditional and contemporary opera. May be repeated for credit.

331. Summer Institute of Opera (1-5) SS Faculty
(By audition or approval of instructor.) Preparation and performance of opera production. Intensive individual and ensemble coaching; attendance at lectures and master classes dealing with various aspects of operatic practice and training for professional careers in opera.

332. Opera Repertoire (2) F Carson
Prerequisite: Two years of voice study, completion of Department of Music Foreign Language Proficiency Examination in French, German, or Italian (may be waived by completion of 101B level course in French, German, or Italian) and consent of instructor. Study and musical preparation of representative opera excerpts (arias, ensembles, and entire roles). Vocal interpretation as function of the dramatic action.

335./535. Advanced Performance (2) S Musafia
Prerequisite: Consent of instructor. Advanced study in a performance medium with equal emphasis on concert repertoire and technique. Includes special training for a performing career. May be repeated for credit to a maximum of 8 units.

341. Musical Form (3) F,S Faculty
Prerequisites: MUS 241. Small, large, multi-movement, variation, and contrapuntal forms in instrumental and vocal music.

342./548. Materials of Modern Music (3) F,S Faculty
Prerequisites: 241. Melodic, harmonic, rhythmic and contrapuntal materials of 20th-Century music. Analysis of representative compositions and writing in typical contemporary styles.

350. Influence of Music on Behavior (3) S Roskam
View of historical and contemporary uses of music to influence behavior.

352. Music Therapy — On-Campus Clinic (3) F Montgomery
Prerequisite: MUS 250A. Content designed for music therapy students to receive clinical experience in a closely supervised and highly controlled setting on campus.

360. History of Music: Medieval/Renaissance (3) F,S Rayner
Chronological survey of music and musical readings, recordings and scores for in-depth study. Primarily for music majors and minors, but open to others who read music.

361. Historical Instruments (1) F Forney
A seminar surveying instruments of the past and style and interpretation of instrumental music, approached practically as well as historically; includes performance skills. Intended to train instrumentalists to play in Collegium Musicum.

362. Singing Early Music (1) S Forney
A seminar surveying vocal techniques and musical styles and interpretation of early music, approached practically as well as historically; includes performance skills. Intended to train singers for Collegium Musicum.

363IC./364IC. Music and the Humanities (3,3) F,S Faculty
Interrelationships between music, the arts and humanistic disciplines. two-semester sequence: Fall — Studies in Music and Literature; Studies in Music and the Visual Arts. Spring — Studies in Music and Western Culture; Studies in Music and Other Temporal Arts.

365IC. Renaissance World (3) S Forney, Gosselin

Prerequisite: none. An interdisciplinary view of selected aspects of Renaissance culture and society, emphasizing the arts and literature within the historical context of the era. Topics span social, economic, intellectual, institutional, religious, and cultural issues and their influences in music, art, literature, and philosophy.(Same course as HIST 416). [Lecture/discussion: 3 hours]

370. Recording and Electronic Techniques (2) S Prince

Technique of the preparation and recording of music and the study of electronic recording and musical equipment.

371. Improvisation Techniques II (2) S Carney

Continuation of MUS 271.

372. Jazz Harmony and Analysis (3) F Prince

Prerequisite: MUS 142B. Basic techniques of writing and analyzing jazz harmony.

375IC. The Avant-Garde: Radical Change in Art and Music in the 20th Century (3) F Matthews, Gross

An examination of some of the major "modern" or avant-garde styles and movements in art and music in Europe and America from about 1900 to the present. The Course aims not only to characterize these styles and their practitioners but to relate them to major changes to modern society.

378. Aesthetics of Music (3) F,S Dr. Paul Tang

Prerequisites: None. Introduction to some central concepts and principles in aesthetics, with specific application to music. Detailed discussions on musical representation, musical expression, and meaning in music. Same course as PHIL 378.

382. Children's Literature in Music (3) F,S Faculty

Music materials designed for children's listening and singing, together with principles of presentation.

384. Music in Special Education (3) F,S Faculty

Prerequisite: MUS 180 or consent of instructor. Open to music majors, music minors, music therapy and liberal studies students. Planning, developing and evaluating musical procedures and materials for the special learner. Topics covered include the use of music to foster growth in the following areas: basic skills, auditory awareness, communication skills, perceptual-motor skills, visual-motor coordination, and enhancement of self-image.

385A. Children's Music (3) On Demand

Prerequisite: Mus 180 or consent of instructor. Analysis of procedures and materials for teaching music in the elementary school. Participation in singing and listening activities and in the use of simple instruments appropriate to child growth and development.

385B. Children's Music (3) On Demand.

Prerequisite: MUS 180 or consent of instructor. Open to music majors, music minors, music therapy and liberal studies students. Planning, developing and evaluating objectives, procedures, and material for teaching music in the elementary schools.

386. Introduction to Music Learning and Teaching (3) F Shuler

Introduction to the psychology of learning and music learning, aesthetics, developing music curricula, lesson planning, classroom management, and evaluation. Open to all music majors.

390. Music in Western Civilization (3) F Rayner

Music from the Renaissance to the present; lectures, readings and listening. Not open to music majors.

391IC. Studies in Musical Criticism (3) F,S Faculty

An historical review of the development of musical taste and concurrent literary styles with practical application to modern performances through written critiques.

393. Jazz, An American Music (3) F,S Carney

Prerequisites: none. A historical survey of the origins, developments, and social significance of American Jazz through recordings, films, live performances, and lectures.

400. Performance (1) F,S Faculty

Prerequisite: consent of instructor. Specialized performance groups, such as chamber music, brass or woodwind ensembles, string quartet, etc.

410IC. Literature and Music (3) F,S Bush

Same course as C/LT 410 IC. An examination of the relationship between music and literature in the late nineteenth and twentieth centuries with emphasis placed on representative literary works and music compositions that show mutual influences and common features and structures.

421. Choral Conducting (2) F Pooler

Prerequisite: MUS 327 or consent of instructor. Principles and techniques of choral conducting and organization. Study and interpretation of choral materials, using the class as a laboratory group.

422./522. Advanced Choral Conducting and Literature (2) S Pooler

Prerequisite: MUS 421 or consent of instructor. Choral technique, style and interpretation; choral schools and composers since the 16th century; contemporary secular and sacred choral compositions. Class used as laboratory group.

423. Senior Project (1) F,S Faculty

An individual recital of the standard literature for solo instrument or voice or a written project in certain options in the Bachelor of Music degree. Enrollment restricted to music majors passing the Qualifying Examination.

424A-B./524B. Advanced Organ (2,2) F Stroud

Prerequisite: MUS 324 or consent of instructor. Technique, registration, repertoire. Recitals, workshop and field trips to outstanding organs.

425A-B./525B. Instrumental Conducting (2,2) F,S Curtis

Three hours weekly.

426./526. Vocal Pedagogy (2) F Faculty

Prerequisite: Consent of instructor. Theory and techniques of teaching voice.

427A. Piano Pedagogy I (3) F,S Nahas

Study of the philosophies, psychology and methods of piano teaching as they apply to children and to beginning through intermediate adult levels.

427B. Piano Pedagogy II (3) F,S Nahas

Prerequisite: Music 427A. Study of piano teaching methods, psychology and philosophies as they apply to the more advanced and secondary university music student.

*429. Individual Instruction for Music Majors (2) F,S Faculty

Open to performance majors only. Private lessons in their major performance medium. Application must be made to the Chair of the Department of Music during the semester prior to registration. Registration is subject to his/her approval. May be repeated for credit.

431A,B./533A,B. Score and Sight Reading (2,2) S Musafia

Prerequisite: Consent of instructor. Instruction in reading piano music at sight and in reducing vocal and instrumental scores at the piano. Studies in transposition.

432A,B./534A,B. Song Repertoire (2,2) F,S Kovalenko

Prerequisite: voice major or consent of instructor. Selecting and preparing song literature for public performance. Coaching in languages, musical style and vocal techniques.

433. Piano Repertoire (2) S Kovalenko

Prerequisite: MUS 360 or 390 or consent of instructor. Survey of music for the piano, emphasizing compositional and stylistic characteristics of specific periods and composers.

434A. Piano Practicum I (1) F,S Nahas

Prerequisite: Music 427A, 427B. Supervised teaching in the piano lab setting.

434B. Piano Practicum II (1) F,S Nahas

Supervised teaching of individual piano instruction.

441. Studies in Musical Analysis (2) F Faculty

Prerequisite: MUS 341. Intensive individual and class analysis of representative compositions of various periods and styles.

442./549. Instrumentation (3) S Faculty

Prerequisites: MUS 142B, 241. Range, characteristics, technical capabilities and limitations of orchestral and band instruments. Scoring for string, woodwind, brass and percussion ensembles.

443./543. Scoring and Arranging (3) F,S Faculty

Prerequisite: MUS 442.Scoring and arranging for orchestras of various sizes for band and symphonic wind ensemble, and for voices.

444./544. Composition I (2) F,S Faculty

Prerequisite: MUS 341 or consent of instructor. Students wishing to compose in the electronic medium must complete MUS 446 as a prerequisite.

445./545. Composition II (2) F,S Faculty

Prerequisite: MUS 444 or consent of instructor. May be repeated to a maximum of 6 units. Students wishing to compose in the electronic medium must complete MUS 446 as a prerequisite.

446./546. Electronic Music Composition (3) S Faculty

Prerequisite: MUS 342 and/or consent of instructor. Introduction to electronic music studio techniques and literature, and composing with analog and digital electronic equipment.

450./550. Psychology of Music (4) Roskam

Introduction to the physical aspects of music with emphasis on psychological and perceptual responses to music. Primarily for music therapy majors.

451. Music in Therapy (3) Roskam

Prerequisites: MUS 250 A, B. Continued development of clinical skills in music therapy, emphasizing the use of materials and equipment to be utilized in various treatment settings.

452. Clinical Experience (1) On Demand Roskam

Prerequisite: MUS 451. Supervised clinical experience within one area of disability for the duration of the semester. May be repeated once for credit.

453. Music Therapy Internship (3) F,S Roskam

Prerequisite: All music therapy coursework. Extension of academic preparation involving the supervised application of learned therapeutic principles to provide assistance to human beings defined as "handicapped."

460./566. Studies in Performance Practices (3) S Forney

Prerequisite: MUS 360 or consent of instructor. Surveys problems of vocal and instrumental performance in music of the Middle Ages, Renaissance and Baroque.

461./567. Studies in Keyboard Music (3) S Kovalenko

Prerequisite: MUS 360 or consent of instructor. Survey of the evolution of keyboard music including the clavichord, harpsichord, piano and organ from the 13th century to the present.

462./568. Studies in Vocal Music (3) On Demand Faculty

Prerequisite: MUS 360 or consent of instructor. A studies course in vocal music spanning at least three epochs of music history and covering a minimum of two of five categories: solo song, small ensemble-sacred, small ensemble-secular, large ensemble-sacred and large ensemble-secular.

463./569. Music of the Theater (3) S Carson

Prerequisite: MUS 360 or MUS 390 or consent of instructor. History and development of music for the stage from 1600 to the present, its conventions and styles. Analysis of representative masterworks.

464./570. Studies in Instrumental Music (3) F Faculty

Prerequisite: MUS 360 or consent of instructor. A studies course in instrumental music spanning at least three epochs of music history and covering a minimum of two of four categories: solo sonata (excluding keyboard), chamber music, orchestral/symphonic and orchestral/concerto.

465./571. Studies in Ethnomusicology (3) On Demand Faculty

Prerequisite: MUS 360 or consent of instructor. Emphasis on theory and methodology of ethnomusicological study. Investigation of music of particular non-western cultures or areas. For music majors only.

469./572. Music in the Humanities (2) On Demand Faculty

Prerequisites: MUS 160, 260, 360. Exploration of the nature of the musical medium and its logic in relation to various philosophical, artistic and aesthetic frameworks, past and present. Required of all music history majors.

470. Summer Institute of Chamber Music (4) SS Marsh

Prerequisites: Previous training in violin, viola, cello or piano. Only qualified students will be accepted; audition required. (May be repeated for up to 12 units.) A comprehensive program devoted to the study and performance of chamber music. An intensive training program for chamber musicians that will include such activities as ensemble coaching, master classes, open rehearsals, and a chamber music literature course. In addition, there will be formal concerts by guests artist faculty and extensive performance opportunities for the student chamber ensembles to perform both on and off campus.

474./574. Commercial Arranging (3) S Prince

Prerequisite: MUS 372 or consent of instructor. Arranging and scoring of the various types of commercial ensembles in the styles demanded by contemporary performance practices.

476. Music Management (3) On Demand Faculty

Examination of administration, management and promotion of musical performances; practical application required in University-sponsored events.

480./580. Marching Band Techniques (2) F Faculty

Marching fundamentals, charting formations, precision drills, parade technique and half-time pageantry.

481./582. Instrumental Organization and Literature (3) S Faculty

Procedures for organization and development of instrumental programs and literature for performing groups.

482A,B. Instrumental Music Laboratory (1,1) F,S Faculty

Laboratory experience in performance on secondary instruments of elementary and junior high level music materials.

483A,B./583A,B. Choral Repertoire (1,1) F,S Faculty

Traditional and contemporary choral repertoire for public school teachers and church choir directors.

484. Church Music Practicum (2) On Demand Faculty

Prerequisites: MUS 421, 483A or consent of instructor. Basic approaches and techniques in the organization and function of church choirs (children, youth, adult) within the context of the liturgies and services of worship of the major denominations. Techniques in the selection and preparation of repertoire for these various situations.

485./586. Teaching Strings (2) S Faculty

Prerequisites: Two semesters of string classes, MUS 125 or 325 or equivalent. Teaching string classes effectively; beginning and intermediate levels; dealing with separate and mixed classes (violin, viola, cello and bass combined); correct methods of playing and practice; applied musicianship; motivating the young string player.

486. Jazz Ensemble Techniques (2) S Prince

Prerequisite: Music 141B, 142B and the following secondary instrument classes (or proficiency equivalent): Piano 220A, Guitar, Low Strings, and Percussion. Introduction to the basic skills, techniques, and materials required in order to teach an instrumental or vocal jazz ensemble program in grades 4-12.

*489. Special Topics in Music Education (1-3) On Demand Faculty

Prerequisite: Consent of instructor. Topics of interest in the various areas of music education selected for special presentation and development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

490. Music Cultures of the World (3) F,S Faculty

Musical cultures of the world (excluding Western art music); the role of music in society and its relationship to other arts. Scale structure, instruments, musical forms and performance standards. For music majors or non-music majors.

491./591. Acoustics of Music (3) On Demand Faculty

Prerequisites: MUS 342, PHSC 102, or consent of instructor. Nature and propagation of sound; acoustics of musical instruments; tuning and temperament; behavior of sound in enclosed spaces, acoustics of music rooms; acoustical aspects of sound recording and reproduction.

*495. Special Topics in Music (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in the various fields of music selected for special presentation and development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

496. Research Methods (3) F Rayner

Prerequisite: Completion of Department of Music Foreign Language Proficiency Examination (French, German, or Italian) or evidence of completion of 101B level course in French, German, or Italian. Bibliography; approaches to contemporary problems in music; demonstration of competency in research and writing about music. Required of all undergraduate music history/literature majors.

*499. Special Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Individual research or group investigation of selected topics. May be repeated for a maximum of six units of credit.

Graduate Division

500. Performance (1) F,S Faculty

Prerequisite: Consent of instructor. Major performance groups, including University Choir, Wind Symphony, University Orchestra, Forty-Niner Chorus, men's chorus, women's chorus, band, orchestra, etc. (See note on music performance.)

520. Advanced Conducting (3) S Curtis, Endo, Pooler

Prerequisite: Consent of instructor. Advanced baton technique, interpretation, securing proper sound, organizing routine and program making.

521./321. Theory of Piano Technique (2) S Musafia

Prerequisite: Consent of instructor. Physiological mechanics and psychology of piano playing; theory of fingering, memorization; teaching, with reference to graded materials.

522./422. Advanced Choral Conducting and Literature (2) S Pooler

Prerequisite: MUS 421 or consent of instructor. Choral technique, style and interpretation; choral schools and composers since the 16th century; contemporary secular and sacred choral compositions. Class used as laboratory group.

524B./424B. Advanced Organ (2,2) F Stroud

Prerequisite: MUS 324 or consent of instructor. Technique, registration, repertoire. Recitals, workshop and field trips to outstanding organs.

525B./425B. Instrumental Conducting (2,2) F,S Curtis

Three hours weekly.

526./426. Vocal Pedagogy (2) F Faculty

Prerequisite: Consent of instructor. Theory and techniques of teaching voice.

526A,B./326A,B. Piano Accompanying (2,2) F,S Kovalenko

Prerequisite: Piano major or consent of instructor. Instruction and training in the art and the techniques of accompanying for singers, instrumentalists and ensembles.

529. Individual Instruction (1-2) F,S Faculty

Open to graduate students in music only. Private lessons in their major performance medium. Application must be made to the Graduate Advisor of the Department of Music during the semester prior to registration. Registration is subject to his/her approval. May be repeated for credit.

530. Opera (1) F,S Carson

Open to graduate music majors only. Preparation, rehearsal and performance of traditional and contemporary opera. May be repeated for credit.

531. Summer Institute of Opera (1-5) SS Faculty

(By audition or approval of instructor.) Preparation and performance of opera production. Intensive individual and ensemble coaching; attendance at lectures and master classes dealing with various aspects of operatic practice and training for professional careers in opera.

532. Opera Repertoire (2) S Carson

Prerequisites: Two years of voice study or equivalent and consent of instructor. Open to graduate music majors only. Study and musical preparation of representative opera excerpts (arias, ensembles, and entire roles). Vocal interpretation as function of the dramatic action.

553A,B./431A,B. Score and Sight Reading (2,2) S Musafia

Prerequisite: Consent of instructor. Instruction in reading piano music at sight and in reducing vocal and instrumental scores at the piano. Studies in transposition.

534A,B./432A,B. Song Repertoire (2,2) F,S Kovalenko

Prerequisite: voice major or consent of instructor. Selecting and preparing song literature for public performance. Coaching in languages musical style and vocal techniques.

535./335. Advanced Performance-Piano (2) F Musafia

Prerequisite: Graduate standing and consent of instructor. Advanced study in piano performance with equal emphasis on concert repertoire and technique. Includes special training for a performing career.

541. Studies in Homophonic Music (3) S Faculty

Prerequisites: MUS 341 and 342 or equivalent. Intensive analysis and synthesis of homophonic forms and techniques of homophonic music in various genres and styles.

542. Studies in Polyphonic Music (3) F Faculty

Prerequisites: MUS 241, 341, and 342 or equivalent. Intensive analysis and synthesis of the forms and techniques of polyphonic music in various genres and styles.

543./443. Scoring and Arranging (3) F,S Faculty

Prerequisite: MUS 442. Scoring and arranging for orchestras of various sizes, for band and symphonic wind ensemble, and for voices.

544./444. Composition I (2) F,S Faculty

Prerequisite: MUS 341 or consent of instructor. Students wishing to compose in the electronic medium must complete MUS 446 as a prerequisite.

545./445. Composition II (2) F,S Faculty

Prerequisite: MUS 444 or consent of instructor. May be repeated to a maximum of 6 units. Students wishing to compose in the electronic medium must complete MUS 446 as a prerequisite.

546./446. Electronic Music Composition (3) S Faculty

Prerequisite: MUS 342 and/or consent of instructor. Introduction to electronic music studio techniques and literature, and composing with analog and digital electronic equipment.

548./341. Materials of Modern Music (3) F,S Faculty

Prerequisites: MUS 142B, 241. Melodic, harmonic, rhythmic and contrapuntal materials of 20th-Century music. Analysis of representative compositions and writing in typical contemporary styles.

549./442. Instrumentation (3) S Faculty

Prerequisites: MUS 142B, 241. Range, characteristics, technical capabilities and limitations of orchestral and band instruments. Scoring for string, woodwind, brass and percussion ensembles.

550./450. Psychology of Music (4) F Roskam

Introduction to the physical aspects of music with emphasis on psychological and perceptual responses to music. Primarily for music therapy majors.

560. Music of the Middle Ages (3) On Demand Forney

Prerequisite: MUS 360, or consent of instructor. Survey of medieval music from the beginnings of polyphony to approximately 1450. Both monophonic and polyphonic will be covered.

561. Music of the Renaissance (3) F Forney

Prerequisite: MUS 360, or consent of instructor. Stylistic analysis and inquiry into the cultural background. Reference to notation, sources, bibliography, and editions.

562. Music of the Baroque Period (3) S Faculty

Prerequisites: MUS 341, 360, or consent of instructor. Stylistic analysis and inquiry into cultural background.

563. Music of the Classic Era (3) S Faculty

Prerequisites: MUS 341, 360, or consent of instructor. Music from the Rococo to the end of the eighteenth century. Philosophical attitudes in relation to the musical styles.

564. Music of the Romantic Era (3) S Faculty

Prerequisites: MUS 341, 360, or consent of instructor. Music from Beethoven to the end of the nineteenth century.

565. Twentieth Century Music (3) F Faculty

Prerequisites: MUS 342, 360, or consent of instructor. Stylistic analysis and music; aesthetic and socioeconomic problems of contemporary music; survey of new music.

566./460. Studies in Performance Practices (3) S Forney

Prerequisite: MUS 360 or consent of instructor. Surveys problems of vocal and instrumental performance in music of the Middle Ages, Renaissance and Baroque.

567./461. Studies in Keyboard Music (3) S Kovalenko

Prerequisite: MUS 360 or consent of instructor. Survey of the evolution of keyboard music including the clavichord, harpsichord, piano and organ from the 13th century to the present.

568./462. Studies in Vocal Music (3) On Demand Faculty

Prerequisite: MUS 360 or consent of instructor. A studies course in vocal music spanning at least three epochs of music history and covering a minimum of two of five categories: solo song, small ensemble-sacred, small ensemble-secular, large ensemble-sacred and large ensemble-secular.

569./463. Music of the Theater (3) S Carson

Prerequisite: MUS 360 or MUS 390 or consent of instructor. History and development of music for the stage from 1600 to the present, its conventions and styles. Analysis of representative masterworks.

570./464. Studies in Instrumental Music (3) F Faculty

Prerequisite: MUS 360 or consent of instructor. A studies course in instrumental music spanning at least three epochs of music history and covering a minimum of two of four categories: solo sonata (excluding keyboard), chamber music, orchestral/symphonic and orchestral/concerto.

571./465. Studies in Ethnomusicology (3) On Demand Faculty

Prerequisite: MUS 360 or consent of instructor. Emphasis on theory and methodology of ethnomusicological study. Investigation of music of particular non-western cultures or areas For music majors only.

572./469. Music in the Humanities (2) On Demand Faculty

Prerequisites: MUS 160, 260, 360. Exploration of the nature of the musical medium and its logic in relation to various philosophical , artistic and esthetic frameworks, past and present.

574./474. Commercial Arranging (3) S Prince

Prerequisite: MUS 372 or consent of instructor. Arranging and scoring for the various types of commercial ensembles in the styles demanded by contemporary performance practices.

580./480. Marching Band Techniques (2) F Faculty

Marching fundamentals, charting, formations, precision drills, parade technique and half-time pageantry.

581. Foundations of Music Education (3) F Faculty

Open to graduate music majors only. A survey of contemporary aesthetic, philosophical, psychological and sociological trends in music education course requirement: a major research paper dealing with one of the previously cited topics.

582./481. Instrumental Organization and Literature (3) S Faculty

Procedures for organization and development of instrumental programs and literature for performing groups.

583A,B./483A,B. Choral Repertoire (1,1) F,S Faculty

Traditional and contemporary choral repertoire for public school teachers and church choir directors.

584. Music in Special Education (3) S Faculty

Open to graduate music majors only. A survey of music materials and methods suitable for use with special learners. Topics covered: the use of music with mentally retarded, hyperactive, learning disabled, physically disabled and emotionally disturbed children. Course requirement: a major research paper dealing with one of the previously cited topics.

585A,B. Children's Music (3,3) F,S Faculty

Open to graduate music majors only. A study of contemporary techniques for teaching general music in grades K-6. MUS 585A, primary level (K-3). MUS 585B intermediate level (4-6).

586./485. Teaching Strings (2) S Faculty

Prerequisites: Two semesters of string classes, MUS 125 or 325 or equivalent. Teaching string classes effectively; beginning and intermediate levels; dealing with separate and mixed classes (violin, viola, cello and bass combined); correct methods of playing and practice; applied musicianship; motivating the young string player.

589. Special Topics in Music Education (1-3) F,S Faculty

Prerequisite: Consent of instructor. Open to graduate music majors only. Topics dealing with contemporary issues in music education. May be repeated for a maximum of six units.

591./491. Acoustics of Music (3) On Demand Faculty

Prerequisites: MUS 342, PHSC 102, or consent of instructor. Nature and propagation of sound; acoustics of musical instruments; tuning and temperament; behavior of sound in enclosed spaces; acoustics of music rooms; acoustical aspects of sound recording and reproduction.

595. Special Topics in Music (1-3) F,S Faculty

Prerequisite: Consent of Graduate Advisor and instructor. Topics of current interest in various fields of music selected for special presentation and development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

599. Special Studies (1-3) F,S Faculty

Prerequisite: Consent of Graduate Advisor and instructor. Individual research or group investigation of selected topics. May be repeated for a maximum of six units of credit.

600. Performance (1) F,S Faculty

Prerequisite: Consent of instructor. Specialized performance groups such as chamber music, brass or woodwind ensembles, percussion ensemble, string quartet, Collegium Musicum and New Music Ensemble.

645. Seminar in Advanced Composition (3) F,S Faculty

Prerequisites: MUS 443, 444, 445, or equivalent. Free composition in the more extended forms for various combinations of instruments including full orchestra and band.

646. Seminar in Electronic Music Composition (3) S Faculty

Prerequisite: MUS 446 and/or consent of instructor. Advanced instruction in electronic studio techniques, literature and composing with analog and digital electronic equipment.

660. Seminar in the History of Music (3) On Demand Faculty

Chronological survey of historical styles in western music from ancient times to the present.

680. Seminar in Instrumental Music Teaching (3) F Curtis

Prerequisite: Consent of instructor. Principles, procedures, and materials used in teaching instrumental music in the public schools. Special attention given to methods and materials used in instrument classes.

681. Seminar in Choral Music Teaching (3) S Pooler

Prerequisite: Limited to music majors and minors. Research and analysis of principles, procedures, curricula and materials used in choral music performance and composition at all levels of teaching.

695. Reading and Research Seminar (3) On Demand Faculty

Prerequisite: Consent of the Graduate Adviser.

696. Research Methods (3) F Rayner

Bibliography; approaches to contemporary problems in music; demonstration of competence. Required of all master's degree candidates in music.

698. Thesis (2-6) F,S Forney

Planning, preparation, and completion of a thesis or project related to this field. Limited to graduate candidates who have taken MUS 696.

Theatre Arts

School of Fine Arts

Department Chair: Bernard J. Skalka, Interim Chair
Department Office: Theatre Arts, Room 221
Telephone: 498-5356
Faculty: Professors: Herbert L. Camburn, Robert F. Eggers, Stanley Kahan, Kenneth W. Rugg, Gail L. Shoup, Bernard J. Skalka, T. William Smith; Associate Professors: Gerald R. Bailor, Ashley Carr; Assistant Professor: Jan Gist, Holly Harbinger.
Emeritus Faculty: Ralph W. Duckwall, John H. Green, Michael C. Lyman, David E. MacArthur, Gilman Rankin, Harry E. Stiver, Edward A. Wright.
Administrative Operations Analyst: Lou Pass

The Department is a member in good standing in the following: University Resident Theatre Association; National Association of School of Theatre; American Theatre Association; Southern California Educational Theatre Association.

Students desiring information should contact the Department Chair.

The Department of Theatre Arts offers four basic programs leading to the bachelor of arts degree with opportunities for options in performance (acting/directing), technical theatre (scenery/costume/lighting design), children's theatre, and General Theatre. Each program will provide a background for the master of arts degree in Theatre Arts which, in turn, is the basis for a junior college credential and other professional objectives.

This flexibility of program planning in Theatre Arts has been organized to serve student needs in three principal areas: (1) Enrichment of the student's liberal arts background through the development of appreciations and insights derived from theatre arts courses taken as general education electives. (2) Development of interests and skills that will offer the student life-long satisfactions as an avocational outlet. (3) Preparation for the professions of director, technical director, scene designer and performer in the community theatre, recreational theatre, children's theatre, educational theatre and professional theatre. Several course offerings in theatre and dramatic literature are available jointly with the Comparative Literature Department. These courses cover the full range of world drama from both the viewpoint of theatre and dramatic literature.

All majors are required to participate with or without credit in the departmental production program each semester. Furthermore, majors enrolled in any acting course are expected to be available, try out and paticipate in departmental productions in that semester. The student is expected to accept any role in which he/she is cast. Majors are also expected to seek approval from their advisors before making any commitment to a theatre program which lies outside of the departmental academic atmosphere.

The Department of Theatre Arts has extensive library resources available for students including the entire library of the Pasadena Playhouse, a collection consisting of approximately 5,400 scripts and books. The rare book department of the University Library houses for departmental use rare costume and scenic designs, outstanding Oriental theatre materials, period theatrical posters and rare manuscripts. Also a compilation of over 1,400 authentic period costumes including part of the Pasadena Playhouse collection is available for student study and demonstration.

The W. David Sievers Memorial Scholarship in acting, named for the first faculty member of the theatre program, is awarded annually to new students who exhibit potential in the field of performance. Award consists of a modest sum and is determined through competitive audition judged by faculty and fellow students. In addition, the Fine Arts Affiliates of the University and the Dramatic Allied Arts Guild of Long Beach provide for monetary awards to qualified students in all areas of theatre. For further information contact the Scholarship Committee of the Department of Theatre Arts.

The Theatre Arts Department holds division II membership in the National Association of School of Theatre. The Bachelor of Arts, Master of Arts, and Master of Fine Arts degrees are accredited by the association. The department is also a member in good standing with the University/Resident Theatre Association.

The Department of Theatre Arts offers graduate study leading to the Master of Arts and Master of Fine Arts degrees. The candidate is urged to observe the general requirements stated in this Bulletin, as well as the specific departmental requirements stated here and, more fully, in the Department Handbook, available upon request from the department.

Bachelor of Arts in Theatre Arts

The General Option in the Bachelor of Arts in Theatre Arts provides the opportunity for the student to gain a broad exposure to the discipline. The curriculum requires study in Acting, Technical and Design crafts, the History, Literature and Criticism of Theatre, and in general Directing as well as Children's Theatre.

Requirements for the Bachelor of Arts in Theatre Arts

The Theatre Arts core is required of all majors regardless of option.

Lower Division:

THEA 100, 114A, 142, 144, 146, 148.

Upper Division:

THEA 321, 322, 346, 374, 476. THEA 010 is required each semester of enrollment.

No more than eight units of Theatre Arts activity (cast and/or crew) will apply toward degree requirements. Crew requirements for all majors: One major running crew assignment in residence in each of the areas of costume, make-up, stagecraft and lighting, to be satisfactorily completed with or without credit during the semester following completion of the related course. Students with transfer credit in those related courses must fulfill the same running crew requirements, with or without credit, within the first three semesters of matriculation into the University.

At the beginning of each semester, all incoming transfer students (including those who have been inactive for a year in our department) are required to audition (in the case of acting majors) or interview (in the case of all other majors). Auditions and interviews to be conducted by appropriate faculty/student groups. (These auditions are required for admittance to certain upper division classes and are therefore used for appropriate placement of students at their level of competency as determined by the faculty.)

General Option (code 2-5844)

Choose six units in each of the following four categories for a total of twenty-four units:

(A) Acting: THEA 112, 114B, 214, 216, 262, 331, 352;
(B) Tech/Design: THEA 341, 342, 385, 444, 446, 448;
(C) History/Literature/Criticism: THEA 313, 324IC, 325IC or 326IC, 353, 380, 426;
(D) Directing/Childrens Theatre: THEA 356, 358, 375, 431, 452, 474.

Option in performance: Acting/Directing (code 2-5847)

THEA 114B, 426, and 18 units approved from THEA 214, 216, 310A,B, 312, 316, 318, 324, 325, 331, 352, 361, 363, 375, 380, 414, 416, 431, 432, 443, 452, 459A,B, 470A,B, 474, 490, 498. THEA 214, 216, 316, 318, and 331 may be repeated to a total of six units each.

Option in Technical: Scenery/Costume/Lighting Design (code 2-5848)

THEA 341, 444, 446, 448 and 12 units approved from THEA 342, 343, 344, 345, 347, 440A,B, 442, 443, 445, 446, 447, 470A, 470B, 490, 498.

Option in Children's Theatre (code 2-5845)

THEA 352, 353, 356, 358, 452, 459A,B and seven units of electives.

Master of Arts in Theatre Arts (code 5-5844)

Prerequisites

1. A bachelor's degree with a major in Theatre Arts, or:
2. A bachelor's degree with 24 units of upper division work in Theatre Arts, including courses comparable to those required at this University.

Each student applying for admission to a graduate degree program in Theatre Arts must initiate, in the department office, a request to receive a departmental evaluation, based upon diagnostic examination and an analysis of official undergraduate transcripts to determine any deficiencies and all areas which must be strengthened by the graduate program.

Advancement to Candidacy

1. Satisfy the general University requirements.
2. Remove all undergraduate deficiencies as determined by the departmental evaluation and/or the Dean of Graduate Studies.
3. Submit a program for approval by the student's departmental faculty advisor, the department chair, the graduate advisor and the Dean of Graduate Studies.

Requirements for the Master of Arts

A minimum of 36 units in approved upper division and graduate courses, including:

1. 22 units in Theatre Arts, of which at least 18 units must be in the 500 and/or 600 series completed at this University. Required courses: THEA 696A-B, 621A or 694J, 523, 626A or 426, 514 or 542, and 698. The graduate student also will include specialized studies and/or course work in dramatic theory and criticism and theatre history. (Determination of the specific courses to be made by the Theatre Arts Graduate Committee and approved by the Theatre Arts Graduate Advisor.)
2. 14 approved elective units, of which six may be in approved areas related to Theatre Arts. (No more than six units may be in Education. Student teaching and special methods courses will not apply.)
3. Each student will select an area of specialization and complete a research thesis. The student must enroll in THEA 698 to a maximum of four units and thereafter enroll in XGS 700 until the thesis is complete and approved.

Master of Fine Arts in Theatre Arts

The Master of Fine Arts Degree in Theatre Arts is the terminal degree offering the minimum professional training deemed necessary by the major Theatre Arts schools in the United States for university and college teaching, positions in professional theatre of acting, design and technical theatre in television, film, stage, theme parks and industry. The Department of Theatre Arts at California State University, Long Beach is a fully accredited program and meets the standards of Division II of the National Association of Schools of Theatre. The department is also a member in good standing with the University/Resident Theatre Association.

Criteria for Admission to the Program

1. Students applying for the M.F.A program must have completed a bachelor's or master's degree in Theatre Arts from an accredited institution with a 3.0 GPA in upper-division theatre courses, meet University admission requirements, and submit evidence of creative ability and professional intent in one of the following areas: Acting, Technical Theatre, and/or Design.
2. When an undergraduate degree has been completed in a program having different requirements than those at CSULB or in some field other than Theatre Arts, additional preparation and time may be required before the student can be considered for classified status in the degree program. Up to 30 units of credit from an M.A. degree program may be acceptable after review of the faculty evaluation committee and approval by the Dean.
3. Admission to the program in Acting requires audition, interview and/or submission of evidence of creative work. Admission to the program in Technical Theatre/Design requires interview and/or submission of original work such as manuscripts, designs, renderings, slides, models and/or working drawings.
4. At the time of being conditionally classified into the program, an examining diagnostic committee, consisting of at least two instructors in the student's field of specialization and at least one other member, approve the student's program of study and the creative thesis project. A committee will review the student's work no later than the end of his/her first year in residence and judge whether the student should continue in the program.
5. In order to obtain full classified status, a committee from the Theatre Arts graduate faculty will evaluate academic progress, individual skills development, and review of performance or portfolio at the end of the student's first full year of residence.

Advancement to Candidacy

1. Attain fully classified status.
2. Remove all undergraduate deficiencies determined by the departmental evaluation and the Dean of the School.

3. Submit a program for approval by the student's departmental faculty advisor, the department chair, the graduate advisor and the Dean of the School.

Requirements for the Master of Fine Arts in Theatre Arts

The M.F.A. degree is a 60-unit degree normally requiring full time residency. Course requirements are arranged according to the following structure depending on the student's choice of option, Acting or Technical Theatre/Design:

Option in Acting (code 7-5847)

Core Courses:

24 units to include: THEA 514, 523, 570, 696, and 699.

Studio Courses:

24 units to include: THEA 513, 512, 515, 562, and 614.

Elective:

12 units approved from the following: THEA 561, 563, 511, 516, 418, 498A, 694A and 697.

Option in Technical Theatre/Design (code 7-5848)

Core Courses:

24 units to include: THEA 523, 542, 570, 696 and 699.

Studio Courses:

9 units to include: THEA 541, 544 and 545. 12 units selected from one of the following groups: For Scenery and Lighting Concentration: THEA 581, 540, 585, 548, 590, 590D, 590N; For Costume Concentration: THEA 343, 347, 546, 587 and 590C, 590M.

Electives:

15 units approved from the following: THEA 343, 549, 590, 498C, 498D, 498M 498N, 642, 694C, 694D, 694M, 694N and 697.

Both options share a common core of courses which offer study in aesthetics, conceptualization, history, theory, literature, and research. The remainder of the courses offer students the opportunity to further develop artistic skills in their particular area of option. The program culminates in a major creative project.

1. The Acting option requires work in voice, movement, and process each semester. Process classes explore a wide range of acting styles. Ongoing performances in public presentations are required.
2. The Technical Theatre/Design option requires work in a variety of skills development which emphasizes the technological as well as the artistic aspects of design and execution. Continuous advancing assignments in productions for public performances are required.

Courses (THEA):

Lower Division

010. Theatre Arts Showcase (1) F,S Faculty
Participation in weekly programs dealing with all aspects of Theatre Arts. Required of Theatre Arts majors each semester.

100. Fundamentals of Theatre Production (3) F,S Faculty
An introductory course covering all facets of theatre production including selection of script, casting, rehearsals, production elements of costume, scenery, lighting, makeup, as well as aesthetic considerations in analytical and visual conceptualization.

110A,B. Theatre Arts Activity — Cast (1,1) F,S Faculty
Participation in acting; open to students who expect to be cast in either afternoon or evening University-sponsored productions; major cast assignment or equivalent required.

112. Stage Diction (3) F,S Faculty
Theory and practice in developing command of oral techniques for stage.

113. Introduction to Acting (3) F,S Faculty
Review of actors and acting, past and present; their work as artists; basic exercises in voice, diction, movement and personality projection. Open only to non-Theatre Arts majors.

114A,B. Fundamentals of Acting (3,3) F Faculty
Development and preparation of the actor's instrument: voice, body, imagination. Exercises in relaxation, sensory work, motivations and relationships are utilized. Individual study of textual problems for actors.

122. Appreciation of Theatre Arts (3) F,S Eggers
Appreciation and understanding of the arts of the theatre for the non-drama major; standards for critical evaluation of contemporary theatre including stage, screen and TV; lecture, discussion, field trips and written critiques; not open to students with credit in THEA 124.

124. Introduction to World Theatre and Drama (3) F,S Lyman, Stiver
Introduction to all aspects of theatre including criticism, dramatic literature, movements, themes, historical background and theatrical production from different parts of the world. (Same course as Comparative Literature 124.)

140A,B. Theatre Arts Activity — Crew (1,1) F,S Faculty
Participation in technical play production activities of either afternoon or evening. University-sponsored productions; specific assignments determined at initial meeting; 45 hours minimum participation time plus major crew assignment or equivalent required.

142. Elementary Stagecraft (2) F,S Skalka
Basic physical equipment of the theatre: elementary scenic drafting, construction, assembly and scene painting. Preparation of scenic and property elements for University-sponsored productions. To be taken concurrently with THEA 248.

144. Stage Make-up (2) F,S Smith
Practical introduction to techniques of theatrical make-up. Male students must be clean-shaven because of the nature of the course. Preparation of make-up material for University-sponsored productions. To be taken concurrently with THEA 246.

146. Costume Crafts (2) F,S Faculty
Techniques of costume and accessory construction for the stage; use of fabrics, materials and equipment. Preparation of costumes and accessories for University-sponsored productions. (To be taken concurrently with THEA 244.)

148. Stage Lighting (2) F,S Skalka
Theory and practice of modern stage lighting; functions of light; design of lighting layout; properties of various instruments; practical experience in the hanging and focusing of lighting equipment for University-sponsored productions. To be taken concurrently with THEA 242. Not open to students with credit in THEA 348 prior to Fall Semester, 1978.

210A,B. Theatre Arts Activity — Cast (1,1) F,S Faculty
Prerequisite: Sophomore class standing. Participation in acting; open to students who expect to be cast in either afternoon or evening University-sponsored productions; major cast assignment or equivalent required.

214. Intermediate Acting (3) F,S Faculty
Prerequisite: THEA 112, 114A and B. Should be taken directly following THEA 114B. Introduction to scene study. Application of techniques of body, voice and imagination to dramatic texts thereby stimulating an acting process for the development of a role. Repeatable to a maximum of 6 units

216. Rehearsal and Performance (3) F,S Lyman, Rugg
Prerequisite: THEA 214 and/or consent of instructor. Preparation and rehearsal for performance in short scenes, one-act plays and University-sponsored productions; no more than six units of THEA 216 and/or THEA 316 may be applied toward the major. May be repeated once for credit.

231. Applied Musical Theatre (2) S Faculty
Fundamentals of musical theatre for actors and directors which includes an overview of the genre, an approach to developing a role and practical application in solos and duets. (This course is to be taken concurrently with MUS 122A, Class Voice.)

240A,B. Theatre Arts Activity — Crew (1,1) F,S Faculty
Prerequisite: Sophomore class standing, participation in technical play production activities of either afternoon or evening University-sponsored productions; specific assignments determined at initial meeting; 45 hours minimum participation time plus major crew assignment or equivalent required.

262. Beginning Movement for the Actor (3) F,S Faculty
Prerequisite: THEA 114A or consent of instructor. Beginning movement training for the actor based on physical conditioning and non-verbal communication related directly to the beginning acting process.

Upper Division

310A,B. Theatre Arts Activity — Cast (1,1) F,S Faculty
Prerequisite: Junior class standing. Participation in acting; open to students who expect to be cast in either afternoon or evening University-sponsored productions. Major cast assignment or equivalent required.

***312. Advanced Stage Diction and Dialects (3) Even years Faculty**
Prerequisite: THEA 112 or equivalent. Advanced study and special problems in stage speech and a study of special dialects for the stage.

313. The Screen Actor (3) F,S Kahan
Study of major screen performances by outstanding actors and actresses of the past and present. Discussion of the different types of screen acting including character acting, Romantic acting, comic acting, and impersonation. Representative excerpts from the great performances will be viewed and discussed in relation to the social, economic, and artistic implications of the times involved.

***316. Rehearsal and Performance (3) F,S Lyman, Rugg, Shoup**
Prerequisite: THEA 214 and/or consent of instructor. Preparation and Rehearsal for performance in short scenes, one-act plays and University-sponsored productions; no more than six units of THEA 216 and/or THEA 316 may be applied toward the major. May be repeated once for credit.

***318. Advanced Scene Study (3) F Carr, Shoup**
Prerequisites: THEA 214, 216, 316A,B and/or consent of instructor. Intensive scene study in modern dramatic texts. The class is designed to continue and strengthen the process of roll development for the actor through scenic exercises. May be repeated to a maximum of six units.

***321. History of the Theatre and Drama to 1660 (6) F Bailor, Kahan, Shoup**
Development of Theatre Arts from primitive origins through Moliere. Not open to students with three units of credit in THEA 321.

***322. History of the Theatre and Drama Since 1660 (6) S Bailor, Kahan, Shoup**
Prerequisite: THEA 321 or consent of instructor. Development of Theatre Arts from the Restoration to the present. Not open to students with three units of credit in THEA 322.

***324IC. World Theatre Today (3) S Lyman, Rugg**
Current trends, problems and achievements of the theatre of the present day from an international point of view, with an examination of influences of the avant-garde movement of post world War II (Expressionism, Dada, Surrealism, the Absurd, Existentialism). (Same course as C/LT 324.)

325IC. Theatre and Drama of India and Southeast Asia (3) F Shoup
History and social background of the classical genres, as well as contemporary forms, of dance and theatrical production, including puppetry and masked ritual. Representative selections, in translation, from the great Indian epics and Sanskrit dramas.

326IC. Theatre and Drama of China, Korea and Japan (3) F,S
(Same course as C/LT 326.) History and social background of selected genres, both classical and modern, of dance, folk plays, musical and theatrical production, including puppetry and masked ritual. Readings, in translation, of dramatic, comedic and lyrical works comparing cultures.

***331. Acting for the Musical Theatre (3) S Kahan, MacArthur, Shoup**
Prerequisite: THEA 114A,B and/or consent of instructor. Problems of performing in opera, operetta and musical comedy. May be repeated to a maximum of six units.

335. The History of the American Musical in Film (3) S Kahan
History of film musicals through lectures and feature films. Focus is on the directors/actors and choreographers/dancers in films representative of important historical periods, studios and styles. (Same course as DANC 335.)

340A,B. Theatre Arts Activity — Crew (1,1) F,S Faculty
Prerequisite: Junior class standing. Participation in technical play production activities of either afternoon or evening University-sponsored productions; specific assignments determined at initial meeting; 45 hours minimum participation time plus major crew assignment or equivalent required.

***341. Graphics for the Theatre (3) F Camburn**
Interpretation of form, architecture, landscape, drapery and the costumed figure for the theatre designer through basic drawings, watercolor, gouache and mixed media. (No previous art training required.) May be repeated for a total of six units.

***342. Advanced Technical Theatre (3) F,S Duckwall, Skalka**
Prerequisite: THEA 242. Scene painting, scenic drafting, problems of rigging and mounting various stage productions. Supervision in the practical application of these elements in University-sponsored productions. Not open to students with credit in THEA 342A,B.

***343. Patterning for Stage Costume (3) F Even years Camburn**
Prerequisite: THEA 246 or consent of instructor. Practical application of special processes in costume patterning techniques for theatrical production. May be repeated for a total of six units.

344. Theatre Decor (3) S Camburn
Chronological study of interior and exterior architecture, stylistic trends, furniture and decorative accessories and their application for the theatrical director, designer and technician.

345./584. Scene Painting (3) F Camburn
Prerequisite: THEA 242 or consent of instructor. Introduction to theatrical scene painting techniques, materials and methods through specialized technical problems; paint crew assignments required for University-sponsored production. May be repeated for a total of six units.

***346. Costume History for the Stage (3) F,S Duckwall, Faculty**
Chronological study of fashions, modes and mores of major historical periods and their application in contemporary stage productions.

***347. Advanced Costume History (3) S Camburn**
Prerequisite: THEA 346 or equivalent. Specialized consideration of historical costume periods for the theatre designer. Emphasis on research source, textiles, color, structure and technical reproduction for the stage.

348. Advanced Stage Lighting (3) S Skalka
Prerequisite: THEA 248 or equivalent. An introduction to the processes of lighting design and the current technical practices of stage lighting. Lab or production assignment to be required.

351. Personal and Social Integration Through Role-Play (3) F,S
The exploration of the individual in relation to himself, to others and to groups through the technique of role-play improvisations.

***352. Creative Drama (3) F,S Rugg, Smith**
Theory and techniques of developing creative capacities through improvisation and original dramatizations; participation and leadership in creative dramatics.

***353. Dramatic Literature for Children's Theatre (3) F Rugg**
Survey of dramatic literature for the child audience.

***356. Puppetry (3) F Faculty**
Introduction to the history and forms of puppetry. Practical experience in productions of puppet plays.

***358. Recreational Dramatics (3) F,S Rugg**
Problems of staging theatrical productions, puppet shows, variety programs, plays at community recreation centers. Story dramatization, dramatic games, simplified staging techniques appropriate to recreation programs.

361./561. Improvistions in Mime (3) F Faculty
Prerequisite: THEA 114A,B. Use of an improvisational structure to introduce mime styles for developing characterization, expression of emotion and drama narrative needed in the various historical periods in theatre.

363./563. Mime (3) F,S Faculty
Prerequisites: THEA 114, 361 or consent of instructor. Technique of classical mime. Use of the human body as an instrument for the expression of emotions, dramatic narrative and characterization.

***374. Fundamentals of Directing/Stage Management (3) F,S Lyman, Shoup, Stiver**
Theory and techniques of directing and stage management; responsibilities; organization of production staff; play selection and interpretation; blocking; preparation of, casting, and rehearsing the play.

***375. Intermediate Directing/Stage Management (3) F Rugg, Stiver**
Prerequisites: THEA 374 and consent of instructor. Intensive play analysis; concept preparation and executions experienced by a director and stage manager; to be further explored in scene work and limited play presentation.

***380. Playwriting (3) F,S Lyman, Rugg**
Creative writing for the stage. General consideration of realistic and non-realistic theatrical styles and conventions; exercises in source, character development, dialogue, plot, structure. Students will develop a one-act play and discuss one another's scripts in a workshop format. Selected scripts may be produced at the end of the semester.

385. Intermediate Make-up (3) S Smith
Prerequisite: THEA 244 or equivalent. Class designed for the intermediate makeup student. Students learn fine painting techniques, character portraiture and color design rendering.

410A,B. Theatre Arts Activity — Cast (1,1) F,S Faculty
Prerequisite: Senior class standing. Participation in acting; open to students who expect to be cast in either afternoon or evening University-sponsored productions. Major cast assignment or equivalent required.

412./511. Text Analysis and Process Production (3) F,S Faculty
Prerequisites: THEA 112, 312. Textual and literary analysis of representative material for the actor. Application to the actor's oral interpretation and physical movement.

414./513. Period Scene Study (3) F,S Appel, MacArthur, Shoup
Prerequisites: THEA 318 and/or consent of instructor. Scenic exercises in period plays. Analysis of the play's structure in terms of language, socio-political background, human behavior. Exercises in scenes from Greek, Shakespeare, Comedy of Manners, Farce. May be repeated to a maximum of six units.

415./416. Audition Techniques (3) Odd years McArthur

Prerequisites: THEA 114A,B and 214 or consent of instructor. This course is designed to acquaint the student with auditioning materials and practical auditioning techniques. Included are guest speakers, preparation of resume and tapings of scenes. May be repeated for a total of six units.

*416. Rehearsal and Performance in Acting Styles (3) F,S MacArthur, Stiver

Prerequisite: THEA 414. Rehearsal and performance of scenes from various periods in theatre history. In addition, scenes and one-act plays will be rehearsed and prepared for performances at the end of the semester.

*418. Mask Characterization (3) F Faculty

Prerequisites: THEA 318, consent of instructor. Advanced Acting class utilizing specially designed character masks and intensive movement exercises to permit greater physical freedom, open up the sensory resources, and stimulate maximum use of the imagination for the actor. Exercises in Neutral and Character mask. Development of a complete character from the mask and direct links to scripted role characterization. May be repeated for a total of six units.

421IC. Classical Drama (3) F Faculty

Prerequisites: One course in literature or Theatre Arts. An interdisciplinary examination of major plays of the Greeks and the Romans, both as literature and as theatre. Includes the "invention" of the drama as an art form, the development of trajedy and comedy, works by Aeschylus, Sophocles, Euripides, Aristophanes, Menander, Plautus, Terrence, and Seneca. Considers also the debt of modern and dramatic literature to the theatre of the ancients. Same course as C/LT 421IC.

422IC. Renaissance Theatre and Drama (3) F Faculty

Prerequisites: One course in literature or Theatre Arts. An interdisciplinary study of the achievements, problems, themes and trends of Renaissance drama in Italy, Spain, France, and England between 1350 and 1650. Major plays of the period are read in translation, including works by Machiavelli, Tasso, Tirso de Molina, Lope de Vega, Calderon, and Shakespeare. Texts are treated both as literature and theatre. Same course as C/LT 422IC.

*426. Play Analysis and Theory (3) F Kahan

Study of major forms of drama including traged, comedy, melodrama and film. Analysis of dramatic works from the standpoint of structure, creative potential, and social commentary.

428. Selected Periods in Theatre and Drama (3) S Faculty

Prerequisites: One course in literature or Theatre Arts. Study of special movements and periods in the history of drama and theatre, to be selected each semester. Same course as C/LT 428.

*431. Directing for the Musical Theatre (3) F Kahan, MacArthur, Shoup

Prerequisite: Consent of instructor. Direction and rehearsal of short scenes, one-acts and University-sponsored musical theatre productions. (Not open to students with credit in THEA 430A, formerly 166A.)

*432. Lyric Theatre (3) F Kahan, Shoup

History and production techniques of musical theatre including the dramatic content and staging of the lyric drama: opera, operetta, ballet, musical comedy and musical drama.

440A,B. Theatre Arts Activity — Crew (1,1) F,S Faculty

Prerequisite: Senior class standing, participation in technical play production activities of either afternoon or evening University-sponsored productions; specific assignments determined at initial meeting; 45 hours minimum participation time plus major crew assignment or equivalent required.

445./581. Scenographic Techniques (3) Faculty

A study of the graphic techniques that are practiced in the theatre as they develop from the designer's vision to the finished set on stage.

442./540. Stage Property Construction (3) S Camburn, Skalka

Prerequisite: THEA 342 or consent of instructor. A study and application of both basic and advanced concepts of stage property and furniture construction. Includes the use of nontraditional materials and construction methodologies.

*443./582. Advanced Stage Make-up (3) F,S Smith

Prerequisite: THEA 244. Make-up techniques for characterization, style and technical processes. Male students must be clean-shaven because of the nature of the course. Crew assignment required in University-sponsored productions.

*444. Scene Design (3) F Camburn, Duckwall

Prerequisite: THEA 342 or consent of instructor. Creative planning and projects of designs for specific University-sponsored productions.

445./585. Period Scenic Design (3) S Camburn, Duckwall

Prerequisite: THEA 444 or consent of instructor. Creative planning of scenic designs for various types of period plays with emphasis on Greek, Elizabethan, 18th and 19th century dramas.

446./546. Costume Design (3) F,S Camburn, Faculty

Prerequisite: THEA 246 or equivalent. Technique of designing stage costumes of various historical periods; creative planning and projection of designs for specific University-sponsored productions. May be repeated once for credit.

447./587. Advanced Costume Crafts (3) S Odd years Camburn

Prerequisite: THEA 246 or equivalent. Advanced technical problems in costume and accessory construction; production planning pattern drafting.

448./548. Stage Lighting Design (3) F Skalka

Prerequisite: THEA 248. Techniques of designing lighting for various stage forms; creative planning and projection of designs for specific productions.

449./549. Sound Design for the Theatre (3) Faculty

This course provides an introduction to the scope, tools, materials and practices of sound in the theatre today. The course uses formal lectures, group discussions, individual projects, and field trips to cover the information.

451. Computer Applications for the Theatre (3) F Faculty

Prerequisites: None. The course covers the use of computers in the process of scenic, lighting, and costume design and the application of general purpose software in the management and operation of performing arts organizations.

*452. Advanced Creative Drama (3) S Rugg, Smith

Prerequisite: THEA 352 or consent of instructor. Practical application of creative drama techniques in leadership situations with children.

*459A,B. Children's Theatre Production (2,2) F,S Rugg

Preparation and rehearsal of various theatre forms to be produced for the child audience. Productions to be available to tour in the community

*462. Advanced Movement for the Actor (3) F,S Faculty

Prerequisite: THEA 262 and consent of instructor. Advanced movement training for the actor based on the physical conditioning and non-verbal communication related directly to the advanced action process. Introduction to period movement. In depth exploration of essence studies.

*470A,B. Ensemble Production (3,3) F,S Faculty

Prerequisites: Consent of instructor. Preparation, rehearsal and performance in University-sponsored Studio Theatre productions.

*474. Advanced Play Direction (3) F,S Lyman

Prerequisites: THEA 214, 374, 375, 321 or concurrent enrollment and consent of instructor. Intensive study of thematic structure; director/actor relationship; individual characterization; special problems of working with the student actor in selected scenes.

*475. Rehearsal and Performance in Directing Styles (3) S Faculty

Prerequisites: THEA 214, 374, 375, 474, 321, 322 or concurrent enrollment and consent of instructor. A survey of Period Styles and their individual problems as relevant to the director's overall concept and approach to the play; problems in directing the new, unproduced scripts. The course will culminate in the public performance of original scripts and/or other works selected to illustrate a given period and style. May be repeated to a maximum of 6 units.

*476. Theatre Management (3) F Eggers

Examination of administration, management and promotion of a producing theatre organization practical application required in University-sponsored productions.

*480. Advanced Playwriting (3) S Rugg

Prerequisite: THEA 380 or consent of instructor. Advanced creative writing for the stage. Emphasis on an examination and creation of alternate theatre forms: scripts from improvisation and/or non-matrix material; one of the Absurdist styles; political theatre; material suited to environmental theatre. Selection material to be produced as part of an annual Spring Festival of Alternate Theatre.

*482. Three-Dimensional Makeup (3) S Even years Smith

(Male students must be clean-shaven because of the nature of the course.) Prerequisite: THEA 244 and 385 and permission of instructor. Class is designed to teach the student how to fabricate theatrical three-dimensional pieces. Students learn coloring and painting techniques.

484. Wigmaking (3) S Odd years Smith

Prerequisite: THEA 385 or permission of instructor. Course covers fabrication of wigbases, hairline ventilation and facial hair ventilation into lace.

490./590. Special Topics in Theatre Arts (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in Theatre Arts selected for intensive study. May be taken for maximum of nine units. Topics will be announced in the Schedule of Classes.

*498. Special Studies in Theatre Arts (3) F,S Faculty

Prerequisite: Consent of instructor and department chairperson (consent of instructor and graduate coordinator if taken for graduate credit). Independent projects and research of advanced nature in the area of Theatre Arts under faculty supervision. Limited to six units in any one area. Area will be designated by letter at time of registration as (a) acting, (b) directing, (c) costume, (d) scenery, (f) playwriting, (g) children's theatre, (h) theatre management, (i) dance, (j) theatre history, (k) theatre criticism, (m) makeup, (n) lighting.

Graduate Division

511./412. Text Analysis and Process Production (3) F,S Faculty

Prerequisite: THEA 112, 312, Textual and literary analysis of representative material for the actor. Application to the actor's oral interpretation and physical movement.

512. Advanced Voice for the Actor (1-6) F,S Faculty

Prerequisite: Acceptance into the MFA program. Emphasis on the contemporary techniques used for speech and vocal production. Individual study in areas of dialects, projection, and language.

513./414. Period Scene Study (3) F,S Appel MacArthur, Shoup

Prerequisites: THEA 318 and/or consent or instructor. Scenic exercises in period plays. Analysis of the play's structure in terms of language, socio-political background, human behavior. Exercises in scenes from Greek, Shakespeare, Comedy of Manners, Farce. May be repeated to a maximum of six units.

514. History and Theory of Acting (3) S Kahan, MacArthur

Prerequisite: Minimum of size units of acting or consent of instructor. Selected areas of study in the history, theories and criticism of acting.

515. Advanced Acting Process (1-6) F,S Faculty

Prerequisite: Acceptance into the MFA program. Variable areas and topics of study within the acting process depending upon the needs of the performer. Must be repeated for a total of six units.

516./415. Audition Techniques (3) Odd years McArthur

Prerequisites: THEA 114A,B and 214 or consent of instructor. This course is designed to acquaint the student with auditioning materials and practical auditioning techniques. Included are guest speakers, preparation of resume and tapings of scenes. May be repeated for a total of six units.

523. Contemporary Theatre (3) F MacArthur, Stiver

Intensive study of a major area of contemporary theatre. Problems of modern movements in playwriting, production, acting, design and theatre philosophy.

540./442. Stage Property Construction (3) S Camburn, Skalka

Prerequisite: THEA 342 or consent of instructor. A study and application of both basic and advanced concepts of stage property and furniture construction. Includes the use of nontraditional materials and construction methodologies.

541. Portfolio Development (3) F Faculty

A study of the content and presentation forms of production designer portfolios.

542. History and Theory of Design for the Theatre (3) Faculty

Prerequisite: THEA 344 or consent of instructor. The evolution of design theory, styles and architectural modes through historical evidence from the Renaissance to the present.

544. Visual Conceptualization for the Theatre (3) F Faculty

Prerequisites: THEA 341, 444, 446, 448 or consent of instructor. Advanced techniques in visual conceptualization for the stage, costume and lighting designer as related to production conferences, idea generation, style and mood.

545. Production Management (3) F Faculty

The study of production scheduling and planning and its relationship to the scenery studio and the costume studio.

546./446. Costume Designing (3) F,S Camburn, Faculty

Prerequisite: THEA 246 or equivalent. Technique of designing stage costumes of various historical periods; creative planning and projection of designs for specific University-sponsored productions. May be repeated once for credit.

548./448. Stage Lighting Design (3) F Skalka

Prerequisite: THEA 248. Techniques of designing lighting for various stage forms; creative planning and projection of designs for specific productions.

549./449. Sound Design for the Theatre (3) Faculty

This course provides an introduction to the scope, tools, materials and practices of sound in the theatre today. The course uses formal lectures, group discussions, individual projects, and field trips to cover the information.

561./361. Improvisations in Mime (3) F Faculty

Prerequisite: THEA 114A,B. use of an improvisational structure to introduce mime styles for developing characterization, expression of emotion and drama narrative needed in the various historical periods in theatre.

562. Advanced Actor Movement Techniques (1-6) F,S Faculty

Individual study in body alignment, body control, body and spatial awareness. Exploration of movement as an actor's tool to aid him/her in the acting process. Study of various styles and periods of movement as applied to the stage.

563./363. Mime (3) F,S Faculty

Prerequisites: THEA 114A,B, 361 or consent of instructor. Technique of classical mime, use of the human body as an instrument for the expression of emotions, dramatic narrative and characterization.

570. Production Practicum (2-3) S Faculty

Prerequisites: Consent of instructor and graduate advisor. Must be repeated for a total of 6 units. Advanced individual projects and research for both the actor and the technical/designer under appropriate faculty supervision. Practical experience in acting or technical/design with direct application to creative activity in production within the department's production program.

574. History and Theory of Directing (3) S Stiver

Prerequisites: Minimum of six units of directing or consent of instructor. Selected areas of study in history, theories and criticism of directing.

581./441. Scenographic Techniques (3) Faculty

A study of the graphic techniques that are practiced in the theatre as they develop from the designer's vision to the finished set on stage.

582./443. Advanced Make-up (3) F,S Smith

Prerequisite: THEA 244. Make-up techniques for characterization, style, and technical processes. Male students must be clean shaven because of the nature of the course. Crew assignment required in University-sponsored productions.

584./345. Scene Painting (3) F Camburn

Prerequisite: THEA 242 or consent of instructor. Introduction to theatrical scene painting techniques, materials and methods through specialized technical problems; paint crew assignments required for University-sponsored production. May be repeated for a total of six units.

585./445. Period Scenic Design (3) S Camburn, Duckwall

Prerequisite: THEA 444 or consent of instructor. Creative planning of scenic designs for various types of period plays with emphasis on Greek, Elizabethan, 18th and 19th century dramas.

586. Pattern Drafting (3) F,S Smith

Prerequisite: THEA 246 or consent of instructor. Practical applications of special processes in costume patterning techniques for theatrical production. May be repeated for a total of six units. [Drama Activity: 6 hours]

587./447. Advanced Costume Crafts (3) S Odd years Camburn

Prerequisite: THEA 246 or equivalent. Advanced technical problems in costume and accessory construction; production planning pattern drafting.

590./490. Graduate Design (3) F,S Faculty

Prerequisite: Consent of instructor and graduate advisor. Advanced design projects and concepts with faculty supervision. Limited to six units in any one area and no more than six units in all areas in any one semester. Area will be designated by letter at time of registration as (c) costume, (d) scenery, (f) technical, (m) makeup, (n) lighting, or (p) stage management.

614. Advanced Period Scene Study (3) S Faculty

Prerequisite: THEA 414. Advanced scene study from selected theatrical periods and plays. Analysis and exercises include language, socio-political sources, and human behavior. Representative periods including 17th-century France, Restoratio, Commedia dell-arte and the English Renaissance.

621A,B. Seminar in Theatre History and Dramatic Literature (3,3) S Kahan, MacArthur, Stiver

Prerequisite: THEA 321 or consent of instructor. Intensive study of one major playwright or period in the history of the theatre.

626A,B. Seminar in Play Analysis and Theory (3,3) S Kahan

Prerequisite: THEA 426 or consent of instructor. Selected areas play analysis.

642. Seminar in Theatre Decor (3) F Camburn

Prerequisite: Minimum of 9 units of work in theatre history, design and costuming or consent of instructor. Intensive study of the historical aspects of stage decoration, textiles and properties.

694. Advanced Studies in Theatre Arts (3) F,S Faculty

Prerequisite: Consent of instructor and graduate adviser. Advanced individual projects with faculty supervision in an area of Theatre Arts specialization. Limited to three units in any one area per semester and no more than six units in one semester with a total of nine units in any one area. Areas will be designed by letter at time of registration as (a) acting, (b) directing, (c) costumes, (d) scenery, (f) playwriting, (g) children's theatre, (h) theatre management, (i) dance, (j) theatre history, (k) theatre criticism, (m) make-up, (n) lighting.

696A-B. Research/Aesthetics/ Conceptualization (3,3) F,S Faculty

(Three units to be completed in the first semester and an additional three units completed in the second semester.) Techniques and methods of research for the preparation of the creative act, including performance and technical theatre/design. A study of aesthetics as it applies to the creative act. The final project will be the conceptualization of a production approach for the actor and/or technical artists and designer.

697. Directed Research (3) F,S Faculty

Prerequisite: Advancement to candidacy. Required of all candidates who elect the comprehensive option. Individual study under the guidance of a faculty member.

698. Thesis or Project (1-4) F,S Faculty

Prerequisites: THEA 696 and consent of department chair. Preparation, completion and submission of an acceptable thesis or creative project in partial fulfillment of the requirement for the master's degree.

699. MFA Final Project (1-6) F,S Faculty

(Open only to students who have been admitted to MFA Candidacy. Required of all MFA candidates.) Prerequisite: Consent of instructor. Planning, preparation and completion of final project related to field of specialization.

School of Humanities

Dean: Dr. Karl W. E. Anatol
Secretary: Gretchen Icenogle
Associate Dean, Educational Policy: Dr. Beverly J. DeLong-Tonelli
Secretary: Lorraine Michael
Associate Dean Instructional Support: Dr. Virginia Warren
Administrative Operation Analyst: Linda Mc Connell
Assistant to the Dean: Mr. Frank L. Costa
School Office: McIntosh Humanities Building (MHB), Room 214
Telephone: 498-4201

The greatest obstacle to change is not ignorance, but the illusion of knowledge. It is the role of the Humanities to not only preserve but also to constantly question established concepts of knowledge, considering whether they constitute knowledge, illusion or ignorance. In the Humanities, change is constantly postulated as possible, potential, or necessary, in order to truly preserve our cultural heritage as an active force and not as mere dogma. Study in the Humanities will, therefore, be inquisitive, critical, challenging and lively.

At California State University, Long Beach, the School of Humanities pursues this always challenging investigation in a dozen fields, ranging from the consideration of literary, linguistic, and philosophical monuments, to analysis and training in the very ways in which we can talk and listen to one another, the analysis of how we conceptualize and describe numbers and forms, and the use of technologies with which we communicate.

In the School of Humanities, complacency will find no comfort, and the search for solutions to eternal problems may only reveal more directions to pursue. For none will the study of Humanities be a closure.

Degree programs offered by the School are:

Communicative Disorders B.A., M.A.
Comparative Literature B.A.
English B.A., M.A.
French B.A., M.A.
German B.A., M.A.
Journalism B.A.
Linguistics M.A.
Mathematics and Computer Science B.A., B.S., M.A.
Philosophy B.A., M.A.
Radio, Television, and Film B.A.
Religious Studies B.A.
Spanish B.A., M.A.
Speech Communication B.A., M.A.

Degree Requirements

Specific degrees requirements are described in the appropriate departmental sections of this Bulletin.

Students declaring Liberal Studies as their major will need to complete the Liberal Studies core courses and one approved concentration. Approved concentrations in the School of Humanities include: Comparative Literature, English, French, German, Italian, Mathematics, Philosophy, Religious Studies, Russian, Spanish, and Speech Communication.

Double Major

Although students may not work toward nor receive two degrees concurrently at this University, they may complete the requirements for a second major and have this fact noted on their transcript.

Humanities Minors and Certificate Programs

Students are strongly encouraged to combine a minor and/or certificate program along with their chosen major. A minor consists of a minimum of 18 units (as specified by the department or program), at least nine of which must be upper division. The minor may be in a single subject or it may be interdisciplinary. However, no courses in the major department may be counted toward the minor. Courses outside the major department may count both toward the minor and toward requirements for the major.

The School of Humanities offers minors in the following disciplines: Comparative Literature, English (Literature, Language and Composition, Creative Writing, Teaching, or Special Option), French, German, Greek, Italian, Latin, Journalism, Mathematics, Philosophy, Religious Studies, Spanish, and Speech Communication.

Students may also elect to complete a certificate. Undergraduate certificates will be awarded only concurrently with, or subsequent to, the awarding of the bachelor's degree.

Advisement

Departments in the School of Humanities maintain academic advisors. Students are encouraged to contact the department of their major well in advance of registration day for advice on degree requirements or on other matters regarding their academic programs. Students may also contact the Liberal Studies or Special Majors Offices.

Internships

The School of Humanities and the Departments of Communicative Disorders, Journalism, Radio-Television, and Speech Communication offer internships with on- and off-campus cooperating organizations designed to provide students with practice in the field under supervision.

Student Activities

Most of the departments in the School of Humanities have either a student association or honor organization which provide students with a program of activities. Students should contact the department of their major to inquire about the kinds of organizations available to them.

The School and Associated Students promote the Humanities Student Council with its representation from each department acting as liaison between the School administration, faculty, and members of the School's student body. The Student Council also provides a forum for the discussion and resolution of common student concerns.

Some of the activities of the Humanities Student Council and its member department student associations include: cultural activities, speakers, films, potluck dinners, career programs, conferences, publications, social and sporting events, and faculty-student programs.

School Based Courses (HUM):

Upper Division:

Interdisciplinary Courses:

300. Student Life in London (2) F Axelrad, Cressy

Orientation to the culture and conditions of modern Britain, designed as preparation for the London Semester Program. Essentials of English history, literature, and contemporary life. Strongly recommended for all participants in the London Semester Program. One hour of in-class discussion and two hours of supervised activities. CR/NC only. Same course as SBS 300. 302IC. Molecular Biology and Bioethics (3) F, S Bonis, Carlberg A systematic study of some of the profound advances in Molecular Biology and the main genetic and ethical issues these advances have raised. General Education category [B.3].

350IC. California Culture (3) F,S Brophy, Fine, Krause, Leiter

This course examines the culture of California from several distinct disciplinary perspectives including history, political science, geography, sociology, art, and literature. It seeks to integrate the knowledge and methodologies of these disciplines as they converge on the study of California. The course is team-taught and modular in format. Students take three four-week intensive modules and a final three-week synthesizing module. General Education categories [C.3, D.2].

363IC. Implications of Human Language (3) F DeLong-Tonelli, Wardrip-Fruin

Study of how Europe's principal languages reflect their peculiar cultures, their geographical situation, their historical evolution, in such a way as to complicate communication. Languages discussed will include Romance and Germanic (including English), as well as several dialects. General Education category [C.3].

Internship Courses:

492A. Internship in Humanities (3) F,S Faculty

Prerequisites: Upper-division standing and consent of instructor. EPIC field experience. Students qualifying can be placed in a major or career-related volunteer assignment in private industry or public agencies. An organized plan utilizing a series of seminars and learning agreements is required, accompanied by selected assignments. (Minimum 120 hours work per semester for one unit of credit.) May be repeated to a maximum of six units. No more than six units total in 492A and B.

492B. Internship in Humanities (3) F,S, Faculty

Prerequisites: Upper-division standing and consent of instructor. CO-OP field experience. Students who qualify can be placed in a major or career-related, community-based, preprofessional experience as an employee in private industry or in public agencies. An organized plan utilizing a series of seminars and learning agreements is required, accompanied by selected assignments. CR/NC only. (Minimum 120 hours work per semester. May be repeated to a maximum of six units. No more than six units total in 492A and B.

Communicative Disorders

School of Humanities

Department Chair: Duane C. Craven
Department Office: Language Arts Building (LAB), Room 102
Telephone: 498-4594
Faculty: Professors: Randall C. Beattie, June M. Cooper, Walter H. Moore, Jr., Bruce P. Ryan, Virginia G. Warren, JoAnn R. Yates; Associate Professors: Duane C. Craven, Carolyn Wardrip-Fruin
Emeritus Faculty: Lyman M. Partridge, Jesse J. Thompson
Department Secretary: Karen Fawson
Community Advisory and Development Board: Natalye Black, Program Specialist, Irvine School District; Ida Bossier, Program Specialist, Los Angeles Unified School District; Margaret Briggs, Director of Speech Pathology, University Affiliated Program, Children's Hospital, Los Angeles; Michelle Clark, Director of Speech Pathology, St. Francis Hospital, Lynwood; Linda Daily, Audiologist, Newport Speech and Hearing Center, Laguna Hills; Elizabeth Dale, Director of Speech and Hearing, St. Jude's Hospital, Fullerton; Pat Eldredge, Program Specialist, ABC Unified School District, Cerritos; Karen Fait, Public Member, Lakewood; Lauren Franke, Director of Scottish Rite Institute for Childhood Aphasia, Long Beach; Gloria Hoversten, Audiologist, Los Angeles County Schools; Stephanie Day Hernandez, Speech Language Pathologist, Santa Ana Unified School District; Nancy Kahn, Supervisor, Speech, Language Hearing Specialist, Los Angeles Unified School District; Sheila Levy, Coordinator of the Communicative Handicapped Program, Santa Ana School District; Laura Miller, Supervisor of Special Education Services, Los Angeles County, Office of Education; Roxanne Schnell, Education Specialist, Special Education Resource Network, Montebello.

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisor, Graduate Advisor, Student Teacher Coordinator, Clinic Director.

The Communicative Disorders Department provides specialized course work for students planning careers in speech-language pathology or audiology. Departmental majors may complete work leading to bachelor of arts and/or master of arts degrees, as well as Certificates of Clinical Competence in either audiology or speech pathology from the American Speech and Hearing Association and the requirements for licensure by the State of California.

Students seeking special education credentials may obtain specific credentials while completing the master's degree. Students in allied health fields and linguistic sciences will find courses to supplement their regular majors.

The department maintains a language, speech and hearing clinic to serve as a clinical and research laboratory on campus for both graduate and undergraduate students. This facility is supplemented by many nearby hospitals, rehabilitation agencies and nonprofit language/speech/hearing clinics.

The Department of Communicative Disorders offers graduate study leading to the master of arts degree in communicative disorders with options in audiology and speech pathology. This coursework meets requirements for certification by the American Speech and Hearing Association and licensing by the State of California.

Bachelor of Arts in Communicative Disorders (code 2-6842)

Students desiring a bachelor's degree in communicative disorders must complete ANTH 170 and a course in language and culture/society (e.g. ANTH 413 or SOC 485IC) before completing the following required courses:

Lower Division:

C D 260, 261, 271, PSY 210.

Upper Division:

C D 330, 363, 373, 431, 432, 440, 466, 476, 481A, 481B, 483, 489.

Credentials for Service in Public Education

Students who wish to complete credentials for service as language, speech and hearing specialists, educational audiologists or teachers of the severe language disordered must be admitted to the graduate program in speech pathology or audiology.

Clinical-Rehabilitative Services — Language, Speech and Hearing Specialist Credential
Candidates must:

A. Complete the master's degree in speech pathology.
B. Complete C D 483, 489, EDP 686A (Student Teaching (5) in order to complete 100 contact hours as a Language, Speech and Hearing Specialist trainee in the school setting).

Clinical-Rehabilitative Services — Audiologist Credential

Candidates must:

A. Complete the master's degree in audiology.
B. Complete EDP 451, C D 380 and 680 (internship to be completed in the schools in order to complete 100 contact hours as an Audiologist trainee in a public school environment.)

Clinical-Rehabilitative Services — Lanaguage, Speech and Hearing Specialist Credential with Special Class Authorization to Teach Language Disordered Children

Candidates must:

A. Complete the master's degree in speech pathology.
B. Complete EDP 350, 451, C D 483, 489, 582, EDP 686A (in order to complete 100 contact hours as a Language, Speech and Hearing Specialist trainee in the school setting), and EDP 686B (in order to complete 100 contact hours as a teacher of severe language disordered children trainee in a school setting).

Specialist in Special Education — Communication Handicapped Credential (may be suspended Fall, 1989)

Candidates must:

A. Hold a valid teaching credential or complete one through the Graduate School of Education.
B. Complete the following generic special education courses: EDP 350, 451.
C. Complete the master's degree in speech pathology.

D. Complete C D 380, 483, 489, EDP 486A (in order to complete 100 contact hours as a Language, Speech and Hearing Specialist trainee in the school) and EDP 486F (in order to complete 100 contact hours as a teacher of severe language disordered children trainee in the schools).

Master of Arts in Communicative Disorders Degree (Code 5-6842)

Admission to the Graduate Program

Enrollment in 500/600 level courses in communicative disorders is restricted to students who have been admitted to the graduate program of the department. Students wishing to be admitted must complete the following procedures:

A. Students must meet the criteria for acceptance by the University as a graduate student.
B. Every student (new or continuing) must apply to the Office of Admissions and Records to obtain admission to the University with graduate standing.
C. Every student then must apply to the Department of Communicative Disorders for admission to the graduate program using the department application form. This form must be filed with the department chair by March 1 for admission in the fall semester. The following supportive materials must be filed with the department admission application:

1. Change of objective form available at department office (continuing CSULB students only).
2. Transcripts of all undergraduate and graduate work. (These transcripts are in addition to those required by the Office of Admissions and Records.) These transcripts should reflect the following minimum criteria:
   (a) a GPA of 3.0 or better for all undergraduate coursework and
   (b) confirmation of acceptable GPA obtained during the final senior semester.
3. Three letters of recommendation from academic faculty in Speech-Language, Pathology and/or Audiology, Psychology, Linguistics, etc. Our standard recommendation forms can be obtained from the Graduate Advisor and must be completed. CSULB C D majors need only to list names of three full-time C D faculty members who have agreed to serve as references.
4. Results of the Graduate Record Examination (GRE). Students must make arrangements to take this test in the semester prior to filing for admission to the department graduate program. This is to insure that the student's test results will be available by the filing date since test scores are used as one criterion for acceptance into the graduate program. Students can make arrangements to take the GRE at the Testing Office in SS/AD Room 216. The testing Office will supply students with further information and provide them with a description and sample items.

D. Any deficiencies will be determined by the department graduate committee after consultation with the student and the student's faculty advisor and study of transcript records. This includes demonstration, through a series of tests, of the applicant's abilities in logical thinking and problem solving, writing, reading and speech proficiency.
E. Student will have completed one of the two prerequisites listed in the next section.

Prerequisites

1. A bachelor's degree from an accredited institution with a major in communicative disorders (speech pathology and/or audiology), or:
2. A bachelor's degree from an accredited institution. In addition to courses in (1) anatomy and physiology of the speech and hearing mechanism, (2) phonetics, and (3) introduction to communicative disorders, the applicant must have 24 units of course work in speech science, speech-language pathology or audiology. If student has not completed sufficient units or courses to meet this requirement, he/she may enroll in the University as an 'unclassified' graduate student to complete the required undergraduate courses prior to being admitted to the Graduate Program in Communicative Disorders.

See your advisor for determination of 'comparable' courses. If your advisor cannot determine the equivalency, you will be directed to the individual who teaches the course for evaluation.

Advancement to Candidacy

In order to be advanced to candidacy for a master's degree, a student must meet the following criteria:

1. enrollment in the semester or summer session in which advancement takes place;
2. selection of Speech-Language Pathology or Audiology option;
3. satisfactory completion of C D 696 and three additional units;
4. satisfactory completion of the CSULB Writing Proficiency Examination. The Writing Proficiency Examination must be passed before the student is advanced to candidacy. After paying a fee at the Business Office (SS/AD Room 148), take your receipt to the Testing Office (SS/AD Room 216) and sign up for the examination. This examination is administered six times per year. A detailed description of the test is available at the Testing Office.
5. maintenance of a GPA of 3.0 in (a) all graduate work completed in Communicative Disorders, (b) all graduate work completed at CSULB, and (c) all graduate work transferred to meet degree graduate requirements;
6. filing of the student Program for the Master of Arts Degree in Speech Pathology after completion of items 2-5;
7. a written program of graduate courses approved by the student's department advisor, the department graduate advisor, the department chairperson, and the School of Humanities Associate Dean of Graduate Studies (Educational Policy).

Requirements for the Master of Arts in Communicative Disorders (code 5-6842)

Students must elect one of two available options: audiology or speech pathology.

For speech pathology 39 units of course work is required: C D 696, 662*, 663*, 664, 665, 666, 669A, 669B, or 669C, 669D, 669F, 669G, 669J, 670 or EdP 686A and C D 698 or 695 (Comprehensive Examinations) plus a three-unit elective. Within the context of the clinical courses (669A, 669B, 669C, 669D, 669F, 669G, 669J, 670, 669H, or EDP 686A), the student will complete 25 hours of clinical experience under appropriate supervision with a client determined to be of a language or dialect different from that of the student clinician. C D 483 and 489 or 460/560, or equivalent content, are prerequisites to this experience.

For audiology 37 units of course work is required: C D 696, 530, 574, 669A or 669B or 669C, 673, 674, 675, and either 698 and 2 units of electives or 695 (Comprehensive Examinations) and 5 units of electives.

Special Program for Students Who are Bilingual in Spanish

Students who can demonstrate native proficiency in Spanish as well as advanced proficiency in English may take the clinical practicum courses with a bilingual supervisor, working with clients who are monolingual in Spanish, monolingual in English, and bilingual. See Advisor for details. All students will take a final oral examination which includes a defense of the thesis or written examination.

*Students who were advanced to candidacy before August 16, 1981, to meet the intent of C D 662, may take C D 662 or C D 665. To meet the intent of C D 663, they may take C D 663, C D 664 or C D 666. Regulations governing the preparation and eligibility for and administration of comprehensive examinations are available in the Department office. Departmental regulations concerning preparation of theses are also available in the office.

Courses (C D):

Lower Division

060. Speech Improvement (1) F,S Faculty
Speech, language and hearing therapy to students enrolled in the University. May be repeated for credit to a maximum of two units.

260. Introduction to Communicative Disorders (3) F,S Craven, Moore, Ryan, Yates
Historical and interpersonal features of human communication dysfunction. Survey of major communicative disorders. Role of speech-language pathologist and audiologist in medical, educational, and private practice settings.

261. Anatomy and Physiology of the Speech and Hearing Mechanism (3) F Craven
Anatomical, physiological and neurological components of the speech and hearing mechanism. Designed for students planning to enter the clinical program in communicative disorders.

271. Phonetics (3) S Ryan
Phonetic basis of speech sounds and the various factors which influence pronunciation. Consideration is given to linguistic variations, regional dialects and standards. (Lecture 2 hours, laboratory 2 hours.)

Upper Division

330. Speech and Hearing Science (3) F,S Wardrip-Fruin
An introduction to the acoustic aspects of speech and hearing: generation of sound, nature and propagation of sound waves, absorption, reflection and measurement of sound; physiological/acoustic parameters of respiration, phonation, resonance, articulation and audition: acoustic perception, including acoustic/phonetic cues, categorical perception, acoustic encoding.

361. Language Development and Disorders in Monolingual and Bilingual Children (3) F,S Faculty
Principles of language and speech development related to cognitive, linguistic and communication behaviors of monolingual and bilingual children. Not open for credit for communicative disorders majors. [Lecture - Discussion]

363. Language and Speech Development of Monolingual and Bilingual Children (3) S Yates
Cognitive, associative, and linguistically oriented theories of language function. The student shall understand the linguistic and cultural factors in the normal language development of monolingual and bilingual children. Recommended for enrollment by communicative disorders majors only.

373. Principles of Audiology I (3) F,S Beattie, Warren
Anatomy and physiology of the hearing mechanism; administration and interpretation of audiometric test results, organization of hearing conservation programs. Designed for students planning to enter the clinical program in communicative disorders.

380. Sign Language and Non-Vocal Communication Systems (3) S
Origin, development and principles of sign language. Practice with the American Manual Alphabet, American Sign Language and Signing Exact English to provide basic conversational skill; other sign systems and modes of non-vocal communication are discussed.

431./531. Pediatric Audiology (3) S Warren
Prerequisite: C D 373. The auditory development of the child; evaluative techniques by age level, the categories and the parent role in a diagnostic, therapeutic and the counseling situation. (Lecture 2 hours, laboratory 3 hours.)

432./532. Audiology II (3) F,S Beattie
Prerequisite: C D 373. Audiological assessment of (1) pathologies affecting the middle ear, cochlea, 8th nerve, brain stem, and cortex, and (2) functional hearing loss. Includes administration and interpretation of discussed test batteries, observation/participation in auditory evaluations and experimentation, and a laboratory notebook detailing course activities.

440. Aural Rehabilitation for the Hearing Impaired (3) S Warren
Prerequisite: C D 373. The psychology of hearing impairment and the philosophy of aural rehabilitation together with specific reference to speech reading and auditory training are presented along with educational considerations for the hearing impaired.

456. Speech Pathology I: Disorders of Phonology (3) F Ryan
Prerequisites: C D 260, 271, 330, 363. Etiology, assessment, and treatment for disorders of phonology.

460./560. Language Assessment of the Limited English Proficient Child (3) F,S
Prerequisites: C D 363 and C D 481A, or equivalent, or permission of instructor. Provides an understanding of the Non-Discriminatory assessment process for the Limited English Proficient child referred for a Language Assessment. [Lecture — Discussion] Grading: Traditional only. Same course as C D 560.

460. 466./566. Speech Pathology II: Fluency Disorders (3) S Craven
Prerequisite: C D 261, 271, 330, 363. Etiology, assessment, and therapy for disturbances in the fluency of speech with emphasis on psychological, physiological, and linguistic variables correlated to disfluent behaviors.

476./576. Speech Pathology III: Disorders of Voice/Oro-facial Mechanism (3) F Wardrip-Fruin
Prerequisites: C D 261, 271, 330. The processes of phonation and resonance and their application to etiology, diagnosis and therapy of functional and organic voice disorders, such as those arising form laryngeal pathology, vocal abuse, neurological impairment, auditory impairment and oro-facial abnormalities.

481A./581A. Speech Pathology IV: Disorders of Language (3) F
Prerequisites: C D 261, 271, 330 and 363. An analysis of the components of language and how each is involved with language disorders in children. Provides for the understanding and recognition of variables for the assessment and clinical management of such children.

481B./581B. Speech Pathology IV: Disorders of Language Neuropathologies (3) S Moore
Prerequisite: C D 481A. Neurophysiological and neurolinguistic basis for language and speech disorders associated with central nervous system pathologies. Provides for the recognition and understanding of variables for the assessment and clinical management of such disorders.

483. Assessment of Monolingual and Bilingual Clients (3) Faculty
Prerequisites: CD 261, 271, 330, 363 and either ANTH 170 or a course in language and culture/society. Co-requisites: C D 456 and 481A. Introductions to principles underlying assessment procedures in speech and language disorders for both monolingual and bilingual clients. Focus is on the cultural and linguistic variables affecting standardized and non-standardized assessment procedures. [Lecture 2 hours, laboratory 3 hours.]

489. Management of Mono/Bilingual Clients (3)
Prerequisites: C D 432, 456, 476, 481A, 483; co-requisites: C D 466, 481B. Introduction to principles underlying management procedures in speech and language disorders for monolingual, bilingual and/or bicultural clients. Focus is on relationship of assessment to management, formulation of objectives, task analysis, data collection, clinical techniques and materials, and transfer and maintenance programs (including parent training). 25 hours of clinic observation and participation are included. Lecture 2 hours, laboratory 3 hours. [Lecture - Laboratory]

490. Special Studies in Communicative Disorders (1-3) F,S
Open only to communicative disorders majors with senior or graduate standing and consent of department chairperson. Individualized laboratory or library research selected in consultation with instructor. Written report of the research is required. Not acceptable for graduate credit toward the master's degree. May be repeated to a maximum of six units.

491. Proctoring in Communicative Disorders (2-3) F,S Craven, Ryan
(Open only to students who have achieved the grade of 'A' in the course in which they are serving as proctor.) Advanced students shall engage in peer teaching and examination scoring in specific Communicative Disorders undergraduate courses under the specific direction of the course instructor. May be repeated for credit to a maximum of 6 units.

499. Directed Studies in Communicative Disorders (1-3) F,S
Prerequisite: Consent of instructor. Independent study under supervision of a faculty member. May be repeated for a maximum of six units. Not acceptable for graduate credit toward the master's degree.

Graduate Division

530. Audiological Instrumentation (3) F Even years Beattie

Prerequisites: C D 330, 373 or consent of instructor. Use of instrumentation commonly used in audiology, such as the sound level meter, electronic counter-timer, multi-meter, oscilloscope, filters, mixer, impedance audiometer, psychogalvanometer, hearing aid test box and signal-averaging systems. (Lecture 1 hour, laboratory 6 hours.)

531./431. Pediatric Audiology (3) S Warren

Prerequisites: C D 373. The auditory development of the child; evaluative techniques by age level, the categories and the parent role in a diagnostic,therapeutic and the counseling situation. [Lecture 2 hours, laboratory 3 hours.]

532./432. Audiology II (3) F,S Beattie

Prerequisites: C D 373. The audiological assessment of (1) pathologies affecting the middle ear, cochlea, 8th nerve, brain stem, and cortex, and (2) functional hearing loss. Includes administration and interpretation of discussed test batteries, observation/participation in auditory evaluations and experimentation, and a laboratory notebook detailing course activities.

560./460. Language Assessment of the Limited English Proficient Child (3) F,S

Prerequisites: C D 363 and C D 481A, or equivalent, or permission of instructor. Provides an understanding of the Non-Discriminatory assessment process for the Limited English Proficient child referred for a Language Assessment. [Lecture — Discussion] Grading: Traditional only. Same course as C D 460.

566./466. Speech Pathology II: Fluency Disorders (3) S Craven

Prerequisites: C D 261, 271, 330, 363. Etiology, assessment, and therapy for disturbances in the fluency of speech with emphasis on psychological, physiological, and linguistic variables correlated to disfluent behaviors.

574. Hearing Aids (3) F Odd years Beattie

Prerequisites: C D 373, 431, 432, or consent of instructor. Role of the hearing aid in auditory rehabilitation, hearing aid circuitry and assessment, types of hearing aids, response characteristics; hearing aid selection and evaluation.

576./476. Speech Pathology III: Voice/Oro-Facial Mechanism (3) F Wardrip-Fruin

Prerequisites: C D 261, 271, 330. The processes of phonation and resonance and their application of etiology, diagnosis and therapy of functional and organic voice disorders, such as those arising from laryngeal pathology, vocal abuse, neurological impairment, auditory impairment and oro-facial abnormalities.

581A./481A. Speech Pathology IV: Language (3) F Faculty

Prerequisites: C D 261, 271, 330 and 363. An analysis of the components of language and how each is involved with language disorders in children. Provides for the understanding and recognition of variables for the assessment and clinical management of such children.

581B./481B. Speech Pathology IV: Disorders of Language Neuropathologies (3) S Moore

Prerequisites: C D 581A/481A. Neurophysiological and neurolinguistic basis for language and speech disorders associated with central nervous system pathologies. Provides for the recognition and understanding of variables for the assessment and clinical management of such disorders.

582. Teaching the Severe Language Handicapped/Aphasic Child (3) F Faculty

Prerequisites: C D 481 A-B. Designed for SLH/A teachers to provide preparation for utilizing assessment information and specialized teaching strategies. The course explores both conditioning techniques and cognitive discovery experiences necessary for both behavioral management and cognitive learning experiences in social science, language arts, mathematics and reading. (Lecture 2 hours, laboratory 3 hours.)

590. Advanced Topics and Current Issues in Communicative Disorders (1-3) F,S Faculty

Selected topics from the most recent developments and issues in Speech-Language Pathology and Audiology. Course content will vary with each offering. May be repeated for credit under different topics for a maximum of three units. Topics will be announced in the Schedule of Classes.

662. Seminar in Language Disorders in Children (3) S Yates

Prerequisite: C D 481A, 696. The subsystems of language: linguistic structure, cognitive competency and communication abilities are investigated in six major language intervention therapeutic approaches.

663. Seminar in Disorders of Phonology (3) F Ryan

Prerequisites: C D 456 or equivalent, 696. Information in the description, assessment and treatment of phonological disorders. Survey of current literature and practices. Practice in conducting procedures.

664. Seminar in Disorders of Voice and the Oro-facial Mechanism (3) S Wardrip-Fruin

Prerequisites: C D 476, 696. Selected problems in voice disorders through an investigation of the literature and clinical research.

665. Seminar in Language Disorders in Adults (3) F Moore

Prerequisites: C D 481B, 696. Provides an understanding of neuropathological substrates of language disorders in adults resulting from brain damage. Provides for the recognition and assessment of the syndromology and clinical aspects of adult language disorders.

666. Seminar in Fluency Disorders (3) F Craven, Moore, Ryan

Prerequisites: C D 466, 696. Historical and current research and its effect upon the assessment and management of fluency disorders.

669A. Clinical Practice in Phonological Disorders (2) F,S

Prerequisites: C D 489; pre- or co-requisite: C D 663 or consent of instructor. Student conducts assessment of phonological disorders and management of therapy, under supervision, with clients in the university speech and hearing clinic. Students handle all aspects of clinical program including initial interviews, parent counseling, and testing.

669B. Clinical Practice with Pre-School Language Disordered Children (2) F,S Faculty

Prerequisites: C D 489; pre- or co-requisite: C D 662 or consent of instructor. Student conducts individual and group language therapy, under supervision, within a nursery school. Student makes a developmental diagnosis through assessments and formal tests.

669C. Clinical Practice with School-Age Language Disordered Children (2) F,S Faculty

Prerequisites: C D 489; pre- or co-requisite: C D 662 or consent of instructor. Student conducts individual and group language therapy, under supervision, within a clinical and/or school environment. Student makes a diagnosis through assessments and formal testing.

669D. Clinical Practice with Voice and Oro-facial Mechanism Disorders (2) F,S Faculty

Prerequisites: C D 489; pre- or co-requisite: C D 664 or consent of instructor. Student conducts therapy sessions under supervision for persons with functional and/or organic voice disorders. Practicum includes initial interviews, diagnostics, therapy program planning, counseling and report writing.

669F. Clinical Practice with Fluency Disorders (2) F,S Faculty

Prerequisites: C D 489; pre- or co-requisite: C D 666 or consent of instructor. Assessment, planning, and management in a supervised clinical experience with persons who have fluency disorders.

669G. Clinical Practice in Audiology (2) F,S Faculty

Prerequisites: C D 431, 432, 440, 489. Student will conduct individual and group therapy with hearing impaired clients, as well as audiological evaluation of hearing impaired persons.

669H. Clinical Practice-Special Programs (2) F,S Faculty

Prerequisite: At least three of the C D 669A through J courses. Specialized practice placement to obtain experience with speech, language, and hearing disorders. May be repeated to a maximum of 4 units.

669J. Clinical Practice with Language Disordered Adults (2) F,S

Prerequisites: C D 489; pre- or co-requisite: C D 665 or consent of instructor. Student conducts clinical management sessions, under supervision, for adults with neurological language disorders. Practicum includes initial interviews, assessment, management program planning, counseling and report writing.

670. Internship in Speech and Language Pathology (5) F,S

Prerequisites: C D 669A,B or C,D,F,G, and J with a GPA of 3.0. Advanced clinical supervised practice with speech and language disordered persons in either a hospital, rehabilitation agency or speech and language center.

673. Seminar in Hearing Science (3) S Even years Beattie, Warren

Prerequisites: C D 330, 373, 432, and 696 or consent of instructor. Provides an advanced research-based understanding of how normal-hearing listeners respond to selected acoustic signals and the anatomical/physiological bases underlying these phenomena. Parameters include dB notation, psychophysical methods, pitch and loudness perception, differential sensitivity to intensity and frequency, adaptation/fatigue, masking, binaural hearing, and speech intelligibility in quiet and noise.

674. Seminar in Audiology: Aural Rehabilitation (3) S Even years Beattie, Warren

Prerequisites: C D 440, 696 or consent of instructor. Major emphasis will be placed on advanced study of one or more areas covered under the term 'aural rehabilitation.' Topics will include speech reading, manual communication, auditory training, speech conservation, hearing aids and an overview of the fields of educational and industrial audiology.

675. Seminar in Audiology: Electroacoustic and Physiological Assessment (3) S Odd years Beattie

Prerequisites: C D 431, 432, 696 or consent of instructor. Major emphasis is placed on the advanced study of acoustic immittance and evoked response audiometry. Other topics include electronystagmography, cardiotachometry, electrodermal audiometry, and/or respiration audiometry.

679. Practicum in Audiology (2) F,S Beattie, Warren

Prerequisites: C D 431, 432, 440, or consent of instructor. Student conducts evaluation and rehabilitative sessions under supervision with persons with more complex hearing disorders. Student handles all aspects of the audiologic program including evaluation, consultation, program planning and execution. May be repeated for credit to a maximum of 10 units.

680. Internship in Audiology (5) F,S Beattie, Warren

Prerequisites: C D 669A or B or C, 679(2-2); with a minimum of 175 clinical contact hours and with a minimum grade point average of 3.0 in clinical practice. Advanced clinical practice in audiology with hearing impaired persons in a community facility.

695. Directed Readings (1-3) F,S Faculty

Prerequisite: Consent of instructor. Readings in communication sciences/disorders. Required of all candidates for the master's degree not electing the thesis option. (Under special circumstances, may be repeated for a maximum of 6 units.)

696. Research Methods in Communicative Disorders (3) F Beattie, Ryan, Moore

Prerequisite: PSY 210 or equivalent or consent of instructor. Problems, procedures, methods of a descriptive, historical and empirical nature as utilized in communicative disorders research. Single subject experimental designs and group designs and their contributions are discussed.

697. Directed Research (1-3) F,S Faculty

Pre- or Co-requisite: C D 696 and consent of instructor. Independent research under supervision of a faculty member.

698. Thesis (1-4) F,S Faculty

Prerequisites: Advancement to candidacy for master's degree. Preparation, completion and submission of an acceptable thesis in partial fulfillment of the requirements for the master's degree.

Comparative Literature

School of Humanities

Department Chair: Roberta H. Markman
Department Office: McIntosh Humanities Building (MHB), Room 517
Telephone: 498-4239
Faculty: Professors: J. Charles Jernigan, Roberta H. Markman; Associate Professor: Roland E. Bush, Frank Fata; Assistant Professor: Sarah Spence
Department Secretary: Janet Rodriguez

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisor.

Comparative literature is the study of literature without respect to national boundaries through methods of comparison of authors and cultures. It is also the interdisciplinary study of the relationships of literature to the visual arts, music, history, language, philosophy, creative writing, theatre, film, and other areas. Comparative Literature is the critical analysis of textual material based on an understanding of important theoretical approaches. Students who complete a degree in comparative literature will be expected to know the history of literature in its broad outlines and will be able to analyze a literary text. Training in competent writing techniques, analytical reasoning and cross-cultural relationships fall naturally within the areas of the student's study. Comparative literature is an exciting, challenging discipline for the student who does not wish to be bound by traditional ideas and for the student who is interested in the humanistic study of an interrelated world — a world that is his or her own.

At CSULB, comparative literature also offers a strong focus in folklore studies and mythology as bases for understanding literature and, more important, for the way we see ourselves and create our own environments.

Suggested Preparation: Course work in world literature, English composition, and foreign language.

Bachelor of Arts in Comparative Literature (code 2-6832)

The Bachelor of Arts in Comparative Literature consists of the required core of courses (24 units), together with one of the three emphases that follow (27 units each). In addition, C/LT 261 is strongly recommended. Core of 24 units required of every major distributed as follows:

C/LT 330A and B and at least one course from each of the following groups:

1. Genre: 346, 401, 440, 453
2. Author: 430 or 449
3. Non-Western or Mythology: 402, 403, 440, 445
4. Theory: 361
5. Movement or Comparative Study: 349, 404, 450, 452
6. Period: 428, 431, 432, 438

(Note: C/LT 440 may be used in both groups 1 and 3 only with different appropriate topics.)

Emphasis I:

This emphasis is designed primarily to prepare the student for graduate studies in Comparative Literature of related fields; it is a traditional undergraduate major in Comparative Literature.

Primary Concentration: 15 upper division units from any one of the following: English, English/creative writing, a single foreign language, philosophy, religious studies, music history, art history, history, or theatre arts. (If this concentration is English or foreign language, the equivalent of 6 of these units must be in literature. If the concentration is English/creative writing, 12 units of creative writing will be permitted, with the remaining units in literature. If the concentration is theatre/drama, courses in dramatic literature may be chosen from English, theatre arts, foreign languages or comparative literature/theatre arts courses.)

Secondary Concentration: 12 upper division units (six of which must be in literature) in one foreign language. In the case of languages offering a limited number of courses, the equivalent of four semesters of college study will suffice. If a foreign language has been chosen for the primary concentration, the student may elect the secondary concentration in English, English/creative writing, another foreign language, philosophy, religious studies, music history, art history, history, or theatre arts (nine units of which must be in comparative literature/theatre arts).

Emphasis II: World Literature

This emphasis is primarily designed for the student who wants a broad background in world literature in translation allied with a strong concentration in one specific field.

This emphasis is also designed for the student who elects the Comparative Literature teaching option of the English Single Subject credential. Advisement from both English and Comparative Literature is necessary.

Concentration: 24 upper division units from any one of the following: English, English/creative writing, a single foreign language, philosophy, religious studies, music history, art history, history or theatre arts. (If the concentration is English/creative writing, 12 units of creative writing will be permitted, with the remainder in literature. If the concentration is theatre/drama, courses in dramatic literature may be chosen from English, theatre arts, foreign languages or comparative literature/theatre arts courses.)

Foreign Language Examination: A basic reading examination in a foreign language will be administered to test a student's reading proficiency. Proficiency level equivalent to four semesters of college study of a foreign language may be used in lieu of an examination.

Emphasis III: Interdisciplinary Studies

This emphasis is designed to allow the student, with the aid of a faculty committee, to create an interdisciplinary program of study founded in literature.

Concentration: 24 upper division units to be arranged in an interdisciplinary pattern by the student in cooperation with a faculty committee. It will be the responsibility of the faculty committee to be sure that the student's program is academically defensible. All students wishing to participate in this emphasis must receive permission from the department chairperson before beginning the process. The committee will be chosen by the student in cooperation with the department chair and will consist of two full-time faculty in comparative literature and one full-time faculty from another discipline. The student's program must be established by the end of the first semester of the junior year.

Foreign Language Examination: A basic reading examination in a foreign language will be administered to test a student's reading proficiency. Proficiency equal to four semesters of college study of a foreign language may be used in lieu of an examination.

Minor in Comparative Literature (code 0-6832)

In addition to the bachelor of arts degree, the department offers a minor in comparative literature. The minor provides a flexible program for the student who is majoring in another discipline, but who is interested in comparative literature either for professional advantages or for intellectual enrichment.

Requirements for the Minor in Comparative Literature:

A minimum of 18 units in comparative literature, of which at least 12 are selected from any of the department's upper division offerings excluding C/LT 499.

Concentration in Comparative Literature for the Bachelor of Arts in Liberal Studies

A minimum of 24 units from any of the departmental offerings, at least 15 units of which must be upper division.

Courses (C/LT):

Lower Division:

124. Introduction to World Theatre and Drama (3) F,S Bush, Jernigan, Markman, Spence, Fata
Introduction to all aspects of theatre, including criticism, dramatic literature, movements, themes, historical background and theatrical production from different parts of the world. (Same course as THEA 124.)

230. Introduction to World Literature (3) F,S Bush, Jernigan, Markman, Spence, Fata
Readings in translation from masterpieces of world literature with emphasis on the technique and form of literary art as developed in various cultures.

232. Folklore and Mythology (3) F,S Bush, Jernigan, Markman, Spence, Fata
Introduction to mythology and folklore, with emphasis on myths of Eastern and Western civilization and their application in literature.

234. Introduction to Asian Literature (3) F Faculty
A comprehensive introduction to Asian culture by reading representative selections from the literature of China, Japan, and India. The Near East may also be studied.

250. Literature and the Other Arts (3) F,S Bush, Jernigan, Markman, Spence, Fata
Investigation of the interrelationships between the arts. Analysis of literary, fine art and music materials from ancient periods to the present in regard to movements, techniques, philosophies and formal organization to achieve artistic expression. Field experience and interviews with local artist.

261. Introduction to Comparative Literature (3) F,S Bush, Jernigan, Markman, Spence
An introduction to the basics of literary interpretation and comparative literature. Strongly recommended for majors in Comparative Literature. Upper Division

320IC. Comic Spirit (3) F,S Jernigan, Bush, Markman, Spence, Fata
An investigation of comedy as a literary genre and of the manifestation of the comic spirit in related art forms such as music, art, and film. Examination is given to the history of comedy as well as to theories of the causes and effects of laughter.

324IC. World Theatre Today (3) F,S Bush, Markman
Current trends, problems and achievements of the theatre of the present day from an international point of view with an examination of influences of the avant-garde movements of post World War I (Expressionism, Dada, Surrealism, the Absurd, Existentialism). (Same course as THEA 324IC.)

325IC. Theatre and Drama of India and Southeast Asia (3) F Faculty
History and social background of the classical genres, as well as contemporary forms, of dance and theatrical production, including puppetry and masked ritual. Representative selections, in translation, from the great Indian epics and Sanskrit drama. (Same course as THEA 325IC.)

326IC. Theatre and Drama of China, Korea and Japan (3) S Shoup
History and social background of selected genres, both classical and modern, of dance, folk plays, musical and theatrical production, including puppetry and masked ritual. Readings, in translation, of dramatic, comedic and lyrical works, comparing cultures. (Same course as THEA 326IC.)

30A,B. Masterpieces of European Literature (3,3) F(330A),S(330B) Bush, Jernigan, Markman, Spence, Fata
Prerequisite: one course in literature or consent of instructor. Representative selections, in translation, of European texts to and since the Renaissance, and their relation to the development of Western civilization.

342. The Bible as Literature (3) F,S Faculty
Prerequisite: One course in literature or consent of instructor. Reading of representative Biblical selections evaluated by literary criteria.

346. Readings in World Poetry (3) F,S Bush, Spence
Prerequisite: One course in literature or consent of instructor. Representaive selections of the poetry of the world from the earliest examples to the present. Facing-page translations will be included.

349. Literary Movements (3) F,S Bush, Fata, Jernigan, Markman
Prerequisite: One course in literature or consent of instructor. Intensive study of a movement or theme in world literature. specific movement or theme will be announced in the Schedule of Classes. (May be repeated for credit to a maximum of nine units with different topics.)

349IC. Medieval World (3) F,S Fata, Jernigan, Spence
An interdisciplinary examination of major themes in medieval society and culture with emphasis on literature, the arts, and the historical forces at work. Topics will include the Roman heritage of the middle ages, barbarian culture, Romanesque and Gothic worlds, crusades and pilgrimages, commerce and cathedrals, and late medieval problems. (Same course as HIST 414IC.)

361. Masterpieces of Literary Criticism (3) F,S Spence, Yeh
Representative selections of literary theory from Plato to the present. Readings from each theory will be supplemented by applications to a specific literary text. Course will provide students with a broad historical background to the critical and the practical tools to analyze a literary text. (No student who has taken C/LT 460 may receive credit for C/LT 361.)

401./511. The Modern Confessional Novel (3) F,S Bush
Prerequisite: One course in literature or consent of instructor. A comparative analysis of the thematic and structural characteristics of the confessional novel in the 19th and 20th centuries. Representative novels from Europe, Asia and Latin America are examined.

402./512. Modern Folklore (3) F,S Faculty
Prerequisite: One course in literature or consent of instructor. Origin and development of folk tradition from rural society to the modern city, with special emphasis on the folk arts and their development in the mass media.

403. Studies in Asian Literature (3) F,S Faculty
Prerequisites: one course in literature or consent of instructor. Interrelationships of two or more authors, themes, genres, movements or aspects of literature and culture in Asia or between Asia and the West. Topics to be announced in the Schedule of Classes. May be repeated for credit, on different topics, for a maximum of nine units.

404. Women in World Literature (3) F,S Markman, Spence
Prerequisites: one course in literature or consent of instructor. Study of the role of women in world literature. Specific movement, area, or theme will be announced in the Schedule of Classes. May be repeated for credit to a maximum of six units with different topics.

410IC. Literature and Music (3) Bush
An examination of the relationship between music and literature in the late 19th and 20th centuries with emphasis placed on representative literary works and musical compositions that show mutual influences and common features and structures.

411IC. 20th Century Dimensions (3) S Markman
Prerequisite: one course in literature or consent of instructor. An interdisciplinary study of the 20th century through Western literature, art, music and film with an emphasis on the assumptions, aesthetics, methodologies, and expression of major movements such as Fauvism / Primitivism, Expressionism / Existentialism, Cubism, Abstract Expressionism, Surrealism, Constructivism, and Neo-Realism and the major influences on them such as Darwin, Nietzsche, Freud, Bergson, Einstein and Jung.

412IC. Art and Literature (3) F,S Bush, Markman, Spence
Comparing the visual arts and literary masterpieces in selected representative periods including a study of the theory and methods of comparative aesthetics of the two disciplines.

420IC. The Greek World (3) F,S Jernigan
An interdisciplinary examination of major events and ideas in the society and culture of ancient Greece with an emphasis on literature, the arts, and the historical forces at work. Topics include the foundations of Greek culture, Minoan civilization, Homer and the Trojan War, mythology and religion, lyric poetry, the Persian Wars, the "Golden Age" of Athens, the Peloponesian War, Hellenistic culture and the contributions of the Greeks to the modern world. (Same course as HIST 310IC.)

421IC. Classical Drama (3) F,S Jernigan, Markman

Prerequisite: One course in literature or theatre arts. An interdisciplinary examination of major plays of the Greeks and the Romans, both as literature and as theatre. Includes the "invention" of the drama as an art form, the development of tragedy and comedy, works by Aeschylus, Sophocles, Euripides, Aristophanes, Menander, Plautus, Terrence, and Seneca. Considers also the debt of modern drama and dramatic literature to the theatre of the ancients. (Same course as THEA 421IC)

422IC. Renaissance Theatre and Drama (3) F,S Fata, Jernigan, Markman

Prerequisite: One course in literature or theatre arts. An interdisciplinary study of the achievements, problems, themes and trends of Renaissance drama in Italy, Spain, France, and England between 1350 and 1650. Major plays of the period are read in translation, including works by Machiavelli, Tasso, Tirso de Molina, Lope de Vega, Calderon, and Shakespeare. Texts are treated both as literature and as theatre. (Same course as THEA 422IC).

428. Selected Periods in Theatre and Drama (3) S Bush, Fata, Jernigan, Markman, Spence

Prerequisite: One course in literature or theatre arts. Study of special movements and periods in the history of drama and theatre, to be selected each semester. (Same course as THEA 428)

430./513. Dante (3) F,S Fata, Jernigan

Prerequisite: One course in literature or consent of instructor. A reading, in translation, of the major works of Dante, including the *Vita Nuova* and the *Divine Comedy*. Examination is also given to the comparative nature of Dante's work: his sources and his influence on later writers, artists, and composers.

431./514. Medieval Literature (3) F Fata, Jernigan, Spence

Prerequisite: One course in literature or consent of instructor. Representative selections, in translation, from writings of the medieval period, reflecting dominant ideas of the time.

432./515. Continental Renaissance Literature (3) S Fata, Jernigan

Prerequisite: One course in literature or consent of instructor. A comparative study of the major works of the chief nondramatic authors of Renaissance Europe, including all or some of the following: Petrarch, Boccaccio, Lorenzo de'Medici, Machiavelli, Ariosto, Tasso, Ronsard, Rabelais, Erasmus, and Cervantes. Emphasis is also given to influences, trends, and contributions to the modern world.

438./516. 20th Century Continental Literature (3) F,S Bush, Markman

Prerequisite: One course in literature or consent of instructor. Comparative study of continental European literature, in translation from 1900 to the present. Novelists studied include Kafka, Gide, Proust, Hesse, Moravia, Kazantzakis, and Mann; dramatists include Pirandello, Chekhov, Beckett, Sartre, and Camus. Movements include realism, naturalism, the development of the psychological novel, existentialism, and the theatre of the absurd.

440./520. Latin American Literary Studies (3) F,S Bush

Prerequisite: One course in literature or consent of instructor. A comparative study of major literary genres in Latin American literature in relation to the principal periods and movements of the Western literary tradition. The genres for the semester will be announced in the Schedule of Classes. May be repeated with different topics up to nine units.

445. American Folklore Studies (3) F,S Bush, Jernigan

Prerequisite: One course in literature or consent of instructor. Special topics in American folklore. Topics are chosen to provide a bridge between literary, aesthetic and specialized folkloristic studies of American culture. Special attention will be paid to European and Third World contributions to American folklore. Topics to be announced in the Schedule of Classes. May be repeated with different topics up to nine units.

449./521. Critical Studies in Major Continental Writers (3) F,S Bush, Fata, Jernigan, Markman, Spence

Prerequisite: One course in literature or consent of instructor. Intensive and comparative study of one to three major continental authors. Authors to be studied will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics.

450./522. Comparative Studies (3) F,S Bush, Fata, Jernigan, Markman, Spence

Prerequisite: One course in literature or consent of instructor. Interrelationship of two or more disciplines, with emphasis on reciprocal influences and borrowing of materials during various literary periods. The class will feature a different interdisciplinary study each semester to be announced in the Schedule of Classes. May be repeated for a maximum of nine units with different topics.

451IC. The Novel and the Motion Picture in Contemporary Society (3) S Bush

Interdisciplinary study of two genres, with particular focus on novels made into films and on the aesthetic distinction of both forms as major genres in the 20th century.

452./523. Studies in Mythology (3) F,S Bush, Markman

Prerequisites: one course in literature or consent of instructor. Interrelation of two or more mythologies, mythological themes or theories of mythology. This class will feature a different area of an interdisciplinary or comparative nature in the study of mythology each semester, to be announced in the Schedule of Classes. May be repeated with different topics to a maximum of nine units.

452IC. Mythic Visions into Mythology (3) F Markman

Thematic polarities in mythology will be examined. Chaos and Cosmos; Microcosm and Macrocosm; Life and Death; Sacred and Profane in relation to expression of the same in art. (For IC credit, must be taken concurrently with ART 360IC.)

453./517. Fairy Tales (3) F,S Markman

Prerequisite: One course in literature or consent of instructor. An in-depth study of the fairy tale as a unique literary genre and art form. Class will investigate various theories as applied to the tales and identify psychological, religious, cultural, and alchemical patterns and symbols that reappear in fairy tales and manifest man's early realization of his identity and of the creative process.

461. Topics in Contemporary Literary Criticism (3)

Prerequisite: C/LT 361. An in-depth study of a particular critic or movement in contemporary literary theory. May be repeated for credit to a maximum of 9 units with different topics.

499. Directed Studies (1-4) F,S Bush, Fata, Jernigan, Markman, Spence

Prerequisite: Consent of instructor. Independent study of special topics under supervision of a faculty member. May be repeated for a maximum of six units with consent of department.

Graduate Division:

501. Advanced Interdisciplinary Study (3) F Bush, Fata, Jernigan, Markman, Spence

Intensive study of the theories and methods of comparing and interrelating literature with other disciplines such as various areas among the fine arts, the social sciences and the sciences. Course will involve independent research.

502. Modern Folklore Research (3) F,S Bush, Jernigan, Markman, Spence

Intensive study of folklore research methods and techniques with particular emphasis on rural-to-urban changes in the modern city.

511./401. The Modern Confessional Novel (3) F,S Bush

Prerequisite: One course in literature or consent of instructor. A comparative analysis of the thematic and structural characteristics of the confessional novel in the 19th and 20th centuries. Representative novels from Europe, Asia and Latin America are examined.

512./402. Modern Folklore (3) F,S Faculty

Prerequisite: One course in literature or consent of instructor. Origin and development of folk tradition from rural society to the modern city, with special emphasis on the folk arts and their development in the mass media.

513./430. Dante (3) F,S Fata, Jernigan

Prerequisite: One course in literature or consent of instructor. A reading, in translation, of the major works of Dante, including the *Vita Nuova* and the *Divine Comedy*. Examination is also given to the comparative nature of Dante's work: his sources and his influence on later writers, artists, and composers.

514./431. Medieval Literature (3) F Fata, Jernigan, Spence

Prerequisite: One course in literature or consent of instructor. Representative selections, in translation, from writings of the medieval period, reflecting dominant ideas of the time.

515./432. Continental Renaissance Literature (3) S Fata, Jernigan

Prerequisite: One course in literature or consent of instructor. A comparative study of the major works of the chief nondramatic authors of Renaissance Europe, including all or some of the following: Petrarch, Boccaccio, Lorenzo de'Medici, Machiavelli, Ariosto, Tasso, Ronsard, Rabelais, Erasmus, and Cervantes. Emphasis is also given to influences, trends, and contributions to the modern world.

516./438. 20th Century Continental Literature (3) F,S Bush, Markman

Prerequisite: One course in literature or consent of instructor. Comparative study of continental European literature, in translation from 1900 to the present. Novelists studied include Kafka, Gide, Proust, Hesse, Moravia, Kazantzakis, and Mann; dramatists include Pirandello, Chekhov, Beckett, Sartre, and Camus. Movements include realism, naturalism, the development of the psychological novel, existentialism, and the theatre of the absurd.

517./453. Fairy Tales (3) F,S Markman

Prerequisite: One course in literature or consent of instructor. An in-depth study of the fairy tale as a unique literary genre and art form. Class will investigate various theories as applied to the tales and identify psychological, religious, cultural, and alchemical patterns and symbols that reappear in fairy tales and manifest man's early realization of his identity and of the creative process.

520./440. Latin American Literary Studies (3) F,S Bush

Prerequisite: One course in literature or consent of instructor. A comparative study of major literary genres in Latin American literature in relation to the principal periods and movements of the Western literary tradition. The genres for the semester will be announced in the Schedule of Classes. May be repeated with different topics up to nine units.

521./449. Critical Studies in Major Continental Writers (3) F,S Bush, Fata, Jernigan, Markman, Spence

Prerequisite: One course in literature or consent of instructor. Intensive and comparative study of one to three major continental authors. Authors to be studied will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics.

522./450. Comparative Studies (3) F,S Bush, Fata, Jernigan, Markman, Spence

Prerequisite: One course in literature or consent of instructor. Interrelationship of two or more disciplines, with emphasis on reciprocal influences and borrowing of materials during various literary periods. The class will feature a different interdisciplinary study each semester to be announced in the Schedule of Classes. May be repeated for a maximum of nine units with different topics.

523./452. Studies in Mythology (3) F,S Bush, Markman

Prerequisites: one course in literature or consent of instructor. Interrelation of two or more mythologies, mythological themes or theories of mythology. This class will feature a different area of an interdisciplinary or comparative nature in the study of mythology each semester, to be announced in the Schedule of Classes. May be repeated with different topics to a maximum of nine units.

550. Topics in Comparative Literature (3) S Bush, Jernigan, Markman, Spence

Prerequisite: C/LT 501 or consent of instructor. Special studies of movements, figures and relationships in world literature; or between world literature and other disciplines. Topics to be announced in the Schedule of Classes. May be repeated to a maximum of nine units with different topics.

English

School of Humanities

Department Chair: Robert A. Hipkiss
Assistant Chair: A. Robert Bell
Department Office: McIntosh Humanities Building (MHB), Room 419
Telephone: 498-4223
Faculty: Professors: Kenneth J. Ames, Harold Aspiz, Abraham A. Avni, Arthur M. Axelrad, A. Robert Bell, Robert H. Berdan, Blaze O. Bonazza, Alice M. Brekke, Robert J. Brophy, Walter B. Crawford, James E. Day, David M. Fine, Elliot Fried, Helen C. Gilde, Robert M. Hertz, Robert A. Hipkiss, Stephen R. Knafel, Alvin H. Lawson, Richard E. Lee, Paulino M. Lim, Jr., Gerald I. Locklin, Eileen E. Lothamer, Richard E. Lyon, Frederic J. Masback, Charles E. May, Leslie B. Mittleman, Doris L. Nelson, Douglas H. Orgill, David R. Peck, Audrey C. Peterson, Dora B. Polk, Mary J. Purcell, Stephen B. Ross, David N. Samuelson, Janet B. Sawyer, Arnold T. Schwab, Charles E. Stetler, Gerald L. Sullivan, Donald J. Weinstock, John B. Williams, Luster J. Williams, R. Ora Williams, Suzanne M. Wilson; Associate Professors: Albert G. Black, Edward J. Borowiec, Gene L. Dinielli, Gloria G. McCullough, F.J. Plourde, Charles W. Pomeroy, Richard D. Spiese, Ronald J. Strahl; Assistant Professor: Elyse M. Blankley, Roy C. Garrott.
Emeritus Faculty: Charles A. Allen, Ralph K. Allen, George V. Betar, Charles B. Brooks, George R. Cerveny, Richard H. Darbee, John Hermann, Wilfred P. James, Louise C. Lubbe, Delmer J. Rodabaugh, Aillee Willford Rose, A. Keith Skarsten, George Stephens, Robert C. Wylder.
Administrative Aide: Jeane Kernodle

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate, Graduate, Teacher Education, Liberal Studies, Composition, Technical and Professional Writing, Linguistics, and the American Language Program.

In the discipline of English, throughout the student's study of language and literature and in his or her own writing, the teaching emphasis is on the development of the student's own critical reasoning, imagination, and expressive clarity and meaningfulness. One's experience of life is broadened and deepened through literature, and thinking is sharpened and clarified through the study and practice of language and writing. One learns to see and to seek out the possibilities of language and to use the essay, fiction, drama, and poetry to add dimension and meaning to the life within and around.

The courses of study for the undergraduate English major are designed to enlarge the literary background of students and to prepare them for graduate study, teaching, other professions or business careers.

Work in a foreign language is required for one of the options and recommended for the others, preferably to begin (if not continued from high school) in the lower division and to continue in the upper division. Because at least one language is usually required to obtain an advanced degree, students aiming at such degrees should include language study in their undergraduate program.

Bachelor of Arts in English

In planning a program of courses for the major in English, the student is advised to keep in mind the opportunities and limitations of the different options explained below. More detailed information about each option is available in the English Department office, but each student is also expected to consult a department faculty member regularly for advisement.

The major in English, for all options, consists of 41 units. This total may not include English 100 (which, however, satisfies general education requirements), but, upon petition to the English Department, may include courses taken in other departments. Because some courses are required in several options, a student desiring to change options can do so without any great loss of unit credit toward the 41-unit total.

A student may accelerate completion of the major in English by taking advantage of the department's credit by examination policy. Certain courses may be waived or substituted for under certain circumstances. Consult an English Department advisor for the option concerned.

Requirements for the Bachelor of Arts:

Option in Literature (code 2-6830)

The literature option is designed for students who desire a thorough grounding in English and American literature, particularly those planning on graduate study in English. Students aiming at advanced degrees should take as many of the recommended electives as possible. Because a reading knowledge of at least one foreign language is usually required to obtain an advanced degree, such students should also include language study in their undergraduate programs.

This option consists of 41 units, 29 of which must be upper division, including the following:

Lower Division:
ENGL 184, 250A,B.

Upper Division:
ENGL 384; three courses in English literature: 363 and either two courses from the 450 series or one course from the 450 series and one course from 462, 463, 465, 467A,B, 468; three courses in American literature: 370A,B and one course from 474, 475, 476, 477A,B, 478; one author seminar: 469 or 479; electives to make up a total of 41 units. Recommended: 431 (classical background); courses in English linguistics; additional courses in the 450, 460, 470 series; 405; 406; 407; 499; C/LT 330A,B. Either ENGL 481 or 482 may be elected in satisfying this requirement.

Option in Language and Composition (code 2-6829)

The language and composition option is designed to emphasize linguistic studies in preparation for either graduate study in language or for teaching. Four college semesters, or the equivalent, of a language other than English are also required.

This option consists of 41 units, 29 of which must be upper division, including the following:

Lower Division:
ENGL 184, 250A,B.

Upper Division:
Two courses in American literature: 370A,B; five courses in language: 325, 420, 421, 428 and either 423 or 426; one course in composition either 300 or 310; electives to make up a total of 41 units. Recommended: additional courses in literature and language, 405, 406, 407, 499. Either ENGL 481 or 482 may be elected in satisfying this requirement.

Option in Creative Writing (code 2-6831)

The creative writing option is designed for students who wish to write, as well as to study, fiction, poetry or plays.

This option consists of 41 units, 26 of which must be upper division, including the following:

Lower Division:
ENGL 184, 205 or 206, 250A,B.

Upper Division:
Any three classes in creative writing chosen from ENGL 405, 406, 407, 499; THEA 380, 480; R/TV 404. Three classes in recent literature, literary genres and/or literary criticism chosen from the following courses: ENGL 384, 385, 386, 459, 467A,B, 469, 474, 475, 476, 477A,B, 479. Electives to make up a total of 41 units chosen from the classes listed above and/or any upper-division English courses.

Option with Special Emphasis (code 2-6827)

The opportunity to pursue individually designed 41-unit programs of study is provided for students who wish a major in English but who have special interests or career objectives so different from those for which the other options are designed that their personal educational needs would be better served by some other pattern of courses. Students desiring to take the special option should present a detailed program proposal as early in their college career as possible. Such programs will be recognized only if planned in consultation with an English Department faculty advisor, approved in writing by the advisor and approved by a vote of the Curriculum Committee, given signed approval by the department chair and carried out under the advisor's continuing supervision. Students must complete at least 15 upper division units applicable to their special option program after it has been officially approved. The only specific course requirements and limitations are as follows:

ENGL 184, Composition and Literature (four units); ENGL 384, Principles of Literary Study (three units).

Electives in English and related fields to make up a total of 41 units. These electives may not include ENGL 100 or 101.

Option in English Education (code 2-6803)

Secure credential information in English Department Office, MH-420.

Certificate in Honors English

This certificate program offers students the opportunity to follow their own reading schedules, fill in gaps in their knowledge, and develop interests in a wide range of subjects offered by the English Department.

In order to apply, students must have senior status and a grade point average of 3.0 or better overall and 3.2 or better in their English concentration.

In addition to completion of a degree program in English, a candidate must pass two comprehensive and critical examinations. Passing the first, a qualifying examination which is mainly objective, entitles the student to take the second. Passing the second, an essay examination consisting of an analysis of one or more specific texts, completes the requirements.

Minor in English (Literature) (code 0-6830)

The minor in English (Literature) requires a minimum of 21 units and must include: ENGL 184; eight units from ENGL 250A,B, 370A,B, and nine units of electives to complete at least 21 units from ENGL 363, 385, 386, 390, 398 and/or any courses from the 450, 460 or 470 series.

Minor in English (Language and Composition) (code 0-6829)

The minor in English (Language and Composition) requires a minimum of 20 units and must include: ENGL 310, 325, 420, 421, 428 and 497. Also recommended are three units from ENGL 423 or 426.

Minor in English (Creative Writing) (code 0-6831)

The minor in English (Creative Writing) requires a minimum of 21 units and includes the following: ENGL 184; three units from ENGL 205 or 206, three units from ENGL 405 or 406; three units from ENGL 385 or 386; and eight units of electives from ENGL 405, 406, 407, 459, 467A,B, 474, 475, 476, 477A,B, 499. (Note: ENGL 405 and 406 may be repeated for credit to a maximum of six units by consent of instructor.)

Minor in English (Teaching Emphasis) (code 0-6803)

The minor in English (Teaching Preparation) requires a minimum of 21 units and includes the following: eight units from ENGL 250A,B, 370A,B; ENGL 310; four units from ENGL 320 or 325; ENGL 482; three units of approved electives.

Minor in English (Special Emphasis) (code 0-6828)

The minor in English (Special Option) requires a minimum of 21 units in a program developed, approved and supervised in the same manner as the Special Option major. ENGL 184 is required of all students, with the rest of the program constructed in consultation with a faculty advisor.

Students may take courses which center on technical writing, for example, or other writing goals; they may focus on American or English literature, literature in a particular genre, a particular historical period, or a particular theme.

Certificate Program in Teaching English as a Second Language

The Certificate Program in Teaching English as a Second Language is conducted by the Linguistics Program faculty. Please refer to the Linguistics sections of this catalog, following.

Certificate Program in Technical and Professional Writing

Committee on Technical and Professional Writing: A.R. Bell, A. Black (Chair), Edward Borowiec, J. Williams.
Advisory Board: Ron Arendas, Fujitsu Business Systems; Bruce Dieter, Northrup Corporation; Becky Gingras, McDonnell Douglas; Sel Handler, Consultant, La Habra; Anna Marie Jenkins, Consultant, Tustin; Tammy Morris, TRW; Gregory Reinke, Burroughs; James Ryan, Rockwell; Shirley Thomas, Consultant, Hollywood; James Tracy, Hughes.

The Department of English offers the Certificate in Technical and Professional Writing to those students interested in pursuing careers in writing and editing. The Application Form for the Certificate Program may be obtained from the English Department Office.

Prerequisites for the Certificate Program:

1. Consultation with an advisor on the Certificate Program Committee.
2. Upper-division or post-baccalaureate standing in the University with a grade point average of at least 2.75 overall.
3. Admission to a degree program in this University or possession of a degree from this or another accredited University.
4. Successful completion of English 317, Technical Writing, at this University with a letter grade of 'C' or higher.

General Requirements for the Certificate in Technical and Professional Writing:

1. Baccalaureate degree, which may be taken concurrently with the Certificate in Technical and Professional Writing.
2. A minimum of 24 units in courses approved for the Certificate Program at this University. A grade of C or higher is required for every course in the Certificate Program. One course may be taken CR/NC.
3. Completion of a program of courses in Areas I through IV developed in consultation with a member of the Certificate Program Committee and approved by the Committee.
4. Development of a portfolio of reports, written and edited by the student during enrollment in the Certificate Program, for review and approval of the Committee. (See Course Requirements Area IV.)

Course Requirements:

Area I: Report Forms (6 units)

ENGL 417 (Proposal Writing), 418 (Manual Writing), 419 (Writing in Science and Technology).

Area II: Language Studies

A. 3-4 units from ENGL 320 (English Grammar), 325 (Models of English Grammar), 421 (Structure of Modern English; Morphology, and Syntax), 423 (Semantics).
B. 3 units from C/ST 200, 280, QS 240, 242, and 243

Area III: Exposition, Language, and Graphic Applications (9 units)

Applied Arts: I E 341, 342, 352; I T 300.
Business: MGMT 426; MKT 320, 330; QS 402.
Education: IM 300, 441.
Engineering: CE 305; ME 172.
Fine Arts: ART 307, 309; THEA 380.
Humanities: ENGL 283, Science Fiction; ENGL 427/527, Computers and Language Instruction; ENGL 498, Science as Literature; SPCH 344; Creative Writing: one course; Literature: one upper-division course.
Natural Sciences: BIOL 364, 365, 376IC.
Social Sciences: ANTH 413; AS/AM ST 320; PSY 438; SOC 485.

Area IV: Practical Writing (3-6 units)

ENGL 491 (1 or more units) Applied Technical Writing

ENGL 492 A or B (2 or more units) Internship in Technical and Professional Writing and Editing (A grade will not be assigned until portfolio is turned in. See Paragraph 4, General Requirements).

Concentration in English for the Bachelor of Arts in Liberal Studies

A minimum of 24 units is required, 15 of which must be upper division. There are three alternative emphases:

Literature Emphasis: The Literature Emphasis is intended for students who desire to deepen their understanding of English and American literature. The requirements are as follows:

ENGL 184* and 363; either ENGL 370A* or 370B*; at least one course from ENGL 451, 452, 453, 455, 456, 458, 459, 462, 463, 467A, 467B, or 468; at least one course from ENGL 474, 475, 476, 477A, 477B, or 478; sufficient electives from the list of required or recommended courses for the Literature Option for the B.A. in English (see Bulletin) to meet the total unit requirements for the Concentration.

Language Composition Emphasis: The Language and Composition Emphasis is designed for students who desire to deepen their understanding of language, the linguistic structures of English and applied uses of the study of language, such as the teaching of composition. The requirements are as follows:

Required courses: ENGL 184*, 310*, 325*, 420*, 421*. Sufficient electives from the list of required or recommended courses for the Language and Composition Option for the B.A. in English (see Bulletin) to meet the total unit requirements for the Concentration.

Creative Writing Emphasis: The Creative Writing Emphasis is designed for students who desire to deepen their understanding of the principles and processes of writing imaginative prose and poetry. The requirements are as follows:

Required courses: ENGL 184*, 370B*; either ENGL 205* or 206*; two courses from ENGL 405*, 406*, 407*. Sufficient electives from the list of required and recommended courses for the Creative Writing Option for the B.A. in English (see Bulletin) to meet the total unit requirements for the Concentration.

Note: *Courses also available in the Liberal Studies core.

Master of Arts in English (code 5-6830)

The Department of English offers graduate study leading to the master of arts degree. The candidate is urged to observe the general requirements stated in the Bulletin as well as the specific departmental requirements stated here and, more fully, in the Master of Arts Brochure issued by the department (copies of which are available upon request). The candidate must see an advisor to plan a tentative program and file transcripts of all college work with the English Department.

Prerequisites:

1. A baccalaureate degree from an accredited institution (bachelor of arts degree in English or any other bachelor's degree, on the condition of completion of 24 units of upper division courses in English substantially equivalent to those required of an English major at this University; deficiencies will be determined by the advisor after consultation with the student and study of transcript records). Courses used to remove deficiencies may not be included on the M.A. program.
2. Successful completion of the GRE advanced test in literature and an undergraduate grade point average of 3.0 or better in English. If the student meets only one of these criteria, admission will be decided on the applicant's individual merits by the Graduate Committee.

Advancement to Candidacy:

1. The candidate must satisfy the general requirements of the University, including the Writing Proficiency Exam, and the department (GRE or equivalent department examination).
2. The graduate program must be approved by a faculty advisor, the graduate advisor and the School Associate Dean of Graduate Studies.
3. Advancement should take place upon completion of six, preferably no more than 9, units on the student's program.

Note: Students planning to enter a Ph.D. program are advised to pass the ETS or to complete two years of work in a single language.

A limited number of teaching assistantships are available to students working on the master's degree. The beginning instructor normally teaches one class under the supervision of a faculty member.

There are limited funds available for qualified persons who wish to act as departmental readers, assisting faculty members with papers, library orders, bibliographies, etc.

Application for these positions is made to the Chair of the English Department.

Requirements for the Master of Arts:

1. A minimum of 30 units of approved upper division and graduate courses with 24 units in the major.
2. A minimum of 20 units in the 500 and/or 600 series in English at this University, 16 of which must be in the 600 series, including ENGL 696, which is to be completed before or concurrently with other 600 series courses. (A student will not be allowed to take ENGL 696 unless admitted to the M.A. program.)
3. A minimum of two seminars in the 600 series in English literature before 1900.
4. The foreign language requirement may be fulfilled in one of the following ways:
   (a) Completion of 12 college semester units of foreign language with a grade of C or better. These 12 units may include one or two of the following courses with a grade of B or better: ENGL 550, 551; or
   (b) Completion of college course work in a foreign language equivalent to sophomore proficiency (201B) with a grade of C or better; or
   (c) Proficiency in a foreign language demonstrated by passing either the ETS or a special examination in a language approved by the Graduate Studies Committee.
5. Successful completion of a final comprehensive examination.
6. Appropriate filing for Graduation Check and for Diploma.

Courses (ENGL):

Lower Division:

Please check the section on 'Application Procedures and Admissions Requirements' of this Bulletin for CSU system-wide writing proficiency requirements.

001. Writing Skills (3) F,S Faculty

Prerequisites: None. Required of all entering students who score below 145 on the English Placement Test and who have not taken an equivalent writing skills course in another department. Does not count toward graduation but does count toward course load. A basic course in writing, offering intensive practice in every stage of the writing process from the generation of ideas to final proofreading. Reviews organization, paragraph and sentence development, appropriate word choices, and conventional mechanics, including spelling. CR/NC grading only. [Discussion]

100. Composition (3) F,S Faculty

Prerequisite: A recorded total score of 145 or above on the English Placement test or ENGL 001 or its equivalent. Writing non-fiction prose, with emphasis on exposition. Readings may be assigned. Satisfies the baccalaureate degree requirement for one course in English composition.

101. Composition (3) F,S Faculty

Prerequisite: ENGL 100. Writing expository prose, with emphasis on the research paper. For students not majoring in English.

180. Appreciation of Literature (3) F,S Faculty

Study of works representing the scope and variety of themes and types of imaginative literature. (Not applicable toward an English major. Not open to students with credit in ENGL 184.)

181. Developmental Reading (2) F,S Faculty

Rigorous practice, using all levels of mature reading materials, in the techniques of more efficient comprehension at faster rates. Study of expository devices and structures. Extensive vocabulary training. Three hours per week.

184. Composition and Literature (4) F,S Ames, Lothamer, O. Williams

Prerequisite: ENGL 100. Introduction to the major literary genres and to methods of critical expository writing, including methods of research and documentation. Required of all English majors. Open to non-majors with consent of instructor.

198. Topics in English (1-4) F,S May, Mittleman, Samuelson

Prerequisite: ENGL 100. Topics in language and literature, considered in a small class format. Specific topics will be announced in the Schedule of Classes. May be repeated with different topics for a maximum of eight units.

200. Critical Reading and Writing (3) F,S Faculty

Prerequisite: ENGL 100 or equivalent. Analytical reading and persuasive writing with emphasis on logic and argumentation.

205. Introduction to Creative Writing: Fiction (3) F,S Fried, Lee, Polk, Weinstock

Prerequisite: ENGL 100. Practice in the basic elements of fiction writing: character sketch, plot development, description, dialog.

206. Introduction to Creative Writing: Poetry (3) F,S Fried, Lee, Locklin, Mittleman, Polk

Prerequisite: ENGL 100. Theory and techniques of poetry. Practice in creative work, with group discussions and individual conferences.

250A,B. Survey of English Literature (4,4) F,S Faculty

Prerequisite: ENGL 100. Representative selections from English writers to and since the late eighteenth century.

283. Science Fiction (3) S Samuelson, Weinstock

The literature of science fiction, from Frankenstein and H.G. Wells to the present, emphasizing the relevance of science and technology to literary fantasy.

Upper Division:

An asterisk (*) indicates that the course is acceptable for the M.A. degree.

ENGL 100 is a prerequisite for all upper division courses.

300. Advanced Composition (3) F,S Faculty

Prerequisite: ENGL 100. Writing expository prose, with emphasis upon organization, style and diction.

303. Communication for Accounting and Finance (3) F,S Axelrad, Dinielli, Spiese

Prerequistes: ENGL 100 or equivalent; SPCH 130 or 132 or 246 or equivalent; upper division standing; open only to accounting and finance majors. Oral and written communication principles and practice in the accounting and finance professions.

310. Applied Composition (4) F,S Day, Borowiec, Sullivan

Prerequisite: ENGL 101 or 184 or 317 or a baccalaureate degree. Intensive practice in writing, correcting and evaluating compositions, with specific reference to contemporary classroom situations and problems. The course includes a 30-hour tutorial component in which students work as composition tutors. Required for all English credential candidates.

317. Technical Writing (3) F,S Faculty

Prerequisite: ENGL 100. Expository writing on technical subjects dealt with in industry, science, and government. Long and short forms including reports, proposals, manuals, and journal articles, with emphasis on the longer research paper or technical report.

318IC. Theory of Fiction and Film (3) F,S,SS,W May

Examination of the narrative methods and conventions of American and British fiction and the methods and conventions of film; consideration of the relationships between the artistic structure of fiction and film; study of theoretical and practical approaches to fiction and film. Same course as R/TV 318IC.

***320. English Grammar (4) F,S Borowiec, Dinielli, Knafel, Lothamer, Sawyer, J.Williams, L.Williams**

Advanced study of the principles of English grammar.

***325. Models of English Grammar (4) F,S Borowiec, Hertz, McCullough, Ross, Sawyer**

Introduction to structural and transformational models of American English, with reference to traditional grammar.

363. Shakespeare I (4) F,S Axelrad, Bonazza, Gilde, Lyon, Orgill

Principal plays of Shakespeare. Not open to students with credit in English 464 or 464A.

370A,B. Survey of American Literature (4,4) F,S Faculty

Representative selections from American writers to and since about 1865.

382. Women and Literature (3) F Faculty

Images of women in English literature; works in various genres that present the range and complexity of women's lives; feminist critical approaches and bibliographic resources. Specific content will vary.

***384. Principles of Literary Study (3) F,S Fine, May, Pomeroy, Samuelson**

Fundamental issues of literary study such as literary history; literary forms, themes and conventions; major critical approaches. Intense written practice in literary analysis.

385. The Short Story (3) F,S Faculty

The short story as a literary genre, with emphasis on analysis of individual stories.

386. Poetry (3) F,S Ames, Aspiz, Fried, Lee, Lim, Masback, Mittleman, Polk, Spiese

Poetry as a literary genre, with emphasis on analysis of individual poems.

***390. Studies in Contemporary Literature (3) F,S Locklin, Peck, Samuelson, Stetler**

Reading and analysis of literary works, British and American, written since 1945. Topics, themes, limitations for each section will be announced in the Schedule of Classes. May be repeated once with a different topic.

***398. Modern Drama (3) F,S Lyon**

Continental, English, and American drama from Ibsen to the present.

***405. Creative Writing: Short Story (3) F,S Fried, Lee, Locklin, Polk**

Prerequisite: ENGL 205 or consent of instructor. Writing short stories, with a detailed study of published models and with emphasis on the creative process. (May be repeated for credit to a maximum of 6 units by consent of instructor.)

***406. Creative Writing: Poetry (3) F,S Fried, Lee, Locklin, Polk**

Prerequisite: ENGL 206 or consent of instructor. Writing poetry, with a detailed study of published models and with emphasis on the creative process. (May be repeated for credit to a maximum of 6 units by consent of instructor.)

***407. Creative Writing: Novel (3) F,S Fried, Polk**

Prerequisite: Consent of instructor. Writing long fiction, with a detailed study of published models and with emphasis on the creative process. (May be repeated for credit to a maximum of 6 units by consent of instructor.)

417. Proposal Writing (3) F,S Black, Crawford, Dinielli, Lim, Samuelson, Weinstock

Prerequisite: ENGL 100 or equivalent. Intensive writing of proposals in their various forms as letter, memo, and grant application. Main focus will be on the formal proposal as a marketing strategy.

418. Manual Writing (3) F,S Axelrad, Black, Crawford, Dinielli, Lim, Weinstock

Prerequisite: ENGL 100 or equivalent. Writing of original manuals of various types in technical and professional fields based on the study of company publications as models.

419. Writing in Science and Technology (3) F,S Black, Dinielli, Lim, Samuelson, Weinstock, J.Williams

Prerequisite: ENGL 100 or equivalent. Intensive practice in writing on topics in science and literature based on a study of traditional and contemporary models.

420./520. English Phonology (3) F,S Hertz, McCullough, Ross

Prerequisite: ENGL 325 or consent of instructor. Study of the phonology of American English, using articulatory phonetic, phonemic and distinctive feature analyses. Not open to students with credit in ENGL 321A.

421./522. English Syntax (3) F,S Hertz, McCullough, Ross, Sawyer

Prerequisite: ENGL 325 or consent of instructor.Study of the morphology and syntax of American English, using structural and early and recent transformational models. Not open to students with credit in ENGL 321B.

423./523. Semantics (3) F,S Ross, Sawyer, J.Williams

Study of meaning in language.

426./526. History of the English Language (3) F,S Knafel, Sawyer

Development of the English language from its beginnings to the present day. Not open to students with credit in ENGL 323.

427./527. Computers and Language Instruction (4) F,S Hertz, Sawyer

(Not open to students with ENGL 498 with this topic.) Preparation of educational software for use in microcomputers as an interactive instructional tool in the classroom with special emphasis upon the preparation of language-teaching computer programs. The course assumes no background in computers, programming, or math beyond arithmetic. The BASIC programming language will be taught as needed.

428./524. Applied Linguistics (3) F,S Sawyer

Prerequisites: ENGL 420 and 421. Linguistic research applied to the study and teaching of the English language.

429./529. Language Strategies for Bilingual/TESL Classrooms (3) F,S Borowiec, McCullough, Sawyer

Prerequisite: ENGL 325 (may be taken concurrently) or consent of instructor. Linguistic strategies for teaching the native speaker and the second language learner. To gain practical experience, students will work a minimum of 12 hours a semester in off-campus or on-campus bilingual and ESL classrooms.

***431. Classical Background of English Literature (3) F Bell, Dinielli, Plourde**

Greek and Roman literature, in translation, in relation to English literature; the interrelations of classical literature with philosophy and art. Not open to students with credit in ENGL 331.

451./554. Medieval Literature of the British Isles (3) F,S Axelrad, Bell, Knafel

Representative selections of Old and Middle English prose and poetry read for the most part in modern English including Beowulf, the romance, medieval drama, Chaucer, and the ballad.

452./552. Literature of the Renaissance (1500-1603) (3) F,S Axelrad, Brooks, Gilde, Orgill

Prose and poetry of Marlowe, Sidney, Raleigh, Spenser and other predecessors and contemporaries of Shakespeare, noting the influence of Humanism and the emergence of literary identity.

453./553. Literature of the Late Renaissance (1603-1660) (3) F,S Ames, Axelrad, Gilde, Purcell

Poetry and prose (chiefly non-dramatic) of Milton, Bacon, Jonson, Donne and the 'Metaphysicals,' and their contemporaries.

455./555. English Literature of the Enlightenment (1660-1798) (3) F,S Black, Purcell

Prose and poetry (chiefly non-dramatic) of Swift, Dryden, Pope, Johnson, Boswell and their contemporaries, with emphasis on major satires such as Gulliver's Travels and The Rape of the Lock. Not open to students with credit in ENGL 454.

456./556. English Literature of the Romantic Period (1798-1832) (3) F,S Avni, Crawford, Lim, L.Williams

Poetry and prose (chiefly non-dramatic) of Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, and their contemporaries, emphasizing the modern Romantic spirit, theories of literary art, and the concept of the self.

458./558. English Poetry and Prose of the Victorian Age (1832-1900) (3) F,S Lothamer, May, Peterson, Weinstock

Poetry and prose of Tennyson, Browning, Arnold, Carlyle, Mill, and others, emphasizing literary, social and political issues, and religious controversies. Not open to students with credit in ENGL 457.

459./559. English Literature of the Twentieth Century (1900-Present) (3) F,S Locklin, Lothamer, Mittleman, Polk, Samuelson, Stetler, Wilson

Prose and poetry of Shaw, Conrad, Yeats, Lawrence, Joyce, Woolf, and others, emphasizing artistic experimentation and the development of modern value systems.

462./562. Chaucer (3) F,S Bell, Knafel

Works of Geoffrey Chaucer in Middle English.

***463. Shakespeare II (3) F,S Bonazza, Lyon, Orgill**

Prerequisite: ENGL 363. Advanced study of some of the plays of Shakespeare. Not open to students with credit in ENGL 464B.

467A,B./567A,B. The English Novel (3,3) F,S Lothamer, Lyon, Mittleman, Pomeroy, Weinstock

History and development of long prose fiction in the British Isles to and since 1832.

468./568. English Drama (3) F,S Orgill

Readings from the history of English drama, excluding Shakespeare, including Marlowe, Jonson and Restoration comedy. Not open to students with credit in ENGL 468A or B.

***469. Critical Studies in Major English Writers (4) F,S**

Prerequisites: At least senior standing, 12 units of upper division English. Intensive study of one to three major English authors. May be repeated for credit with different authors to a maximum of eight units, but no more than four units may be used to satisfy the requirements for the English major.

474./574. Twentieth Century American Literature (3) F,S Dinielli, Fine, Hipkiss, Locklin, Mittleman, Nelson, Peck, Spiese

American literature from about 1914 to the present.

475./575. The American Short Story (3) F Dinielli, Garrott, May, Nelson, Spiese

History and development of the short story and its criticism in the United States.

476./576. American Poetry (3) F Dinielli, Fine, Masback, Spiese

History and development of poetry and its criticism in the United States.

477A,B./577A,B. The American Novel (3,3) F,S Dinielli, Hipkiss, Masback, Nelson, Peck, Spiese

History and development of the novel and its criticism in the United States to and since the 1920's. Not open to students with credit in ENGL 477.

478./578. American Drama (3) F Nelson

History and development of drama and its criticism in the United States.

***479. Critical Studies in Major American Writers (4) F,S**

Prerequisites: At least senior standing, 12 units of upper division English including ENGL 370A,B. Intensive study of one to three major American authors. May be repeated for credit with different authors to a maximum of eight units, but no more than four units may be used to satisfy the requirements for the English major.

481. Children's Literature (3) F,S Black, Lawson, Orgill

Survey of literature suitable for children.

482. Literature for Adolescents (3) F,S Avni, Borowiec, Brekke, Day, Sullivan

Prerequisite: One college course in literature. Survey of literature suitable for adolescents.

491. Applied Technical Writing (1-3) F,S Black, Crawford, Dinielli, Samuelson, Weinstock, J.Williams

Prerequisite: Admission to Certificate Program in Technical and Professional Writing. Writing and editing technical reports and papers. Independent production of a report in a technical or scientific area under faculty supervision. May be repeated to a maximum of 4 units.

492A-B. Internship Technical-Professional Writing and Editing (1-3) F,S Black, Crawford, Dinielli, Samuelson, J.Williams

Prerequisite: Admission to Program for Certificate in Technical and Professional Writing. At least 90 hours writing and editing with cooperating agencies and companies on-and off-campus under direction and with evaluation of faculty in consultation with supervisors of the participating agency or company. May be repeated to maximum of 4 units.

497. Directed Studies in Composition (4) F,S Faculty

Prerequisite: Graduate standing or one of the following courses: ENGL 300,310,405,406,407. Theory and practice of teaching English composition. Recommended for single-subject credential candidates and those preparing for college level teaching. CR/NC only. (Three hours a week in freshman composition class as laboratory; one hour per week in seminar.)

***498. Topics in English (1-4) F,S Axelrad, Hertz, Samuelson, Weinstock**

Exploration of topics in language and literature, specific topics to be announced in the Schedule of Classes. May be repeated with different topics, but no more than six units may be applied to the 41 units required for the English major.

***498A. American Novel on Film (3)**

Reading and discussion of major American novels and viewing their filmed versions. Lectures will focus on critical evaluation of and explication of both novel and film. Special attention will be given to any significant changes in plot, character, social comment, etc., which may be evident in movie versions. Choice of novels will vary according to availability of film and/or other resources (TV, disc, video cassette, etc.), but includes Hawthorne, Twain, Dreiser, James, Hemingway, Fitzgerald, Faulkner, Melville, Heller, etc. Grading: Traditional Grading Only.

499. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent study undertaken under the supervision of a faculty member. May be repeated for credit to a maximum of 4 units. Not applicable toward the Master of Arts in English. Also see Comparative Literature Department for course offerings.

Graduate Division:

520./420. English Phonology (3) F,S Hertz, McCullough, Ross, Sawyer

Prerequisite: ENGL 325 or consent of instructor. Study of the phonology of American English, using articulatory phonetic, phonemic and distinctive feature analyses. Not open to students with credit in ENGL 321A.

521. Historical Linguistics (4) S Sawyer

Prerequisites: ENGL 420,421. Advanced study of language change, language families, and language relationships using the methods of comparative linguistics.

522./421. English Syntax (3) F,S Hertz, Ross, Sawyer

Prerequisite: ENGL 325 or consent of instructor. Study of the morphology and syntax of American English, using structural and early and recent transformational models. Not open to students with credit in ENGL 321B.

523./423. Semantics (3) F,S Ross, Sawyer, J.Williams

Study of meaning in language.

524./428. Applied Linguistics (3) F,S Sawyer

Prerequisites: ENGL 420 and 421. Linguistic research applied to the study and teaching of the English language.

525. Analytical Phonology (4) F Hertz, Ross, Sawyer

Prerequisites: ENGL 420,421. Theory and practice of descriptive, acoustic, distinctive feature and transformational phonology.

526./426. History of the English Language (3) F,S Knafel, Sawyer

Development of the English language from its beginnings to the present day. Not open to students with credit in ENGL 323.

527./427. Computers and Language Instruction (4) F,S Hertz, Sawyer

(Not open to students with ENGL 498 with this topic.) Preparation of educational software for use in microcomputers as an interactive instructional tool in the classroom, with special emphasis upon the preparation of language-teaching computer programs. The course assumes no background in computer, programming, or math beyond arithmetic. The BASIC programming language will be taught as needed.

528. Current Issues in English as a Second Language (3) F,S Ross, Sawyer

Prerequisite: ENGL 428 or consent of instructor. Advanced study in applied linguistics, focusing on topics of current interest in teaching English as a Second Language. May be repeated under a different topic to a maximum of six units.

529./429. Language Strategies for Bilingual/TESL Classrooms (3) F,S Borowiec, McCullough, Sawyer

Prerequisite: ENGL 325 (may be taken concurrently) or consent of instructor. Linguistic strategies for teaching the native speaker and the second language learner. To gain practical experience, students will work a minimum of 12 hours a semester in off-campus or on-campus bilingual and ESL classrooms.

535. Teaching Composition (3) F,S Borowiec, Brekke, Sullivan

Prerequisite: Bachelor's degree or consent of instructor. Intensive examination and study of composition teaching practices, research and evaluation in public schools, including community colleges.

537. Current Issues in English Instruction (3) F,S Borowiec, Sullivan

Designed for in-service teachers. Intensive studies and research in special, timely topics (as announced in the Schedule of Classes) related to the teaching of English. May be repeated to a maximum of six units with different topics.

550. Old English Language and Literature (4) F Bell, Knafel

Beowulf and other representative selections from Anglo-Saxon literature in the original language.

551. Middle English Language and Literature (4) F,S Axelrad, Bell, Knafel

Chaucer and other representative selections from Middle English literature in the original language.

552./452. Literature of the Renaissance (1500-1603) (3) F,S Axelrad, Gilde, Orgill

Prose and poetry of Marlowe, Sidney, Raleigh, Spenser and other predecessors and contemporaries of Shakespeare, noting the influence of Humanism and the emergence of literary identity.

553./453. Literature of the Late Renaissance (1603-1660) (3) F,S Ames, Axelrad, Gilde, Purcell

Poetry and prose (chiefly non-dramatic) of Milton, Bacon, Jonson, Donne and the 'Metaphysicals' and their contemporaries.

554./451. Medieval Literature of the British Isles (3) F,S Axelrad, Bell, Knafel

Representative selections of Old and Middle English prose and poetry read for the most part in modern English including Beowulf, the romance, medieval drama, Chaucer, and the ballad.

555./455. English Literature of the Enlightenment (1660-1798) (3) F,S Black, Purcell

Prose and poetry (chiefly non-dramatic) of Swift, Dryden, Pope, Johnson, Boswell and their contemporaries, with emphasis on major satires such as Gulliver's Travels and The Rape of the Lock. Not open to students with credit in ENGL 454.

556./456. English Literature of the Romantic Period (1798-1832) (3) F,S Avni, Crawford, Lim, L.Williams

Poetry and prose (chiefly non-dramatic) of Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, and their contemporaries, emphasizing the modern Romantic spirit, theories of literary art, and the concept of the self.

558./458. English Poetry and Prose of the Victorian Age (1832-1900) (3) F,S Lothamer, May, Peterson, Weinstock

Poetry and prose of Tennyson, Browning, Arnold, Carlyle, Mill, and others, emphasizing literary, social and political issues, and religious controversies. Not open to students with credit in ENGL 457.

559./459. English Literature of the Twentieth Century (1900-Present) (3) F,S Locklin, Lothamer, Mittleman, Polk, Samuelson, Stetler, Wilson

Prose and poetry of Shaw, Conrad, Yeats, Lawrence, Joyce, Woolf, and others, emphasizing artistic experimentation and the development of modern value systems.

562./462. Chaucer (3) F,S Bell, Knafel

Works of Geoffrey Chaucer in Middle English.

567A,B./467A,B. The English Novel (3,3) F,S Lothamer, Lyon, Mittleman, Pomeroy, Weinstock

History and development of long prose fiction in the British Isles to and since 1832.

568./468. English Drama (3) F,S Orgill

Readings from the history of English drama, excluding Shakespeare, including Marlowe, Jonson and Restoration comedy. Not open to students with credit in ENGL 468A or B.

574./474. Twentieth Century American Literature (3) F,S Dinielli, Fine, Hipkiss, Locklin, Mittleman, Nelson, Peck, Spiese

American literature from about 1914 to the present.

575./475. The American Short Story (3) F Dinielli, Garrott, May, Nelson, Spiese

History and development of the short story and its criticism in the United States.

576./476. American Poetry (3) F Dinielli, Fine, Masback, Spiese

History and development of poetry and its criticism in the United States.

577A,B./477A,B. The American Novel (3,3) F,S Dinielli, Hipkiss, Masback, Nelson, Peck, Spiese

History and development of the novel and its criticism in the United States to and since the 1920's. Not open to students with credit in ENGL 477.

578./478. American Drama (3) F Nelson

History and development of drama and its criticism in the United States.

583. Special Topics in Literature (3-4) F,S May

Intensive studies in special topics in literary theory, techniques, types, genres, modes, themes, movements and in the relations of literature with other arts and disciplines, as announced in the Schedule of Classes. May be repeated for credit, on different topics, to a maximum of eight units.

584. Contemporary Literary Theory (3) F,S Locklin, C.May, Pomeroy

Study of the principal theories of literature including Structuralism, Hermeneutics, theory of genre, and theory of criticism.

598. Directed Studies in Creative Writing (1-3) F,S Fried, Lee, Locklin, Polk

Prerequisites: Baccalaureate degree, consent of instructor. Independent creative activity under the supervision of a faculty member. May be repeated for credit to a maximum of three units. Not applicable to the Master of Arts in English.

620. Seminar in Special Topics in Linguistics (4) S Hertz, Ross, Sawyer

Prerequisites: ENGL 420, 421, or consent of instructor. Intensive studies in special topics in linguistics as announced in the Schedule of Classes. May be repeated for credit, on different topics, to a maximum of eight units.

623. Seminar in Dialect Study (4) F Sawyer

Prerequisites: ENGL 420, 421, or consent of instructor. Intensive study and individual research in variations within a language, emphasizing dialect studies of modern English.

652. Seminar in the English Renaissance (4) S Gilde, Orgill

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in the literature of the period, chiefly Elizabethan.

653. Seminar in the Age of Milton (4) F Ames, Axelrad, Gilde

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature of the Stuart and Commonwealth periods, including Milton.

655. Seminar in Restoration and Eighteenth Century Literature (4) S Purcell

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature of the Restoration and eighteenth century.

656. Seminar in Romantic Literature (4) F Crawford, Lim, L.Williams

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature of the Romantic period.

657. Seminar in Victorian Literature (4) F Lothamer, May, Peterson, Weinstock

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature of the Victorian period.

659. Seminar in Twentieth Century English Literature (4) F,S Locklin, Mittleman, Samuelson, Wilson

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in English literature from about 1900 to the present.

672. Seminar in the Nineteenth Century American Renaissance (4) F Aspiz, Masback, Peck, Pomeroy, J.Williams, O.Williams

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in American literature from about 1820 to about 1865.

673. Seminar in American Realism (4) F Fine, Peck, Pomeroy

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in the development of realism in American literature.

674. Seminar in Twentieth Century American Literature (4) S Hipkiss, Locklin, Peck

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies of 20th century American writers, with attention to social forces conditioning their points of view.

681. Seminar in Major Authors (4) F,S Bonazza, Brophy, Samuelson, J.Williams

Prerequisite: ENGL 696 (may be taken concurrently). Intensive studies in the works of specific authors as announced in the Schedule of Classes. Not open to students with credit in ENGL 469 or 479 covering the same author. May be repeated for credit, on different authors, to a maximum of 12 units.

696. Seminar in Literary Criticism and Research (4) F,S Ames, Axelrad, Lim, May, Peterson, J. Williams

Study of major critical approaches to literature and basic literary research methods. Introduction to the discipline of literary criticism, various critical methodologies, techniques of bibliography and research, important literary reference works. Writing of critical research papers. A student will not be allowed to take ENGL 696 unless admitted to the M.A. program. (An English M.A. candidate may not be enrolled in any other 600 course without completion of or concurrent enrollment in ENGL 696.)

697. Directed Research (1-3) Faculty

Prerequisites: ENGL 696 and consent of instructor. Individual research or intensive study under the guidance of a faculty member.

698. Thesis (1-6) F,S Faculty

Prerequisites: ENGL 696 and consent of instructor. Planning, preparation, and completion of a thesis under supervision of a faculty committee. Must be taken for a total of six units.

French and Italian

School of Humanities

Department Chair: F.M. Swensen
Department Office: McIntosh Humanities Building (MHB), Room 608
Telephone: 498-4618
Faculty: Professors: Elizabeth M. Quillen, Frederick M. Swensen, Lindsay Thomas; Associate Professors: Eugene E. Kessler, Herbert A. Winter, Pierre Yperman
Department Secretary: Patricia Adam

Students desiring information should contact the department office for referral to one of the faculty advisors: Credential Advisor, Undergraduate Advisor, Graduate Advisor.

In the history of Western Europe and its cultural development, the position of the French-and Italian-speaking peoples is central. These traditions have been impressively fertile and have exercised far-reaching influence both in Europe and in North America. Study of French and Italian combine very well with specializations in a wide variety of other disciplines by providing you with a cultural background and personal enrichment of lasting value, whatever your choice of a career.

The Department of French and Italian has a carefully structured program. Basic courses provide you with both cultural insight and thorough language training. Since all upper-division and graduate classes are conducted in the language you are studying, you will acquire fluency in that language. The department also stimulates interest in study and travel abroad, encouraging students to participate in the International Programs of the California State University System and enhance their studies through close contact with French- and Italian-speaking peoples and their cultures.

The department offers basic and advanced level courses in both French and Italian. In addition, you may choose from a wide variety of courses on literature, civilization, and special topics such as film, folk-songs, geography, authors, and literary and philosophical movements. You may select courses that correspond to a topic of particular personal or professional interest and still meet degree requirements.

The department offers graduate study leading to the Master of Arts degree in French. In all upper division and graduate level courses, French is the language of instruction in all regular classes.

Bachelor of Arts in French (code 2-6812)

The major in French consists of 30 upper-division units, the 300- and 400-level courses indicated below. The number of lower-division units will depend on the amount of French studied previously in high school or college, since students with prior study of French may enter at advanced standing (usually second or third year). The major program satisfies the requirements for the Single-Subject teaching credential in French, but credential candidates must take French 414 (Phonetics). Major students should be mindful of the Department's "second language requirement" — two college years or equivalent — of a foreign language, not English. The Department also recommends inclusion of specified History courses in their program of studies. These courses provide additional enrichment to the cultural component of the student's course of study. The Bachelor of Arts in French serves as an excellent liberal arts degree for general purposes as well as for professional careers in international fields of many kinds.

Requirements for the Bachelor of Arts in French (code 2-6812)

Lower Division:

One year of intermediate French, FREN 214. Students who have completed sufficient high school French may take upper division courses as soon as lower division requirements have been met.

Upper Division:

A minimum of 30 units of upper division courses which must include FREN 312A, 312B, 314, 335, 336, 411, 440 and three of the following courses: 414, 470, 471, 472, 474, 477, 479, 490. Candidates for the teaching credential must take FREN 414.

Departmental Requirement:

Two years of a second foreign language at the college level or equivalent, is required of all majors. Departmental Recommendation: Students specializing in French should include the following courses in their program of study: HIST 131, 132, and one or more of the following: History 335, 336, 337. A selection from the following courses would also be appropriate: HIST 332, 333.

Minor in French (code 0-6812)

A minimum of 20 units which must include: FREN 312A, 312B, 314.

Concentration in French for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required; the following must be included: FREN 312A, 312B, 314, and six additional upper division units in French.

Master of Arts in French (code 5-6812)

Prerequisites:

1. A bachelor of arts degree in French, or:
2. A bachelor's degree with a minimum of 24 upper-division units in French, comparable to those required of a major in French at this University. Deficiencies will be determined by the advisor after consultation with the student and study of transcript records.

Advancement to Candidacy:

1. Approval of the graduate program by the graduate advisor, the faculty advisor and/or departmental committee, and the School of Humanities Associate Dean of Graduate Studies.
2. The candidate should file for advancement upon completion of 6 units (or no more than one semester's work, whichever is the larger). A 3.0 grade point average is required.
3. Successful completion of the University Writing Proficiency Examination.

Requirements for the Master of Arts:

1. Completion of a minimum of 30 units of approved upper-division and graduate courses with 24 units in French.
2. A minimum of 18 units in the 600 series in French, including 696.
3. Two years of college-level study, or equivalent, of another language (e.g., German, Italian, Latin, Russian, or Spanish) with a minimum average grade of B or better. This requirement may also be met by

passing the Graduate Studies Foreign Language Test (G.S.F.L.T.) in another language with a minimum percentile of 500 or better. This requirement must be completed before taking the comprehensive examination. Students who have a native language other than French or English may meet this second-language requirement by completing ENGL 300 (Advanced Composition) with a minimum grade of B or better.

4. A comprehensive examination.

Courses (FREN):

Lower Divison:

101A-B. Fundamentals of French (4,4) F,S Faculty

Fundamental skills of speaking, comprehending, reading and writing. 101A: For those who are beginning the study of French or who have had one year of high school French or equivalent. 101B: Prerequisite: FREN 101A or two years of high school French or equivalent. Continuation of FREN 101A.

201A-B. Intermediate French (4,4) F,S Faculty

Continued work in speaking, pronunciation, comprehension and writing with some reading of modern writers in the second semester. 201A: Prerequisite: FREN 101A-B or three years of high school French or equivalent. 201B: Prerequisite: FREN 201A or four years of high school French or equivalent.

214. Intermediate Conversation (3) F,S Faculty

Prerequisite: FREN 101B. Should be taken concurrently with FREN 201A or 201B. Designed to develop basic conversational skills and to prepare for more advanced work in FREN 314. Credit/No Credit Grading only.

Upper Division:

312A. Advanced French I (3) F,S Faculty

Prerequisite: Upper-division standing in French or equivalent. Review of grammatical principles with regular exercises and composition work for the development of increased mastery of the written language.

312B. Advanced French II (3) F,S Faculty

Prerequisite: Upper-division standing in French or equivalent. Review of grammatical principles with regular exercises and composition work for the development of increased mastery of the written language.

314. Advanced Conversation (3) F,S Faculty

Prerequisite: FREN 214 or consent of instructor. Continuation of FREN 214. Credit/No Credit Grading only.

335. Survey of French Literature I (3) F Faculty

Prerequisite: Upper-division standing in French. From the Middle Ages through the Eighteenth Century.

336. Survey of French Literature II (3) S Faculty

Prerequisite: Upper-division standing in French. Nineteenth and Twentieth Centuries.

411. Advanced French Syntax and Composition (3) F Faculty

Prerequisites: FREN 312A-B or equivalent. Special emphasis on the writing of short compositions and developing an awareness of French style.

***414. French Phonetics (3) S Thomas**

Prerequisites: FREN 312 A-B or consent of instructor. General concepts of linguistic science. Linguistics applied to the study and teaching of the French language. Articulatory phonetics as a means to form native French pronunciation habits with emphasis upon the difficulties encountered by speakers of American English.

440. French Civilization (3) S Quillen, Yperman

Prerequisite: FREN 312B (may be taken concurrently with FREN 335 or 336 or with consent of instructor). Significant aspects of French art, culture and social institutions.

470./570. French Literature of the Middle Ages (3) S Odd years Thomas

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative drama, poetry and prose of the period. Texts in modern French.

471./571. French Literature of the Renaissance (3) F, Odd years Kessler, Yperman

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative drama, poetry and prose of the 16th Century.

472./572. French Literature of the Seventeenth Century (3) F Odd years Quillen

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative drama, poetry and prose of the century.

474./574. The Age of Enlightenment (3) S, 1982 Even years Kessler, Swensen

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers and thinkers of the century. Drama, poetry and prose.

477./577. French Literature of the Nineteenth Century (3) F, Even years Swensen

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers of the century. Drama, poetry and prose.

479./579. French Literature of the Twentieth Century (3) F, Even years Winter, Yperman

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers of the century. Drama, poetry and prose.

***490. Special Topics in French (3) F,S Faculty**

Study of a particular topic in French literature, language or culture. Specific topics to be announced in the Schedule of Classes. May be repeated with different topics for up to 12 units.

499. Directed Studies (1-3) F,S Faculty

Prerequisites: Consent of instructor and department chair. Independent study undertaken under the supervision of a faculty member. May be repeated for three units provided the material is not the same. Additional credit beyond three units is available only under exceptional circumstances and with prior approval of the department, but under no circumstances may the total exceed six units.

Graduate Division:

570./470. French Literature of the Middle Ages (3) S Odd years Thomas

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative drama, poetry and prose of the period. Texts in modern French.

571./471. French Literature of the Renaissance (3) F Odd years Kessler Yperman

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative drama, poetry and prose of the 16th Century.

572./472. French Literature of the Seventeenth Century (3) F Odd years Quillen

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative drama, poetry and prose of the century.

574./474. The Age of Enlightenment (3) S Even years Kessler, Swensen

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers and thinkers of the century. Drama, poetry and prose.

577./477. French Literature of the Nineteenth Century (3) F Even years Swensen

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers of the century. Drama, poetry and prose.

579./479. French Literature of the Twentieth Century (3) F Even years Winter, Yperman

Prerequisites: FREN 335, 336 or consent of instructor. Study of representative writers of the century. Drama, poetry and prose.

599. Directed Studies (1-3) F,S Swensen

Graduate standing with baccalaureate degree or equivalent. Graduate-level in-depth study on selected topics under the supervision of a graduate faculty member. May be repeated for a maximum of 3 units. Topic and study outline of work undertaken to be on file in Department. Enrollment contingent upon approval of Department Chair and faculty member.

604. Seminar in a Century of French Literature (3) F,S Faculty

Prerequisite: Corresponding 400/500 level century survey course or consent of instructor. Intensive studies in one of the following: (a) Medieval period, (b) 16th Century, (c) 17th Century, (d) 18th Century, (g) 19th Century, (h) 20th Century. Courses may be taken concurrently or repeated if century studied is different. Each seminar gives three units of credit for a total of 18.

688. Seminar in French Literature or Culture (3) F,S Faculty

Prerequisite: Graduate standing in French. Intensive study of a specific aspect of French literature or culture. Subjects to be announced in the Schedule of Classes. May be repeated for credit on different subjects.

696. Bibliographical Methods of Research (3) F Faculty

Introduction to methods of research, scholarly writing. Required of all candidates for the M.A. in French.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of department chair. Individual study under the guidance of a faculty member. May be taken for a maximum of three units.

698. Thesis (2-6) F,S Faculty

Planning, preparation, and completion of thesis in French for the master's degree. Optional.

Minor in Italian (code 0-6814)

The Minor in Italian provides academic recognition to students who have completed a basic course of studies and have achieved competence in the Italian language.

Prerequisite:

ITAL 101A-B

Requirements for the Minor in Italian

A minimum of twenty units must include:

Lower Division:

ITAL 201A-B, and 214.

Upper Division:

ITAL 312A, 312B, and 314.

Concentration in Italian for the Bachelor of Arts in Liberal Studies.

A minimum of 24 semester units in Italian, with at least 15 upper-division units, which must include: ITAL 214, 312A-B, and 314.

Courses (ITAL):

Lower Division:

101A,B. Fundamentals of Italian (4,4) F,S Faculty

Practice in grammar, reading, pronunciation, writing and conversation.

101A. For those who are beginning the study of Italian or who have had one year of high school Italian.

101B. Prerequisite: ITAL 101A or two years of high school Italian. Continuation of ITAL 101A.

201A,B. Intermediate Italian (4,4) F,S Faculty

Readings of representative writers with oral and written practice.

201A. Prerequisite: ITAL 101A-B or three years of high school Italian or equivalent.

201B. Prerequisite: ITAL 201A or four years of high school Italian or equivalent.

214. Intermediate Conversation (3) F,S Faculty

Prerequisite: ITAL 101B. Should be taken concurrently with ITAL 201A or 201B. Designed to develop basic conversational skills and to prepare for more advanced work in ITAL 314.

Upper Division:

312A. Advanced Italian I (3) F,S Faculty

Prerequisite: Upper-division standing in Italian or equivalent. Review of grammatical principles with regular exercises and composition work for the development in increased mastery of the written language.

312B. Advanced Italian II (3) F,S Faculty

Prerequisite: Upper-division standing in Italian or equivalent. Review of grammatical principles with regular exercises and composition work for the development of increased mastery of the written language.

314. Advanced Conversation (3) F,S Faculty

Prerequisite: ITAL 214 or consent of the instructor. Continuation of ITAL 214. More advanced use of spoken Italian to establish a strong basis for correct and fluent proficiency in the oral idiom.

490. Special Topics in Italian (3) F,S Faculty

Prerequisite: Upper-division standing in Italian or consent of instructor. Study of a particular topic or aspect of Italian literature, language or culture. Specific topics to be announced in the Schedule of Classes. May be repeated with different topics to a maximum of 12 units.

499. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor and department chair. Independent study under the supervision of a faculty member. May be repeated to a maximum of six units.

German, Russian, and Classics

School of Humanities

Department Chair: Johanna W. Roden
Department Office: McIntosh Humanities Building (MHB), Room 809
Telephone: 498-4635
Faculty: Professors: Irmgard Bartenbach, Harvey L. Kendall, Wilm A. Pelters, Johanna W. Roden; Associate Professor: Harold Schefski
Emeritus Faculty: Graham K. Spring
Department Secretary:

Students desiring information should contact the department office for referral to one of the faculty advisors: Credential Advisor, Undergraduate Advisor, Graduate Advisor

The Department of German, Russian, and Classics offers the following courses of study:

Bachelor of Arts degree in German;
Master of Arts degree in German;
Minor in German;
Concentration in German, B.A. Liberal Studies;
Single Subject Teaching Credential, German.
Concentration in Russian, B.A. Liberal Studies; Minor in Greek; Minor in Latin; German and Classical Languages Courses in Certificate programs in Mediterranean Studies and in Medieval and Renaissance Studies.

The need for a knowledge of foreign languages and cultures is increased by the continuing rapid growth of internationalism in business, politics, travel, scientific and cultural exchanges. We and our country benefit, of course, by a quick and accurate conversion of information from another language to ours, but even greater achievements are made when business people, politicians, tourists, scientists, and others can communicate directly in the other person's native language. Sharing ideas in the other person's native language demonstrates care and commitment and establishes a friendly human base for understanding.

The Department of German, Russian, and Classics presents programs that recognize the changes in world relations. Course offerings and course content are constantly updated to better prepare students to handle the needs of their professions.

Bachelor of Arts in German

The program in German is designed to meet the needs of several types of students, including those who seek a liberal arts education with an emphasis on the German language and its literature; those who intend to teach at the elementary, secondary or the college level; those who plan to use German in professional careers or in pursuit of graduate studies. The program promotes competency in the use of the language and understanding of German literature and culture.

The department offers graduate study leading to the master of arts degree in German. The candidate is urged to observe the general requirements stated in this Bulletin, as well as the specific departmental requirements. In all upper division and graduate level courses, German is the language used in class discussion and written work.

Requirements for the Bachelor of Arts in German (code 2-6813)

Lower Division:

One year of intermediate German or equivalent. Students who have completed sufficient high school German may take upper division courses as soon as lower division requirements have been met. Native-speakers of German may not enroll for credit in 101A/B or 201A/B.

Upper Division:

A minimum of 30 units of upper division courses in German which must include GERM 301, 302, 315, 316, six units of 401, and six units of 400-level literature and culture courses.

Departmental Requirement:

Two years of a second foreign language is required of all majors.

Recommendations:

Courses should be selected in consultation with the major advisor. The department recommends studies in a German-speaking country and will assist in such plans.

Single Subject Teaching Credential, German

Requirements are same as B.A. plus German 303 and 410.

Minor in German (code 0-6813)

A minimum of 20 units which must include: GERM 301, 302, 315, 316, and 401.

Concentration in German for the Bachelor of Arts in Liberal Studies.

A minimum of 24 units is required which must include: GERM 301, 302, 315, 316, and 401.

Concentration in Russian for the Bachelor of Arts in Liberal Studies.

A minimum of 24 units is required, which must include RUSS 312, 314, and 315.

Master of Arts in German (code 5-6813)

Prerequisites:

1. A bachelor of arts degree in German, or:
2. A bachelor's degree with a minimum of 24 units of upper division courses in German. These courses must be comparable to those required of a major in German at the University. Deficiencies will be determined by the department.

Advancement to Candidacy:

Advancement to Candidacy should take place upon completion of at least six units to nine units applicable to the program, with at least a 3.0 grade point average.

The candidate may file for advancement to candidacy only after she/he has filed a transcript of credits or a change of objective form, and completed the prerequisites and successfully completed the Writing Proficiency Examination (WPE).

The student graduate program must be approved by the graduate advisor, departmental committee, and the School of Humanities Associate Dean of Graduate Studies.

Requirements for the Master of Arts

1. Completion of a minimum of 30 units of approved upper division and graduate courses with 24 units in German.
2. A minimum of 18 units in the 500 and 600 series in German.
3. A reading knowledge of French, Italian, Latin, Russian or Spanish. Another language may be substituted only under special circumstance.
4. A comprehensive examination unless department permission is granted to substitute a thesis.

Minor in Greek (code 0-6811)

A minimum of 20 units which must include four 300-level courses. Prospective teachers are strongly urged to take, in addition, HIST 313, CLSC 310IC, 291 and 200, and other courses touching on the ancient world.

Minor in Latin (code 0-6815)

A minimum of 20 units which must include four 300-level courses. Prospective teachers are strongly urged to take, in addition, HIST 314, CLSC 310IC, 291 and 200, and other courses touching on the ancient world.

German Courses (GERM):

Lower Division:

101A-B. Fundamentals of German (4,4) F,S Faculty

101A: For those who are beginning the study of German. 101B: Prerequisite: GERM 101A or one year of high school German or equivalent. Continuation of GERM 101A.

201A-B. Intermediate German (4,4) F,S Faculty

German grammar review with further development of reading, writing and conversational skills. 201A: Prerequisites: GERM 101A-B or two years of high school German or equivalent. 201B: Prerequisite: GERM 201A.

250. Cultural Landscape of Germany (3) F Bartenbach

History and culture of specific areas in Germany. Lecture-discussion with audiovisual presentations. Taught in English.

Upper Division:

301. Advanced German I (4) F,S Faculty

Prerequisite: GERM 201B or equivalent. Intensive practice and the consolidation of the basic language skills: reading comprehension, composition and conversation. Emphasis on reading, comprehension, vocabulary building and idiomatic usage.

302. Advanced German II (4) F,S Faculty

Prerequisite: GERM 201B or equivalent. Intensive practice and the consolidation of basic skills: reading, comprehension, composition and conversation. Emphasis on composition, oral reports and discussion.

303. German Phonetics (3) F,S Faculty

Prerequisite: Upper-division standing in German or consent of instructor. General concepts of linguistic science. Linguistics applied to the study and teaching of the German language. Articulatory phonetics as a means to form native German pronunciation habits with emphasis upon the difficulties encountered by speakers of American English.

305. German Conversation (3) F,S Faculty

Prerequisite: Upper-division standing in German. Intensive practice of spoken German with stress on vocabulary building, pronunciation, intonation and oral comprehension. CR/NC only. May be repeated once for credit. Not open to students with credit in both 305A and 305B. May be taken only once by students with credit in either 201A or 201B.

306. Translating German to English (3) F,S Faculty

Prerequisite: Upper-division standing in German or consent of instructor. The preparation of translations from German texts of wide ranging subject matter.

309. Business German (3) F

Prerequisites: GERM 101A,B or equivalent or consent of instructor. Advanced language course to acquaint students with the terminology of German business. Conversational and written approaches to business correspondence, forms of business and corporate organizations, transportation, banking, management, protection, marketing. (Not open to students with credit in German 307 or 308.)

315. Survey of German Literature and Culture I (3) F Faculty

Prerequisite: Upper-division standing in German. German literature from the Middle Ages to the time of Goethe as related to the other arts, to philosophy, and to the social and political institutions of the time.

316. Survey of German Literature and Culture II (3) S Faculty

Prerequisite: Upper-division standing in German. German literature from Romanticism to the present as related to the other arts, to philosophy, and to the social and political institutions of the time.

370IC. Wagner's Operas in Perspective (3) Kendall (C.3)

Prerequisites: Upper-division standing or consent of the instructor. The texts of the Wagner operas, their literary/mythological background, primary critical comments, the musical themes, Wagner's contributions to music. Taught in English.

398. Topics in German (3) F,S Faculty

Prerequisite: Upper-division standing in German or consent of instructor. Exploration of topics in language, culture and literature. Specific topics to be announced in the Schedule of Classes. May be repeated with different topics to a maximum of six units.

401. Advanced German Syntax and Composition (3) F,S Faculty

Prerequisites: GERM 301, 302. Practice in developing a style and vocabulary suitable for the writing of reports and essays on cultural and literary topics. May be repeated to a maximum of six units.

*410. German Civilization (3) S Pelters, Roden

Prerequisite: Upper-division standing in German. Historical development of important German institutions, customs and thought.

430./530. German Poetry (3) F Pelters

Prerequisite: upper division standing in German. German poetry from the Baroque to the present.

441./541. German Novelle (3) F Roden

Prerequisite: Upper-division standing in German. The German novelle as a separate literary genre, represented by Goethe, Tieck, Kleist, Keller, Meyer, Storm, Spielhagen, Hesse, Kafka, Thomas Mann and others.

454./554. German Literature of the 18th Century (3) S Pelters, Roden

Prerequisite: Upper-division standing in German. Literary trends of the 18th century, with emphasis on Lessing, Wieland, Klopstock, Herder, Goethe and Schiller and the authors of the 'Sturm und Drang.'

458./558. Nineteenth Century Literature (3) S Kendall

Prerequisite: Upper-division standing in German. Representative literary works of the 'Biedermeier,' 'Junges Deutschland' and 'Poetischer Realismus' against the background of the historical, philosophical and cultural movements of the times.

459A./559A. German Literature from 1890-1945 (3) F Kendall, Roden

Prerequisite: Upper-division standing in German. Major German prose, drama and poetry from naturalism to the end of World War II.

459B./559B. German Literature from 1945 to Present (3) S Kendall,Roden

Prerequisite: Upper-division standing in German. Significant contemporary German writers of prose, drama and poetry.

470. German Literature in English (3) S Faculty

Study of significant German writers, German literary movements or a specific literary genre in English translation.

*498. Topics in German (3) F,S Faculty

Prerequisite: Senior standing in German or consent of instructor. Exploration of topics in language, culture and literature. Specific topics to be announced in the Schedule of Classes. May be repeated with different topics to a maximum of six units.

499. Directed Studies (1-6) F,S Faculty

Prerequisite: Consent of instructor. Independent study undertaken under the supervision of a faculty member.

Graduate Division:

508. Topics in German Language Studies (3) S Faculty

Prerequisite: B.A. in German or equivalent. Intensive studies of etymological, phonological, morphological and syntactical aspects of the German language. May be repeated to a maximum of 12 units with different topics.

511. Selected Topics in German Culture and Civilization (3) F, Even years Faculty

Prerequisite: B.A. in German or equivalent. Intensive studies in special topics of the artistic, intellectual, social, religious, economic and political development of the German-speaking countries, as announced in the Schedule of Classes. May be repeated for credit, with different topics, to a maximum of 9 units.

530./430. German Poetry (3) F Pelters

Prerequisite: Graduate standing in German. German poetry from the Baroque to the present.

541./441. German Novelle (3) F Roden

Prerequisite: Graduate standing in German. The German novelle as a separate literary genre, represented by Goethe, Tieck, Kleist, Keller Meyer, Storm, Spielhagen, Hesse, Kafka, Thomas Mann and others.

554./454. German Literature of the 18th Century (3) S Pelters, Roden

Prerequisite: Upper-division standing in German. Literary trends of the 18th century, with emphasis on Lessing, Wieland, Klopstock, Herder, Goethe and Schiller and the authors of the 'Sturm and Drang.'

558./458. Nineteenth Century Literature (3) S Kendall

Prerequisite: Graduate standing in German. Representative literary works of the 'Biedermeier,' 'Junges Deutschland' and 'Poetischer Realismus' against the background of the historical, philosophical and cultural movements of the times.

559A./459A. German Literature from 1890-1945 (3) F Kendall, Roden

Prerequisite: Graduate standing in German. Major German prose, drama and poetry from naturalism to the end of World War II.

559B./459B. German Literature from 1945 to Present (3) S Kendall,Roden

Prerequisite: Graduate standing in German. Significant contemporary German writers of prose, drama and poetry.

590. Approaches to the Study of German Literature (3) F, Even years Faculty

Prerequisite: B.A. in German or equivalent. Evaluation of various methods in interpreting a literary work of art; different levels of interpretation; concepts of literary movements; complexity of structure related to content; literary appreciation; introduction to bibliographical aids. May be repeated with different topics to a maximum of 9 units.

599. Directed Studies (1-3) F,S Faculty

Prerequisites: Graduate standing. Consent of instructor and chairperson or graduate advisor. Selected topics in German to be pursued in depth. May be repeated for a maximum of 6 units, provided subject matter is distinct for each enrollment.

652. Seminar in Medieval German Literature (3) S, Even years Faculty

Prerequisite: B.A. in German or equivalent. Reading and analysis of Middle High German texts with an introduction to Middle High German grammatical forms and structures. Not open to students with credit in GERM 505.

653. Seminar in a Century of German Literature (3) F,S Faculty

Prerequisite: Corresponding 400./500 level century course or consent of graduate advisor. Topics dealing with literary trends, literary genres or individual authors. Intensive studies in one of the following: (a) 16th century, (b) 17th century, (c) 18th century (d) 19th century, (f) 20th century. Courses may be taken concurrently. A century may be repeated once if topic studied is different.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of graduate advisor. Required of all candidates for the master of arts in German who do not choose to write a thesis.

698. Thesis (1-4) F,S Faculty

Prerequisite: Consent of graduate advisor. Planning, preparation and completion of a thesis. Does not count toward 30 units required for the M.A. degree.

Russian Courses (RUSS):

Lower Division:

101A-B. Fundamentals of Russian (4,4) F,S Schefski

Practice in grammar, reading, pronunciation, writing and conversation. 101A: For those who are beginning the study of Russian. 101B: Prerequisite: RUSS 101A or one year of high school Russian. Continuation of RUSS 101A.

201A-B. Intermediate Russian (4,4) F,S Schefski

Readings of representative modern writers with oral and written practice. 201A: Prerequisites: RUSS 101A-B or two years of high school Russian or equivalent. 201B: Prerequisite: RUSS 201A or three years of high school Russian or equivalent.

205A,B. Russian Conversation (3,3) F,S Schefski

Designed for students who wish to acquire or review fundamental skills of beginning Russian for conversation.

Upper Division:

312. Advanced Russian (3) F Schefski

Required background or experience. Ability to read general material in Russian and to translate non-technical material into the language. Extensive reading of Russian writings, review of grammatical principles, and a general consolidation of the four language skills: reading, comprehension, composition and conversation.

314. Russian Conversation (3) F Schefski

Prerequisites: Upper-division standing in Russian or consent of instructor. Intended to meet specific, everyday situations and to provide help to those who intend to use Russian for travel, work or classroom instruction.

399. Directed Studies in Russian Language (1-3) F,S Schefski

A Directed Studies course designed to meet the individual needs of students.

410. Russian Civilization (3) F Schefski

Prerequisite: Upper-division standing in Russian. Development of important Russian institutions.

499. Directed Studies in Russian (1-3) F,S Schefski

Prerequisites: Senior standing, consent of instructor. Readings in areas of mutual interest to student and instructor which are not a part of any regular course. A written report or project may be required.

Classics

The Classics program comprises a full range of lower- and upper-division courses in Greek and Latin as well as survey courses in English derivatives and Greek mythology. It is possible to minor in both Greek and Latin. Those interested in completing a program in Classics as their primary major or as a concurrent second major should see requirements for the special major listed in this Bulletin and confer with Classics faculty for advice and counsel.

Classics Courses (CLSC):

Lower Division:

200. Greek and Latin Roots in English (3) F,S Faculty

Survey of the makeup and use of English words of Greek and Latin origin, including common as well as specialized vocabulary. Analysis of words and their component parts both in isolation and in context.

201. Biomedical Terminology (3) F,S Faculty

Study of Greek and Latin roots and word elements basic in the modern technical vocabularies of medical science. No knowledge of Greek or Latin required.

291. Introduction to Greek Mythology (3) F,S Faculty

A survey of the major Greek myths, legends and other tales about gods, heroes and wars. The course will discuss myths in the planes of Earth, Underworld, Sea and Sky.

Upper Division:

310IC. Pagan Culture (3) F Faculty

Students investigate the Pagan culture of the Hellenistic and Roman periods after the conquests of Alexander the Great, and will interpret the human condition from the standpoints of literary writers and of philosophic thinkers.

Greek Courses (GK):

Lower Division:

221. Elementary Greek (4) F Faculty

Introduction to Greek grammar with emphasis on the rapid reading of graded Attic prose. Exercises in the writing of Greek sentences will be regularly required. Main objective of the course is to provide the student with the groundwork for and approach to the great Greek masters of poetry and prose in the original language. Not open to students with credit in GK 101A.

222. Intermediate Greek (4) S Faculty

Prerequisite: GK 221 or equivalent. Understanding, reading and writing of ancient Greek at the intermediate level. Reading selections from representative authors, e.g., Demosthenes, Plato, Aristophanes.

Upper Division:

331. Greek Tragedy (3) F, Odd years Faculty

Prerequisite: GK 222 or its equivalent. Translation and literary study of one or more specific plays of Aeschylus, Sophocles, or Euripides. Writing Greek.

332. Greek Lyric Poets (3) S, Even years Faculty

Prerequisite: GK 331 or consent of instructor. Translation and literary study of selected poems from the corpus, with emphasis on Sappho, Alcaeus, Archilochus, Anacreon and Simonides. Writing Greek.

351. Plato (3) F, Even years Faculty

Prerequisite: GK 222 or its equivalent. Translation and literary study of one or more dialogues of Plato. Writing Greek.

352. Homer (3) S, Odd years Faculty

Prerequisite: GK 351 or consent of instructor. Translation and literary study of select books of the Iliad or Odyssey. Prose composition. Not open to students with credit in GK 342.

490. Special Topics (1-3) F,S Faculty

Prerequisites: 12 units of upper division Greek courses or consent of instructor.Translation and literary study of the selected works of an author, genre (e.g., oratory), or period (e.g., Hellenistic Greek). May be repeated for credit up to six units with different topics.

499. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Directed studies to permit individual students to pursue topics of special interest. May be repeated for credit up to a maximum of six units.

Latin Courses (LAT):

Lower Division:

221. Elementary Latin (4) F Faculty

Introduction to Latin grammar with emphasis on the rapid reading of graded Latin prose. Exercises in the writing of Latin sentences will be regularly required. Main objective of the course is to provide the students with the groundwork for an approach to the great Roman masters of poetry and prose in the original language. Not open to students with more than two years of high school Latin.

222. Intermediate Latin (4) S Faculty

Prerequisite: LAT 221 or its equivalent. Understanding, reading and writing of Latin at the intermediate level. Reading selections from representative authors, e.g., Pliny, Tacitus, Catullus, Vergil, Ovid. Not open to students with more than three years of high school Latin.

Upper Division:

301. Intensive Latin (4) F Faculty

One-semester course in Latin grammar. Designed for undergraduate and graduate students with little or no knowledge of Latin, whose degree programs require or recommend a reading knowledge of the language.

331. Vergil (3) F, Odd years Faculty

Prerequisite: LAT 222 or equivalent. Translation and literary study of Vergil's poetry. Writing Latin.

332. Roman Comedy (3) S, Even years Faculty

Prerequisite: LAT 331 or consent of instructor. Translation and literary study of one or more plays of Plautus or Terence. Writing Latin.

351. Roman Lyric Poets (3) F, Even years Faculty

Prerequisite: LAT 222 or its equivalent. Translation and literary study of selected poems of Catullus and Horace's Odes. Writing Latin.

352. Cicero and Caesar (3) S, Odd years Faculty

Prerequisite: LAT 351 or consent of instructor. Translation and literary study of representative works of Cicero and Caesar. Writing Latin.

490. Special Topics (1-3) F,S Faculty

Prerequisites: 12 units of upper division Latin courses or consent of instructor. Translation and literary study of the selected works of an author, genre (e.g., satire), or period (e.g., Medieval Latin). May be repeated for credit up to six units with different topics.

499. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Directed studies to permit individual students to pursue topics of special interest. May be repeated for credit to a maximum of six units.

Journalism

School of Humanities

Department Chair: Wayne F. Kelly
Department Office: Social Science and Public Affairs (SSPA), Room 024
Telephone: 498-4981
Faculty: Professors: Ben Cunningham, Daniel E. Garvey, Wayne F. Kelly, M. L. Stein, Larry L. Meyer, Robert G. Wells; Associate Professor: William A. Mulligan.
Emeritus Faculty: James H. Bliss, Dixon L. Gayer, Robert A. Steffes
Department Secretary: Judy Argyres

Students desiring information should contact the department office for referral to one of the faculty advisors: Head of Broadcast Journalism Option, Head of Magazine Option, Head of Newspaper Option, Head of Public Relations Option, Head of Teaching Option, Publisher of the Daily Forty-Niner.

The Journalism Department offers five career options. The Newspaper Option prepares students to work as reporters and editors on newspapers. It also encompasses a Photojournalism program to prepare students for careers as news photographers. The Magazine Option provides training for employment on magazines, Company publications, and yearbooks. Broadcast Journalism students learn to gather and prepare material for radio and television news programs. The Public Relations Option prepares students for careers with independent or corporate public relations organizations. The Teaching Option curriculum meets the requirements for a California secondary teaching credential within the English credential. Teaching Option students learn to teach journalism and advise high school level student publications.

The Journalism Department's laboratory newspaper has a daily circulation of 10,000. Magazine Option students produce 'The University Magazine.' Journalism students provide daily news heard throughout southern Los Angeles and northern Orange County on radio station KLON — FM-88, and their stories are sometimes carried nationally by National Public Radio. To help graduating students and alumni find jobs, the Journalism Department maintains its own placement bureau.

Programs leading to a Bachelor of Arts in Journalism: Broadcast Journalism, Magazine Journalism, Newspaper Journalism, Public Relations, and Teaching Options.

The Journalism Department is accredited by the Accrediting Council on Education in Journalism and Mass Communications. To conform to ACEJMC rules, all Journalism majors must take at least 93 non-communication units of which at least 65 must be selected from the following areas: Anthropology, Economics, English and Literature, Foreign Language, Geography (Social and Cultural), History, Sociology, Humanities, Mathematics, Natural Sciences, Philosophy, Political Science, Psychology, and Religious Studies. Art and Music History and Interpretation courses may also be included, but not skills or performance courses in these areas. "Communications courses" are all courses in the Journalism or Radio-TV Department plus any other courses whose primary focus is the development of communication skills for mass media. Students are limited to 31 communications units. No more than 12 communication units may be transferred into the University. Transfer students should seek immediate advisement to avoid curriculum problems.

All Journalism majors and students in all Journalism production classes are expected to be able to type at least 40 words a minute. For Journalism majors, Journalism 120 with a grade of C or better is a prerequisite for all journalism courses numbered 200 and above. In addition, English 101 is a prerequisite to all upper-division Journalism courses. Journalism Majors must maintain an overall grade point average of "C" to graduate. Those majors who receive more more than one "D" in Journalism courses will be removed from the program. Majors should have passed the Writing Proficiency Examination prior to the start of their senior year. All majors must have a minor or an area of concentration (minimum of 15 units) outside of Journalism designed to aid in reaching their professional goals and selected in consultation with a department advisor.

Requirements for the Bachelor of Arts in Journalism

Option in Newspaper Journalism (code 2-6461)

A minimum of 28 journalism and a maximum of 31 communication units, of which at least 18 must be upper division. Students will also be counseled into 15 units of study outside of journalism designed to aid in reaching their professional objectives.

Lower Division:

JOUR 110, 120, and 230.

Upper Division:

JOUR 320, 322A,B, 430, either JOUR 330 or 420, and one or more of the following: JOUR 312, 315, 352, 412, 418, 431, 494 498, or 499.

Recommended additional courses:

JOUR 115, 180, 251, 280, 380, 480 and 490.

Option in Magazine Journalism (code 2-6465)

A minimum of 29 journalism and a maximum of 31 communication units, of which at least 18 must be upper division. Students will be counseled into 15 units of study outside of journalism designed to aid in reaching their professional objectives.

Lower Division:

JOUR 110, 120, 237, 262.

Upper Division:

JOUR 355, 362A or B, 430 and two or more of the following: JOUR 315, 350, 412, 418, 431, 455, or 498.

Recommended additional courses: JOUR 115, 180, 280, 376, and 498.

Option in Broadcast Journalism (code 2-6460)

A minimum of 24 journalism units, of which 18 units must be upper division, and a maximum of 31 communication units. Students will also be counseled into at least 15 units of study outside of Journalism designed to aid in reaching their professional goals. Students must take a minimum of 75 units in liberal arts courses.

Lower Division:

JOUR 110 and 120 and R/TV 220 and 230.

Upper Division:

JOUR 321, 325, 382A and B, 430, and one or more of the following: 321, 315, 412, 418, 431, 494, or 498. (No more than 4 additional communication* units.)

Recommended additional courses:

JOUR 115, 320, 420, 490 and SPCH 271.

Option in Journalism Education (code 2-6836)

A minimum of 24 journalism units, of which 12 must be upper division, selected in consultation with an advisor.

Lower Division:

JOUR 110, 120 and 230.

Upper Division:

JOUR 320, 322A or 322B, and 430.

Recommended additional courses:

JOUR 115, 270, 280, 312, 422A or B, 431, 490 and 499.

To qualify for a credential that will authorize the teaching of journalism in California public schools, a student must complete the journalism requirements specified above and a prescribed core of courses in English.

Option in Public Relations (code 2-6837)

A minimum of 28 journalism units and a maximum of 31 communication units, of which at least 18 must be upper division. Students will also be counseled into 15 units of study outside of Journalism designed to aid in reaching their professional objectives.

Lower Division:

JOUR 110, 120, and 270.

Upper Division:

JOUR 375, 376, 378, 430, and JOUR 470 or 471, and one or more of the following: JOUR 412, 494, 498 and 499.

Recommended additional courses:

JOUR 237, 280, 322A, 322B, 325, 355, 362A, 362B, 380 and 490.

Minor in Journalism (code 0-6835)

A minimum of 18 units including:

Lower Division:

Six to nine units, which must include JOUR 110 and 120. Additional three units may be selected from JOUR 115, 230, 270 and 280.

Upper Division:

Nine to 12 units, which must include a minimum of six units from one option within the journalism major.

Courses (JOUR):

Lower Division:

110. Introduction to Mass Communications (3) F,S Garvey, Kelly

Origins, development and contemporary role of newspapers, magazines, radio, television, books, and films, and such related fields as advertising and public relations. (Lecture, discussion 3 hours.)

115. History of American News Media (3) F,S Faculty

American news media from colonial times to the present day. Effects of print and broadcast journalism on political, news media. (Lecture, discussion 3 hours.)

120. News Writing and Reporting (3) F,S Stein, Wells

Prerequisite: Ability to type and a C or better in ENGL 100. Study of news sources, reporting and interviewing methods and news writing; ethics and responsibilities of the reporter. Practical exercises in reporting and writing news and preparing copy for publication.

180. Introduction to Photojournalism (2) F,S Faculty

Photography for the photojournalist, writer or editor. Course covers operational techniques of cameras, films and fundamental approaches to producing pictures for newspapers and magazines. Skills are developed through practical exercises in news coverage with laboratory instruction. Materials fee for those using university facilities. (Activity, 4 hours.)

230. Copy Editing and Makeup (3) F,S Wells

Prerequisite: JOUR 120 with a grade of C or better or consent of instructor. Study of methods and practice in preparing copy for publication, including editing, headline writing and handling wire copy. Editorial aspects of newspaper makeup and design. (Lecture 2 hours, activity 3 hours.)

237. Magazine Making and Editing (3) F,S Meyer

Prerequisite: JOUR 120 with grade of C or better. Fundamental principles of periodical publication and methods of editing, manufacturing and distributing magazines of every type. The course includes practical training and instruction in editorial work, such as editing, writing, proofreading, makeup and headline writing. Attention also is given to production problems of the modern-day magazine.

251. Feature Writing (3) F,S Stein

Prerequisite: JOUR 120 with a grade of C or better or consent of instructor. Covers the feature article for both newspapers and magazines. Discusses style, organization, human interest, the use of quotes, leads and article ideas. The emphasis is on clear, readable prose. Writing assignments both in and out of the classroom.

262. Magazine Production (2) F,S Meyer

Prerequisite: JOUR 120 with a grade of C or better, 237 or 355. Practical experience in magazine and publications planning, organization, writing, photography, art, layout, advertising and production. Supervised work on The University Magazine, and The Beach. (Laboratory 3 hours.) (May be repeated to a maximum of 4 units.)

270. Introduction to Public Relations (3) F,S Faculty

Prerequisite: JOUR 270 with a grade of C or better. Public relations fundamentals: research, action, communication and evaluation. Study of special publics, the use of public relations tools, planning a public relations program. Not open to students with credit in JOUR 370.

275. Publicity and Publications (3) S Faculty

Not open to Journalism/Public Relations majors. Recommended preparation: JOUR 120. Introduction to the basics of public relations — emphasizing how to produce and use public relations tools such as news releases, institutional ads, public service announcements, brochures and pamphlets, annual reports, newsletters, speeches, etc. Planning and budgeting are also covered.

280. Intermediate Photojournalism (2) F,S Faculty

Prerequisites: JOUR 120, with a grade of C or better, JOUR 180, IA 101 or consent of instructor. Techniques of photojournalism as used in newspapers, magazines and public relations with emphasis on the news and communication values in pictures. Experience with various types of photography equipment. Materials fee for those using university facilities. (Lectures, demonstrations, field trips and practical assignments, journalism activity 4 hours.)

Upper Division:

312. World Press (3) F,S Stein

An analysis of the world's news media with emphasis on their structure, ownership, social and political roles and the degree of government pressure and control. Particular attention is paid to the position of the media in developing nations. Examination of the methods and problems of the American foreign correspondent.

315. Journalism as Literature (3) S Meyer, Faculty

Sets criteria for defining journalism and literature. Examines great journalistic works of the last 275 years — from Addison, Steel and Swift, through Twain, Stephen Crane, Mencken and Camus, to E.B. White, Updike, Didion and Tom Wolfe — which have earned a place in literature.

320. Reporting Public Affairs (3) F,S Wells, Faculty

Prerequisite: JOUR 120 or consent of instructor. News coverage of police, courts and city, county, state and Federal government. Study and practice in methods of investigative reporting. (Reporting and writing practice 3 hours.)

321. Television News Writing (3) F,S Garvey

Prerequisite: JOUR 120 with a grade of C or better and R/TV 230 or consent of instructor. It is recommended students take JOUR 325 before taking this course. Techniques of gathering, writing and editing news for television, including practice with wirecopy, field reporting with camera and sound crew and still pictures. Preparation and presentation of newscasts in laboratory.

322A. Newspaper Production (3) F,S

Prerequisites: JOUR 120 with a grade of C or better, JOUR 230 or consent of instructor. Practice in reporting and feature writing through participation in the publication of the University newspaper. Materials fee. Laboratory 9 hours.

322B. Advanced Newspaper Production (3) F,S Faculty

Prerequisite: JOUR 322A or consent of instructor. Practice in reporting, feature writing, and other journalistic activities through participation in the publication of the University newspaper. Materials Fee. Laboratory 9 hours.

324A,B. Photography for Publication (3,3) F,S Kelly

Prerequisites: JOUR 180 or equivalency test and JOUR 280 (with a grade of B or better), or consent of instructor. Students with qualifying photo skills will comprise staff of the Daily Forty-Niner newspaper. Staffers will be responsible for photographic coverage of campus news and feature events for daily and special edition use. Photographers will practice techniques of newspaper photography through assigned stories as well as personally developed enterprise stories. Individual approach and skills are assessed daily, with staff efforts analyzed at weekly photo conference. Students must provide own camera. Materials fee. (Laboratory 6 hours.)

325. Radio News Writing and Reporting (3) F,S Faculty

Prerequisite: JOUR 120 with a grade of C or better and R/TV 220 or consent of instructor. Techniques of gathering, writing and editing news for radio, including practice with broadcast wire copy, tape recorders and telephone. Preparation and presentation of newscasts in laboratory. (Activity 2 hours.)

330. Advanced Newspaper Editing and Editorial Management (3) F,S Wells

Prerequisites: JOUR 120 with a grade of C or better, JOUR 230. Study of modern techniques of newspaper production. Emphasizes the total newspaper, including gathering, processing and packaging news, computerized design and production of newspapers, supervising and motivating subordinates, advertising, business, circulation, equipment, budget and legal problems. (Lecture, 2 hours; laboratory 2 hours)

350. Contemporary Magazines (3) F Meyer

Development of the magazine and its significance in American life. Periodical types, editorial policies and literary stature. Special study of magazines in a field of the student's particular interest. (Lecture, discussion 3 hours.)

352. Editorial and Critical Writing (3) S Faculty

Prerequisite: JOUR 120 or consent of instructor. Organization, language and content of editorials, columns and other opinion articles. The course will also deal with critical reviewing.

355. Feature Article (3) F,S Stein

Techniques of writing non-fiction articles with a view toward potential sales to magazines, newspaper syndicates and Sunday supplements.

362. Advanced Magazine Production (3) F,S Meyer

Prerequisite: JOUR 237 or 355. Advanced magazine editing, writing, photography, art and production. Participation in publishing The University Magazine, and The Beach. (Laboratory 6 hours.) (May be repeated to a maximum of 6 units.)

375. Publicity Techniques and Procedures (3) F Faculty

Prerequisites: JOUR 120, 270. Recognizing publicity potentials and writing press releases; how to work with the press and other mass communications media for publicity purposes.

376. Publications for Public Relations (3) F,S Faculty

Prerequisites: JOUR 120, 270. Techniques of writing, editing and publishing newsletters, business newspapers and magazines as communication tools for public relations.

378. Public Relations for Business and Industry (3) F,S

Prerequisite: JOUR 270. The use of public relations by business and industry. Application of public relations techniques to the distribution and sale of products and services from the manufacturer to the consumer. Analyzing audiences, creating programs and preparing budgets. Working with the media.

380. Advanced Photojournalism (3) S Kelly

Prerequisite: JOUR 280 or consent of instructor. Photographic reporting with a camera. In-depth study of photojournalism with emphasis on creation of photo story ideas, photo essays and feature photos; photo editing and layout as applied to newspapers and magazines. Materials fee for those using university facilities.

382A-B. Broadcast News Production (3,3) F,S Faculty

Prerequisite: JOUR 120 and 325 and R/TV 220 or consent of instructor. Reporting, writing and editing of news for broadcast with emphasis on preparation of news copy for the campus radio station (KLON, FM-88). (Laboratory 8 hours.)

383. Using Mass Media Critically (3) Garvey, Finney

Examination of content of major American media from standpoint of esthetic and professional standards of excellence. Students will analyze specific media offerings, examine weaknesses and strengths, develop consistent and rational bases for criticism, and examine means of improving both media quality and the usefulness of the media to the individual.

412. Theories of Mass Communication (3) F Garvey

Prerequisite: JOUR 110 or consent of instructor. Contemporary theories of mass communication. An overview of the development of communication theory as it relates to the mass media. Evaluation of classical and modern theories of the communication process through analysis of the original research upon which the theories were founded. Source, message and audience effects of the communication process.

418. Current Trends in Mass Communication (3) F,S Garvey

Discussion of the effects of social trends on the media. A thorough examination of the current state of the mass media in the United States and their relationship to the various political, cultural and social institutions in our society.

420. Reporting of Urban Problems (3) F,S

Prerequisite: JOUR 120 and 320 or consent of instructor. An advanced course in investigative and interpretive reporting. Students will work in an editor-reporter relationship with the instructor in researching and writing depth pieces on such complex issues as mass transit, air pollution, city government, poverty, crime, housing and drug abuse. Investigative and interviewing techniques will be stressed.

422A,B. Senior Media Production (2,2) F,S Cunningham

Prerequisite: Consent of instructor. Advanced work on campus information media. May include writing, editing, photography, layout or news broadcasting.

428. Newspaper Management (3) S Faculty

Prerequisite: Nine units of journalism. Management side of newspaper publishing, including newspaper organization, budget, personnel, equipment, business accounting, advertising sales and production, labor relations, postal regulations, legal problems and newspaper management techniques.

430. Law of Mass Communications (3) F,S Cunningham

Principles and case studies of the law of the press, radio and television with emphasis on constitutional guarantees, libel, contempt, privacy, taxation licensing shield laws and other laws affecting the news media. (Law case study 3 hours.)

431. Ethical Problems of the News Media (3) F,S Cunningham

The study of ethical codes and value systems used in writing, editing, producing and presenting the news in the United States today. Case studies of current ethical problems confronting print and broadcast journalists with emphasis on how the student solves each problem.

455. Advanced Magazine Article Writing (3) F Meyer

Prerequisite: JOUR 355. Writing of fully developed magazine articles. At least one major, publishable article and at least two other pieces will be required. Heavy stress will be placed on article ideas, research and sophisticated interviewing techniques. Designed especially for students who plan to earn all or part of their income through freelance writing. Professional standards.

470. Institutional Public Relations (3) S Faculty

Prerequisite: JOUR 120 and 270. Study of the structure, methods and functions of an internal corporate public relations department either as a separate entity or in association with an external public relations agency.

471. Agency Public Relations (3) F Faculty

Prerequisite: JOUR 120 and 270. The public relations agency, its structure and its function as a counseling and consulting service in planning and communicating for industry, government and organization clients.

480. Picture Editing (3) F,S Kelly

Prerequisite: JOUR 120 and 230 or consent of instructor. Principles of picture selection for newspaper and magazine publication. Emphasis on preparing material — written and visual — for use as single picture or layout presentation. Materials fee. (Laboratory 9 hours.)

490. Special Topics in Mass Communications (1-3) F,S Cunningham

Topics of special interest in mass communications selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated for a total of six units.

494. Research Methods in Mass Communications (3) S Garvey

Prerequisite: Consent of instructor. Basic techniques of research in mass communication and mass media. Overview of theory building and hypothesis testing procedures as applicable to current problems in the mass communication field. Scientific methods, survey and experimental design, field studies, analysis of data.

498. Internship (3) F,S Garvey

Prerequisite: For seniors only, by faculty recommendation, with consent of department chair. Work of an editorial or writing nature at least one full day a week with cooperating organizations in the Los Angeles-Orange County area. Work edited and evaluated by supervisors of the participating media firms. Regular reports to faculty supervisor and regular scheduled meetings with supervisor on-campus to discuss progress and problems. CR/NC grading only.

499. Special Projects (1-3) F,S Faculty

Prerequisite: advance approval of project by the department. Research in the field of journalism in newspaper, magazine, public relations, advertising or other related fields. Open to journalism majors only. Student must meet once a week with instructor.

Linguistics

School of Humanities

Director: Stephen B. Ross
Department Office: McIntosh Humanities Building (MHB), Room 311
Telephone: 498-4210; 498-4223 (msg.)
Faculty: Professors: Robert H. Berdan (Educational Psychology), Beverly J. DeLong-Tonelli (Spanish-Portuguese), Robert M. Hertz (English), Steven Knafel (English), Clyde McCone (Anthropology), Walter B. Moore (Communicative Disorders), Fernando Penalosa (Sociology), Stephen B. Ross (English), Janet B. Sawyer (English), G. A. Spangler (Philosophy), Lindsay Thomas, Jr. (French-Italian), Francisco Trinidad (Spanish-Portuguese), John Williams (English); Associate Professors: Edward J. Borowiec (English), Robert C. Harman (Anthropology), Gloria G. McCullough (English), Alex Osuna (Mexican-American Studies), Carolyn Wardrip-Fruin (Communicative Disorders).

Students desiring information should contact the program office for referral to one of the faculty advisors.

Baccalaureate Minor in Linguistics (code 0-6833)

A minor in Linguistics consists of a minimum of 21 units, with at least one course selected from each of five subject area categories. Although not required for the Minor, foreign language courses are recommended. In selecting courses, students should be aware that some courses have prerequisites, including language proficiency.

Courses which are counted for a major may not also be counted for a minor, but students who have taken a course from any category as a part of their major may substitute an elective with approval of the Director of the Interdisciplinary Program in Linguistics.

Requirements:

Select one course from each category:

Category I — Introduction:

ANTH 170, ENGL 325, HUM 363IC, MEXA 402;

Category II — Phonology:

C D 330, ENGL 420, FREN 414, GERM 303, SPAN 425;

Category III — Syntax:

ENGL 421, FREN 411, GERM 401, SPAN 426;

Category IV — Psycholinguistics and Neurolinguistics:

C D 361, 363, 481B, ED P 454, PSY 438;

Category V — Language, Culture, and Society:

ANTH 412IC, 413, SOC 485IC, SPCH 451;

Electives to a program total of 21 units selected from: any course listed above, ANTH 470, C D 380, ENGL 423, 426, 428, 498, MEXA 403, PHIL 484, SPAN 412, 427, SPCH 448, and variable/special topics courses on linguistics subjects offered through the participating departments. These topic courses are shown on an approved list available in the participating departments.

Master of Arts in Linguistics (code 5-6833)

The program for the M.A. degree in linguistics is interdisciplinary in nature to accommodate a variety of needs of students within the program. The program is designed both for students who wish to pursue further graduate study and those seeking a terminal degree. It seeks to blend theoretical and applied aspects of linguistics, both in the overall curriculum and in most of the individual courses.

The M.A. in Linguistics offers several options: (1) General Linguistics; (2) Language and Culture; (3) Psycho- and Neurolinguistics; (4) Romance Linguistics; (5) Second Language Studies; and (6) Sociolinguistics. There is a core of classes which students from each option must complete as close to the beginning of the program as scheduling permits.

Graduate assistantships and teaching assistantships are sometimes available to qualified students.

Prerequisites:

1. A bachelor's degree which includes 18 units of course work as follows:
   a. Nine units in linguistics (descriptive linguistics, historical or comparative linguistics, sociolinguistics, psycholinguistics, or ethnolinguistics, etc.).
   b. Nine units in language, linguistic or linguistic-related courses (cross-cultural studies, TESL and foreign language instruction, cognition, symbolic logic, artificial and sign languages, etc.).
2. A grade-point average of 2.50 on the last 60 units.
3. Passing of the CSULB Writing Proficiency Examination (WPE).

Advancement to Candidacy:

1. Satisfaction of the general university requirements for advancement to candidacy, including prerequisites, the Writing Proficiency Examination, and grade point average.
2. Completion of six units of a foreign language at the upper division level, or the equivalent.
3. Completion of six units of course work within the program, exclusive of any classes used to meet prerequisites.
4. Approval of the candidate's graduate program by the Director, the School of Humanities Associate Dean for Educational Policy, and any other individuals identified by relevant university policy.
5. Advancement must take place no later than the semester before the student graduates.

Requirements for the Master of Arts:

1. A minimum of 30 units of approved upper division and graduate courses with at least 24 units from the list of linguistic courses.
2. A minimum of 21 units at the 500 or 600 level.
3. Completion of the core requirements for the program.
4. Completion of the requirements for one option of the program.
5. Completion of one of two culminating experiences:
   a. A thesis and an integrative oral examination.
   b. Comprehensive examinations and a research paper.
6. A grade point average of 3.00 on all courses included in the program.

The Core:

1. LING 500 Educational Linguistics (3) or ENGL 524 Applied Linguistics (3)
2. LING 540 Sociolinguistics (3) or ENGL 521 Historical Linguistics (4)
3. PSY 539 Language Acquisition (3) or LING 539 Language Acquisition (3)
4. ENGL 525 Analytical Phonology (4)
5. ENGL 620 Syntactic Theory (4)
6. An Emphasis:

General Linguistics Emphasis (9-15 units)

ENGL 521, LING 540 and approved selections from: ANTH 490, 570, 597, 630; C D 581B, 665; ENGL 498 (Computational Linguistics), 520, 522, 523, 524, 526, 620 (Bilingualism), 623; FREN 414, 490; LING 697, 698; PHIL 484, 570, 590G; PSY 538; SPAN 525; SPCH 551, 600. Language and Culture Emphasis (9-15 units)

ANTH 630, LING 540 and approved selections from : ANTH 413, 490, 570, 597; ENGL 523, 524, 620 (Bilingualism), 623; LING 697, 698; SPCH 448, 551, 600.

Psycho- and Neuro-linguistics Emphasis (9-15 units)

C D 581B, PSY 538 and approved selections from: C D 560, 665; ENGL 498 (Computational Linguistics), 520, 522, 524, 528 (Second Language Testing), LING 697, 698; SPCH 448, 600.

Romance Linguistics Emphasis (9-15 units)

MEXA 402, SPAN 528 and approved selections from: C D 560; ED P 454; EDEL 558; ENGL 521, 529, 620 (Bilingualism), 623; FREN 414, 490; LING 697, 698; MEXA 403; SPAN 412, 425, 490, 525, 526, 527, 590 (Spanish of the Southwest), 639, 697. Second Language Studies Emphasis (9-15 units)

ENGL 528 (Communicative Syllabus Design) and approved selections from: C D 560; ED P 454; EDEL 558 or MEXA 445; ENGL 520, 522, 524, 527, 528, 529,620; LING 500, 535, 540, 565, 697, 698; PHIL 484; PSY 538; SPAN 527; SPCH 551.

Sociolinguistics Emphasis (9-15 units)

ENGL 521, 623, LING 540 and approved selections from: ANTH 413, 490, 570, 597, 630; C D 560; ENGL 498 (Computational Linguistics), 520, 522, 524, 620 (Bilingualism); LING 697, 698; MEXA 402, 403; SPAN 590 (Spanish of the Southwest); SPCH 448, 55l.

Students wanting graduate credit for this course must consult with the Graduate Advisor before enrolling.

Courses with an -IC suffix are not available for graduate credit.

Note: Graduate students are required to register for the higher (500-level) course whenever a course has a double number. Students may not repeat courses by taking them under different numbers or titles unless the course description specifically permits. Certificate Program in Teaching English as a Second Language

The Certificate Program in Teaching English as a Second Language (TESL) is open to students from any field who desire training for teaching English to speakers of other languages. While the program may be begun as an undergraduate, at least 18 units must be completed as a post-baccalaureate student.

The Certificate includes two options: (1) the Adult/Post-Secondary Option for preparation to teach in adult education and college-level programs; and (2) the Language Development Specialist Option for preparation to teach in K-12 programs. Students in the first option who wish to teach at the college level are advised that an M.A. is the usual minimum requirement for full-time positions. Students in the second option who wish to receive additional certification as Language Development Specialists from the Commission on Teacher Credentialing must meet additional requirements which are not a part of the certificate, including among other things, the possession of a California Teaching Credential, the completion of a foreign language requirement, and the passing of the Language Development Specialist Examination. Further information on LDS certification is available from the Interdisciplinary Program in Linguistics, the Center for Educational Research and Services in the Graduate School of Education, or the Commission on Teacher Credentialing.

Certificate in Teaching English as a Second Language

Recommendations:

Students are strongly urged to include foreign language study as a part of their undergraduate curriculum. Students planning to teach in California schools must also include appropriate credential requirements in their total program.

Prerequisites:

1. A baccalaureate degree with a GPA of 2.50 in the last 60 units.
2. Passing of the CSULB Writing Proficiency Examination.
3. Passing of the California Basic Educational Skills Test (CBEST). Note: This requirement may be waived for international students who are planning to return to their home country to teach, or for students who possess a valid California Teaching Credential (Multiple Subject, Single Subject, or equivalent).

Requirements:

1. Twenty-four units, including at least 20 taken in residence.
2. Eighteen (18) units taken as a graduate student.
3. Twelve units taken at the 500 or 600 level.
4. A grade-point average of 3.0 on all work included in the program.
5. Completion of a core of courses as follows:
   a. ENGL 325 Models of English Grammar (4) (Not required of students with previous linguistic training in the U.S.)
   b. ENGL 420/520 English Phonology (3)
   c. ENGL 421/522 English Syntax (3)
   d. ENGL 429/529 Language Strategies for Bilingual/TESL Classrooms (3)
   e. LING 500 Educational Linguistics (3)
6. Completion of courses in one emphasis as follows:

Adult/Post-secondary Emphasis

a. VE 506 — VESL/ESP (3), LING 570 — VESL/ESP (3)
b. ENGL 528 — Communicative Syllabus Design (3)

Language Development Specialist Emphasis

a. PSY 439/539/LING 539 Language Acquisition (3)
b. ENGL 528 Second Language Testing (3)

7. Internship: A minimum of 90 hours of teaching English as a second language, including at least 45 hours on the CSULB campus or in a CSULB approved-program. Students who wish to have this internship on their transcript may use LING 592. Credit for the internship cannot be given retroactively. Guidelines governing remuneration or academic credit for the internship are available upon request.
8. Electives to complete, selected with the approval of an advisor:

   ANTH 412IC Culture and Communication (3), ANTH 413 — Language and Culture (3); C D 330 — Speech and Hearing Science (3), C D 361 — Language and Speech in Normal and Exceptional Children (3), C D 363 — Language and Speech Development (3), C D 460/560 — Language Assessment of the LEP Child (3); EDEL 430 — Teaching in Cross-Cultural Settings (3), EDEL 558 — Linguistics for Reading Teachers (3) or MEXA 445 — Reading for Chicano Bilingual Children (3); ED P 454 Development of Communication Skills in a Bilingual Context (3); EDSE 401 Principles of Adult Education (3), EDSE 402 — Methods and Materials of Adult Education (3), EDSE 435 — Cross-Cultural Education in United States Society (3), EDSE 436 — Instruction and Evaluation in a Cross-Cultural Setting (3); ENGL 423/523 — Semantics (3), ENGL — 428/524 Applied Linguistics (3), ENGL 427/527 — Computers in Language Instruction (4), ENGL 499 — Directed Studies (1-2), ENGL 528 — Second Language Testing (3), ENGL 528 — Communicative Syllabus Design (3), ENGL 620 — Bilingualism (4); LING 535 — Pedagogical Analysis of English (3), LING 539 — Language Acquisition (3), LING 565 — Teaching English Overseas (3), LING 570 — VESL/ESP (3), LING 592 — Internship in TESL/TEFL (l-2); MEXA 402 — Bilingual Linguistic Studies (3); PSY 438/538 — Psycholinguistics (3); SOC 485IC — Sociology of Language (3), SPCH 448 — Language and Behavior (3); SPCH 451/551 — Intercultural Communication (3); SPAN 427/527 Contrastive Analysis of Spanish/English (3); V E 404 — Techniques of Occupational Instruction, V E 405 — Instruction and Evaluation in Occupational Education (3), V E 506 — VESL/ESP (3).

Students wanting graduate credit for this course must consult with an advisor before enrolling. However, courses with the -IC suffix are not available for graduate students, but may be used for the certificate if taken as an undergraduate.

Courses (LING):

500. Educational Linguistics (3) F,S Faculty

Prerequisites: Nine units of linguistics or permission of instructor. A graduate introduction to the role of language and linguistics in contemporary education; analysis of the context of language acquisition; attitudes toward multilingualism; language policies which set guidelines and expectations for instruction; cultural factors which influence language acquisition. [Discussion] Grading: Traditional only.

535. Pedagogical Analysis of English (3) F Faculty

Prerequisites: Selection to a program to teach English in another country, or permission of instructor. A detailed analysis of the English language, based on the linguistic information necessary to teach English as a second or foreign language: phonetics and phonology, morphology and syntax, semantics, speech acts, discourse, notions and functions, pragmatics. This course may be offered at an international site. [Discussion] Grading: Traditional only.

539. Language Acquisition (3) S Faculty

Prerequisites: Six units of linguistics or upper division psychology, or consent of instructor. Theory and research on the acquisition of first and second languages in children and adults. Psycholinguistic perspectives on the development of phonology, syntax, semantics and pragmatics. The interacting roles of developmental stages, cognitive processes, individual differences, social influences, and the cultural context will be stressed. Same course as PSY 539. [Seminar] Grading: Traditional only.

540. Sociolinguistics (3) F Faculty

Prerequisites: Nine units of linguistics or consent of instructor. Study of the linguistic and social antecedents, correlates, and consequences of language variation in the individual and in society. Integration of theoretical models and practical fieldwork. [Seminar] Grading: Traditional only.

565. Teaching English Overseas (3) F Faculty

Prerequisites: Selection to a program to teach English in another country, or permission of instructor. Principles and practices of teaching English as a foreign language (TEFL), including comparison and contrast between EFL and teaching English as a second language (TESL). The class is conducted at an international site. Offered on demand. [Discussion] Grading: Traditional only. Repeatable to a maximum of 6 units.

570. VESL/ESP Program and Instruction (3) F Faculty

Prerequisites: Admission to the TESL Certificate Program or consent of instructor. An examination of the integral role of tailored language instruction to the success of non- and limited-English speaking trainees and workers. This course will deal with Vocational English as a Second Language, English for Specific Purposes, and English for Science and Technology. Key topics include language needs assessment, course design, instructional techniques, and testing in specified settings. (Same course as VE 506.) [Seminar] Grading: Traditional only.

592. Internship in TESL/TEFL (1-2) F,S Faculty

Prerequisites: English 429/529 or consent of instructor. At least 45 hours of participation in a second-language classroom or tutoring situation for each unit of credit. Working under supervision of a master teacher or program director while teaching ESL/EFL. CR/NC grading only. [Activity - Laboratory] Grading: CR/NC only. Graduate credit. Repeatable to a maximum of 4 units.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of graduate committee. Research in linguistics on an individual basis.

698. Thesis (2-5) F,S Faculty

Prerequisite: Consent of graduate committee. Planning, preparation and completion of a thesis in linguistics.

Mathematics and Computer Science

School of Humanities

Department Chair: Charles W. Austin
Department Office: Faculty Office 5 (FO5), Room 203
Telephone: 498-4721
Faculty: Professors: Ruth H. Afflack, M. Shafqat Ali, Charles W. Austin, John M. Bachar, Jr., Howard Beckwith, Kuang-Ho Chen, Floyd A. Cohen, Carl H. Dorn, Milton J. Fatt, L. Sheila Foster, Arthur P. Gittleman, Bernard N. Harvey, Willard D. James, Shui Lam, Melvin D. Lax, Kau-Un Lu, Jerome H. Manheim, Anthony Mardellis, William Margulies, Daniel Martinez, Thomas A. McCullough, Edward B. McLeod, Howard J. Schwartz, Joseph F. Seewerker, Norman E. Sexauer, Alton H. Smith, Mary E. Smoke, M. Barbara Turner, Joseph Verdina, Kenneth Warner, Robert R. Wilson; Associate Professors: Eugene Albert, Stuart E. Black, Jean L. Conroy, Samuel G. Councilman, Wayne Dick, Harry D. Eylar, Robert Froyd, Carl Maltz, Saleem Watson, Arthur K. Wayman; Assistant Professors: Hyeja Byun, Michael K. Mahoney, Lindsay Tartre, Derming Wang
Emeritus Faculty: James Baugh, Stephen Kulik, Walter Lyche
Administrative Aide: Linda Dixon

Students desiring information should contact the department office for referral to one of the faculty advisors: Computer Science Coordinator, Credential Advisor, Graduate Coordinator, Lower-division Service Coordinator, Math Student Association Liason, Undergraduate Advising Coordinator, Vice Chair.

Mathematics is fundamental to all scientific knowledge including not only the traditional natural sciences but increasingly the social and economic sciences as well, and the increasing applicability of mathematical methods has been enhanced and accelerated by the development of the computer. Mathematics is also a vital aid to critical thinking and, at least to some, a thing of beauty in itself.

The Department of Mathematics and Computer Science provides instruction for students at all levels beyond high school mathematics, providing the computational, analytic and programming skills needed for a variety of majors, as well as advanced theoretical courses for specialists in mathematics and computer science. Its various degree options are intended to provide the student with the knowledge and techniques needed for scientific, management and statistical applications, as well as the theoretical understanding needed for teaching, graduate study and lifelong professional growth. Beyond these, it hopes to instill a spirit of curiosity and healthy skepticism towards mathematical statements and results — a willingness to ask "is this true?" and "why?", and to try to find the answers.

Undergraduate Degree Programs

The Mathematics Department offers four undergraduate degree programs in mathematical sciences.

Bachelor of Arts in Mathematics

The student in this program is required to take a selection of fundamental courses in algebra and analysis. It is the most flexible program, in which the greatest number of electives may be chosen by the student. Elective upper division mathematics courses are available which meet the needs of students preparing for a variety of goals, including careers in industry and government, secondary teaching and graduate study. Students who do not wish to complete the requirements for a formal option in applied mathematics, computer science or statistics may wish to elect courses in one or all of these areas as part of this degree program.

Requirements for the Bachelor of Arts in Mathematics (code 2-6666)

Lower Division:

ENGL 101 or 300 or 317; MATH 122, 123, 224, and 270, and any one of the following sequences: PHYS 151 and 152; or PHIL 170 and 270; or eight units of a foreign language.

Upper Division:

A minimum of 30 units of approved upper division mathematics courses selected in consultation with major advisor to include MATH 345 or 346, 361A-B, 364A and 444 but not 311, 370A or B.

To achieve flexibility, only 15 of the required 30 units are specified. Students should, therefore, discuss career goals and plan a program with an advisor. For additional information and to secure an advisor contact the Mathematics Department office.

Bachelor of Arts in Mathematics — Option in Applied Mathematics

The student who is most interested in the applications of mathematics has a choice of two suboptions: the first concentrates on the applications in engineering and science while the second concentrates on the applications to management. In both suboptions courses are specified in the major areas of applied mathematics and in the field of application. The student is prepared for a career in business, industry or government or for graduate study.

Option in Applied Mathematics (code 2-6608)

Suboption I:

Area of application in science and engineering

Lower Division:

ENGL 101 or 317; MATH 122, 123, 224, 270; PHYS 151, 152; PHYS 153 or 154 or EE 210 or CE 205.

Upper Division:

MATH 323, 345, 361A, 361B, 364A, 364B, 380, 470. A minimum of 9 units from the following: MATH 381, 382, 421, 423, 461, 463, 472, 479, 485. A minimum of 9 units from one of the following three groups:

A. PHYS 310, 311, 340A, 340B, 410, 450.
B. EE 310, 320, 370, 410, 462, 471, 482.
C. CE 335, 359, 437, 438, 458, 494; ME 371, 373.

Sub-Option II:

Area of application in management

Lower Division:

ENG: 101 or 317; MATH 122, 123, 224, 272, ECON 201, 202, or 300.

Upper Division:

MATH 345, 361A, 361B, 364A, 380, 381, 382; QS 460, ECON 333. A minimum of 10 units from the following courses: MATH 323, 423, 463, 479, 480, 485; a minimum of 15 units from the following courses: MGMT 300, 402, 406, 407, 422, 426, QS 463, ECON 486. Option in Statistics (code 2-6008)

Bachelor of Arts in Mathematics — Option in Statistics.

The student interested in statistics may pursue a program of study covering the main concepts of probability and statistics. Electives are required in an area in which statistics is used such as business or psychology. Students are prepared for careers as statisticians in government or industry or for graduate study.

Option in Statistics (code 2-6008)

Lower Division:

ENGL 101 or 317, MATH 122, 123, 224, 270; and any one of the following: PHYS 100A-B, or PHYS 151 and 152; or PHIL 170 and 270; or 8 units of a foreign language, or 6 lower-division units in a field in which approved upper-division Statistics courses are also taken.

Upper Division:

A minimum of 30 units of approved upper-division mathematics courses to include MATH 323, 345 or 346, 361A, 380, 381, 382 and 3 units of MATH 480 or 497 taken after completion of MATH 380. MATH 361B is recommended. Six additional units must be taken in fields outside mathematics; these must be approved by a mathematics advisor. In addition, any student planning to pursue graduate studies in mathematics should take MATH 444. The following courses are approved statistics option electives: BIOL 472; ECON 481, 486; PSY 315, 403, 411, 412; Q S 460, 463; SOC 455.

Bachelor of Science in Computer Science — Option in Computer Science and Mathematics

The Bachelor of Science degree in Computer Science is jointly offered by the departments of Computer Science and Engineering and of Mathematics and Computer Science. Two degree options are offered: 1. Option in Computer Science and Engineering, offered in the school of Engineering; 2. Option in Computer Science and Mathematics, offered in the School of Humanities.

Option in Computer Science and Mathematics (code 3-6010)

Lower Division:

Math 122, 123, 174, 224, 233, 274; CSE 101 or EE 101 (same course); Physics 151, 152; English 101 or 317;

Upper Division:

Math 321, 323, 325, 326, 333; 345 or 346; 380, 422; one course taken from Math 381, 423, 428; two courses taken from Math 420, 425, 427; Math 429 or CSE 444 (same course); CSE 440 or EE 440 (same course).

The high school student planning to enter the program for either option in computer science is advised to pursue a strong program in science and mathematics. Deficiencies in some of the above areas may result in an extension of the time required to complete a program in this option.

Minor in Mathematics (code 0-6666)

Requirements for the Minor in Mathematics: MATH 122, 123, 224; and 12 units of upper-division Mathematics courses to include MATH 345 or 346, and MATH 361A, but not MATH 370A.

Concentration in Mathematics for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required; 15 of which must be upper division.

Lower Division:

One course chosen from: MATH 114, 117, 180, or 270; either MATH 115S and 116 or MATH 122 and 123. (Students who might choose later to major in Mathematics should elect the sequence MATH 117, 122, and 123.)

Upper Division:

A minimum of 15 units of upper division mathematics courses including at least two courses from the following: MATH 310, 317, 330, 340, 346, or 355.

Master of Arts in Mathematics (code 5-6666)

Prerequisites:

1. A bachelor's degree in mathematics from an accredited college or university, or
2. A bachelor's degree with a minimum of 24 upper division units in mathematics.
3. Courses must include MATH 345 or 346, 361A-B, 364A and 444, or their equivalents. Deficiencies will be determined by the graduate advisor after consultation with student and study of transcript records.

Advancement to Candidacy

In addition to University requirements, the student must have completed all prerequisite courses listed above with no grade less than C. Students should have passed the Writing Proficiency Examination (WPE) and file for Advancement upon completion of at least six units (and no more than nine units) on the Program, with at least a 3.0 grade average.

Requirements for the Master of Arts:

1. A minimum of 24 graduate and approved upper division units in mathematics including:
   a. One of the sequences MATH 540A-B, 550A-B, 561A-B, 562A-B or two courses selected from MATH 560, 570, 575, 580, 590.
   b. Two additional courses selected from MATH 540A, 550A, 561A or 562A.
   c. At least 18 units of graduate courses in mathematics including at least 15 units other than MATH 697 or 698.
2. Six units of approved upper division or graduate electives to total 30 units for the degree.
3. Fulfill the requirements in either Option A or Option B.
   a. Option A — pass a comprehensive written examination.
   b. Option B — subject to the approval of the Graduate Committee of the Department of Mathematics, write a thesis in mathematics and defend it orally.

Master of Arts in Mathematics — Option in Applied Mathematics (code 5-6608)

Prerequisites:

1. A bachelor's degree in mathematics, physics, or engineering from an accredited college or university.
2. Credit in the following courses MATH 323, 345 or 346, 361A-B, 364A, and 380, or their equivalents. Deficiencies will be determined by the graduate advisor. Advancement to Candidacy

In addition to University requirements, the student must have completed all prerequisite courses listed above, with no grade less than C. Students should have passed the Writing Proficiency Examination (WPE) and file for Advancement upon completion of at least six units (and no more than nine units) on the Program, with at least a 3.0 grade average.

Requirements for the Master of Arts in Applied Mathematics

1. A minimum of 30 approved graduate and upper-division units including:
   a. MATH 461 or 562A, 479, and 576.
   b. At least 12 units, of which at least 6 units must be at the 500 level; selected from MATH 364B, 381, 382, 421, 423, 463, 470, 472, 473, 480, 485, 495, 560, 570, 575, 580, and 590 as approved by the graduate advisor.
   c. A minimum of 18 units of graduate mathematics courses including not more than 3 units total from MATH 697 or a minimum of 4 units of 698.
2. Complete one of the following:
   a. Pass a comprehensive written exam on Applied Mathematics.
   b. Subject to the approval of the Graduate Committee of the Department of Mathematics, write a thesis in applied mathematics and defend it orally.

Courses (MATH):

For students entering the university Fall 1983 and thereafter, passing of the Entry-Level Mathematics Examination (ELM) is a prerequisite for all mathematics courses except MATH 001 and 007.

Lower Division:

001. Elementary Algebra and Geometry (3) F,S Faculty

Prerequisite: permission of instructor. Preparatory course for the Entry Level Math Exam covering arithmetic, elementary algebra and geometry. This course may not be taken for credit toward a university degree. CR/NC only.

007. Math Without Fear (3) R,S Afflack

Prerequisite: permission of instructor. This course may not be taken for credit toward a university degree. The course will help students strengthen their problem solving abilities while developing their quantitative skills. A broad range of topics in mathematics will be covered with emphasis being placed on recognizing patterns, analyzing problems and generalizing concepts.

010. Intermediate Algebra (3) F,S Faculty

(This course may not be taken for credit toward a university degree.) Prerequisites: A score of 25 or better on the Entry Level Mathematics exam and permission of instructor. Polynomial, rational and radical expressions and equations; rational exponents; solutions and graphs of linear and quadratic inequalities; systems of linear equations; operations, inverses, and graphs of functions; logarithmic and exponential functions; Binomial Theorem; arithmetic and geometric sequences.

101. Trigonometry (3) F,S Faculty

Prerequisites: MATH 010 or two years of high school algebra. Trigonometric functions and applications. Complex numbers. Not open to students with credit in MATH 117 or 122.

103. Liberal Arts Mathematics (3) F,S Faculty

Not open to students with credit in any Mathematics course numbered higher than 103, or the equivalent. One year of high school algebra and one year of high school geometry. Non-technical course for general education emphasizing the ideas and concepts of mathematics. Will include topics such as number patterns, binary arithmetic, puzzles and games, map coloring problems and concepts in geometry. Traditional grading only.

109. Math Ideas for Teachers (1) F,S Faculty

Topics in mathematics applicable to teachers. Through the use of manipulative materials, games, mathematical activities and puzzles, students will explore mathematical concepts in a creative, open environment.

110. Mathematics for Elementary Teachers I (3) F,S Faculty

Prerequisites: One year of high school algebra, one year of high school geometry. Theory of the structure, arithmetic and algebra of the real number system. Designed for prospective elementary teachers. Not open for credit to mathematics majors.

111. Mathematics for Elementary Teachers II (3) F,S Faculty

Prerequisite: MATH 110. Elements of logic and the basic concepts of informal geometry; introduction to trigonometry. Not open for credit to mathematics majors.

112. College Algebra (3) F,S Faculty

Prerequisites: MATH 010 or two years of high school alegbra. Study of algebra including linear and quadratic equations and systems; matrices and determinants; theory of equations; polynomial, exponential and logarithmic functions and their graphs; permutations and probability. Designed for students majoring in a life or social science. Not open to students with credit in MATH 117 or 122.

114. Finite Mathematics (3) F,S Faculty

Not open to students with credit in MATH 233 or 380. Prerequisite: MATH 010 or two years of high school algebra. Combinatorial techniques and introduction to probability. Equations of lines and systems of linear equations, matrices, introduction to linear programming.

115B. Calculus for Business (3) F,S Faculty

Not open to students with credit in MATH 115S, 120, or 122. Prerequisite: Two years of high school algebra, or MATH 010, or the equivalent. Functions, derivatives, optimization problems, graphs, partial derivatives. Lagrange multipliers, integration of functions of one variable. Applications to business and economics. Emphasis on problem-solving techniques.

115S. Survey of Calculus I (3) F,S Faculty

Prerequisite: MATH 112 or its equivalent. Real numbers and functions; limits and continuity; differentiation and integration of functions of one variable with applications to physical, life and social sciences. Emphasis on problem-solving techniques rather than theory. Not open to students with credit in MATH 115B, 120 or 122.

116. Survey of Calculus II (3) S Faculty

Prerequisite: MATH 115S. Further topics in differentiation and integration of functions of one variable including numerical integration, use of tables and improper integrals; introduction to calculus of several variables and elementary differential equations. Not open to students with credit in MATH 123 or 224.

117. Precalculus Mathematics (4) F,S Faculty

(Not open to students with credit in MATH 122.) Prerequisites: At least 3 years of high school mathematics including at least 2 years of algebra and 1/2 year of trigonometry, or MATH 101. Polynomials, exponential, logarithmic, and trigonometric functions. Complex numbers, mathematical induction, binomial theorem, conic sections.

120. Calculus for Technology (4) F,S Faculty

Prerequisite: MATH 010 and 101 or two years of high school algebra including trigonometry. Real numbers and functions; limits and continuity; differentiation and integration of functions of one variable. Introduction to calculus of several variables. Applications to science and technology. Not open for credit to students with credit in MATH 115B, 115S or 122. (Lecture 3 hours, problem session 2 hours.)

122. Calculus I (4) F,S Faculty

Prerequisite: A grade of C or better in MATH 117 or four years of high school mathematics including two years of algebra, one year of geometry, one-half year of trigonometry and one additional senior-level course. Derivatives and applications of the derivative. Integration and applications of integration. Analytic geometry. (Lecture 3 hours, problem session 2 hours.)

123. Calculus II (4) F,S Faculty

Prerequisite: A grade of C or better in MATH 122. Transcendental functions. Techniques of integration. Further applications of the integral. Infinite series. (Lecture 3 hours, problem session 2 hours.)

170. Programming Using BASIC (3) F,S Faculty

Prerequisite: MATH 117 or consent of instructor. Introduction to computing using the BASIC programming language. Computers and algorithms. Computer solution of numerical and non-numerical problems using BASIC. (Lecture 2 hours, problem session 2 hours.) This course is intended primarily for students obtaining a teaching credential. Other students will be admitted on a space-available basis.

174. Programming and Problem Solving I (3) F,S,SS Faculty

Prerequisites: A grade of C or better in MATH 117 or the equivalent. Introduction to a block-structured high-level programming language (PASCAL) and to the programming language FORTRAN 77. For both languages the topics include program structures, data types and program development. Not open for credit to students with credit in MATH 272. [Lecture 2 hours, laboratory 2 hours]

180. Elementary Statistics (3) F,S Faculty

Prerequisite: MATH 010 or two years of high school algebra. Nature of statistics and probability theory; description of sampled data. Random sampling, normal distribution assumption and its consequences; tests of hypotheses and estimation; correlation, regression, analysis of variance. Non-parametric methods. (Lecture 3 hours.)

224. Calculus III (4) F,S Faculty

Prerequisite: A grade of C or better in MATH 123. Vectors and parametric equations. Solid analytic geometry. Multiple integrals. Line and surface integrals. Green's Theorem. Stokes' Theorem and the Divergence Theorem. (Lecture 3 hours, problem session 2 hours.)

233. Discrete and Combinatorial Mathematics I (3) F,S,SS

Prerequisites: A grade of C or better in Math 122. Permutations and combinations, fundamentals of logic and set theory, relations and functions, languages and finite state machines, Boolean algebra and switching functions. Applications in computer science and discrete probability. Not open for credit to students with credit in Math 343.

246. Elementary Linear Algebra (3) S Faculty

Prerequisite: Math 114 or 117 or consent of instructor. Vectors, Matrices; Matrix operations, rank, determinant and similarity. Methods for inverting a matrix and solving systems of linear algebraic equations. Methods of obtaining eigenvectors of matrices. Applications in business and in natural and social sciences. Emphasis on computational methods rather than theory.

270. Introduction to FORTRAN Programming (3) F,S Faculty

Prerequisite: A grade of C or better in Math 122. Application of FORTRAN 77 to solve numerical and non-numerical problems. Not open to students with credit in Math 174. [Lecture 2 hours, laboratory 2 hours].

273. COBOL Programming (3) F,S Faculty

Prerequisite: A previous course in computing, such as MATH 270 or Q S 240. Fundamentals of the computer programming language COBOL. Data division, input and output file handling for tapes and disks. Computer assignments using COBOL. (Lecture 3 hours.)

274. Programming and Problem Solving II (4) F,S,SS Faculty

Prerequisites: A grade of C or better in Math 174. Programming methodology, data structures, recursion, searching and sorting. Problem solving using these concepts with the same block-structured high-level language used in Math 174. Not open for credit to students with credit in Math 272. [Lecture 3 hours, laboratory 2 hours].

295. Topics in Mathematics (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics in mathematics for students interested in mathematics education or in pure or applied math. Specific topics will be announced in the Schedule of Classes. May be repeated with different topics for a maximum of six units of credit.

297. Directed Study (1-3) F,S Faculty

Prerequisite: Consent of instructor. Designed for students who wish to undertake special study, at the lower division level, which is not a part of any regular course, under the direction of a faculty member. Individual investigation, studies or surveys of selected problems.

Upper Division:

310. History of Mathematics (3) S Gittleman

Prerequisites: MATH 116 or 123. Designed to trace the continuous growth and development of mathematical thought and practices from the primitive origins to the present. Fundamental concepts, methods and developments are studied; evolution of areas in mathematics is traced. Recommended for all mathematics majors and minors preparing to teach. Introduction to number theory.

311. Topics of Enrichment in Mathematics for the Elementary Teacher (3) Afflack, Manheim

Prerequisites: One year of high school algebra, one year of high school geometry and possession of a valid teaching credential or consent of instructor. Enrichment topics in mathematics for the elementary teacher, such as theory of arithmetic, numeration systems, elementary logic, mensuration, metric system, topological equivalence, probability and statistics and network theory. Not open for credit to mathematics majors.

317. Introduction to Abstract Mathematics (3) F,S Faculty

Prerequisite: MATH 123. Introduction to topics which form a background for the study of abstract mathematics with emphasis on methods of developing and writing proofs. Topics will include set theory, complex numbers and abstract algebra. Not open for credit to anyone with a grade of C or better in MATH 444.

321. Introduction to File Processing (4) F,S Dick, Doan, Mahoney, Seewerker

Prerequisites: MATH 274 or CSE 342. Introduction to file processing, file organization and data management systems. Computer projects in the design and implementation of such systems. (Lecture 3 hours, problem session 2 hours.)

323. Introduction to Numerical Analysis I (4) F,S Chen, Cohen, Doan, Lax, Lu

Prerequisites: Math 224 and either Math 174 or 270. Numerical solution of nonlinear equations, systems of linear equations, and ordinary differential equations. Interpolating polynomials, numerical differentiation, and numerical integration. Computer implementation of these methods. (Lecture-discussion 3 hours, problem session 2 hours.)

325. Computer Organization and Assembly Language Programming (4) F,S Margulies, Seewerker, Smoke

Prerequisites: MATH 274 and CSE 101. Basic computer organization, representation of information and instruction, addressing techniques, input/output, assembly language programming, macros and macro processing. Introduction to software systems, including assemblers, linkage editors and loaders. Programming assignments in assembly language. (Lecture 3 hours, lab 2 hours.)

326. Operating Systems (4) F,S Dorn, Gittleman, C.Maltz, Margulies, Seewerker

Prerequisites: MATH 325 and a grade of C or better in MATH 233. An introduction to the structure and functions of operating systems. Topics include: interrupt handling, processes and interprocess communication, memory management, resource scheduling, information sharing and protection, and file systems. Project implementation. (Lecture 3 hours, lab 2 hours.)

330. Introduction to Mathematical Logic (3) F Beckwith, Mardellis, Turner, Wilson

Prerequisite: MATH 115S or 122. Symbolic methods of propositional calculus, general theory of inference, transition from formal to informal proofs, theory of definition, elementary set theory and axiomatic method.

333. Discrete and Combinatorial Mathematics II (3) F,S Ali, Dick, Foster, Mahoney, Wayman

Prerequisites: A grade of C or better in Math 233. The principle of inclusion and exclusion, generating functions, recurrence relations, coding theory, Polya's method of enumeration, graph theory and trees. Applications in computer science.

340. Theory of Algebraic Equations (3) S Albert

Prerequisite: MATH 116 or 123. Complex numbers, general theorems on algebraic equations, the discriminant, location and approximation of roots of equations, solution of the cubic and quartic equation; determinants and their application to simultaneous linear equations, symmetric function.

345. Applied Linear Algebra (3) F,S Faculty

(Not open to students with credit in MATH 346.) Prerequisite: MATH 224. Matrix algebra, solution of systems of equations, determinants, eigenvalues, eigenvectors, vector spaces, quadratic forms, linear transformations in the space R. Enphasis on topics with applications in science and engineering.

346. Linear Algebra (3) F,S Faculty

(Not open to students with credit in MATH 345.) Prerequisite: MATH 224. Vector spaces. Matrix algebra, determinants, eigenvalues and eigenvectors. Cayley-Hamilton theorem. Linear transformations. Similarity, invariants and canonical forms.

350. Projective Geometry (3) S Albert, Verdina

Prerequisite: MATH 224 or consent of instructor. Homogeneous coordinates. Projectivities. Collineations and correlations. Polarities. Projective properties of conics. Linear and quadratic transformations. Applications to computer graphics may be included.

355. College Geometry (3) F Albert, Verdina

Prerequisite: MATH 116 or 123. Transformations, motions, similarities, geometric objects, congruent figures, the axioms of geometry, and selected topics in advanced Euclidean geometry.

361A. Introduction to Mathematical Analysis I (3) F,S Faculty

Prerequisite: MATH 224. Rigorous study of calculus and its foundations. Structure of the real number system. Sequences and series of numbers. Limits, continuity and differentiability of functions of one real variable. Not open to students with credit in MATH 460A.

361B. Introduction to Mathematical Analysis II (3) F,S Faculty

Prerequisite: MATH 361A. Riemann integration. Topological properties of the real number line. Sequences of functions. Introduction to the calculus of several variables. Not open to students with credit in MATH 460B.

364A. Ordinary Differential Equations I (3) F,S Faculty

Prerequisite: MATH 224. First order differential equations; undetermined coefficients and variation of parameters for second and higher order differential equations, series solution of second order linear differential equations; systems of linear differential equations; applications to science and engineering.

*364B. Ordinary Differential Equations II (3) S Bachar, Fatt, Lax, Mcleod

Prerequisite: MATH 364A. Existence-uniqueness theorems; Laplace tranforms; difference equations; nonlinear differential equations; stability, Sturm-Liouville theory; applications to science and engineering.

370A. Applied Mathematics I (3) F,S Faculty

Prerequisite: MATH 224. First order ordinary differential equations, linear second order ordinary differential equations, numerical solution of initial value problems, Laplace transforms, matrix algebra, eigenvalues, eigenvectors, applications. Not open for credit to mathematics majors.

370B. Applied Mathematics II (3) F,S Faculty

Prerequisite: MATH 370A. Fourier series, separation of variables for partial differential equations, special functions, functions of a complex variable, contour integration, applications. Not open for credit to mathematics majors.

380. Probability and Statistics (3) F,S Black, Cohen, Maltz, Martinez, Smoke

Prerequisite: MATH 224. Frequency interpretation of probability. Axioms of probability theory. Discrete probability and combinatorics. Random variables. Distribution and density functions. Moment generating functions and moments. Sampling theory and limit theorems. Estimation and hypothesis testing. Not open to students with credit in MATH 380A or 382A.

*381. Mathematical Statistics (3) S Black, Cohen, Maltz, Martinez

Prerequisite: MATH 380. Linear algebra recommended. Maximum likelihood and method of moments estimation. Efficiency, unbiasedness, and asymptotic distribution of estimators. Neyman-Pearson Lemma. Goodness-of-fit tests. Correlation and regression. Experimental design and analysis of variance. Non-parametric methods. Not open to students with credit in MATH 380B.

*382. Random Processes (3) F Black, Foster, James, Lax

Prerequisite: MATH 380. Further topics in probability. Markov processes. Renewal theory. Random walks. Queuing theory. Poisson processes. Brownian motion. Not open to students with credit in MATH 382B.

383. Statistical Data Analysis (4) S Chen

Prerequisites: MATH 270 and 380, or consent of instructor. Data analysis of discrete and continuous random variables; multiple regression and correlation, analysis of variance and covariance, discriminant analysis, principle component analysis, canonical correlation. Analysis of computerized statistical packages. Random number generation. Lecture 3 hours, problem session 2 hours.

*420. Artificial Intelligence (4) F Gittleman

Prerequisites: MATH 325 or Computer Science and Engineering 342 or permission of instructor, and a grade of C or better in MATH 233. (No credit for students with credit in MATH 421). Selected topics from heuristic programming, pattern recognition, learning systems, problem solving systems and formal symbol manipulating systems. (Lecture 3 hours, problem session 2 hours.)

*422. Organization of Programming Languages (4) F,S Gittleman, Seewerker

Prerequisites: MATH 321, MATH 325, and grade of C or better in MATH 233. MATH 321 and 325 and a grade of C or better in MATH 343. Comparison of programming languages (PASCAL, Ada, PL/1, FORTRAN, etc.) in their design and structure regarding features such as data types, control structures, run-time considerations, etc. Computer projects illustrating some of these concepts. (Lecture 3 hours, problem session 2 hours.)

423. Intermediate Numerical Analysis (3) S Faculty

Prerequisites: MATH 323, and 345 or 346. Numerical solutions of systems of equations, calculation of eigenvalues and eigenvectors, approximation of functions, solution of partial differential equations. Computer implementation of these methods.

*425. Introduction to Database Management Systems (3) S Seewerker

Prerequisites: MATH 321, 325, and a grade of C or better in MATH 233. Introduction to database concepts. Hierarchical, network, and relational data models. Data normalization. Data description languages. Query facilities.

*427. Computer Graphics (3) F,S Faculty

Prerequisites: MATH 274; MATH 345 or 346; and a grade of C or better in MATH 233. MATH 272 and 345 or 346. The hardward and software of interactive computer graphics. Transformations; windowing and viewports; rendering of geometry including curves, surfaces, and solids; device independent graphics packages; applications of computer graphics to problem solving.

*428. Analysis of Algorithms (3) S Dick

Prerequisite: MATH 333. (No credit for students with credit in MATH 424). Applications of standard combinatorial techniques to applied programming problems. Rigorous analysis of the correctness and complexity of algorithms. Tree and graph algorithms are emphasized. Topics include depth first search algorithm with related applications, sorting, union find problem, divide-and-conquer technique and weighted-edge problems.

429. Compiler Construction (3) F,S Dick, Gittleman, Margulies

Prerequisite: MATH 325 or CSE 340, and a grade of C or better in MATH 233. Syntax directed compiler study. Organization of a compiler and overall design: parsing, semantic analysis, optimization and code generation. (Lecture-problems-computer projects 3 hours.)

*430. Mathematical Logic (3) S Turner, Wilson

Prerequisite: MATH 330. Introduction to formal logical systems. Formal proofs in propositional and first order predicate calculi. Completeness theorems and problems related to consistency and decidability.

*435. Introduction to Set Theory (3) F Beckwith, Eylar, Turner

Prerequisite: Six units of upper division mathematics or consent of instructor. Axioms for set theory; relations and functions, orders; proof and definition by induction; well-ordered sets; transfinite induction and recursion; ordinal and cardinal numbers; Axiom of Choice, well-ordering principle, Zorn's Lemman and their equivalents; continuum hypothesis; ordinal and cardinal arithmetic.

*440. Number Theory (3) F Eylar, Gittleman

Prerequisite: MATH 224. Divisibility, congruences, primitive roots, continued fractions, algebraic numbers, partitions.

444. Introduction to Higher Algebra (3) F,S Faculty

Prerequisite: MATH 224. Recommended: MATH 317. Groups, subgroups, cyclic groups, symmetric groups, Lagrange's theorem, quotient groups. Homomorphisms and isomorphisms of groups. Rings, integral domains, ideals, quotient rings, homomorphisms of rings. Further topics in groups, rings and fields as time permits. Not open to students with credit in MATH 344.

*451. Differential Geometry (3) F Bachar, Fatt, Margulies

Prerequisite: MATH 364A or 370A (either can be taken concurrently). Structure of curves and surfaces in space, including Frenet formulas of space curves; frame fields and connection forms; geometry of surfaces in Euclidean three space; Geodesics and connections with general theory of relativity.

452. Introduction to Topology (3) F Austin, Bachar, Councilman, Eylar

Prerequisite: MATH 361A. Introduction to the basic concepts of point set topology such as topological spaces, continuous functions, compactness and metric spaces. Recommended for those who intend to study analysis, complex analysis or differential geometry.

*461. Introduction to Complex Analysis (3) S Austin, Beckwith, Smith, Wayman

Prerequisite: MATH 361A. Theory and applications of complex variables. Analytic functions, integrals, power series and applications.

*463. Multivariable Calculus (3) F Bachar, Margulies

Prerequisites: MATH 345 or 346, 361B. Topology of Euclidean spaces. Partial derivatives. Derivatives as linear transformations. Inverse and implicit function theorems. Jacobians, vector calculus, Green's and Stokes' theorems. Variational problems.

*470. Introduction to Partial Differential Equations (3) F Fatt, Lu, Margulies

Prerequisite: MATH 370A or 364A. First and second order equations, characteristics, Cauchy problems, elliptic, hyperbolic, and parabolic equations. Introduction to the boundary and initial value problems and their applications.

*472. Fourier Analysis (3) F Fatt, Warner

Prerequisite: MATH 364A or 370A. Theory of Fourier series and integrals with applications to Physics and Engineering. Linear spaces of functions, Bessel's inequality, Parseval's identity. Convergence of Fourier series, the Dirichlet conditions, Fejer's theorem, and the Gibbs phenomenon. Fourier integral Transforms. Orthogonal families of functions obtained from Sturm-Liouville boundary value problems.

*473. Laplace Transform (3) S Cohen, Fatt, James, McCullough

Prerequisite: MATH 364A or 370A. Theory of the Laplace transform and its application to linear problems in electrical, mechanical and thermal systems.

*479. Mathematical Modeling (3) S Chen, Lax, McLeod

Prerequisites: MATH 364A or 370A, 345 or 346, and consent of instructor. Application of mathematics to develop models of phenomena in science, engineering, business and other disciplines. Evaluation of the benefits and limitations of mathematical modeling.

*480. Topics in Probability and Statistics (3) F,S Chen, Foster, Maltz

Prerequisites: MATH 380, consent of instructor. Topics of current interest in probability and/or statistics. May be repeated with different topics for a maximum of six units of credit.

*485. Mathematical Programming (3) F Gittleman, James

Prerequisites: MATH 345 or 346 and senior standing. Linear and nonlinear programming: simplex methods, duality theory, theory of graphs, Kuhn-Tucker theory, gradient methods and dynamic programming.

*491. Secondary School Mathematics Seminar (1) S Dorn

Prerequisite: Concurrent enrollment in EDSS 470A,B or EDSS 471A,B or possession of a valid California Credential. Study of the content of the secondary mathematics curriculum as it applies to mathematics teaching problems, classroom techniques, performance evaluation.

*495. Topics in Modern Mathematics (3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest from mathematics literature.

496. Topics in Computer Science (1-3) S 1986 Faculty

Prerequisite: Consent of Instructor. Topics of current interest from Computer Science. May be repeated to a maximum of 6 units, with different topics.

*497. Directed Studies (1-3) F,S Faculty

Prerequisites: Junior or senior standing and consent of instructor. Readings in areas of mutual interest to student and instructor which are not a part of any regular course. A written report or project may be required. May be repeated to a maximum of three units of credit.

Graduate Division:

521. Database Management Systems (3) F Faculty

Prerequisites: MATH 321 and 425. Database systems architecture: data models, views, mappings and languages; database design; semantics, design methodology and tools; implementation issues; storage structures, query processing, data integrity, concurrency control, recovery and protection, transaction management; database machines and distributed databases.

526. Advanced Operating Systems (3) F Margulies

Prerequisites: MATH 326 and 333, or equivalents. This course covers the theoretical foundations of the concepts applied in the design of operating systems. Topics include: control of concurrent processes, deadlocks, mutual exclusion, virtual memory, resource management, and scheduling.

527. Advanced Computer Graphics (3) Mahoney

Prerequisite: MATH 427 or equivalent. Graphics system design. Geometric modeling including solid modeling. Visual realism. Topics of current interest.

528. Advanced Analysis of Algorithms (3) F Dick, Wilson

Prerequisites: MATH 333 and 428. Theoretical analysis of algorithms. Topics include: divide and conquer, dynamic programming and greedy algorithms; basic search and traversal techniques including search trees; sorting; matrix manipulations; NP-completeness.

529. Advanced Compiler Design (3) S Dick

Prerequisites: MATH 333 and either MATH 429 or CSE 444.) (No credit for students with credit in MATH 524). This course covers some of the more difficult real-world and theoretical problems encountered by the compiler writer. Topics include: error handling, table management, the symbol table, run-time problems, code optimization, code generation and register allocation.

540A. Higher Algebra I (3) Ali, Beckwith, Mahoney, Sexauer, Wilson

Prerequisite: MATH 444 (MATH 346 is recommended). Groups, rings, fields. Galois fields and related topics.

540B. Higher Algebra II (3) S Ali, Beckwith, Mahoney, Sexauer, Wilson

Prerequisite: MATH 540A. Continuation of MATH 540A.

550A. Topology I (3) S Austin, Bachar, Councilman, Eylar, Lu

Prerequisite: MATH 361A. (MATH 352 is recommended.) Study by analytic methods of geometric properties that are invariant under bicontinuous transformations.

550B. Topology II (3) Councilman, Eylar, Lu

Prerequisite: MATH 550A. Theory of singular homology groups, relative homology groups; simplicial homology; cohomology; applications of the methods of algebraic topology to problems in analysis.

560. Applied Functional Analysis (3) S Bachar, Lax, McCullough, Warner

Prerequisites: MATH 345 or 346, and 361B. Introduction to metric spaces, normed spaces, Banach spaces, inner-product spaces, fixed-point theorems, approximation theory, and Lebesgue Integration, with applications.

561A. Real Analysis I (3) S Austin, Bachar, Margulies, Schwartz

Prerequisite: MATH 361B. Point set theory, metric spaces, Baire category theorems, measures as set functions, Lebesgue, Baire and Borel measures, Fubini's theorem and Radon's theorem.

561B. Real Analysis II (3) F Bachar, Margulies, Schwartz

Prerequisite: MATH 561A. Functional analysis including Banach Spaces, Hilbert Spaces, Lp Spaces, Riesz representation theorem, algebras of continuous functions, measures as linear functionals, Banach algebras and spectral theory.

562A. Theory of Functions I (3) F Bachar, Cohen, McCullough, Warner

Prerequisite: MATH 361B. (MATH 461 is recommended.) Axiomatic development of real and complex numbers; elements of point set theory; differentiation and analytic functions, classical integral theorems; Taylor's series, singularities, Laurent series, calculus of residues.

562B. Theory of Functions II (3) S Bachar, Cohen, McCullough, Warner

Prerequisite: MATH 562A. Multiple valued functions, Riemann surfaces; analytic continuation; maximum modulus theorem; conformal mapping, with applications, integral functions; Gamma function, zeta function, special functions.

570. Partial Differential Equations (3) F Fatt, Lu, Margulies

Prerequisites: MATH 361A and B, 364A, and one of 370B, 470, 472. Cauchy's problem; classification of second order equations; methods of solution of hyperbolic, parabolic, and elliptic equations.

575. Calculus of Variations (3) S Cohen, Lax, McLeod

Prerequisites: MATH 361A, 364A or 370A. Classical theory. Necessary and sufficient conditions for extrema of multiple integrals. Hamilton-Jacobi theory. Applications to eigenvalue problems. Direct methods. Pontryagin maximum principle. Principle of optimality.

576. Numerical Analysis (3) F Cohen, Lax Lu

Prerequisites: MATH 323, 361A and 364A. Advanced numerical methods. Introduction to error analysis, convergence, and stability of numerical algorithms. Topics may include solution of ordinary differential equations, partial differential equations, systems of linear and nonlinear equations, and optimization theory.

580. Advanced Mathematical Statistics (3) F Chen, Cohen, Smoke

Prerequisite: MATH 381. The general decision problem; Neyman-Pearson lemma; uniformly most powerful, unbiased, and similar tests; invariant tests, general linear hypothesis. Principles of sufficiency, and efficiency of estimates, properties of maximum likelihood estimates; variance bounds; confidence regions, tolerance regions. Non-parametric methods.

590. Theory of Approximation (3) S Cohen

Prerequisite: MATH 361B. Recommended: MATH 561A. The approximation problem. Least squares and Chebyshev approximation. Approximation with the L1 norm. Harmonic analysis. The Weierstrass approximation theorem. Rate of convergence and computational methods.

595. Special Topics in Computer Science (3) Faculty

Prerequisite: MATH 427 or equivalent. Graphics system design. Geometric modeling including solid modeling. Visual realism. Topics of current interest.

695. Seminar in Mathematics (3) F,S Faculty

Prerequisite: Consent of instructor. Presentation and discussion of advanced work, including original research by faculty and students. Topics to be announced in the Schedule of Classes. May be repeated for credit.

697. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Research on a specific area in mathematics. Topic for study to be approved and directed by advisor in the mathematics department.

698. Thesis (2-4) F,S Faculty

Prerequisite: Completion of at least one 500 and/or 600 level mathematics course. Formal report of research or project in mathematics.

Medieval and Renaissance Studies

School of Humanities

Director: Edward A. Gosselin (History)
Program Office: Faculty Office 2 (FO2), Room 214
Telephone: 498-4417, 498-4431 (messages)
Assistant Director: Sarah C. Spence (Comparative Literature)
Faculty: Professors: Rifaat Ali Abou-El-Haj (History), Dorothy deF. Abrahamse (History), Arthur M. Axelrad (English), Irmgard Bartenbach (German, Russian and Classics), A. Robert Bell (English), Blaze O. Bonazza (English), Donna Boutelle (History), Robert H. Eisenman (Religious Studies), Helen C. Gilde (English), Edward A. Gosselin (History), Daniel Guerriere (Philosophy), J. Charles Jernigan (Comparative Literature), Stephen R. Knafel (English), Lawrence S. Lerner (Physics-Astronomy), Diane L. Martel (Art); Associate Professors: N. Anthony Battaglia (Religious Studies), David Cressy (History), Kristine K. Forney (Music), Eugene E. Kessler (French/Italian), Joanna Vechiarelli Scott (Political Science); Assistant Professor: Sarah C. Spence (Comparative Literature).

The Center for Medieval and Renaissance Studies sponsors activities that explore the complex culture of the Middle Ages and the Renaissance. It co-sponsors an annual extravaganza, usually lasting several days, to commemorate a person, place, or event of significance from these periods; recent topics have included Richard III, and Florence and Rome 1200-1600. The Center also offers courses on a wide range of medieval and Renaissance issues, supports faculty research both here and abroad, and is associated with most of the local and national societies relevant to research in these fields.

In addition, the Center has established an interdisciplinary program which offers students interested in these periods the opportunity to pursue a course of study leading to a Certificate in Medieval or Renaissance Studies. Courses which are used to meet the certificate requirements may be counted, where applicable, toward the General Education requirements, the major, and minor requirements.

Interested students should apply to the Director, FO2-214, or to members of the supporting faculty for further information.

Requirements for the Certificate in Medieval and Renaissance Studies:

1. A bachelor's degree with an approved major. (Certificate may be completed prior to the completion of the B.A. requirement or while in the process of working toward an advanced degree.)
2. Consultation and approval of the program with a faculty advisor.
3. Intermediate level language proficiency on the college level, including a course in medieval or Renaissance literature of the language. It is expected that the language selected will be Latin, but with the consent of the advisor, Anglo-Saxon, French, German, Italian, Spanish or Greek may be substituted.
4. Twenty-four units selected from the following courses. Students should elect to concentrate in either the medieval or Renaissance period.
   a. Required courses (12 units): one of the following sequences for six units: HIST 316, 317, or 317, 332, or 332, 333. One of the following literature courses for three units: C/LT 431, 432; ENGL 451, 452. One of the following Art history courses for three units: ART 409, 410, 423. 424. 425.
   b. Nine units selected from the following courses: ART (history) 408, 409, 410, 423, 424, 425, 499Q*; C/LT 349*, 422, 430, 431, 432, 449*, 450*; ENGL 426, 431, 451, 452, 462, 463, 468A, 469*; FREN 470, 471; GERM 315; GK 490*, 499*; HIST 301*, 316, 317, 318, 331, 332, 333, 341A, 351, 353, 411, 431, 432, 490*, 494, 495*, 499*; LAT 490*, 499*; MUS 360; PHIL 403; POSC 301, 302; R/ST 314, 331, 471, 472, 490*, 494*, 495*; SPAN 330; THEA 321, 422, 490*. Graduate courses: ART 611*; ENGL 550, 551, 652, 661, 681; FREN 604, 685; GERM 511; HIST 510*, 611, 631*; MUS 561; PHIL 630*, 690*; SPAN 525, 535, 538; THEA 621*.
   c. Three units of directed research on a medieval or Renaissance topic in any of the following courses: ART (history) 497, C/LT 499, ENGL 499, FREN 499, GERM 499, GK 499, HIST 498, R/ST 490, PHIL 499, SPAN 499, THEA 498. Graduate courses: ART (history) 697, ENGL 697, FREN 697, GERM 652, 697, HIST 697, PHIL 697, SPAN 697, THEA 694.

* Within an approved medieval or Renaissance topic only certain special studies topics may be repeated for credit with approval.

Mediterranean Studies

School of Humanities

Director: David C. Hood (History)
Department Office: Faculty Office 2 (FO2), Room 108
Telephone: 498-4420
Faculty: Professors: Dorothy deF. Abrahamse (History), Daniel Guerriere (Philosophy), David C. Hood (History), J. Charles Jernigan (Comparative Literature), Roberta Markman (Comparative Literature), Diane Martel (Art), G.A. Spangler (Philosophy), Thomas P. Trombetas (Political Science); Associate Professors: Ferdinand Plourde (English).

Students desiring information should contact the department office for referral to one of the faculty advisors.

Mediterranean Studies offers an interdisciplinary approach to the classical world which combines history, language, philosophy and literature. Since the program draws upon a variety of traditional disciplines, the student will be exposed to diverse courses designed to present various aspects of the classical world.

Specifically, this program is designed to serve the interests and goals of (1) classics, history, philosophy, English and comparative literature majors who wish to broaden their own knowledge about the ancient world, (2) students who plan to teach about this period or teachers already in the field who need to update their own knowledge, (3) the general student who wishes to explore a further educational dimension by focusing on the roots of the Western tradition.

The Classics Club, the student association for Mediterranean Studies, is quite active. The Club, together with Program faculty, go on excursions to the Getty Museum, make semi-annual trips to Greek restaurants in the greater Los Angeles area, and attend plays and other cultural events relating to the Ancient Mediterranean World.

Students pursuing any approved degree or credential program of the University may at the same time earn a Certificate in Mediterranean Studies. Courses taken to meet the requirements may also simultaneously be used, where applicable, to meet general education requirements or the degree or credential requirements of cooperating departments. Certification of successful completion of requirements will be issued upon the recommendation of the Director of the Certificate in Mediterranean Studies program. Interested students should apply to the Director, Professor David Hood (FO2-108), or to members of the supporting faculty for further information.

Requirements for the Certificate in Mediterranean Studies:

Twenty-three semester units are required for a certificate, which normally may be completed in two years.

1. A bachelor's degree with a traditional major. (Certificate requirements may be completed prior to completion of the B.A.)
2. A minimum of two semesters of either GK 221-222 or LAT 221-222.
3. Fifteen units chosen from four of the disciplines listed below chosen in consultation with the student's advisor. No more than six units of any one discipline shall apply towards the certificate, excluding the requirements in No. 2.
4. Cumulative GPA of 2.50 in all courses in the student's approved certification program.

Mediterranean Studies Courses:

A. GK 331, 332, 351, 352, 490*, 499*.
B. LAT 331, 332, 351, 352, 490*, 499*.
C. HIST 313, 314, 318A, 490*, 495*.
D. PHIL 203, 421, 422, 491.
E. CLSC 310IC, C/LT 420IC (same course as HIST 310IC), 421 (same course as THEA 421), 452*, 499*, ENGL 431, 499*, POSC 415.

* If Applicable and approved by student's advisor.

Philosophy

School of Humanities

Department Chair: William M. Johnson
Department Office: McIntosh Humanities Building (MHB), Room 917
Telephone: 498-4331
Faculty: Professors: Shane Andre, William Bonis, Daniel Guerriere, William H. McGowan, Edward Quest, Virginia Hartt Ringer, G.A. Spangler; Associate Professors: Cheryl Clark, William M. Johnson; Assistant Professor: Paul C.L. Tang.
Emeritus Faculty: G. Eric Massey, J. B. Maue, Francisco Peccorini, Gerald B. Strickler.
Department Secretary: Roberta Mathias

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisor, Graduate Advisor.

Bachelor of Arts in Philosophy (code 2-6807)

The undergraduate Philosophy program challenges students to think about some of the most profound questions people consider: "What is most important in a human life?"; "What can I know?"; "Does God exist?"; "Do human beings have free will?"; "What are the guidelines for morality?"; "What is 'the soul', or 'the mind'?". No aspect of our lives is immune from philosophical scrutiny. These and other questions are raised in courses in special areas of philosophical concern such as logic, theory of knowledge, ethics, metaphysics, philosophy of religion, philosophy of science, and aesthetics. They are also raised in their historical context in courses which focus on great philosophers such as Plato, Aristotle, Kant, the great "Rationalists" and the great "Empiricists". In addition, the Philosophy curriculum encourages students to examine our contemporary situation (with such courses as Existentialism, Phenomenology, Philosophy of Language, and Conflicts in Political Philosophy), and to extend their thinking with the philosophies of other cultures (such as those of China, Japan, and India).

Requirements for the Bachelor of Arts in Philosophy (code 2-6807)

A minimum of 36 units in philosophy divided as follows:

Lower Division:

A minimum of 12 units in philosophy, including PHIL 100 or 160, 270, 203 and 204.

Upper Division:

A minimum of 24 units in philosophy, including PHIL 342, 363, 382; and at least 6 units chosen from 413, 414, 421, 422, 423, 424; and at least 3 units chosen from 417, 418, 416, 419. The required 6 units remaining are to be selected from philosophy courses with the advice and consent of the student's departmental advisor.

Minor in Philosophy (code 0-6807)

The minor in philosophy provides a structured yet flexible program for the student majoring in a different discipline, but who is interested in philosophy either as an adjunct to the degree major or as a foundation for the student's future intellectual life.

Requirements for the Minor:

A minimum of 21 units in philosophy, of which at least 15 are upper division and include: (a) at least three units chosen from PHIL 342, 363, 382; (b) at least three units chosen from PHIL 413, 414, 421, 422, 423, 424; (c) at least three units selected from the list given in (b), but in addition to the units required in (b), or selected from PHIL 417, 418, 416, 419.

Concentration in Philosophy for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required; 18 of which must be upper division.

Required Courses:

(1) at least 6 units selected from PHIL 342, 363, or 382; (2) at least 3 units selected from PHIL 413, 414, 421, 422, 423, or 424; (3) at least 3 units selected from PHIL 417, 418, 416, or 419; or selected from the list given under (2) above but in addition to any course used to satisfy the requirement in (2).

The Department of Philosophy also offers graduate studies. A person with a baccalaureate degree can continue his or her investigation of fundamental questions at an increasingly sophisticated level, both for the intrinsic value of the investigation and the understanding which emerges, and for the disciplined structure embodied in the Master of Arts degree in Philosophy.

Master of Arts in Philosophy (code 5-6807)

Requirements for entrance to the program:

1. A bachelor's degree with a major in philosophy, or:
2. A bachelor's degree with a minimum of 24 units of upper division philosophy courses. These courses must be comparable to those required for the B.A. in philosophy at this University. (Deficiencies will be determined by the Graduate Advisor after consultation with the student and after study of transcript records.) Students who do not meet these conditions may enter as provisional graduate students. Prospective students must see the Graduate Advisor for assessment and to plan a program. Graduate assistantships and departmental reader positions are sometimes available for qualified persons. A graduate assistant works closely with a member of the faculty, but is not responsible for instruction. Application for these positions can be made to the Chair of the Philosophy Department.

Advancement to Candidacy:

1. The graduate student will be expected to demonstrate proficiency in the areas of epistemology, metaphysics, ethics and symbolic logic. (A grade of B in a semester course in each of these areas is a standard way of demonstrating proficiency).
2. The graduate student who expects to become a candidate for the Master of Arts degree in Philosophy will be required to pass a basic qualifying examination. Normally, the student must complete this examination early in graduate study.
3. Students should attempt to be Advanced upon completion of 6 units (preferably no more than 9 units) on the Program. The Writing Proficiency Exam (WPE) is required for Advancement.
4. Although there is no formal language requirement, the Philosophy Department may require the student to demonstrate a foreign language proficiency whenever — at the department's discretion — a language proficiency is appropriate to the area of study.
5. The student's graduate program must be approved by the Graduate Advisor, the Department Chair, and the School Associate Dean of Graduate Studies (Educational Policy).

Requirements for the Master of Arts

1. The student's graduate program must consist of not less than 30 units of acceptable upper division and graduate courses, of which at least 24 units must be in philosophy. The remaining six units must be chosen in conference with the student's faculty advisor, and may be taken either in philosophy or in another field of study closely related to the candidate's educational objectives. The program must include a minimum of 18 units of graduate courses, with a minimum of six units from the 600 series. PHIL 697 and 698 may not count toward fulfillment of the 600 series minimum requirement.
2. A thesis or comprehensive examination.

Courses (PHIL):

Lower Division:

100. Introduction to Philosophy (3) F,S Faculty
Scope, basic principles and a brief analysis of the major problems of philosophy.

160. Introductory Ethics (3) F,S Faculty
Concepts of right and wrong, good and bad, and the application of moral principles to problems of everyday life.

170. Elementary Logic (3) F,S Faculty
Elements of clear, straight, orderly and valid thought, including deductive and inductive reasoning and the accurate use of language. This course explores practical applications of logic.

203. History of Early Philosophy (3) F,S Faculty
From Thales to the Renaissance including the systems of Socrates, Plato and Aristotle, and their influence on European philosophy through the medieval period.

204. History of Modern Philosophy (3) F,S Faculty
From the Renaissance to the 20th Century, including the development of modern scientific processes, and the philosophical systems of empiricism, rationalism, idealism, etc.

270. Symbolic Logic I (3) F,S Faculty
Introduction to the formal techniques of evaluating arguments.

Upper Division:
NOTE: The philosophy upper-division courses fall into several curricular sub-groups, as follows:

Early Philosophy

306. Philosophies of China and Japan

307. Philosophies of India

421./521. Plato

422./522. Aristotle

490A./590A. Special Topics-Early Philosophy

Modern Tradition

413./513. Continental Rationalism

414./514. British Empiricism

423./523. Kant

424./524. Hegel

490B./590B. Special Topics-The Modern Tradition

Twentieth Century Philosophy

417./517. Phenomenology

418./518. Existentialism

416./516. Pragmatism

419./519. Analytic Philosophy

490C./590C. Special Topics-Twentieth Century Philosophy

Metaphysical Studies

330. Philosophy of Religion

342. Metaphysics

483./583. Philosophical Psychology

490D./590D. Special Topics-Metaphysical Studies

Epistemological Studies

381. Philosophy of Science

382. Theory of Knowledge

490F./590F. Special Topics-Epistemological Studies

Studies in Logic and Semantics

470./570. Symbolic Logic II

484. Philosophy of Language

490G./590G. Special Topics-Logic and Semantics

Studies in Value and Evaluation

305. Philosophy in Literature

351. Conflicts in Political Philosophy

352. Philosophy of Law

360. Ethics and Ecology

361. Philosophy of Art and Beauty

363. Ethical Theory

490H./590H. Special Topics-Value and Evaluation

305. Philosophy in Literature (3) F,S Clark, Massey, Ringer
Intensive exploration of philosophical ideas in selected literature.

306. Philosophies of China and Japan (3) F,S Faculty
Historical and critical study of the philosophical thought of China and Japan.

307. Philosophies of India (3) F,S Faculty
Historical and critical survey with emphasis on basic ideas and traditions.

330. Philosophy of Religion (3) F,S Andre, Bonis, Guerriere, Quest, Strickler
Nature and function of religion and of fundamental religious concepts and ideals.

342. Metaphysics (3) F,S Bonis, Guerriere, McGowan, Peccorini, Strickler
Prerequisite: Three units of philosophy or consent of instructor. Problems of ontology and cosmology including such concepts as matter and energy, time and space, evolution and causality.

351. Conflicts in Political Philosophy (3) F,S Ringer
Intensive study of the philosophies underlying Communism, Socialism, Fascism, and Democracy; in particular, the origins of differing views of justice, freedom, individualism, and the State.

352. Philosophy of Law (3) F,S Ringer
Study of the historical development of the philosophy of law and examination of the problems in the field ranging from general theories to analysis of fundamental legal concepts and normative issues.

360. Ethics and Ecology (3) F,S Quest

Philosophical look at ecological problems. Survey of a number of ethical positions held by the great philosophers will be made and current ecological problems will be looked at from the points of view of the ethical positions studied. Not open to students with credit in E/ST 360.

361. Philosophy of Art and Beauty (3) F,S Quest

Discussion of central problems in aesthetics, such as the possibility of objectivity in criticism, modern and traditional definitions of a work of art, truth and meaning in the fine arts, natural beauty and its relationship to excellence in music, architecture, etc.

363. Ethical Theory (3) F,S Andre, McGowan, Quest, Ringer, Strickler

Prerequisite: Three units of philosophy. In-depth discussion of such issues as obligation, responsibility, social justice, and personal ideals.

381. Philosophy of Science (3) F,S Clark, Maue, Tang

Problems, methods and fundamental concepts of the sciences, including the relationships of the sciences to each other, to mathematics and to philosophy.

382. Theory of Knowledge (3) F,S Andre, Clark, Johnson, McGowan

Prerequisite: Three units of philosophy. Investigation of such concepts as knowledge, belief, certainty. Critical study of theories concerning such issues as our knowledge of the external world, the past, other minds.

413./513. Continental Rationalism (3) F,S Bonis, Clark

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Close study of such major figures as Descartes, Spinoza and Leibniz.

414./514. British Empiricism (3) F,S Clark, McGowan

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Close study of such major figures as Locke, Berkeley, Hume.

416./516. Pragmatism (3) F,S Quest, Ringer

Prerequisite: Three units of philosophy or consent of instructor. Development of pragmatism as exemplified in the philosophies of Peirce, James, Dewey and Mead.

417./517. Phenomenology (3) F,S Faculty

Prerequisites: Six units of philosophy or consent of instructor. Study of one of the major movements of contemporary philosophy. Themes treated may include knowledge, meaning, emotionality, embodiment, language, sociality, freedom and religion. Philosophers treated may include Husserl, Scheler, Heidegger, MerleauPonty and Ricoeur.

418./518. Existentialism F,S Bonis, Guerriere

Prerequisites: Three units of philosophy or consent of instructor. Intensive study of such issues as self-as-existence, freedom and responsibility in their ethical, religious, political and aesthetic dimensions. Philosophers treated may include Kierkegaard, Nietzsche, Marcel, Jaspers, Sartre and Camus.

419./519. Analytic Philosophy (3) F,S Andre, Johnson, Spangler, Tang

Prerequisites: Six units of philosophy to include PHIL 270, or consent of instructor. Critical analysis of major movements in the development of Anglo-American philosophy in the twentieth century, such as logical atomism, logical positivism and ordinary language philosophy. Intensive study of the contributions of such philosophers as Moore, Russell, Wittgenstein, Ayer, Ryle, Austin, Strawson, Quine.

421./521. Plato (3) F,S Clark, Guerriere, Spangler, Strickler

Prerequisites: Six units of philosophy to include PHIL 203, or consent of instructor. Close study of Plato's thought, based primarily on readings from his works.

422./522. Aristotle (3) F,S Guerriere, Spangler

Prerequisites: Six units of philosophy to include PHIL 203, or consent of instructor. Close study of Aristotle's thought, based primarily on readings from his works.

423./523. Kant (3) F,S Bonis, Johnson

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Intensive study of Kant's *Critique of Pure Reason*.

424./524. Hegel (3) S Bonis, Guerriere

Prerequisites: Six units of philosophy to include 204, or consent of instructor. Study of Hegel's *Philosophy of Mind and Logic*, and selected writings by Hegel and other topics. [Discussion]

470./570. Symbolic Logic II (3) F,S Clark, Johnson, Quest

Prerequisite: PHIL 270 or MATH 330 or consent of instructor. Philosophical consideration of deductive systems.

483./583. Philosophical Psychology (3) F,S Clark, Johnson

Prerequisites: Six units of philosophy or consent of instructor. Nature of the mind. Psychological concepts such as intention, consciousness, action, motive, imagination, belief and purpose.

*484. Philosophy of Language (3) F Guerriere, Johnson, McGowan, Spangler

Prerequisites: Six units of philosophy or consent of instructor. Philosophical thought about language and meaning.

499. Directed Studies (1-2) F,S Faculty

Prerequisite: Consent of instructor. Independent study of special topics under supervision of a faculty member. May be repeated to a maximum of six units.

Graduate Division:

513./413. Continental Rationalism (3) F,S Bonis, Clark, Massey

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Close study of such major figures as Descartes, Spinoza and Leibniz.

514./414. British Empiricism (3) F,S Clark, McGowan

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Close study of such major figures as Locke, Berkeley, Hume.

516./416. Pragmatism (3) F,S Quest, Ringer

Prerequisite: Three units of philosophy or consent of instructor. Development of pragmatism as exemplified in the philosophies of Peirce, James, Dewey and Mead. Grading: Traditional only. [Discussion]

517./417. Phenomenology (3) F,S Faculty

Prerequisites: Six units of philosophy or consent of instructor. Study of one of the major movements of contemporary philosophy. Themes treated may include knowledge, meaning, emotionality, embodiment, language, sociality, freedom and religion. Philosophers treated may include Husserl, Scheler, Heidegger, MerleauPonty and Ricoeur.

518./418. Existentialism F,S Bonis, Guerriere

Prerequisites: Three units of philosophy or consent of instructor. Intensive study of such issues as self-as-existence, freedom and responsibility in their ethical, religious, political and aesthetic dimensions. Philosophers treated may include Kierkegaard, Nietzsche, Marcel, Jaspers, Sartre and Camus.

519./419. Analytic Philosophy (3) F,S Andre, Johnson, Spangler, Tang

Prerequisites: Six units of philosophy to include PHIL 270, or consent of instructor. Critical analysis of major movements in the development of Anglo-American philosophy in the twentieth century, such as logical atomism, logical positivism and ordinary language philosophy. Intensive study of the contributions of such philosophers as Moore, Russell, Wittgenstein, Ayer, Ryle, Austin, Strawson, Quine.

521./421. Plato (3) F,S Clark, Guerriere, Spangler, Tang

Prerequisites: Six units of philosophy to include PHIL 203, or consent of instructor. Close study of Plato's thought, based primarily on readings from his works.

522./422. Aristotle (3) F,S Guerriere, Spangler

Prerequisites: Six units of philosophy to include PHIL 203, or consent of instructor. Close study of Aristotle's thought, based primarily on readings from his works.

523./423. Kant (3) F Bonis, Johnson

Prerequisites: Six units of philosophy to include PHIL 204, or consent of instructor. Intensive study of Kant's *Critique of Pure Reason*.

524./424. Hegel (3) S Bonis, Guerriere

Prerequisites: Six units of philosophy to include 204, or consent of instructor. Study of Hegel's *Philosophy of Mind and Logic*, and selected writings by Hegel and other topics. [Discussion]

570./470. Symbolic Logic II (3) F,S Clark, Johnson, Quest

Prerequisite: PHIL 270 or MATH 330 or consent of instructor. Philosophical consideration of deductive systems.

571. Problems in Logic (3) F,S Faculty

Prerequisite: One course in logic or consent of instructor. Selected issues in logic and language. Topics which might be offered include: paradoxes, the history of logic, analytic and synthetic truth, meaning, the limits of formal logic, induction and scientific method. May be repeated for a maximum of six units, subject to suitable variation in course content.

572. Problems in Theory of Value (3) F,S Faculty

Examinations of selected problems in which evaluation provides a central topic of concern, such as those issues commonly discussed in aesthetics, political philosophy or the philosophy of law. May be repeated for a maximum of six units, subject to suitable variation in course content.

583./483. Philosophical Psychology (3) F,S Clark, Johnson

Prerequisite: Six units of philosophy or consent of instructor. Nature of the mind. Psychological concepts such as intention, consciousness, action, motive, imagination, belief and purpose.

590A./490A. Special Topics-Early Philosophy (3) F,S Faculty

Prerequisites: Six units of philosophy or consent of instructor. Detailed and intensive study of figures, periods or issues in ancient or medieval philosophy. Specific issues, period or figures will be announced in the Schedule of Classes. Sample titles: Pre-Socratic Philosophy, Post-Aristotelian Philosophy, Medieval Philosophy. May be repeated for credit to a maximum of nine units with different topics.

590B./490B. Special Topics — Modern Tradition (3) C-4

Prerequisites: Six units of philosophy or consent of instructor. Detailed and intensive study of a significant philosopher, or of some issue or theme of the modern (1600-1900) philosophical era. Specific titles will be announced in the Schedule of Classes. Sample titles: Hobbes, German Idealism, Nietzsche. May be repeated for credit to a maximum of nine units with different topics.

590C./490C. Special Topics-Twentieth Century Philosophy (3) F,S Faculty

Prerequisites: Six units of philosophy or consent of instructor. Detailed and intensive study of a significant philosopher or of a school or movement of the twentieth century. Specific title will be announced in the Schedule of Classes. Sample titles: Wittgenstein, Heidegger, Russell, Process Philosophy. May be repeated for credit to a maximum of nine units with different topics.

590D./490D. Special Topics-Metaphysical Studies (3) F,S Faculty

Prerequisites: Six units of philosophy or consent of instructor. Seminar study of a selected metaphysical topic. Sample topics: Time, Personal Identity, Philosophical Theology, Philosophy of Action, Process Philosophy. Specific topic will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics.

590F./490F. Special Topics-Epistemological Studies (3) F,S Faculty

Prerequisites: Six units of philosophy or consent of instructor. Seminar study of a selected epistemological topic. Sample topics: Philosophy of History, Philosophy of Perception. Specific topic will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics.

590G./490G. Special Topics-Logic and Semantics (3) F,S Faculty

Prerequisites: Six units of philosophy or consent of instructor. Seminar study of a selected topic in logic or semantics. Sample topics: Probability, Necessary Truth, Paradoxes, Philosophy of Mathematics. Specific topic will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics.

590H./490H. Special Topics-Value and Evaluation (3) F,S Faculty

Prerequisites: Six units of philosophy or consent of instructor. Seminar study of a selected topic in value or evaluation. Sample topics: Theories of Value, Freedom and Determinism. Specific topics will be announced in the Schedule of Classes. May be repeated for credit to a maximum of nine units with different topics.

599. Graduate Tutorial (1-3) F,S Faculty

Prerequisite: Consent of the instructor. Supervised independent study. Seniors with a grade point average of B or better may enroll with consent of Department. May be repeated for credit to a maximum of six units.

620. Seminar in History of Philosophy (3) F,S Faculty

Prerequisite: Consent of instructor. Close study of selected subjects in the history of philosophy. The original language may be required. May be repeated with different subjects for a maximum of nine units.

630. Seminar in Philosophy of Religion (3) F Faculty

Prerequisite: PHIL 330 or consent of instructor. Critical examination of selected issues, figures and movements. May be repeated for a maximum of six units, subject to suitable variation.

640. Seminar in Metaphysics (3) F,S Faculty

Prerequisite: PHIL 342 or consent of instructor. Supervised research and discussion on recurrent metaphysical problems and systems on the basis of selected works. May be repeated for a maximum of six units, subject to suitable variation of course content.

663. Seminar in Ethics (3) F,S Faculty

Prerequisite: PHIL 363 or consent of instructor. Systematic examination of topics (such as human rights, pleasure) and theories (such as utilitarianism, contract theory) which are central to moral reasoning. May be repeated for a maximum of six units, subject to suitable variation in course content.

680. Seminar in Epistemology (3) F,S Faculty

Prerequisite: PHIL 382 or consent of instructor. May be repeated for a maximum of six units, subject to suitable variation in course content.

681. Seminar in the Philosophy of Science (3) F,S Faculty

Current issues in the philosophy of science. May be repeated for a maximum of six units, subject to suitable variation in course content.

690. Seminar in Selected Topics of Current Interest (3) F,S Faculty

Presentation, discussion and critical evaluation of advanced work (which may include original research of faculty and graduate students) in selected topics of current interest to professional philosophers. If demand for more than one subject exists, multiple sections may be given in any one semester. May be repeated for a maximum of six units, subject to suitable variation of course content.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of the student's advisor.

698. Thesis (2-4) F,S Faculty

Prerequisite: Consent of graduate advisor. Preparation and completion of a thesis in philosophy.

Radio, Television, and Film

School of Humanities

Department Chair: Saundra McMillan
Department Office: University Telecommunications Center (UTC), Room 208
Telephone: 498-5404
Faculty: Professors: Dan F. Baker, Robert G. Finney, Howard S. Martin, Hubert P. Morehead; Associate Professors: Saundra McMillan, J. David Viera.
Department Secretary: Mary Ellen Atkins

Students desiring information should contact the department Undergraduate Advisor, Dr. Robert Finney.

Radio, Television, and Film Professional Advisory Council

The responsibilities of the Professional Advisory Council to the Radio, Television, and Film Department are to evaluate the curriculum of the department and to suggest changes in policies, course content and curricular structure to make the students' education more relevant to the profession as a whole. Membership of the Advisory Council is as follows:

Ed Arnold, KTLA-TV; Alice Backes, actress; Joseph Baker, attorney; Warren Baker, KNBC; Phoebe Beasley, KFI-Radio; Dick Block, Sunset Gower Studios; Willie Davis, KACE-FM; David Dortort, producer; William Fraker, cinematographer/director; William Furniss, KOCE-TV; David Garcia, producer; Richard Jones, General Telephone Co.; Irma Kalish, writer; Robert Light, Southern California Broadcasters' Assn.; James Loper, Academy of Television Arts and Sciences; Ron Mardigian, William Morris Agency, Inc.; Tichi Wilkerson Kassel, The Hollywood Reporter; George Nicholaw, KNX-AM; Stu Rosen, producer; Jay Sandrich, director; Sherwood Schwartz, producer; John Severino, KABC-TV; S. William Sharmat, film consultant; Bill Shearer, KUTE-FM, KGFJ-AM; Dewey Smith, McDonnell-Douglas; Don Tillman, KTTV; Phil Waxman, Producer; Marcie Wright, The Wright Concept; William Yates, Producer.

The curriculum in Radio, Television, and Film is unique in that basic courses are required of all majors so they will develop some practical knowledge of all three media, audio, film, and video. In that same vein, the department, which is part of the School of Humanities, stresses the importance of a broad liberal arts education. This philosophy promotes flexibility in training and education with the goal of developing resourceful and responsible graduates — graduates who can bring heightened creative, critical, and social skills to bear in communication fields, thereby helping improve the quality of life in diverse local and world communities. This philosophy also promotes definite individual career rewards, for, as occupation analysis data reveal, it is the liberal arts majors rather than the non-liberal arts majors who are more likely to be in the upper echelon of management 10 to 15 years after graduation.

Members of the department faculty reflect diverse expertise and interests. Many media professionals from the Los Angeles Area teach part-time or serve on the department's advisory board. Students also have the opportunity to serve in a great variety of corporate, educational, and entertainment internships under the immediate supervision of industry professionals.

Prospective majors must contact the Department for academic advisement. The prerequisites for R/TV 204 should be carefully noted (a score of 155 on the English Placement Test [EPT] or completion of English 200 with a grade of 'B' or better, and consent of instructor). In addition, students should pay particular attention to the requirement of a 'C' or better in both R/TV 150 and 204 (or equivalents) in order to enroll in the other lower-division required courses.

Requirements for the Bachelor of Arts in Radio and Television (code 2-6846)

Lower Division:

R/TV 150, 204, 220, 230, 240, one course in Speech Communication from the following: 130, 131, 331, 334, 335, or 344; and one course in English from the following: 101, 184, 200, 205, or 300.

Upper Division:

A minimum of 24 units which must include R/TV 316, 430 and 300 or 305. A maximum of 33 units in upper division Radio, Television, and Film courses.

In addition a student is strongly advised to develop an area of concentration outside the department. Lists of a variety of options are available from the department office or departmental advisor.

For students who particularly wish to pursue video production in non-broadcast areas such as cable TV, industrial video, educational video, medical media, etc., there is an 18 unit area of concentration in electronics courses offered by the Industrial Education Department. This Industrial Education option is co-directed by Dan Baker of Radio, Television, and Film and Don Smith of Industrial Education.

Courses (R/TV):

Lower Division:

150. Introduction to Telecommunications and Film (3) F,S Finney, Martin

An overview of the cable, film, radio and television fields with emphasis on history, economics, technology, policy, regulation, programming, and social impact of these media.

204. Writing and Production Planning (3) F,S Baker, McMillan, Morehead

Prerequisites: EPT score of 155 or English 200 with a grade of B or better, and consent of instructor. Study of pre-production principles and procedures common to all media producers, with emphasis on scripting and other writing skills unique to audio, video and film. Consideration of budgeting, casting, legal clearances and other production problems. [Seminar]

220. Introduction to Audio Operations (2) F,S McMillan

Prerequisites: R/TV 150 and 204 with a grade of C or better, and consent of instructor. Basic principles and techniques of audio production. [Activity 9 hours.]

230. Introduction to Video Operations (2) F,S Baker, Finney, Martin

Prerequisites: R/TV 150 and 204 with a grade of C or better, and consent of instructor. Basic principles and techniques of video production. [Activity 9 hours.]

240. Introduction to Film Operations (2) F,S Faculty

Prerequisites: R/TV 150 and 204 with a grade of C or better, and consent of instructor. An introduction to the basic concepts and techniques of film production. Students will furnish their own Super 8 film stock and pay for its processing. [Activity 9 hours.]

Upper Division:

300. History of Radio and Television Programs (3) F Martin

Prerequisites: R/TV 150. Development of radio-television programming in America.

305. Film History (3) S Viera

Prerequisites: R/TV 150. Historical development of the motion picture with special emphasis on early invention, the development of technique, the "Golden Age" of the silent film, and the present evolution of sound film.

312. Television Programming Symposium (3) F,S Faculty

Prerequisites: R/TV 150. Discussion and analysis of creative problems in the television industry. Current local and network programs. Interviews with visiting executives, producers, directors, writers, performers and technicians. May be repeated once. Only 3 units may be used as credit toward major.

314. Theatrical Film Symposium (3) F,S Faculty

Lectures and discussions of creative problems in the motion picture industry; current films; interviews with visiting producers, directors, writers, performers and technicians. May be repeated once. Only three units may be used toward the major.

316. Mass Media and Society (3) F,S Martin, Morehead

Theory and functions of the mass media in America. Enduring issues and unresolved problems of the media. Impact of mass culture on a mass-mediated society.

318IC. Theory of Fiction and Film (3) F,S,SS,W May

Examination of the narrative methods and conventions of American and British fiction and the methods and conventions of film; consideration of the relationships between the artistic structure of fiction and film; study of theoretical and practical approaches to fiction and film. (Same course as ENGL 318IC)

320. Advanced Audio Production (3) F,S McMillan

Not open to students with credit in R/TV 309. Prerequisites: R/TV 220 with grade of B or better and consent of instructor. Planning and producing original programs for broadcast and other means of delivery to the public. (Production laboratory 9 hours.)

325. Radio Station Activity (2) F,S

Not open to students with credit in R/TV 339. Prerequisite: R/TV 320 or consent of instructor. Experience in administering and programming the University radio station. Hours in addition to those scheduled will be arranged. (May be repeated once for a maximum of four units.)

327. Production Management (3) F,S

Prerequisites: R/TV 204. Examination of the step-by-step process of budgeting and scheduling feature length motion pictures. Students will learn methods and procedures of breaking a script down, analyzing production elements, preparing a production board, scheduling principle photography, and preparing a comprehensive budget.

328. Film and Video Lighting (3) F,S

Prerequisites: R/TV 204. Examination of the basic aesthetic and technical principles of film and video lighting. Students will explore various creative lighting styles and techniques through lectures and practical exercises.

330. Advanced Video Production (3) F,S Baker, Finney, Martin

Not open to students with credit in R/TV 301. Prerequisites: R/TV 230 with a grade of B or better and consent of instructor. Experience in producing original television programs. Emphasis is on creative programming using a variety of production techniques, resulting in public performance. (Production laboratory 9 hours.)

335. University Television Activity (2) F,S,SS,W Faculty

Prerequisites: R/TV 330 or consent of instructor. Experience in administration and production of video projects at the University Television facility. Hours in addition to those scheduled will be arranged. (May be repeated once for a maximum of four units.) [Activity] Grading: CR/NC only.

340. Advanced Film Production (3) F Viera

Prerequisites: R/TV 240 or equivalent (with a grade of B or better) and permission of instructor. Experience in the group production of original films. Emphasis is on narrative short films resulting in a public performance. Fee required to cover production expenses.

350. Project Post Production (3) S Viera

Not open to students with credit in R/TV 317. Prerequisite: Either R/TV 320, 330, or 340. An in-depth study and practical application of proper systematic procedures during post-production. Fee required to cover production expenses.

355. Audio-Video-Film Activity (1) F,S

Not open to students with credit in R/TV 302. Prerequisite: Consent of instructor. Group and individual experience in areas of audio-video-film production, and broadcast education. Specific assignments determined in consultation with instructor. Hours other than regular class time to be arranged. May be repeated once, for a maximum of two units. Offered on CR/NC basis only.

370. Television, Film, Media Graphic Production (3) F Faculty

Not open to students with credit in R/TV 345. Theory and practical experience in the development of graphic arts for television, film or educational media productions. Emphasis upon planning and requesting graphics by the producer and designing graphics by the artist.

375. Media Advertising (3) S McMillan, Faculty

Prerequisites: R/TV 204. Theory, role, regulation and procedures of advertising in the electronic media. Study of legal, ethical, commercial and creative principles which the student demonstrates knowledge of by designing advertising strategy, campaigns and scripts.

376. Broadcast Sales (3) F,S

Prerequisites: R/TV 204. Study of the sales function in commercial broadcast stations and networks. Theory and application in media research, sales and promotion.

380. The Documentary: Critics and Persuaders (3) S Morehead, Viera

Prerequisites: R/TV 150. A critical study of the best American documentaries on film, radio and television. Direct experience with the form through seeing and hearing the documentaries. Historical analysis of the documentaries as social criticism of America in transition.

385. Children's TV Programming (3) F Martin

Prerequisites: R/TV 150. Study of the literature and research on the impact of television programs for children. Consideration of the problems of producing children's programs.

400. Media Criticism (3) F,S Viera

Not open to students with credit in R/TV 432. Prerequisite: R/TV 300 or 305. Examination of theoretical bases of aesthetics and their application to the film, radio and television media. Study of critical approaches to, and assessment of, current trends and practices. Students are required to spend three hours each week reviewing the medium under study. (Lecture 3 hours, reviewing media 3 hours.)

403. Electronic Media in Education and Industry (3) F,S Baker

Prerequisites: R/TV 150. Development and utilization of radio, television and film in education and industry with emphasis upon instruction, training and public relations.

404. Scriptwriting for Telecommunications and Film (3) F,S Baker, McMillan

Not open to students with credit in R/TV 304. Prerequisite: R/TV 204 with a grade of B or better. Writing dramatic and comedic screenplays and teleplays. Includes study of produced models with emphasis on the creative process. (May be repeated for credit to a maximum of six units by consent of instructor.)

415. Post-Production Process (3) F

Prerequisites: R/TV 230 or 240. Examination of the post-production process in state-of-the-art facilities. Field trips included.

420. Telecommunications/Film Labor and Management (3) F Finney

Prerequisites: Junior or senior status and at least 15 completed units in the R/TV major, or permission of instructor. Study of management and labor in the changing field of telecommunications, with emphasis upon the manager's roles and functions in the labor intensive cable, film, radio, television and related industries.

430. Telecommunications/Film Policy and Regulation (3) F,S Finney, Viera

Prerequisites: Junior or senior status and at least 15 completed units in the R/TV major, or permission of instructor. Current issues, policies, and regulations affecting the cable, film, radio, television industries, including the impact of new technologies.

490. Special Topics in Radio, Television, and Film (3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in radio-television-film selected for intensive development. May be repeated; only six units may be applied toward the major. Topics will be announced in the Schedule of Classes.

492A,B. Internship (1-3) F,S McMillan

Prerequisite: consent of instructor, senior class standing, and at least 15 units in R/TV major. At least 120 hours with cooperating media facilities on- or off-campus. Work to be directed and evaluated by instructor in consultation with supervisors of the participating media facilities. Assignments will be varied, may include both production and nonproduction duties. (Offered on CR/NC basis only.)

498. Senior Seminar (3) S Martin

Prerequisite: Senior standing and consent of instructor. Intensive study of significant issues in the film and telecommunications media.

499. Special Projects in Radio, Television, and Film (1-3) F,S

Prerequisite: Senior-class standing, at least 15 units in the R/TV major, and consent of instructor. Research into an area of special interest to the student, culminating in a research paper or production. Productions will be limited by equipment and facilities available during any term.

Religious Studies

School of Humanities

Department Chair: Robert H. Eisenman
Department Office: McIntosh Humanities Building (MHB), Room 619
Telephone: 498-5341
Faculty: Professor: Robert H. Eisenman; Associate Professors: Anthony Battaglia, Jeffrey L. Broughton; Assistant Professor: Peter M. Lowentrout
Emeritus Professor: Alexander Lipski
Department Secretary: Jan Robert

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisor. The program in Religious Studies intends to develop in students a critical understanding of the forms of religious phenomena in their cultural and historical contexts and a sensitivity to different value systems. The program provides students with an introduction to the major religious traditions and to religion in the modern world. Religious Studies places special emphasis on relating the religious dimension to the humanities and social sciences. Students interested in the degree in Religious Studies should apply to the Department Chair, MHB-619.

Bachelor of Arts in Religious Studies (code 2-6011)

Core Courses:

15 units selected from the following: R/ST 111, 112, 152, 291, 331IC, PHIL 330.

Fifteen additional upper division units from three of the following five categories:

(a) Jewish Studies: R/ST 311, 312IC, 314, 315IC, 316, 375, 376, 490*, 495*; (b) Christian Studies: R/ST 312IC, 322, 324, 375, 376, 383IC, 471IC, 472IC, 487, 490*, 494*, 495*; (c) Asian Studies: R/ST 341, 343, 344, 351, 487, 490*, 494*, 495*; (d) Biblical Studies: R/ST 311, 312IC, 322, 375, 376, 490*, 494*, 495*; (e) Contemporary Religious Studies: R/ST 383IC, 396*, 425IC, 487, 490*, 494*, 495*. Six additional units are to be selected from either religious studies courses, or AIS 335, C/LT 342, PHIL 306, 307, 313, 442. Six to eight units of Hebrew, Greek or Sanskrit may be substituted.

*When subject matter of special topics course is applicable, the course may be used.

Minor in Religious Studies (code 0-6011)

Requirements for the Minor in Religious Studies

A minimum of 21 units in religious studies courses or courses from other departments approved by the Religious Studies Committee.

Lower Division:

A minimum of six units selected from R/ST 111, 112, 152, 291.

Upper Division:

A minimum of 15 units including three units from each of the following groups: (a) Western Religious Thought: R/ST 311, 312IC, 314, 315IC, 316, 322, 324, 331IC, 375, 376, 425, 471IC, 472IC; (b) Eastern Religious Thought: R/ST 341, 343, 344, 351, 487. Remaining units are to be selected from Religious Studies courses and the following electives: AIS 335, ANTH 406, AIS 380, B/ST 353, C/LT 342, HIST 333, PHIL 313, 330, 403.

Requirements for the Certificate in Religious Studies:

1. A bachelor's degree with a major in a traditional discipline.

* A minimum of 30 units in religious studies or courses offered in other departments approved by the Religious Studies Committee.

Lower Division:

A minimum of nine units selected from R/ST 100, 111, 112, 152, or 291.

Upper Division:

A minimum of 21 units including one course from each of the following: (a) Biblical Studies: R/ST 311, 312IC, 322, 375, 376; (b) Western Religious Thought: R/ST 314, 315IC, 316, 331IC, 471IC, 472IC, 485; (c) Eastern Religious Thought: R/ST 341, 343, 344, 351, 487. A minimum of twelve upper-division units from the preceding courses and the following electives: R/ST 383IC, 396, 482IC, 490, 494, 495, 499; AIS 335; ANTH 406; ASAM 380; B/ST 353; C/LT 342; HIST 333; PHIL 313, 330.

Concentration in Religious Studies for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required; 16 of which must be upper division.

Lower Division:

Select six units from R/ST 100, 152, or 291.

Upper Division:

At least 3 units selected from: R/ST 311, 312IC, 314, 315IC, 322, 324, 331IC, 471IC, 472IC, 485, 490, 494, 495, or 499; at least 3 units selected from: R/ST 341, 343, 344, 351. At least 12 units of electives selected from upper division Religious Studies courses not taken by the student to satisfy the above requirements.

No more than 6 units from the following list may be substituted for Religious Studies electives: AIS 335, ASAM 380, C/LT 342, HIST 333, PHIL 313 or 330.

Courses (R/ST):

Lower Division:

100. Introduction to Religion (3) F,S Lowentrout

Origin, nature, and function of religion in the individual and culture with emphasis upon and reference to outstanding personalities, sacred writings, and basic features of the world's leading religions.

111. Introduction to Western Religions (3) S Battaglia, Eisenman, Lowentrout

A survey of representative figures, themes, the schools in Western religious thought, including Judaism, Christianity and Islam.

112. Introduction to the Bible (3) F,S Battaglia, Eisenman

An overview of the Sacred texts of Jews And Christians. Inspiration, Creation, Salvation, and other Biblical themes will be discussed, as well as key persons and events, such as Moses, Jesus, etc. Not available to students with credit in R/ST 111.

152. Introduction to Asian Religions (3) F,S Broughton

A survey of Indian, Chinese and Japanese religious thought. Emphasis will be on original texts in translations.

291. Religion and Society (3) F,S Battaglia, Lowentrout

Religious and secular views of man in relation to society with emphasis upon contemporary problems of personal and social ethics, political responsibility and social structure.

Upper Division:

301. Approaching Religion (3) S Battaglia, Lowentrout

Study of the methodology of religious studies, including the history of religions, comparative and phenomenological study of religions, textual criticism, exegesis, research methods and techniques.

311. Old Testament (3) F Eisenman

The Old Testament as a religious, historical and literary document with emphasis on the religion and culture of the early Hebrews. Selected books will be read each term, but prime emphasis will be put on Genesis, Exodus, the early prophets, Isaiah. The period of the conquest and the divided monarchies will be studied.

312IC. The Dead Sea Scrolls, Jewish State and Primitive Christianity (3) S Eisenman

Historical development of Jewish religion and culture in the Second Temple period from the rise of the Maccabbees to the beginnings of Christianity with emphasis on the rise of the Jewish State, the coming of the Romans and the beginnings of primitive Christianity (Essenism, Phariseeism and Sadduceeism).

314. History of the Jewish Religion (3) F Eisenman

From the end of the Second Temple period to the close of the Middle Ages. Development from Hellenistic Judaism to Rabbinic Judaism to philosophical theology will be gone into in some detail. Readings from Saadya, Halevi and Maimonides, etc.

315IC. Modern Jewish Thought/Zionism (3) F Eisenman

The course will deal with the development of Jewish thought from the enlightenment and emancipation from the ghettoes, through attempts at assimilation, the Holocaust and the birth of the Jewish State. The development of conservative, reform and orthodox Judaism will also be discussed.

316. Jewish History (3) F Eisenman, Springer

Survey of Jewish history from early times to the present. Subjects such as the Babylonian Captivity, the fall of the Temple, the rise of Rabbinic Judaism, the Dispersion, the impact of anti-Semitism, Jewish community and intellectual life in the Middle Ages, Emancipation from the Ghetto, political movements, the Holocaust, Israel. Same course as HIS 331.

322. New Testament (3) S Battaglia, Eisenman

The emergent Christian community, seen through the missionary and pastoral letters, the synoptic gospels, the radical theologies of Paul and John and the dramatic visions of the Apocalypse.

324. Christianity (3) F Battaglia, Lowentrout

Introduction to the common doctrines of Christianity, with special attention to the causes of the division of Christianity into many churches. Similarities and dissimilarities in the doctrine and practice will be discussed in terms of present day Christianity.

331IC. Islamic Religion and Culture (3) S Eisenman

The Koran, Muhammad and the rise of Islam as a cosmopolitan faith. The development of Muslim civilization, including literature, theology, philosophy and Sufism (mysticism).

341. Buddhism (3) S Broughton

The Buddha; early Buddhism; the great vehicle; and the vehicle of incantations. The transmission of Buddhism to China, Korea, Japan, Southeast Asia and Tibet. Emphasis will be on original texts in translations.

343. Religions of China (3) F Broughton

Ancient Chinese religious thought; the penetration of Indian Buddhism and Ch'an (Zen); popular religion and the religion of the scholar-official. Emphasis will be on original texts in translations.

344. Religions of Japan (3) S Broughton

The transmission of continental civilization to Japan; shinto, Buddhism and Tokugawa Neo-Confucianism; Genroku culture; and the New Religions. Emphasis will be on original texts in translations.

351. Hinduism (3) F Broughton

Survey of ancient, classical and medieval Hinduism. Emphasis on analysis of Upanishads, Bhagavad Gita and the various paths of yoga.

375. The Historical Jesus (3) F,S Eisenman

The life and person of Jesus of Nazareth through a consideration of the political, religious, sociological and historical setting in which he lived. Non-Christian sources as well as Christian will be used in an attempt to reconstruct the movement centering around the person of the Messiah. The consequent messianic thrust of early Christianity both on a secular and religious basis will be treated fully. Readings from Josephus and the New Testament.

376. Paul and James (3) F,S Eisenman

The split between Gentile and Jewish Christianity, Paul representing Gentile Chistianity and James the brother of Jesus, representing Jewish. A consideration of the two factions in the early Church, one following the "Apostle to the Gentiles: and the other following the family line of Jesus in a Jewish messianic way. Readings from apocryphal gospels, the Book of Acts, Paul's letters and Eusebius.

383IC. Christianity and Marxism (3) F Battaglia

An examination of the encounter between Christianity and Marxism, both in the past and in the present. The similarities and differences between the two, their evaluations of one another and of the modern world, and their understandings of appropriate human action will be compared and contrasted.

396. Religion and Humanities (3) S Faculty

Examination of the religious dimensions of man's existence as these are expressed in the humanities, including literature, music and the fine arts. May be repeated up to a maximum of six units. Topics will vary.

425IC. Religion and Modern Literature (3) F,S Eisenman, Lowentrout

The role of the writer and poet in the secular modern world as religious thinker. The themes of alienation, anguish, absurdity, evil, hope, despair, mystic vision, and salvation will be among those treated. (Not open to students with credit in R/ST 396.)

471IC. Ancient and Medieval Christianity (3) F Abrahamse, Eisenman

Development of Christianity from the New Testament period to the Renaissance with emphases on the growth of doctrine, church institutions and the role of Christianity in ancient and medieval society. [Same course as HIST 411IC]

472IC. Formation of Modern Christianity (3) S Battaglia

Restructuring and renewal of Christianity, from the Reformation through the dawn of modern consciousness to the challenge of 20th century secular life.

482IC. American Religious Experience (3) F,S Berk, Lowentrout

Survey of major themes in the unique American religious experience. Topics of significance will include the adaptation of European Christianity to novel American circumstances, the proliferation of denominations and the varied religious response to a dynamic American society. (Same course as HIST 482IC)

485. Contemporary Religious Thought (3) F Battaglia

Critical examination of the current trends in religious understanding against a background of rapid social change. New movements and issues on the religious scene will be considered and a variety of authors representing both East and West will be studied in order to reveal the emerging patterns of religious thought.

487. Mystics West and East (3) F Faculty

Analysis of the nature and methods of mysticism. Comparison of Christian, Jewish, Moslem, Buddhist and Hindu mystics. Emphasis on Christian mystics, especially Meister Eckhart and St. Therese of Avila.

490. Special Topics in Religious Studies (1-3) F,S Faculty

Topics of current interest in religious studies selected for intensive development. A maximum of nine units with different topics may be used in the major. Topics will be announced in the Schedule of Classes.

494. Religious Classics (3) F,S Faculty

Examination of selected religious classics including an analysis of religious themes in significant works of world literature. Specific works will vary. The course may be repeated for credit up to nine units with different topics.

495. The Religious Personality (3) F,S Faculty

Prerequisites: Three units of religious studies or consent of instructor. Study of the cultural influence and personal characteristics of religious men as reflected in their writings. Selection of personalities will vary. May be repeated for credit up to nine units with different topics.

499. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Directed studies to permit individual students to pursue topics of special research interest. May be repeated up to a total of six units.

Spanish and Portuguese

School of Humanities

Acting Department Chair: Mary Purcell
Department Office: McIntosh Humanities Building (MHB), Room 819
Telephone: 498-4317
Faculty: Professors: Harold L. Cannon, Beverly J. DeLong-Tonelli, John H. Schmitt, Francisco Trinidad; Associate Professor: Alfonso L. Archuleta
Emeritus Faculty: Professor Daniel N. Cardenas
Department Secretary: Aida Porte-Neuve

Students desiring information should contact the department office for referral to one of the faculty advisors: Credential Advisor, Graduate Advisor, Undergraduate Advisor.

A major in Spanish is a treasured possession. Even a second major or a minor in Spanish opens many doors, but no matter what field a student plans to enter, be it health services, business, teaching, government, law, medicine, transportation, translation, engineering, or entertainment, a familiarity with Spanish will be invaluable. Bilingualism is almost an imperative in Southern California as well as many other parts of our country, and the Department of Spanish and Portuguese is ready to aid all students to succeed in vocations and avocations.

In addition, the program provides preparation for those who plan to pursue doctoral work at other institutions. It also provides a liberal education for those who wish to expand their knowledge of the communication process and of Hispanic literature and cultures. The Department of Spanish and Portuguese offers courses in language, linguistics, literature, culture and translation leading to the following degrees and certificates: Bachelor of Arts and Master of Arts degrees in Spanish, Single Subject Teaching Credential in Spanish. Concentration in Spanish for the Bachelor of Arts in Liberal Studies, minor in Spanish, Bilingual Cross-Cultural Specialist Certificate, Bilingual Concentration for B.A. in Liberal Studies, B.A. and M.A. degrees in the Special Major, and M.A. degree in Linguistics.

All students are urged to consult the Departmental Student Handbook, in addition to this Bulletin, for further information regarding the curriculum, programs, requirements and faculty.

Bachelor of Arts in Spanish

To prepare for a program of courses for the major in Spanish, the student is advised to keep in mind the upper-division options noted below as well as the Basic Core and Prerequisites for courses. Please note that all options will satisfy the single-subject credential requirements. For all options, at least one year of a second foreign language at the University level is required.

Prerequisites

One year of intermediate Spanish at the university level, or equivalent. Students who have completed sufficient high school Spanish or equivalent may take upper division courses as soon as proficiency requirements have been met. Native-speakers of Spanish who have never formally studied the language are urged to consult with the Mexican-American Studies Department in order to determine the most advantageous manner by which to prepare for upper-division Spanish courses.

Requirements for the Bachelor of Arts in Spanish

Upper-Division Basic Core:

A minimum of 30 units of upper-division Spanish course-work, which must include the Basic Core of 18 units as follows: SPAN 312, 313, 330, 341, 425, and either 430 or 445. (Both 430 and 445 are required for the Single Subject Teaching Credential and may be taken while completing work toward the B.A. degree in Spanish.) In addition to the Basic Core, the student must complete one of the following Options:

Option in General Spanish (Code 2-6816)

The option in General Spanish requires 12 upper-division units in addition to the Basic Core. A faculty member should be consulted to ascertain the appropriate courses for this option.

Option in Language/Linguistics (Code 2-6801)

The Language/Linguistics option is especially designed for students who wish to better understand the structure and workings of the language or who plan on graduate study in Linguistics. A minimum of 9 units from the following courses is required: SPAN 314, 410, 412, 426, 427.

Option in Literature/Culture (Code 2-6802)

The option in Literature and Culture is designed for students who desire a thorough grounding in the literature and cultures of Spain and Latin America, particularly those students who are planning on graduate study in Spanish. A minimum of 9 additional upper-division units must include a choice from SPAN 410, 413, 430 or 445, 439, 441, 490 (Folksong or Thought), 491.

Option in Translation (Code 2-6804)

The Translation Option introduces students to the challenges of translation *per se* and provides a practical grounding in various types of translation which are to be found in any work-setting. In addition, it will be of value to students planning graduate work in many fields, including comparative literature and translation itself. A minimum of 9 units is required, selected from the following courses: SPAN 412, 413, 414, 415, 427.

Additional Requirements

A minimum of one year of a second foreign language at the university level is required of all majors.

NB: No course being used to satisfy any requirement for the B.A. or minor in Spanish may be taken on a Credit/No Credit Basis.

Minor in Spanish (Code 0-6816)

Requirements:

A minimum of 18 units in Spanish, at least 15 of which must be upper-division and must include SPAN 312, 313, and demonstration of oral fluency or 314. Students must file a Declaration of Minor and receive counseling in the Department Office.

Single-Subject Teaching Credential in Spanish

Requirements are same as for B.A. in Spanish, but must include both 430 and 445.

Concentration in Spanish for the Bachelor of Arts in Liberal Studies:

A minimum of 24 units in Spanish will be required as follows:

Required courses:

SPAN 312 and 313; select one of the following sequences:

Spanish Literature Emphasis

Required courses:

SPAN 330 and 430; select six units from SPAN 410, 439, 491, 492.

Spanish American Literature Emphasis

Required courses:

SPAN 341 and 445; select six units from SPAN 410, 491, 441.

Spanish Linguistics and Culture Emphasis

Required courses:

SPAN 425 and 426; select six units from SPAN 412, 427, 430, 445.

Concentration in Bilingual Spanish/English for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required; 15 of which must be upper division.

Required courses:

SPAN 201A or MEXA 203 or equivalent; SPAN 201B or equivalent, 312, and 313, either MEXA 402 or SPAN 425 and 427, ENGL 420, either SOC 485 or SPAN 322.

Advisement:

In the Liberal Studies Core, under Area I, Group 2, students should complete ENGL 310 and in Area I, Group 3, students should complete ENGL 325. Under Area IV, Group 2.b, students should have completed SPAN 101A,B or equivalent. Students should seek early advisement from a professor from the participating departments and be advised on the Liberal Studies Bilingual/Cross-Cultural Track.

Master of Arts in Spanish (code 5-6816)

Prerequisites:

1. A bachelor of Arts degree in Spanish, or
2. A Bachelor's degree with a minimum of 18 upper-division units in Spanish equivalent to the Basic Core of the B.A. in Spanish at this University, with at least a B (3.0) average. Deficiencies will be determined by the Graduate Advisor after consultation with the student and study of transcript records.

Advancement to Candidacy:

1. Approval of a graduate program by the Graduate Advisor, the Departmental Graduate Committee, the Department Chair, and the School Associate Dean of Graduate Studies (Educational Policy).
2. Requirements: All deficiencies have been removed; the student has passed the Writing Proficiency Examination; the student has maintained at least a B (3.0) grade average in all work undertaken as a graduate student.
3. The candidate may file for advancement to Candidacy after filing a transcript of credits or a change of objective form, completing prerequisites, and completing at least 6 units (preferably no more than nine units) on the M.A. program. The candidate must file not later than one semester or summer session prior to completion of course requirements.

Requirements for the Master of Arts Degree in Spanish:

1. Completion of a minimum of 30 units of approved upper- division and graduate courses, with a minimum of 24 units in Spanish, of which at least 18 units must be in the 500 and 600 series in Spanish.
2. Specifically required courses include: SPAN 412, 525, 639, 696, and 697 (or, in special cases, 698).
3. The student must pass, with a score of at least 550, the Educational Testing Service examination in a second foreign language. A major or minor in a second foreign language may be used to fulfill this requirement, upon approval by the Department. Consult the Graduate Advisor.
4. The student must maintain a grade average of at least B (3.0).
5. All students must pass a two-hour examination on the Graduate Reading List (see Departmental Student Handbook).
6. The Student must complete one of the following M.A. plans:

Plan 1 Master's Paper plus Comprehensive examination (See Student Handbook).

Plan 2 Thesis plus 30 units (See Student Handbook). 7. No more than six units of transfer graduate credit are allowed, subject to approval by the Graduate Advisor and the graduate committee. No more than six units of International Programs course-work may be credited toward the 24-unit Spanish requirement for the M.A. at this University. International Programs units will be counted at the 400- level. (See Student Handbook and Graduate Advisor.)

Courses (SPAN):

Lower Division:

101A-B. Fundamentals of Spanish (4,4) F,S Faculty

Concentration on oral comprehension and speaking.

101A. For those who are beginning the study of Spanish or who have had less than two years of high school Spanish or equivalent.

101B. Prerequisite: SPAN 101A or two years of high school Spanish or equivalent. Continuation of SPAN 101A.

201A-B. Intermediate Spanish (4,4) F,S Faculty

Continued development of audio-lingual skills, reading and writing.

201A. Prerequisites: SPAN 101A-B or three years of high school Spanish or equivalent.

201B. Prerequisite: SPAN 201A or four years of high school Spanish or equivalent.

Upper Division:

300. Hispanic Literature in Translation (2) Faculty

Study of a specific author, generation, genre or work, to be announced each semester in the Schedule of Classes. Such topics as the following may be offered: Federico Garcia Lorca; the Latin American new novel; Unamuno, Ortega y Gasset, *Don Quixote*. May be repeated with different topics for a maximum of six units. Not applicable to 30 units of upper division work required for the B.A. in Spanish nor the minor in Spanish.

301. Spanish for Classroom Teachers (3) SS

Prerequisites: None. Fundamentals of spoken Spanish and Hispanic culture in a "total immersion" audio-lingual setting; designed for teachers in districts with a high percentage of Spanish-speaking students. May be repeated once for credit. Applicability to degree and certificate programs very limited. Confer with department chair.

312. Advanced Spanish I (3) F,S Faculty

Prerequisite: SPAN 201B or equivalent. Extensive reading of Spanish writings, review of grammatical principles and a general consolidation of the four language skills: reading, comprehension, composition and conversation.

313. Advanced Spanish II (3) F,S Faculty

Prerequisite: Spanish 312 or equivalent. Sequel to SPAN 312, with continuing emphasis on extensive reading of Spanish texts and periodicals, regular composition work based on these readings, and the development of increased mastery of the spoken language through student discussion of the readings.

314. Oral Communication (3) F,S Faculty

Prerequisite: Upper division standing in Spanish, permission of instructor. Emphasis will be placed on small-group discussion to improve communication skills in Spanish. Intended for non-native speakers.

322. Bilingual Teacher (3) F

Prerequisites: SPAN 313 or consent of instructor. Development and application of vocabulary for teaching elementary/secondary school subject matter in Spanish; application in actual teaching situations. (Not Applicable to B.A. in Spanish or minor in Spanish. No credit for students with credit in SPAN 320 or 321.)

330. Literary Masterpieces: Spain (3) F,S Cannon, DeLong-Tonelli, Trinidad

Prerequisite: Upper division standing in Spanish. Critical analysis of masterworks of Spanish literature.

341. Literary Masterpieces: Spanish America (3) F,S Archuleta, Schmitt

Prerequisites: Upper division standing in Spanish. Critical analysis of masterworks of Spanish American literature. (No credit for students with credit in SPAN 331.)

*410. Introduction to Literary Analysis (3) S DeLong-Tonelli

Prerequisite: One 300 level course in Spanish or consent of instructor. Discovery of literature as a work of art. Different levels of interpretation; complexity of structure related to content; literary appreciation.

*412. Art of Translation (3) F,S DeLong-Tonelli

Prerequisite: SPAN 313 with a grade of B or better, consent of instructor. Seminar in lexical, syntactical, stylistic, cultural problems of translation, Spanish to English, English to Spanish. Analysis of selected translated texts. Practice in effective translating.

*413. Seminar: Literary Translation (3) F,S DeLong-Tonelli, Schmitt

Prerequisite: SPAN 412. Seminar in the semantic and cultural problems of literary translation (Spanish to English, English to Spanish). Comparative analysis of literary translations. Practice in effective translation.

414. Seminar: Medical/Scientific Translation (3) F,S Archuleta, Trinidad

Prerequisite: SPAN 412. Concerted team effort in accurate translation of medical and scientific documents. (Spanish to English, English to Spanish)

415. Seminar: Business/Legal Translation (3) F,S DeLong-Tonelli, Trinidad

Prerequisite: SPAN 412. Seminar designed to develop marketable translation skills for business correspondence and contracts, legal documents, from English to Spanish and vice-versa.

425. Spanish Phonetics and Phonology (3) F,S Trinidad

Prerequisites: SPAN 312 and 313 or consent of instructor. Articulatory phonetics as a means to form native Spanish pronunciation habits with emphasis upon the difficulties encountered by speakers of American English.

426./526. Spanish Morphology and Syntax (3) F Trinidad

Prerequisites: SPAN 425 or consent of instructor. Morphemic and syntagmatic analysis of Spanish; introduction to transformational grammar. (No credit for students with credit in SPAN 513.) [Discussion]

427./527. Contrastive Analysis of Spanish and English (3) S Trinidad

Prerequisite: SPAN 426 or consent of instructor. Study of the known points of similarity and differences between the two languages.

*430. Spanish Civilization (3) S Trinidad

Prerequisites: Upper-division standing in Spanish or consent of instructor. Characteristic features of Spanish culture with special attention to the various institutions, economic, social and cultural configurations, and the ways of thinking. (M.A. program may not include both 430 and 445. No credit for students with credit in SPAN 440.)

439./539. Modern Spanish Narrative S DeLong-Tonelli, Trinidad

Prerequisite: SPAN 330 or permission of instructor. Representative 19th and 20th century novelists. (No credit for students with credit in SPAN 459.) [Seminar]

441./541. Modern Spanish American Narrative (3) S Archuleta, Schmitt

Prerequisites: SPAN 341 or permission of instructor. Critical analysis of 20th century Spanish American prose fiction. (No credit for students with credit in SPAN 461.) [Seminar]

*445. Latin American Civilization (3) F Archuleta, Schmitt

Prerequisite: Upper division standing in Spanish or consent of instructor. Analysis of main currents in Latin American civilization. (M.A. program may not include both 440 and 445.)

*490. Special Topics (3) F,S Faculty

Study of a particular aspect of Spanish literature, language or culture. See Schedule of Classes for specific topics. May be repeated for a maximum of nine units as long as topics are different each time. Traditional grading only. (Hispanic Folksong not applicable to M.A.)

491./591. Nobel Poets and Others (3) S DeLong-Tonelli, Trinidad

Prerequisites: SPAN 330, 341, or permission of instructor. Critical analysis of representative works of Nobel Poets (Aleixandre, Jimenez, Mistral and Neruda) and other significant poets (Alberti, Becquer, Dario, Garcia Lorca, Garcilaso, Gongora, Guillen, Vallejo, etc). (No credit for students with credit in SPAN 460.)

492./592. Modern Hispanic Theatre (3) F DeLong-Tonelli, Donahue, Inostroza, Trinidad

Prerequisites: SPAN 330 or permission of instructor. Representative Spanish and Spanish American plays of the 20th century. (No credit for students with credit in SPAN 462.)

499. Independent Study (1-3) F,S Faculty

Prerequisites: Consent of instructor and department chair. Individual projects or directed readings with a professor of the student's choice. May be repeated to a maximum of six units. (Requires tutorial meetings and demonstrations of progress as defined in a written proposal.)

Graduate Division:

525. History of the Spanish Language (3) F Trinidad

Prerequisites: One course in Spanish linguistics or consent of instructor. Analysis of written and spoken Spanish from its inception through its current use in the Hispanic world. (No credit for students with credit in SPAN 505.)

526./426. Spanish Morphology and Syntax (3) F Trinidad

Prerequisites: SPAN 425 or consent of instructor. Morphemic and syntagmatic analysis of Spanish; introduction to transformational grammar. (No credit for students with credit in SPAN 513.)

527./427. Contrastive Analysis of Spanish and English (3) S Trinidad

Prerequisite: SPAN 426 or consent of instructor. Study of the known points of similarity and differences between the two languages. (No credit for students with credit in 514.)

528. Romance Linguistics (3) S, Odd years Trinidad

Prerequisites: SPAN 525 or equivalent. Methods used in Romance philology and linguistics; origin and evolution of Romance languages comparative characteristics of Romance languages. (No credit for students with credit in SPAN 515.)

530. Contemporary Spanish Poetry (3) S DeLong-Tonelli, Trinidad

Study of the most significant contemporary Spanish poets. (No credit for students with credit in SPAN 585.)

535. Spanish Medieval Literature (3) S, Even years Trinidad

Prerequisite: SPAN 525. Medieval literature from the recently discovered 'muwashahs' (lyric poetry) to the Golden Century.

538. Spanish Poetry of the Golden Age (3) F DeLong-Tonelli

Study of traditional ballads, Renaissance and Baroque poetry with emphasis on Garcilaso, Gongora and other poets.

539./439. Modern Spanish Narrative S DeLong-Tonelli, Trinidad

Prerequisite: SPAN 330 or permission of instructor. Representative 19th and 20th century novelists. (No credit for students with credit in SPAN 459.)

540. Modernismo in Spanish American Literature (3) F, Odd years

Origin and development of the Modernista movement in poetry and prose during the period from 1880 to 1920. (No credit for students with credit in SPAN 520.)

541./441. Modern Spanish American Narrative (3) S Archuleta, Schmitt

Prerequisites: SPAN 341 or permission of instructor. Critical analysis of 20th century Spanish American prose fiction. (No credit for students with credit in SPAN 522.) [Seminar]

543. Contemporary Spanish American Poetry (3) F

Study of representative Spanish American poets from 1920 to the present. (No credit for students with credit in SPAN 521. [Seminar]

555. Mexican Novel (3) S, Even years Archuleta, Inostroza, Ramirez

Intensive study of the major Mexican novelists from Lizardi to Carlos Fuentes.

590. Special Topics (3) S Faculty

Study of a particular aspect of Spanish literature, language or culture. See Schedule of Classes for specific topic. May be repeated for a maximum of nine units as long as topic is different each time. Traditional grading only.

591./491. Nobel Poets and Others (3) S DeLong-Tonelli, Trinidad

Prerequisites: SPAN 330, 341, or permission of instructor. Critical analysis of representative works of Nobel Poets (Aleixandre, Jimenez, Mistral and Neruda) and other significant poets (Alberti, Becquer, Dario, Garcia Lorca, Garcilaso, Gongora, Guillen, Vallejo, etc). (No credit for students with credit in SPAN 584.) [Seminar]

592./492. Modern Hispanic Theatre (3) F DeLong-Tonelli, Trinidad

Prerequisites: SPAN 330 or permission of instructor. Representative Spanish and Spanish American plays of the 20th century. (No credit for students with credit in SPAN 586.)

599. Directed Studies (1-3) F,S Faculty

Selected topics on Hispanic Studies to be pursued in-depth. May be repeated for a maximum of 6 units, provided subject matter is distinct for each enrollment. (Approval of Graduate Advisor and Department Chair required.)

639. Seminar in Hispanic Studies (3) S Faculty

Concentration on a specific literary or linguistic problem. May be repeated once with a different topic.

696. Bibliographical Methods of Research (3) F Faculty

Introduction to methods of research, scholarly writing.

697. Directed Research (1-3) F,S Faculty

Prerequisites: SPAN 696, consent of department chair. Individual study under the guidance of a faculty member, resulting in a scholarly paper.

698. Thesis (2-4) F,S Faculty

Prerequisites: SPAN 696, consent of Graduate Committee and department chair. Planning, preparation and completion of thesis in Spanish for the master's degree. Does not count toward 30 units required for the M.A. degree.

Courses (PORT):

Lower Division:

101A-B. Fundamentals of Portuguese (4,4) F,S Archuleta, Schmitt

Introduction to grammar, reading, pronunciation, writing and conversation. 101A is for those who are beginning the study of Portuguese or who have had less than two years of high school Portuguese or equivalent.

101B. Prerequisite: PORT 101A or two years of high school Portuguese or equivalent. Continuation of 101A.

Upper Division:

399. Directed Studies in Portuguese (3) F Archuleta, Schmitt

Prerequisite: PORT 101A-B or consent of instructor. Practical application of the fundamental principles of grammar.

499. Directed Studies in Portuguese (3) S Schmitt

Prerequisite: PORT 399 or consent of instructor. Individual directed projects or readings.

Speech Communication

School of Humanities

Department Chair: Richard E. Porter
Department Office: McIntosh Humanities Building (MHB), Room 717
Telephone: 498-4301
Faculty: Professors: Karl W. E. Anatol, Nancy E. Briggs, Stephen M. Buck, Luster E. Hauth, Ellis R. Hays, Owen O. Jenson, G. Bruce Loganbill, Richard E. Porter, James G. Powell, Kenneth H. Shanks, Dorothy J. Skriletz, Fathi S. Yousef; Associate Professor: Fred Rogers; Assistant Professor: Lynda Willer; Emeritus Faculty: Earl R. Cain, Ottis L. Castleberry, Dale D. Drum, John L. Healy, Jack H. Howe, Joseph A. Wagner, John W. Wills
Department Secretary: Marcia Wienert

Students desiring information should contact the department office for referral to one of the faculty advisors: Credential Advisor, Dorothy Skriletz; Undergraduate Advisor, Dorothy Skriletz; Graduate Advisor, Fathi Yousef.

Within the School of Humanities, the Speech Communication Department maintains a 2500 year old tradition of liberal education through study of the philosophic, theoretic and skill development aspects of oral communication. Tracing a heritage that spans Western tradition from the Greek Democracy of Fifth Century B.C. Athens through the Roman period to today, the speech communication curriculum focuses on the issues of creative thought, inquiry, critical thinking, understanding of the communication phenomenon, and the development of excellent oral communication skills. To this end, the Speech Communication Department provides four major services to the University community. First, it provides students with a liberal education stressing inquiry, analysis, and critical evaluation through its undergraduate and graduate degree programs in rhetorical studies, general speech communication, communication studies, and interpersonal and organizational communication. Second, the department provides a variety of general education courses stressing inquiry and critical thinking designed to give all students broad experiences in the traditions of the liberal arts. Third, it provides a number of courses which serve the needs of specific majors outside the Speech Communication Department. And, fourth, it provides a single subject major for teaching credential candidates under the Ryan Act.

To fulfill its first service function, the department offers specialized curricula to students who seek to apply a comprehensive background of communication theory and practice in business, industry, professional fields, or education. The second function is fulfilled by offering courses that satisfy requirements in general education and the desire to take additional elective course work for cultural enrichment. The third function is met through courses offered to meet the needs of students whose major courses of study are enriched by specialized instruction in speech communication. Finally, to fulfill its fourth function, an option is presented for students wishing a single subject major for a teaching credential under the Ryan Act. This option provides both a B.A. degree with a major in speech communiction and an English credential for teaching in the secondary schools.

Speech Proficiency Assessment Students enrolled in SPCH 271, 331, 333, 335, 352, 355, and 358 at CSULB will be tested upon student request for speech proficiency as part of the course. All others seeking a teaching credential must arrange for an assessment for speech proficiency through the Testing Office. Assessment information is published in the Schedule of Classes.

Bachelor of Arts Degree in Speech Communication

The Department of Speech Communication offers undergraduate study leading to the Bachelor of Arts Degree in Speech Communication. In order to provide students with the opportunity to emphasize an area of Speech Communication which best will suit their personal and career goals, the Speech Communication major is offered in five different options which are explained below. More detailed information about the options may be obtained from the department office. Each student is also expected to consult the department undergraduate advisor regularly for advisement.

Option in General Speech

The General Speech option, as its title implies, is concerned with all of the dimensions found in the speech communication field. It requires course work in both the rhetorical and behavioral dimensions of the field and then permits the student to elect additional work in communication theory, rhetoric and public address, the communicative interpretation of literature, or interpersonal and organizational communication. The major consists of 39 units of which 33 must be upper division including the following:

Requirements for the Bachelor of Arts Option in General Speech (code 2-6841)

Lower Division:

Six units required from SPCH 130 and 210 or 271.

Upper Division:

(a) Departmental Core, 12 units required from: SPCH 435, 440, 446 and 448; (b) six units required from SPCH 331, 332, 333, 335, 338, or 344; (c) six units required from SPCH 410, 420, 432, 449 or 451; (d) six units required from SPCH 433, 436, 437, or 450; (e) three units required from SPCH 490 or any upper division speech communication courses excluding 499, selected in consultation with an advisor.

Option in Interpersonal and Organizational Communication

The Interpersonal and Organizational Communication option is designed for students who wish to prepare themselves for careers in public and private organizations requiring well-developed communication skills and a knowledge of interpersonal and organizational behavior. Students choosing this option will study the theoretic and applied aspects of interpersonal and organizational communication as they function in complex organizations. They will also develop a wide range of communication skills useful in organizational environments. This option consists of 54 units of which 39 must be upper division including the following:

Requirements for the Option in Interpersonal and Organizational Communication (code 2-6838)

Lower Division:

SPCH 130 or 132 and SPCH 200, 210, 220, and 230.

Upper Division:

(a) Major core, 21 units required from SPCH 344, 410, 420, 435, 440, 446, and 448; (b) three units required from SPCH 331 or 335; (c) three units required from SPCH 333 or 338; (d) six units required from SPCH 332, 346, 411, 421, 432, or 450; (e) Select six units from SPCH 337, 430, 449, 451, 490 or 492.

Option in Communication Theory

The Communication Theory option is designed for students who wish to emphasize the behavioral science dimension of speech communication. Students in this option will concentrate on course work that approaches gaining an understanding of human communication through the application of empirical research methodologies. This approach focuses on the observation of human behavior in order to develop scientifically-based theories which explain human communication. The option consists of 42 units of which 33 must be upper division including the following:

Requirements for the Option in Communication Theory (code 2-6839)

Lower Division:

Nine units required from SPCH 130 or 132 and 210 and 230.

Upper Division:

(a) Departmental Core, 12 units required from SPCH 435, 440, 446 and 448; (b) six units required from SPCH 332, 334, 335 or 344; (c) 12 units required from SPCH 410, 411, 420, 421, 432, 449 or 451; (d) three units required from SPCH 490 or any upper division speech communication course, excluding 499, selected in consultation with an advisor.

Option in Rhetorical Studies

The Rhetorical Studies option is designed for students who wish to approach the study of human communication from a historical-critical perspective. In this option, students will give particular attention to the historical development of rhetoric and to the study of great speakers. This option consists of 36 units of which 30 must be upper division including the following:

Requirements for the Option in Rhetorical Studies (code 2-6840)

Lower Division:

Six units required from SPCH 130, 131 or 133 and either 210 or 271.

Upper Division:

(a) Departmental Core, 12 units required from SPCH 435, 440, 446, 448; (b) six units required from SPCH 331, 332, 333, 335 or 338; (c) six units required from SPCH 433, 436, 437; (d) three units required from SPCH 449, 450 or 490; (e) three units required from SPCH 490 or any upper division speech communication course excluding 499, selected in consultation with an advisor.

Option in Speech Education

This option is designed specifically for students who are interested in teaching speech communication in California secondary schools. Under current California law, speech communication teaching is subsumed under the English teaching credential. Students must take a required body of courses in English as well as in Speech Communication to qualify for a California Single Subject Teaching Credential listing speech as a teaching area. This option serves as the approved subject matter waiver program to establish eligibility for admission to Teacher Education and the Single Subject Credential Program. The option consists of 40 units of which at least 28 must be upper division including the following:

Requirements for the Option in Speech Education (code 2-6849)

Lower Division:

SPCH 210 or 271.

Upper Division:

(a) Nine units chosen from SPCH 331, 332, 333 and 335; (b) nine units from SPCH 435, 448, and 450; (c) three units from ENGL 184; (d) three units from ENGL 250A, 250B, 370A, 370B; (e) three units ENGL 310; (f) four units from ENGL 320, 325; (g) three units C/LT 232 or ENGL 482; (h) three units SPCH 355.

Minor in Speech Communication (code 0-6841)

A minimum of 21 units in speech communication, of which at least 15 must be upper division, chosen in consultation with a faculty member of the department.

Concentration in Speech Communication for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required; 15 of which must be upper division.

1. Required courses: SPCH 352*, 358*, and 448*.
2. Select one course from: SPCH 130*, 132*, or 133*.
3. Select one course from: SPCH 210 or 271*.
4. Select three additional courses; two must be from the following: SPCH 332*, 333*, 335*, 338, 344, 446*, 451*, or CD 361*; one may be from (2) or (3) above.

Note: * Courses also available in the Liberal Studies Core.

Master of Arts in Speech Communication

The Department of Speech Communication offers graduate study leading to the master of arts degree in speech communication. A basic core of communication studies, rhetorical studies and research methods is required, but there also is opportunity for additional work in small group communication, interpretive communication of literature, reader's theatre, communication education or forensics according to student interest.

Several teaching assistant positions in speech communication are available. Interested students should make application to the department chair.

Prerequisites:

1. A bachelor's degree with a major in speech communication to include SPCH 435, 440, 446 and 448 or their equivalents, or:
2. A bachelor's degree with 24 units of upper division work in speech communication, including the courses listed above or their equivalents. Deficiencies may be made up concurrently during the first two semesters of graduate work.
3. Graduate students must consult with the departmental graduate advisor for information concerning procedures and requirements for approval of their course of study prior to enrolling in their graduate program.
4. Students who apply for the graduate program and who meet all University and departmental requirements for admission will be admitted as "classified" graduate students in the Speech Communication Department. Applicants who are otherwise eligible for admission to the University with graduate standing but who do not meet the departmental prerequisites will be admitted as unclassified graduate students until such time as all deficiencies have been removed. At that time their status will be changed to "classified" standing.

Advancement to Candidacy:

1. Removal of all undergraduate deficiencies.
2. Completion of at least six (and no more than nine) units of 500 and/or 600 level courses including 695 or 696 with a minimum grade point average of 3.0.
3. A graduate program approved by the student's faculty advisor, Graduate Committee, department chair, and School Associate Dean for Graduate Studies (Educational Policy).
4. Successful completion of the Writing Proficiency Examination.

Requirements for the Master of Arts in Speech Communication (code 5-6841)

1. A minimum of 30 units in upper division and graduate courses approved by the student's faculty advisor and the Department Graduate Committee to include:
   a. A minimum of 24 units of upper division and graduate work in speech communication;
   b. Six units of electives in any approved area, with the exception that student teaching and special methods courses may not apply.
2. The above 24 units of Speech Communication must include a minimum of 21 units in the 500 and 600 series as follows:
   a. SPCH 695 or 696 to be completed as early as possible in the graduate program and prior to advancement to candidacy.
   b. SPCH 540, 546; one course selected from SPCH 635, 636, 637, 638, or 641; one course selected from SPCH 600, 620, 648, 649, or 651.
   c. Nine elective units of 400, 500, or 600 level course work approved by the student's faculty advisor and the Department Graduate Committee. Only three of these nine units may be selected from among 400 series courses.
   d. SPCH 698 (4 units) if the thesis option is elected.
3. Satisfactory completion of a thesis or comprehensive written examination.

Courses (SPCH):

Lower Division:

130. Essentials of Public Speaking (3) F,S Faculty
Composition and delivery of speeches to inform and persuade. Logical organization is stressed.

131. Essentials of Argumentation (3) F,S Faculty
Theory and practice of argumentation. Includes evidence, proof, refutation in argumentative speaking and evaluative techniques.

132. Small Group Discussion (3) F,S Faculty
Basic principles and techniques of discussion. Relationship of discussion to democratic processes and contemporary society including a study and practice of critical thinking and problem-solving techniques in various group discussion settings.

133. Elements of Interpretive Communication (3) F,S Faculty
Theory and practice in the oral interpretation of prose and poetry.

200. Nonverbal Communication (3) F,S Hays, Yousef
Basic characteristics of the nonverbal elements of human communication in the oral communication setting.

210. Elements of Interpersonal Communication (3) F,S Hays
Not open to students with credit in SPCH 246. Basic characteristics of the processes underlying the formation, maintenance, and termination of interpersonal relationships; theoretical and practical implications of these characteristics in various forms of oral communication.

220. Elements of Organizational Communication (3) F Jenson, Willer, Yousef
The role of communication in achieving organizational goals; theory and practice of communication in private and public organizations; techniques to enhance understanding in organizations.

230. Measurement in Communication Research (3) F,S Porter
(Not open to students with credit in SPCH 447.) Prerequisite: Completion of the University General Education requirement in mathematics. Application of the scientific method to the study of speech communication; examination of the role empirical methodologies play in communication research; fundamental statistical processes.

236. Forensic Activity (1) F,S Faculty
Prerequisite: Consent of instructor. Participation in intercollegiate forensic activities. Any student who expects to participate in such activities during the semester should enroll. The student's specific assignments will be determined in consultation with the staff. Maximum credit, four units.

271. Voice and Articulation (3) F,S Hauth, Loganbill
Physiological and anatomical bases of normal voice production with intensive training in articulation, pronunciation, projection and related oral skills.

Upper Division:

303. Communication for Accounting and Finance (3) F,S Faculty
Prerequisites: ENGL 100 or equivalent; SPCH 130 or 132 or 210 or equivalent; upper division standing; open only to accounting and finance majors. Oral and written communication principles and practice in the accounting and finance professions.

331. Argumentation and Debate (3) F,S Powell, Rogers
Techniques of argumentation and their application to debate; logic, reasoning and fallacies of reasoning; experience in various forms of formal argument and debate; techniques of debate program administration.

332. Small Group Communication (3) F,S Faculty
Prerequisite: SPCH 132. Emphasizes development of communication skills for participation in small group problem-solving interaction; consideration of group structure and dynamics as they relate to small group communication participation.

333. Interpretive Communication of Literature (3) F,S Buck, Loganbill, Shanks
Derivation of meaning in various literary forms and its communicative interpretation to specific audiences.

334. Business and Professional Speech (3) F,S Faculty
Application of principles of speech in basic business, industrial and professional forms and contexts; techniques of preparation, presentation and evaluation.

335. Persuasive Speaking (3) F,S Faculty
Prerequisite: Consent of instructor. Audience behavior; theories of motivation, attention, interest; an understanding and analysis of types of audiences with methods of audience adaptation.

336. Forensic Activity (1) F,S Faculty
Prerequisite: Consent of instructor. Participation in intercollegiate forensic activities. Any student who expects to participate in such activities during the semester should enroll. Student's specific assignments will be determined in consultation with the staff. Maximum credit, four units.

337. Conference Management (3) F,S Rogers
Organization and direction of professional, business and political conferences or conventions; program simulation; leadership of and participation in decision making and parliamentary sessions.

338. Ensemble Interpretive Reading (3) S Buck, Shanks
Programming and presentation of prose, poetry and drama by an ensemble of readers. Emphasis is placed on experimental presentations and on the development of analytical insight into literary forms.

344. Theory and Techniques of Interviewing (3) F,S Faculty
Theory and techniques of oral communication in the process of interviewing. Practical application in employment, information gathering and persuasive interviews.

346. Group Facilitation in Speech Communication (3) F,S Hays
Prerequisite: Consent of instructor. The theory and practice of group facilitation. Includes supervised experience in group facilitation. (Lecture 1 hour, activity 4 hours.)

352. Story Telling (3) F,S Faculty
Cultural heritage in story telling; analysis of story types for oral presentation; techniques of preparation, presentation and listening.

355. Forms of Speech Communication (3) F,S Hauth, Skriletz
Principles of human and interpersonal communication in public speaking, oral reading, group discussion and their application to the classroom. Fulfills the oral communication requirement for the English Secondary Education credential.

358. Speech Arts for Children (3) F,S Briggs
Use of creative dramatics, improvisations, puppetry, choral speech, radio, television and group discussion for the purpose of developing fluency, responsiveness and imagination in children. Integration of speech arts activities with curricular subjects will be stressed. Opportunity to apply the theories in actual situations.

410./510. Advanced Concepts in Interpersonal Communication (3) F,S Jenson, Yousef
Prerequisites: SPCH 210 and 230, or consent of instructor. Systems and symbolic interaction approaches to interpersonal communication, consideration of interpersonal needs, self, disclosure, understanding, interpersonal perception, interpersonal attraction, and social conflict; rule and performance-centered theories of interpersonal communication.

411./511. Communication in Conflict Resolution (3) S Jenson, Yousef
Prerequisites: SPCH 210 and 230, or consent of instructor. An analytical investigation of the nature and dynamics of interpersonal conflict; approaches to the study and understanding of conflict management as examined from intrapersonal, interpersonal, intragroup, organizational, and international perspectives.

420./520. Advanced Concepts in Organizational Communication (3) F,S Jenson, Willer, Yousef
Prerequisites: SPCH 220 or 230 or consent of instructor. Philosophy, methods and designs for studying the communication systems of complex organizations; organizational communication-needs assessment, methods for developing and improving communication in organizations are examined and studied.

421./521. Communication in Bargaining and Negotiation (3) F Jenson, Willer, Yousef
Prerequisites: SPCH 220 and 230, or consent of instructor. Role of communication in the decision-making process of negotiation and bargaining. Emphasis on the functions of communication in resolving disputes through bargaining.

430./530. Computer Applications in Communication Research (3) F Porter, Willer
Prerequisites: SPCH 230 or consent of instructor. Role and use of computers in communication research; data processing, elements of programming, statistical analyses; elements of database files and systems, information storage and retrieval.

432./532. Communication Leadership (3) F Faculty
Development of leadership skills in problem-solving communication environments; leadership theories, strategies and techniques of problem-solving and decision making.

433./533. Trends in Interpretive Communication (3) F Loganbill
Trends and issues in the theoretical and historical development of oral interpretation as applied to current times.

435. Communication Criticism (3) F Briggs, Buck, Hauth
Prerequisite: SPCH 440. The analysis and criticism of public communication events including speeches, editorials, advertisements, and documentaries from a variety of rhetorical perspectives.

436./536. Communication Strategies of American Speakers (3) F Buck, Hauth, Rogers
Prerequisites: SPCH 435, 440. Comparison and contrast of famous American speakers and their techniques, effects and environments from the colonial period to present.

437./537. Communication Strategies of European Speakers (3) F Briggs, Buck
Prerequisites: SPCH 435, 440. Comparison and contrast of famous European speakers and their techniques, effects and environments from Demosthenes and Cicero to Churchill and Hitler.

440. Survey of Rhetorical Theory (3) F,S Buck
Major rhetorical contributions from the Classical to the Modern Period.

446. Studies in Communication Theory (3) F,S Faculty
Prerequisite: SPCH 440 or consent of instructor. Conceptual perspectives and studies of coding, meaning, thinking, information and persuasion within interpersonal, group and organizational contexts; theoretical contributions from other disciplines.

448. Language and Behavior (3) F,S Briggs, Hauth, Jenson
Symbolic basis of human communicative behavior; relationship between language and behavior; investigation and analysis of discourse and behavioral effects.

449./549. Studies in Oral Persuasion and Attitude Change (3) F,S Faculty
Attitude formation and change through oral communication; factors in persuasion; problems in determining the effects of persuasive messages; source credibility, message variables; and personality factors in the process of persuasion.

450./550. Communication Training in Organizations (3) F Skriletz
Prerequisite: Major or minor in speech communication or consent of instructor. The nature and role of communication training in a variety of social, educational, and business organizations are investigated and analyzed. Communication effectiveness programs are examined and studied in terms of goals, structure, and impact. Use of audiovisual aids and communication training techniques are emphasized.

451./551. Intercultural Communication (3) S Porter, Yousef
Study of the relationship between culture and communication with emphasis given to social, psychological, linguistic and nonverbal variables; problems in the practice of intercultural communication.

490./590. Special Topics in Speech Communications (1-3) F,S
Topics of current interest selected for intensive study in speech communication. May be repeated with different topics for a maximum of six units. Topics will be announced in the Schedule of Classes.

492A-B. Internship (3) F,S Faculty
Prerequisite: Consent of instructor. Open only to senior majors in Interpersonal and Organizational Communication degree option. At least 120 hours with cooperating organizations off-campus. Work to be directed and evaluated by the instructor in consultation with supervisors of the participating organizations. Assignments will be varied. Offered on CR/NC basis only.

499. Special Studies in Speech (1-3) F,S Faculty
Open to students with upper division or graduate standing and consent of instructor. Individualized laboratory or library research selected in consultation with instructor. Written report of the research is required. Not acceptable for graduate credit toward the master's degree.

Graduate Division:

503. Issues in Business Communication (3) F,S Willer, Yousef
Prerequisite: Successful completion of WPE. Study and analysis of written communication processes applicable to complex organizational enrivonments: consideration of such forms as letters, memoranda, proposals, reports, evaluations, and position descriptions; consideration of usage, style, format, and content. [Seminar] Grading: Traditional only.

510./410. Advanced Concepts in Interpersonal Communication (3) F,S Jenson, Yousef
Prerequisites: SPCH 210 and 230, or consent of instructor. Systems and symbolic interaction approaches to interpersonal communication, consideration of interpersonal needs, self, disclosure, understanding, interpersonal perception, interpersonal attraction, and social conflict; rule and performance-centered theories of interpersonal communication.

511./411. Communication in Conflict Resolution (3) S Jenson, Yousef
Prerequisites: SPCH 210 and 230, or consent of intructor. An analytical investigation of the nature and dynamics of interpersonal conflict; approaches to the study and understanding of conflict management as examined from intrapersonal, interpersonal, intragroup, organizational, and international perspectives.

520./420. Advanced Concepts in Organizational Communication (3) F,S Jenson, Willer, Yousef
Prerequisites: SPCH 220 or 230 or consent of instructor. Philosophy, methods and designs for studying the communication systems of complex organizations; organizational communication-needs assessment, methods for developing and improving communication in organizations are examined and studied.

521./421. Communication in Bargaining and Negotiation (3) F Jenson, Yousef
Prerequisites: SPCH 220 and 230, or consent of instructor. Role of communication in the decision-making process of negotiation and bargaining. Emphasis on the functions of communication in resolving disputes through bargaining.

530./430. Computer Applications in Communication Research (3) F Porter, Willer
Prerequisites: SPCH 230 or consent of instructor. Role and use of computers in communication research; data processing, elements of programming, statistical analyses; elements of database files and systems, information storage and retrieval.

531. Administering the Forensic Program (3) S Faculty
Prerequisite: Consent of instructor. Principles of constructing and administering a forensic program, including recruiting, squad direction, budgeting, tournament policies and current literature on forensic direction. Not open to students with credit in SPCH 431.

532./432. Communication Leadership (3) F Faculty
Development of leadership skills in problem-solving communication environments; leadership theories, strategies and techniques of problem-solving and decision making.

533./433. Trends in Interpretive Communication (3) F Loganbill

Trends and issues in the theoretical and historical development of oral interpretation as applied to current times.

534. Organizational Issues in Public Communication (3) F,S Jenson, Willer, Yousef

Study and analysis of public communication processes. Planning, practice, and presentation of messages for different specific organizational environments ranging from stockholders and employees of organizations to the media and the public at large. [Seminar] Grading: Traditional only.

536./436. Communication Strategies of American Speakers (3) F Buck, Hauth, Rogers

Prerequisites: SPCH 435, 440. Comparison and contrast of famous American speakers and their techniques, effects and environments from the colonial period to present.

537./437. Communication Strategies of European Speakers (3) F Briggs, Buck

Prerequisites: SPCH 435, 440. Comparison and contrast of famous European speakers and their techniques, effects and environments from Demosthenes and Cicero to Churchill and Hitler.

540. Contemporary Rhetorical Theory (3) F Hauth

Prerequisite: Consent of instructor. The rhetorical theory of British and American rhetoricians since 1750.

546. Issues in Communication Studies (3) S Jenson

Prerequisite: Consent of instructor. Investigation and evaluation of intra-personal and sociocultural communication systems; nonverbal communications; language and symbolic systems; persuasion and attitude change; contributions to human communication theory from other disciplines; and current trends and directions in communication research.

549./449. Studies in Oral Persuasion and Attitude Change (3) F,S Faculty

Attitude formation and change through oral communication; factors in persuasion; problems in determining the effects of persuasive messages; source credibility, message variables, and personality factors in the process of persuasion.

550./450. Communication Training in Organizations (3) F Skriletz

Prerequisite: Major or minor in speech communication or consent of instructor. The nature and role of communication training in a variety of social, educational, and business organizations are investigated and analyzed. Communication effectiveness programs are examined and studied in terms of goals, structure, and impact. Use of audiovisual aids and communication training techniques are emphasized.

551./451. Intercultural Communication (3) S Porter, Yousef

Study of the relationship between culture and communication with emphasis given to social, psychological, linguistic and nonverbal variables; problems in the practice of intercultural communication.

590./490. Special topics in Speech Communication (3) F Faculty

Prerequisite: Consent of instructor. Investigation of topics of current interest and concern to students in speech communication and allied areas. Topics will be announced in the Schedule of Classes. May be repeated for credit with different topics, but no more than six units may count toward the master's degree in speech communication.

600. Seminar in Nonverbal Communication (3) S Odd years Yousef

(Not open to students with credit in SPCH 646D.) Review and analysis of theoretical writings and critical studies in nonverbal communication; the relationship of nonverbal behavior to oral communication.

610. Seminar in Interpersonal Communication (3) F Faculty

Prerequisite: Speech Communication 410 or consent of instructor. Current theories and research in interpersonal communication.

611. Seminar in Negotiation and Conflict Resolution (3) S Willer, Yousef

Prerequisite: Speech Communication 411 or 421 or consent of instructor. Investigation, analysis, and criticism of the nature, development, and dynamics of conflict and the role of negotiations in interpersonal, group, organizational, and international and intercultural communication; study and understanding of conflict management.

620. Seminar in Organizational Communication (3) F Willer, Yousef

(Not open to students with credit in SPCH 646B.) Theories and models of communication in large organizations; design and management of organizational communication systems.

632. Seminar in Small Group Communication (3) S Faculty

Prerequisite: Consent of instructor. Research in small group discussion.

633. Seminar in Interpretive Communication (3) F Loganbill

Prerequisite: Consent of instructor. Theories of communicative interpretation of literature, with emphasis upon the theory and evaluation of oral presentation of literature as an art form and a pedagogical instrument.

635. Seminar in Communication Criticism (3) F Hauth

Prerequisite: SPCH 540. Critical theories of rhetoric and major systems of communication criticism; development of criteria and approaches for the evaluation of select communication acts and contexts.

636. Seminar in American Public Communication (3) F Even years Faculty

(Not open to students with credit in SPCH 640C.) Studies of American rhetorical events and their social, political and intellectual settings; application of rhetorical theory in the analysis of these events.

637. Seminar in British Public Communication (3) S Even years Faculty

(Not open to students with credit in SPCH 640B.) Studies of British rhetorical events and their social, political and intellectual settings; application of rhetorical theory in the analysis of these events.

638. Seminar in Greek and Roman Public Communication (3) F Odd years Faculty

(Not open to students with credit in SPCH 640A.) Studies of Greek and Roman rhetorical events and their social, political and intellectual settings; application of rhetorical theory in the analysis of these events.

641. Seminar in Rhetorical Theory (3) S Buck, Hauth

Studies of the major figures in the development of rhetorical theory; consideration of the philosophic bases of rhetoric and the relationship of their social, political and cultural settings.

648. Seminar in Language and Behavior (3) F Even years Jenson

(Not open to students with credit in SPCH 646F.) Contemporary theories and models in linguistic, psycholinguistic and sociolinguistic research; communication discourse and speech acts analysis.

649. Seminar in Persuasion and Attitude Change (3) S Even years Faculty

(Not open to students with credit in SPCH 646A. Contemporary theories and models of persuasion; structure and relationships of beliefs, values and attitudes; methods of assessing persuasive effects; analysis of research literature.

650. Seminar in Communication Education (3) S Skriletz

Prerequisite: Consent of instructor. Advanced studies in historical and contemporary theories and problems in speech communication pedagogy.

651. Seminar in Intercultural Communication (3) F Odd years Yousef

(Not open to students with credit in SPCH 646C.) Analysis of cultural influences on interpersonal communication; emphasis given to cultural values, perception, social organization, language and nonverbal codes; development of strategies for effective intercultural communication in both international and domestic settings.

695. Empirical Research Methods (3) S Faculty

Prerequisite: SPCH 230 or equivalent course in statistics. Empirical research methodologies applied to communication research; problems of measurement, quantification and measuring instruments; theory and design of scientific research; analysis of findings.

696. Communication Research Methods (3) F,S Faculty

Methodological problems involved in graduate research; bibliographical problems and library research; study and critical evaluation of research; methods in the development of rhetorical, experimental, descriptive and critical research.

697. Directed Research (1-3) F,S Faculty

Prerequisites: SPCH 695 or 696, authorization of the department Graduate Advisor, consent of instructor. Directed research leading to the definition and discussion of a selected problem of issue in speech communication and the presentation of research results in a formal paper submitted to the department. [Independent Study]

698. Thesis (2-4) F,S Faculty

Prerequisites: SPCH 696, consent of the department. Preparation, completion and submission of an acceptable thesis in partial fulfillment of the requirements for the master's degree.

School of Natural Sciences

Dean: Dr. Roger D. Bauer
Associate Dean: Dr. James L. Jensen
School Office: Faculty Office 5 (FO5), Room 104
Telephone: 498-4707

In a world where science plays an increasingly important role and where an understanding of the sciences is essential for an informed citizenry, the School of Natural Sciences provides quality educational opportunities in the life and physical sciences. Students are provided a broad-based, fundamental education in the natural sciences, and challenged to think and act in a scientific way. Alumni of the School demonstrate that science graduates are well-prepared to enter graduate and professional schools, or to assume responsible positions in industry or government.

The School is dedicated to the concept that a university has a special responsibility toward academic excellence and the advancement of knowledge. The faculty and staff of the Departments of Anatomy/Physiology, Biology, Chemistry, Geological Sciences, Microbiology and Physics/Astronomy are committed to providing an outstanding educational experience for all students.

Degrees Offered

All departments within the School of Natural Sciences offer both the Bachelor of Science and Master of Science degrees.

The Departments of Biology, Chemistry and Physics/Astronomy also offer the Bachelor of Arts degree, and the Department of Physics/Astronomy offers a Master of Arts degree. Each degree has unique requirements and students should refer to a departmental section of this catalog to determine specific requirements. A department advisor should be consulted early, preferably prior to the first semester of enrollment, in order to develop an appropriate academic plan consistent with career goals.

Consortium Programs

The School of Natural Sciences hosts the Southern California Ocean Studies Consortium. The consortium operates an 80-foot research vessel, and provides the mechanism whereby students from CSU Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, and Pomona can share courses and degree programs. In addition, consortium staff conduct research and facilitate the research of CSU faculty. The major focus is on harbors and coastal areas, with emphasis on environmental issues.

CSULB participates in the California Desert Studies Consortium which has a Desert Studies Center in the heart of the Mojave Desert at Soda Springs (formerly called Zzyzx) near the town of Baker. The surrounding area consists of typical Mojave Desert with dry lakes, sand dunes, and mountain ranges; it is the gateway to Death Valley and the Kelso Dunes. The Center has excellent facilities for teaching field classes and for student and faculty research. California State Universities at Long Beach, Los Angeles, Fullerton, Pomona, Dominguez Hills, Northridge, and San Bernardino use the Center.

Science Student Learning Center

Recognizing that all students have unique learning needs, the Science Student Learning Center seeks to meet these outside the traditional lecture halls and laboratories. The Center is equipped with a variety of equipment, including Apple II microcomputers and video cassette players. Materials for use with this equipment, as well as textbooks, files of previous examinations, and study guides are available for student use. Qualified upper division and graduate students staff the Center and are available for some tutorial assistance. The Center's activities are designed for the science major and for the non-science major who may be having difficulty with a new discipline of study.

Student Organizations

The School of Natural Sciences Student Council is one of the most active and effective student organizations at the University. Their efforts have made significant contributions to the School's educational program, bringing to campus renowned scientists for seminars. In addition to the School-wide student organization, each department has an active student organization that plays a vital role in providing peer support for science majors.

Pre-Health Professions Office (FO5-112)

Professional schools in many universities either require or recommend that applicants complete four-year programs for admission. Although the professional schools do not always require a bachelor's degree, they generally encourage basic preparation and a broad general education leading to that degree before beginning specialization.

Students planning a career as a health professional can begin preparing themselves by making use of the advising services coordinated by the Pre-Health Professions Office. Pamphlets, catalogs, and college admissions and testing information are available in the office for those interested in such fields of study as medicine, dentistry, optometry, osteopathy, pharmacy, podiatry, and veterinary medicine.. The office maintains a file on each student which, among other features, allows students to have one centralized location for all of their letters of recommendation. Letters are copied free of charge and sent to professional schools at the student's request.

The Organization of Preprofessional Students (T.O.P.S.) organizes various social and professional functions providing an excellent information network and peer advising group. Chicanos for Community Medicine (CCM) sponsors a variety of activities each year including community outreach activities, workshops on summer programs for minority students, and training on interview techniques. The Black Students in Science Organization (BSSO) also provides a variety of outreach and peer support activities.

An alumni group, composed of CSULB alumni who are practicing health professionals, provides role models for pre-health professions students as well as providing guidance and insight into a variety of health professions and professional schools.

Natural Science Museum

The School of Natural Sciences maintains a modest Natural Science Museum in which the displays and exhibits encourage visitor participation as much as possible. Each week during the academic year the museum is visited by students from Los Angeles and Orange

County elementary, junior high and high schools. The museum is a great tool to encourage a more positive outlook toward science and provides a forum for people to get a glimpse of University Life.

The School also operates the Mobile Science Museum, which extends the campus Science Museum into the community. This innovative museum travels to schools and community groups, bringing many of the interactive displays and exhibits featured in the campus museum. Like the campus Science Museum, the Mobile Science Museum's greatest asset is its ability to motivate people toward a better understanding of science.

Science Education

The School of Natural Sciences has made a strong commitment to precollege science through the activities of its Science Education Office. The Office plays a key role in the preservice education and certification of both elementary and secondary school science teachers. Experienced teachers are encouraged to increase their science teaching effectiveness through a continuing program of inservice education. Some of these activities, such as 'Bio-Forum' and 'Mini-Courses in Science,' have been conducted with support from the National Science Foundation, while others (such as those offered through University Extension) have been self-supporting. The Office also conducts occasional special programs for pre-college students and for school principals and parent organizations. In recent years, these have included a very popular 'Saturday Sciencing for Kids' series and a statewide series of conferences designed to improve science instruction in 'School Improvement Program' schools. In addition to its teaching activities, the Science Education Office also maintains an extensive Science and Environmental Education Curriculum Resource Center in which are displayed science teaching guides and related materials, textbooks, journals, and selected audio-visual materials.

School-Based Courses (SNS):

200. Introduction to Computer Methods in Science (2) F,S

Prerequisites: Two years of high school mathematics. Introduction to computer methods used in collecting, analyzing, and presenting scientific data. Will introduce word processing, spreadsheet analysis, data base management, and statistical analysis. Essentials of programming using BASIC will be presented. (Lecture 1 hour, Laboratory 3 hours)

301. Science in the Elementary School (3) F,S Ritz

Prerequisites: Six units of course work in departments of the School of Natural Sciences. A sampling of the broad fields of science, emphasizing the processes of science. Practical approaches to teaching elementary school science are integrated throughout. Equivalent to BIOL 301. (Lecture 2 hours, activities 2 hours.)

302. Elementary School Science Workshop (2) F,S Faculty

A practicum on the development and use of hands-on elementary school science teaching/learning activities, units, and learning centers. BIOL / N SCI 301 recommended. Equivalent to BIOL 302 (Lecture 2 hours, activities 2 hours.)

305. Workshop in Environmental Education (3) F,S Ritz

An interdisciplinary workshop/seminar course for teachers of all grade levels or subject specialties, K-12. Current environmental issues, field excursions, involvement with innovative curricular materials, and development of teaching/learning units for class use. (Lecture 2 hours, workshop 2 hours.)

350. The Scientist in Industry (3) F,S Mayfield

Open to majors in any of the natural sciences. Examination and discussion of the new environment which university graduates in science will encounter upon moving to employment in science-based industrial, business and governmental organizations. Utilizing basic knowledge to solve applied problems. Experts from the private and governmental sectors will speak on selected topics. One or two site visits will be scheduled.

376IC. Science and Modern Culture (3) F,S Lerner, Biedebach

Prerequisites: At least two courses in the departments of the School of Natural Sciences, and two courses from the Department of History of Political Science. Study of the manner in which culture has been shaped by the enterprise of science. Issues or subtopics within emerging themes will deal with the interaction of the scientific community and other social or cultural groups during specific historical periods since the beginning of the modern scientific age.

377. Blood Research: A Study in Landmark Discoveries (3) F,S Senozan

A study of landmark discoveries in blood research that emphasizes the interplay between biology, chemistry and physics.

381IC. Marine Resources Management (3) F,S Faculty

General ecological, engineering and management principles applied to the recreational and commercial utilization of living and nonliving marine resources of Southern California. Emphasis will be on current and future demands on local marine resources.

490. Special Topics in Science Education (1-3) F,S Faculty

Prerequisite: Consent of instructor. Selected topics in science education. Course content will vary from section to section. May be repeated for credit with the consent of instructor.

492. Internships in Natural Science (3) F,S Reish

Prerequisites: Upper-division standing and consent of instructor prior to registration. Students who qualify will be placed in a major or career-related assignment in private industry and public agencies. All participants utilize learning agreements. A final written report is required. Class attendance to be arranged by instructor. CR/NC only. (9 hours experience per week). May be repeated for a maximum of six units. [Activity — Laboratory] Grading: CR/NC only. Repeatable to a maximum of 6 units with different topics.

496. Directed Studies in Science Education (1-3) F,S Faculty

Prerequisite: Consent of instructor. Supervised study of current topics in science education. May be repeated for credit.

Anatomy Physiology

School of Natural Sciences

Department Chair: Rajen S. Anand
Department Office: PH1-217
Telephone: 498-4024
Faculty: Professors: Rajen S. Anand, Bruce E. Beekman, Kenneth M. Gregory, Byron C. Kluss, Frank C. Schatzlein; Associate Professors: Mark C. Biedebach, Anna M. Parmley, Brenda M. Sanders, Edward Tjioe
Department Secretary: Lou Houshar
Undergraduate/Graduate Advisor: Frank C. Schatzlein

The Department of Anatomy and Physiology offers programs that lead to a bachelor's degree in Physiology, a minor in Physiology or a certificate in Biomedical Art. There are programs designed to meet the entrance requirements for students seeking admission to medical, dental, veterinary and other allied Health institutions of learning. The course of studies offered by the Department also prepares students for advanced study at the graduate level, as well as for careers in teaching, industry, or government.

Special courses are offered to satisfy the basic science requirements of students majoring in Nursing, Physical Therapy, Physical Education, Home Economics and other fields. Several courses are designed to meet the General Education requirements in Biological Science.

The Department also participates in the Master of Science degree in Biology through the Department of Biology. Students interested in graduate studies should obtain a brochure from the Anatomy and Physiology Department office for further information.

The Anatomy and Physiology Department occupies facilities on the second floor of Peterson Hall 1 (PH 1).

Financial Support, Assistantships

A limited number of teaching, graduate, and research assistantships are available in the department. Usually, these involve half-time work devoted to preparation and/or instruction in undergraduate laboratory classes. Application forms for these positions are available in the Department of Anatomy and Physiology.

Bachelor of Science in Zoology: Option in Physiology (code 3-7604)

Requirements for the Bachelor of Science

Lower Division:

BIOL 212, 216, and 260; CHEM 111A-B; MATH 115S, 116; PHYS 100A-B; MICR 210.

Upper Division:

CHEM 321A, 322, 441A-B; 28 units satisfied with the following requirements including BIOL 370 and one course selected from A/P 335, BIOL 332, 333, or 433; eight units selected from Anatomy/Physiology 340 and 340L, 342 and 342L, 440; and nine units selected from A/P 340, 342, 440, 441, 442, 443, 446, 460, 480, and BIOL 448, 470, 473.

Minor in Physiology (code 0-7604)

A minimum of 18 units is required for the minor.

Lower Division:

A minimum of seven units selected from the following courses: BIOL 216; A/P 107, 202, 207, 208 and 209.

Upper Division:

A minimum of eleven units selected from the following courses including at least eight units from Anatomy/Physiology Department. BIOL 332, 448; A/P 305, 307, 336, 340, 340L, 342, 342L, 440, 441, 442, 443, 446; P ED 301; CHEM 441A-B, 448; PSY 345; H EC 331, 436.

Certificate Program in Biomedical Art

The certificate in Biomedical Art is an interdisciplinary program sponsored by the Art, Biology and Anatomy/Physiology Departments. Requirements for the certificate are listed in the Art Department section of this bulletin. Co-directors of the CSULB biomedical Art program are Richard Oden and Peter Mendez from the Art Department; and Kenneth Gregory from the Anatomy/Physiology Department. Questions regarding this program may be addressed to them during office hours which are listed in the respective departmental offices.

Master of Science in Biology (code 6-7621)

The department participates in this degree program. Students planning to undertake graduate work leading to this degree must consult the section under Biology and obtain further information from the Department of Biology.

Major in Physiology

Students may receive unit credit for courses marked with the symbol '##' as a general elective but may not apply the units toward the specific requirements for their degree.

Courses (A/P):

Lower Division:

107. Human Body-Structure and Function (3) F,S Faculty

Brief survey of structure and function of human systems. Designed for those who desire basic understanding of the body. Not designed for majors in the School of Natural Sciences. (Lecture 2 hours, laboratory 3 hours.)

202. Human Anatomy (3) F,S Parmley

General introduction to the structure of human body systems with emphasis on skeletal and muscular systems. Not designed for majors in the School of Natural Sciences. (Lecture 2 hours, laboratory 3 hours.)

206. Essentials of Pharmacology (2) F,S Faculty

Prerequisite: A/P 209. A systematic study of drugs, their classification, methods and routes of administration, therapeutic and toxic effects with emphasis on nursing implications. Not designed for majors in the School of Natural Sciences. Not open to students with credit in A/P 246. Same course as A/P 246. (Lecture 2 hours.)

207. Human Physiology (4) F,S Biedebach

General introduction to the functional integration of human body systems. Not designed for majors in the School of Natural Sciences. (Lecture 3 hours, laboratory 3 hours.)

208. Human Morphology (4) F,S Gregory

The gross anatomy, histology and neuroanatomy of the human body. Designed primarily for majors in nursing, biomedical engineering and biomedical art. Not open to students with credit in A/P 202 except by consent of instructor. (Lecture 3 hours, laboratory 3 hours.)

209. Applied Physiology (4) F,S Faculty

Prerequisites: A/P 202 or 208, CHEM 200 or equivalent. A/P 208 may be taken concurrently. Principles of human physiology. Designed primarily for majors in nursing and related disciplines. (Lecture 3 hours, laboratory 3 hours.)

Upper Division:

305. Pathophysiology (3) F,S Anand, Gregory

Prerequisites: A/P 208, 209; CHEM 300; MICR 210. Pathogenesis and pathophysiology of common disorders of human nervous, musculoskeletal, endocrine, cardiovascular, respiratory, excretory, digestive and reproductive systems with emphasis on the physiological basis of the disease process and clinical correlations. Not designed for majors in the School of Natural Sciences. Not open to students with credit in A/P 345. Same course as A/P 345. (Lecture 3 hours.)

307. Physiology for Therapists (4) F,S Anand

Prerequisites: BIOL 200, CHEM 300, PHYS 104; Admission to the Professional Physical Therapy Program or consent of instructor. Mechanisms of action and interaction of the various body systems, including the implications related to clinical and therapeutic treatment procedures. Not designed for majors in the School of Natural Sciences. (Lecture 3 hours, laboratory 3 hours.)

308. Human Body and Mind (3) F,S Faculty

A course designed to facilitate understanding of the human being as an integrated physiological and psychological entity. It presents clear and simple explanations of various aspects of the human body's function, development and care, and explores the interaction between body and mind in physiological, medical and psychological terms. (Lecture 3 hours.)

*335. Histology (3) S Kluss

Prerequisite: BIOL 216. Microscopic anatomy of animals; nature and characteristics of tissues, organs and organ systems; emphasis on human histology. (Lecture 2 hours, laboratory 3 hours.)

*336. Human Prosection (3) F,S Parmley

Prerequisite: Consent of instructor. Detailed regional dissection of the human body with emphasis on dissection technique. May be repeated once for credit. Grading: Traditional only. Repeatable to a maximum of 6 units with different topics. [Lecture 1 hour, laboratory 6 hours].

*340. Comparative Animal Physiology (3) F,S Beekman

Prerequisite: BIOL 216; CHEM 111A-B. Comparison of the fundamental physiological processes of the major animal phyla. (Lecture 3 hours.)

*340L. Laboratory in Comparative Animal Physiology (1) F,S Beekman

Prerequisite: A/P 340 (may be taken concurrently). Laboratory course designed to acquaint students with direct observation and measurement of physiological processes in various animal groups, both invertebrate and vertebrate. (Laboratory 3 hours.)

*342. Mammalian Physiology (3) F,S Anand, Tjioe

Prerequisites: BIOL 216; CHEM 111A-B. Recommended: PHYS 100A-B. A course dealing with the function of the various mammalian body systems, especially of humans. Emphasis will be placed on the integration of homeostatic mechanisms of the nervous, muscular, endocrine, cardiovascular, respiratory, renal, digestive and reproductive systems. (Lecture 3 hours.)

*342L. Laboratory in Physiology (1) F,S Tjioe

Prerequisite: A/P 342 (may be taken concurrently). Experiments and exercises designed to provide laboratory experience in, and illustration of, physiological principles and mechanisms of interaction among the various body systems. (Laboratory 3 hours.)

365. Biomedical Illustration — Animals (2) S Gregory

Prerequisites: Degree in biology or art in progress, consent of instructor. Completion of, or concurrent enrollment in Art 374A-B. (Activity 4 hours.)

400. Biology of Human Development (3) F,S Kluss

Prerequisite: A/P 107 or 207. Biological and physiological processes associated with human growth and development from conception to adulthood. Not designed for majors in the School of Natural Sciences. (Lecture 3 hours.)

401. Biology of Human Aging (3) F Kluss

Prerequisite: A/P 107 or 207 or 209 or BIOL 200 or 216. Biological processes associated with aging in humans. Emphasis on both cellular and organ aging. Not designed for majors in the School of Natural Sciences. (Lecture 3 hours.)

*440. General and Cellular Physiology (4) F,S Schatzlein

Prerequisites: Five units of biological or physiological sciences; CHEM 327; PHYS 100A-B. Physiological processes of plant and animal cells and tissues basic to understanding the function of the whole organism. (Lecture 3 hours, laboratory 3 hours.)

441./541. Cardiovascular Physiology (3) S Faculty

Prerequisite: A/P 340 or 342; PHYS 100A-B. Functions of the cardiac, vascular and blood systems in the vertebrate animal. (Lecture 3 hours.)

442./542. Neuromuscular Physiology (3) S Biedebach

Prerequisite: A/P 340 or 342 or 440 or consent of instructor. Emphasis upon the mechanisms by which nerve and muscle cells function. Representative examples will be selected from vertebrate and invertebrate phyla. (Lecture 2 hours, laboratory 3 hours.)

443./543. Endocrinology (3) F,S Schatzlein

Prerequisites: BIOL 216; CHEM 327. Role of the endocrines in vertebrate and invertebrate adjustment to changes in the internal and external environment. (Lecture 3 hours.)

446./546. Respiratory and Renal Physiology (3) F Faculty

Prerequisites: A/P 340 or 342; PHYS 100A-B. Functions and interaction of the respiratory and renal systems. Both vertebrate and invertebrate systems will be studied. (Lecture 3 hours.)

460./560. Radio-Chemical Techniques in Biology (4) F

Prerequisites: CHEM 327. Five units of biological sciences. CHEM 251 and 251L strongly recommended. Experience in the use and handling of radioactive tracers in the biological sciences. (Lecture 2 hours, laboratory 6 hours). Grading: Traditional only.

466./566. Biological Graphics (2) F

Prerequisites: ART 374A-B or consent of instructor. Techniques and experience in the use of pen and ink in the preparation of illustrations for textbooks and scientific illustrations. Course is designed for scientific illustration majors. May be repeated once for credit. Grading: Traditional only. Repeatable to a maximum of 4 units with different topics. (Activity — 4 hrs.)

480./580. Seminar (1) F,S

Prerequisites: Consent of instructor. Topics on current research in anatomy and/or physiology presented by local and visiting scientists or by graduate students. Requires participation in the organization of the seminars and in the critical evaluation of these presentations. May not be repeated for credit towards any single degree. Grading: Traditional only. Repeatable to a maximum of 1 units with different topics.

490./590. Special Topics (1-3) F,S

Prerequisites: Consent of instructor. Topics from selected areas of Physiology. Course content will vary from section to section. May be repeated for credit with the consent of the instructor. Maximum credit for A/P 590 and/or 590L limited to six units. Topics to be announced in the schedule of classes. Grading: Traditional only. Repeatable to a maximum of 6 units with different topics. (Lecture 1-3 hours).

490L./590L. Laboratory in Special Topics (1-3) F,S

Prerequisites: Consent of instructor. Topics from selected areas of Physiology. Course content will vary from section to section. May be repeated for credit with the consent of the instructor. Maximum credit for A/P 590 and/or 590L limited to six units. Topics to be announced in the Schedule of Classes. Grading: Traditional only. Repeatable to a maximum of 6 units with different topics. (Laboratory 3-9 hours).

495. Supervised Laboratory Techniques (1-2) F,S Faculty

Prerequisite: A/P 202 or 208 or both BIOL 212 and 216, and consent of instructor. Experience for upper division students in the organization of and techniques for a laboratory in physiology. Includes individual supervision of directed teaching. May be repeated for a maximum of two units. (Conference 1 hour, laboratory 3 hours.)

496. Investigations in Physiology (1-3) F,S Faculty

Prerequisite: Consent of instructor. Research in a specific subject in physiology. Topic of study to be approved and directed by a faculty member in the Department of Anatomy/Physiology. May be repeated to a maximum of 3 units. (Conference 1 hour, laboratory 3 hours per unit.)

Graduate Division:

507. Advanced Pharmacology (2) F,S Faculty

Prerequisite: A/P 206. Study of principles governing the interaction between drugs and biological systems. Particular attention is focused on the modes of action, pharmacokinetics and disposition of drugs to provide a scientific basis for their rational use in medicine. Not designed for majors in the School of Natural Sciences. Not open to students with credit in A/P 547. Same course as A/P 547. (Lecture 2 hours.)

541./441. Cardiovascular Physiology (3) S Faculty

Prerequisite: A/P 340 or 342; PHYS 100A-B. Functions of the cardiac, vascular and blood systems in the vertebrate animal. (Lecture 3 hours.)

542./442. Neuromuscular Physiology (3) S Biedebach

A/P 340 or 342 or 440 or consent of instructor. Emphasis upon the mechanisms by which nerve and muscle cells function. Representative examples will be selected from vertebrate and invertebrate phyla. (Lecture 2 hours, laboratory 3 hours.)

543./443. Endocrinology (3) F,S Schatzlein

Prerequisites: BIOL 216; CHEM 327. Role of the endocrines in vertebrate and invertebrate adjustment to changes in the internal and external environment. (Lecture 3 hours.)

544. Experimental Endocrinology (3) S Beekman, Schatzlein

Prerequisite: A/P 443. Laboratory techniques basic to the understanding of endocrinology. Quantitative experiments concerning the endocrine control of metabolism, reproduction, differentiation and adaptation in organismic and molecular biology. (Lecture 1 hour, laboratory 6 hours.)

546./446. Respiratory and Renal Physiology (3) F Faculty

Prerequisites: A/P 340 or 342; PHYS 100A-B. Functions and interaction of the respiratory and renal systems. Both vertebrate and invertebrate systems will be studied. (Lecture 3 hours.)

560./460. Radio-Chemical Techniques in Biology (4) F

Prerequisites: CHEM 327. Five units of biological sciences. CHEM 251 and 251L strongly recommended. Experience in the use and handling of radioactive tracers in the biological sciences. Grading: Traditional only. (Lecture 2 hours, laboratory 6 hours).

566./466. Biological Graphics (2) F

Prerequisites: ART 374A-B or consent of instructor. Techniques and experience in the use of pen and ink in the preparation of illustrations for textbooks and scientific illustrations. Course is designed for scientific illustration majors. May be repeated once for credit. Grading: Traditional only. Repeatable to a maximum of 4 units with different topics. (Activity — 4 hrs.)

580./480. Seminar (1) F,S

Prerequisites: Consent of instructor. Topics on current research in anatomy and/or physiology presented by local and visiting scientists or by graduate students. Requires participation in the organization of the seminars and in the critical evaluation of these presentations. May not be repeated for credit towards any single degree. Grading: Traditional only. Repeatable to a maximum of 1 units with different topics.

590./490. Special Topics (1-3) F,S

Prerequisites: Consent of instructor. Topics from selected areas of Physiology. Course content will vary from section to section. May be repeated for credit with the consent of the instructor. Maximum credit for A/P 590 and/or 590L limited to six units. Topics to be announced in the schedule of classes. Grading: Traditional only. Repeatable to a maximum of 6 units with different topics. (Lecture 1-3 hours).

590L./490L. Laboratory in Special Topics (1-3) F,S

Prerequisites: Consent of instructor. Topics from selected areas of Physiology. Course content will vary from section to section. May be repeated for credit with the consent of the instructor. Maximum credit for A/P 590 and/or 590L limited to six units. Topics to be announced in the Schedule of Classes. Grading: Traditional only. Repeatable to a maximum of 6 units with different topics. (Laboratory 3-9 hours).

661. Seminar in Anatomy and Physiology (1) F,S Faculty

Critical evaluation of the primary literature of this field, including oral and/or written presentation of critiques.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of instructor. Research on a specific subject in physiology. Topic for study to be approved and directed by a faculty member in Anatomy/Physiology Department. (May be repeated for credit to a maximum of 3 units.)

698. Thesis (1-6) F,S Faculty

Prerequisite: Consent of departmental graduate advisor. Planning, preparation and completion of a thesis in Anatomy and Physiology.

Biology

School of Natural Sciences

Department Chair: Larry Leamy
Department Office: PH1-109
Telephone: 498-4806
Faculty: Professors: Frank J. Alfieri, James A. Bourret, George L. Callison, Charles T. Collins, Murray D. Dailey, Charles P. Galt, Ju-Shey Ho, Everett H. Hrubant, Kenneth L. Jenkins, Ira Jones, Ronald A. Kroman, Larry Leamy, Greayer Mansfield-Jones, Donald R. Nelson, Dennis G. Rainey, Donald J. Reish, Elbert L. Sleeper, Stuart Warter, Eunice Wood; Associate Professors: Philip C. Baker, Richard N. Bray, Robert C. Clover, Cliff W. Hill, David G. Huckaby, Alan C. Miller, Keh-Ping Ting.
Emeritus Faculty: John J. Baird, Hiden T. Cox, Honore Dash, Robert P. Durbin, Ross Hardy, Richard G. Lincoln, Kenneth E. Maxwell, Donald D. Shipley, Lee B. Stephens, William Wellhouse
Department Secretary: Shirlee Critchfield

Students desiring information should contact the department office for referral to one of the faculty advisors. Credential Advisor: William Ritz; Undergraduate Advisor: See list in undergraduate office; Graduate Advisor: Charles Collins.

Biology Department Advisory Council:

The Biology Department Advisory Council consists of individuals prominent in the community who represent a wide variety of biological disciplines. They advise the department regarding its instructional program and provide information concerning opportunities for interaction between the department and the community.

Mr. Jack Anderson, Director, Southern California Coastal Water Research Project; Mr. Brad Andrews, Curator of Mammals, Marineland of the Pacific; Mrs. Eunice Antosik, California Garden Clubs, Inc.; Mr. Willard Bascom; James Bell, M.D.; Dr. Craig C. Black, Director, Natural History Museum of Los Angeles County; Mr. Paul B. Engler, Agricultural Commissioner, County of Los Angeles; Mr. Leland R. Hill, Director of Port Planning, The Port of Long Beach; Dr. Charles Jenner, Rossmoor-El Dorado Animal Hospital; Mr. Randy McGlade, Interstate Electronics Corp.; Mr. Charles T. Mitchell, President, MBC Applied Environmental Sciences; Dr. Richard A. Nesbit, Director of Research, Beckman Instruments, Inc.; Dr. Frank W. Pelsue, General Manager, Southeast Mosquito Abatement Dist.; Dr. Robert W. Porter, UCI and VA Medical Center; Mr. Lon H. Records, Branch Manager, Target Chemical Company; Mr. Paul D. Romero, Director, Parks and Recreation Department, County of Riverside; Mr. William Routhier, California Department of Food and Agriculture; Dr. Thomas B. Scanland; Dr. June Lindstedt Siva, Senior Science Advisor, Environmental Sciences, Atlantic Richfield Co.

Programs in biology are offered to provide preparation for advanced study at the graduate level, for pre-professional programs in medicine, dentistry, and allied fields, as well as for teaching or careers in industry and government.

The department offers a varied program in the biological sciences that can lead to a degree in any one of the following: biology, botany, entomology, marine biology, or zoology. Courses in any of these degree programs should be selected in consultation with the major advisor, who will be assigned in the department undergraduate office. Elective courses may be selected that provide an emphasis in one or a combination of the following: biosystematics, ecology, genetics, marine biology, morphology, and plant or animal physiology. (See Department of Anatomy and Physiology).

The department occupies facilities in three science buildings and has an electron microscope, a seawater system, greenhouses, and research and teaching collections of algae, fungi, vascular plants, invertebrates (including insects), and vertebrates. Courses are offered in several areas of experimental biology. Because the campus is near the ocean, mountains, and deserts, the department is able to offer a number of field and laboratory courses in botany, ecology, entomology, marine biology, and vertebrate zoology.

The Biology, Anatomy and Physiology, and Art Departments offer an interdisciplinary program in biomedical art, which is described in the Art section.

The Department of Biology also participates in the interdisciplinary Center for Ocean Science Studies. Information is listed in the Bulletin.

The Department of Biology offers a master of science degree for students completing advanced study. The available programs cover the full spectrum of biology from the molecular to the ecosystem levels and include both laboratory and field study programs. A list of research areas with the names of faculty specializing in these fields can be obtained from the department graduate office.

Financial Support, Assistantships

The Department of Biology offers a limited number of teaching and graduate assistant appointments. Forms requesting consideration for these appointments are available in the department graduate office. Duties consist of approximately 20 hours per week devoted to preparation and/or instruction in general undergraduate laboratory classes. These appointments are limited to a maximum of four semesters per individual.

The department also has a limited number of technical assistant positions as well as some hourly employment.

Several members of the faculty have grants which provide for research assistantships.

A number of scholarships are available through the University.

Students should consider the following degree requirements as minimal. Those individuals desiring entrance into medical, dental, veterinary or graduate schools should check the requirements for entrance before planning which courses to take for any degree. Specifically, many professional and graduate schools require more calculus (either MATH 115S and 116 or MATH 122, 123 and 224), and more organic chemistry (CHEM 321A and 322 instead of 327).

Bachelor of Arts in Biology (code 2-7621)

Lower Division:
CHEM 111A,B; BIOL 212, 216, 260; PHYS 100A,B; MICR 210; MATH 112 or 115S or an appropriate college level course chosen in consultation with a department advisor.

Upper Division:
CHEM 327 and a minimum of 28 units in biological sciences including the following: BIOL 334; 350; 370; A/P 340 and 340L or 342 and 342L or 440 or BIOL 447 and 447L; BIOL 313 or 316 or 324 or 332 or 333; and 425 or 426 or 427 or 438 or 439. The student's entire program must include a minimum of two upper division animal biology courses and two upper division plant biology courses. A list of acceptable courses to meet this requirement is available in the Biology Department office. Remaining electives should be selected from above as well as other courses in consultation with a faculty advisor.

Bachelor of Science in Botany (code 3-7642)

Lower Division:
CHEM 111A, B; BIOL 212, 216, 260; PHYS 100A, B; MICR 210; MATH 115S, 116.

Upper Division:
CHEM 327 and a minimum of 33 units of upper division courses in biological sciences including BIOL 316, 370, 427, 439, 447, 447L, 450, and the remaining units to be selected in consultation with the major advisor.

Bachelor of Arts in Entomology (code 2-7652)

Lower Division:
CHEM 111A-B; BIOL 212, 216; PHYS 100A,B; MATH 112 and either MATH 115S or BIOL 260.

Upper Division:
CHEM 327; BIOL 316, 370; BIOL 427 or 429 or 447 and 447L; either Ecology (BIOL 350 or 456 or 450 or 453) or Biochemistry (CHEM 441A or 448); A/P 340 and 340L or 342 and 342L or 440; six additional units of electives in natural sciences (excluding entomology) selected in consultation with the major advisor. A minimum of 18 units of entomology (including General Entomology) must be completed (these units to be determined in consultation with the major advisor).

Bachelor of Science in Marine Biology (code 3-7626)

Lower Division:
CHEM 111A,B; BIOL 212, 216, 260; PHYS 100A,B; MATH 115S, 116.

Upper Division:
CHEM 327; GEOL 465, 466; BIOL 313, 353, 370, 419, A/P 340 and 340L or 440, BIOL 425; six units of electives in marine biology and related areas selected from GEOL 424; BIOL 314, 315, 351, 413, 417, 451 (Marine Ornithology, Subtidal Marine Ecology), 458, 458L; CE 468; MICR 441; plus six units of electives from BIOL 324, 332, 333, 350, 360, 438, 439, 447, 447L, 456.

Bachelor of Science in Zoology

Lower Division:
MATH 115S, 116; CHEM 111A,B; PHYS 100A,B; BIOL 212, 216, 260. Additional courses listed below.

Upper Division:
BIOL 370.

Option in General Zoology (code 3-7643)

Lower Division:
MICR 210 or Geological Sciences 102 and either 104 or 105.

Upper Division:
CHEM 327 and 448; 31 units of Biology including one course selected from 313, 315, 316, or 317; one course selected from 324, 419, 421, 424, 423; one course selected from 332, 333, 335; and 4 units from A/P 340 and 340L; 342 and 342L, or 440; and BIOL 350.

Option in Physiology (code 3-7604)
See Anatomy and Physiology Department.

Option in Terrestrial Biology (code 3-7645)

Lower Division:
GEOL 102 and either 104 or 105.

Upper Division:
CHEM 327; 34 units of Biology including 316; 324 or two courses selected from 421, 424, or 423; 427; one course selected from 332, 333, or 335; A/P 340 and 340L; BIOL 350 and 412.

Minor in Biology (code 0-7621)

A minimum of 19 units is required for the minor.

Lower Division:
A minimum of 10 units including BIOL 212 and 216.

Upper Division:
A minimum of nine units selected from upper division biology courses, except 300 and 301, with at least one course selected from the 400 series.

Concentration in Biology for the Bachelor of Arts in Liberal Studies

A minimum of 27 units will be required, 12 of which must be upper division.

Lower Division:
BIOL 212, 216, CHEM 111A

Upper Division:
A minimum of 12 units from upper-division Biology or Anatomy Physiology courses.

Certificate Program in Biomedical Art

The Certificate Program in Biomedical Art is an interdisciplinary program sponsored by the Art, Anatomy and Physiology, and Biology Departments. Requirements for the certificate are listed in the Art section of this Bulletin. Co-directors of the CSULB biomedical art program are in Art: Richard Oden, professor, and Mr. Peter Mendez, assistant professor; and in Anatomy and Physiology, Dr. Kenneth Gregory. Questions may be addressed to them during office hours which are listed in the respective departmental offices.

Concurrent and/or Summer Enrollment in Another College

Students who wish to take course work in a community or another college to meet curricular requirements while enrolled as undergraduates in the School of Natural Sciences must petition the appropriate department for prior approval to enroll in specific courses. This policy is for either concurrent enrollment or summer enrollment. University policy must also be complied with. See 'Concurrent Enrollment' and 'Transfer of Undergraduate Credit' in this Bulletin. Courses not receiving prior approval will not be accepted for credit by the department.

Master of Science in Biology (code 6-7621)

Admission to the Department

Prerequisites

In addition to the prerequisites for entrance into CSULB as a graduate student stated previously in this Bulletin under Graduate Degrees and Post Baccalaureate Studies, the Department of Biology requires:

1. An undergraduate program that included course work similar to that required in one of the undergraduate degrees or options in the Department of Biology, CSULB.
2. An undergraduate overall grade point average of at least 2.75, or a grade point average of at least 3.00 in the last 60 semester (90 quarter) units completed.
3. The Graduate Record Examination Subject (Advanced) Test in Biology.

Application

Prospective graduate students in biology, including CSULB graduates, must formally apply for admission to CSULB as described previously in this Bulletin and must also apply directly to the Department of Biology. All applicants must submit the following documents directly to the department no later than 15 April for the fall semester or 15 November for the spring semester to receive consideration for admission:

1. Departmental Application Form, available from the departmental graduate office;
2. Official transcripts of all college level academic work including that done at CSULB, in addition to those transcripts required for general graduate admission to C.S.U.L.B.;
3. Two letters of recommendation from persons familiar with the applicant's academic performance and research potential;
4. Official report of scores on the Graduate Record Examination Subject (Advanced) Test in Biology. The applicant should have taken this examination well prior to applying to the department, because the official score must reach the department by the deadlines above.

Review by the Graduate Studies Committee

The Graduate Studies Committee will review all folders completed by the deadlines and recommend either acceptance of the applicant as a classified or conditionally classified graduate student or rejection of the applicant. All accepted students who expect to enroll in the next semester must schedule an interview with the Graduate Studies Committee during the in-person registration period. This interview will focus on counseling and orienting the applicant with special attention to any academic deficiencies.

Admission to the Department of Biology as a Classified Graduate Student (7621-2)

The Department of Biology will admit as a classified graduate student any applicant who:

1. Has met all prerequisites.
2. Has a complete folder of all required documents.
3. Has obtained acceptance by a faculty member as the Chair of the student's thesis committee. The student should then set up a program (see below).

Admission to the Department of Biology as a Conditionally Classified Graduate Student (7621-1)

The Graduate Studies Committee will admit as conditionally classified graduate students those applicants deficient in prerequisites or lacking a chair for the thesis committee only under the following condition(s):

1. Applicants with course and/or unit deficiencies must make up those deficiencies. The Graduate Studies Committee will determine what deficiencies each applicant has and indicate on the back of the Department Application Form which courses the applicant must take to make up these deficiencies. The student's thesis committee will also add these courses in addition to the minimum 30 units on the student's program of study (see below). The applicant must make up all such deficiencies before attaining classified status.
2. Applicants must normally have an overall undergraduate Grade Point Average of at least 2.75, or a GPA in the last 60 semester (90 quarter) units of at least 3.00. Applicants with an undergraduate GPA between 2.75 and 3.00 in their last 60 (90 quarter) units may secure admission as a conditionally classified graduate student, but only if they can obtain sponsorship from a faculty member in the Department of Biology. Applicants with a low GPA must contact potential thesis advisors before applying to the department. This faculty member must indicate to the Graduate Studies Committee in writing a willingness to serve as the chair of the applicant's thesis committee and the reasons why the Graduate Studies Committee should admit the applicant. An applicant receiving such special consideration must complete, with a grade of B or A, three probationary courses totaling at least nine units acceptable to the Graduate Studies Committee and the department chair before attaining classified status. If the applicant receives less than a B in any of the three courses, the applicant cannot continue pursuit of a Master's degree in this department.
3. Applicants who meet all prerequisites but who do not yet have a chair for their thesis committee will receive admission as conditionally classified graduate students. Students who have not obtained a chair and set up a graduate program by the end of the second semester in residence following admission to the Master of Science program will be dropped from the program.

The Program of Study

After admission to the department as a classified or conditionally classified graduate student, the student must establish a program of study. The student and thesis committee chair will select at least two additional members to serve on the student's thesis committee. The departmental Graduate Advisor serves as an ex-officio member of all thesis committees. Each student must prepare a written thesis proposal for approval by the student's thesis committee. The thesis committee will then meet with the student to determine what courses the student must take and indicate them on the Department of Biology Graduate Program Form.

Advancement to Candidacy

In addition to the general university requirements stated previously under Post-Baccalaureate and Graduate Degrees in this Bulletin, the student must complete the following steps before receiving Candidate status in the Department of Biology.

1. Admission to the Department of Biology Master's Degree program a classified graduate student (see above).
2. Pass the University Writing Proficiency Examination (WPE).
3. Establishment of a thesis committee and program of study (see above).
4. Achievement of a score at, or above, the 50th percentile on the Graduate Record Examination Subject (Advanced) Test in Biology (GRE-STB). Students who fail to meet the minimum level in two or more attempts may petition the Graduate Studies Committee, through the chair of their thesis committee, to provide an alternate method for meeting this requirement. If granted, the alternate method will consist of an exam administered by three faculty members selected by the Graduate Studies Committee. No member of the student's Thesis Committee may serve on this committee. The graduate advisor will normally also participate in the examination. All members of the special examination committee must agree that the student has demonstrated extensive knowledge of the major areas of biology, otherwise the student may not continue working toward a Master's degree in this department. This requirement must be met by the end of the second semester in residence or the student will be dropped from the program.

Requirements for the Master of Science in Biology (code 6-7621)

In addition to the general University requirements stated previously in this Bulletin, the student must meet the following requirements before receiving the degree of Master of Science in Biology.

1. Advancement to candidacy (see above).
2. Each program must include a minimum of 30 units of upper division and graduate courses, at least 18 of which must come from the 500-600 series in biology. Each program must include six units of Thesis (BIOL 698), one to three units of Directed Research (BIOL 697), one unit of Seminars (BIOL 580 or A/P 580) and two courses chosen from BIOL 661, 662, 663, 664, 665, A/P 661. Of the 30 units, no more than three may come from BIOL 662-665, A/P 661 and no more than six may come from transfer credit and/or other departments within CSULB. No more than two courses may have numbers between 300-399.
3. Completion of a written thesis and the oral presentation of the thesis research. The members of the candidate's thesis committee must read and approve of the thesis before the student may schedule the oral presentation. The student may not complete the thesis or give an oral presentation during the summer session.

Courses (BIOL):

Majors in biological science may receive unit credit for courses marked with the symbol '##' as a general elective but may not apply the units toward the specific or elective requirements for any degree or option in this Department.

Lower Division:

100. Man and His Environment (3) F,S Faculty
Biological perspective on human problems including interactions between man and the world he lives in; the problems resulting from ignoring known ecological principles and the cultural implications of biological concepts. Specifically designed for non-science majors. (Lecture 3 hours.)

103. Animal Life in Southern California (3) F,S Rainey
Ecology, aesthetics and economic importance of some common amphibians, reptiles, birds, and mammals of Southern California. Specifically designed for non-science majors. (Lecture 2 hours, laboratory 3 hours.)

106. Birds (3) S Collins, Warter
General identification, life histories, ecology and conservation of local birds. Specifically designed for non-science majors. (Lecture 2 hours, laboratory and field 3 hours.)

200. General Biology (3) F,S Faculty
A brief survey of the major areas of biology including cell biology, genetics, evolution, phylogeny, plant and animal anatomy and physiology, ecology, and behavior. Specifically designed for non-science majors.

201. Marine Natural History (3) F,S Miller, Reish
Not open for credit to biological science majors. An introduction to local marine plants and animals, the interactions between them, and their relationship with the physical environment. Specifically designed for non-science majors. (Lecture 2 hours, laboratory and field 3 hours.)

203. Ecology and Natural Resources (3) F,S Clover, Rainey
Introduction to the principles of ecology, stressing ecological theory and practices in management of our natural resources (wildlife, fisheries, vegetation, soil, minerals, energy). The role of government is discussed. (Lecture 3 hours.)

204. Heredity (3) S Hrubant
Principles of inheritance; role of heredity in improvement of plants and animals; implications in human genetics. Specifically designed for non-science majors. (Lecture 3 hours.)

206. Plant Biology S (3) F,S Faculty
Structural, physiological and developmental biology of plants. Emphasis will be placed upon the application of the scientific method as it relates to classical and modern plant science. Specifically designed for non-science majors. (Lecture 2 hours, laboratory 3 hours.)

212. General Botany (5) F,S Faculty
Principles of plant biology. Structure, metabolism and reproduction of higher plants; morphology and life history of major plant groups. (Lecture 3 hours, laboratory 6 hours.)

216. General Zoology (5) F,S Faculty
Prerequisite: CHEM 111A. Principles of animal biology. Metabolism, physiology, genetics, embryology, evolution and ecology of animals. (Lecture 3 hours, laboratory 6 hours.)

260. Biostatistics (3) F,S Clover, Kroman, Leamy, Miller
Prerequisites: MATH 112, BIOL 212 or 216. Use of probability and statistics in the description and analysis of biological data. (Lecture 2 hours, laboratory 3 hours.)

Upper Division:

300. California Natural History (3) F,S Faculty
Common plants, animals, rocks and minerals; emphasis on local species and environments. (Lecture 2 hours, laboratory 3 hours.)

301. Science in the Elementary School (3) F,S Ritz
Prerequisites: Six units of course work in departments of the School of Natural Sciences. A sampling of the broad fields of science, emphasizing the processes of science. Practical approaches to teaching elementary school science are integrated throughout. Equivalent to NSCI 301. (Lecture 2 hours, activities 2 hours.)

302. Elementary School Science Workshop (2) S,S Ritz
A practicum on the development and use of 'hands-on' elementary school science teaching/learning activities, units and learning centers. BIOL/NSCI 301 recommended. Equivalent of NSci 302. (Lecture 2 hours, workshop 2 hours.)

305. Workshop in Environmental Education (3) F,S Ritz
An interdisciplinary workshop/seminar course for teachers of all grade levels or subject specialties, K-12. Current environmental issues, field excursions, involvement with innovative curricular materials and development of teaching/learning units for class use. (Seminar 2 hours, workshop 2 hours.)

***313. Invertebrate Zoology (4) F,S Ho**
Prerequisite: BIOL 216 or GEOL 140. Basic taxonomy, morphology, ecology, and distribution of the invertebrates. Protozoa through Arthropoda, excluding Insecta, but including Protochordates; emphasis on local marine forms. (Lecture 2 hours, laboratory and field 6 hours.)

***314. Biology of the Protozoa (4) F Jones**
Prerequisites: BIOL 212 or 216; CHEM 111A. A comparative study of certain morphological, physiological and life history features of representative protozoan species. Emphasis in the laboratory on optical, cytochemical, nutritional and other experimental techniques. (Lecture 2 hours, laboratory 6 hours.)

*315. General Animal Parasitology (4) S Dailey

Prerequisite: BIOL 216. The comparative morphology, systematics, and life history of protozoan, helminth, and other invertebrate parasites, excepting higher arthropods. Study not restricted to parasites of man. Emphasis on life cycles, the host-parasite interaction, and host examination and staining. (Lecture 2 hours, laboratory 6 hours.)

*316. General Entomology (3) F,S Sleeper

Prerequisite: BIOL 216. Characteristics, structures, habits, life cycles of insects and their importance to man. (Lecture 2 hours, laboratory and field 3 hours.)

*317. Medical Entomology (3) F,S Faculty

Prerequisite: BIOL 216. Collection, preparation, identification, habits, life cycle and control of insects and other arthropods of medical importance. (Lecture 2 hours, laboratory and field 3 hours.)

*324. Vertebrate Zoology (4) F,S Huckaby, Warter

Prerequisite: BIOL 216. An evolutionary and systematic survey of the living vertebrates. Emphasis on the phylogenetic origin and the morphological and physiological adaptations of the major groups. Not open for major credit if more than one of the following courses has been previously taken: BIOL 419, 421, 423 or 424. (Lecture 2 hours, laboratory 6 hours.)

328. Plants and Man (3) F,S Baker

Economic and social role of plants and plant products in our civilization, from a botanical perspective. Emphasis on the origins, methods of processing and uses of plants. Recommended for non-science majors and prospective teachers. (Lecture 3 hours.)

*332. Comparative Anatomy (4) F,S Callison

Prerequisite: BIOL 216. History of vertebrate structures: application of anatomy to phylogeny, taxonomy and functional morphology. (Lecture 2 hours, laboratory 6 hours.)

*333. Vertebrate Embryology (4) F,S Faculty

Prerequisite: BIOL 216. A comparative study of gametogenesis, fertilization, cleavage, blastulation, gastrulation, neurulation, primary embryonic induction, and the development of organs and systems. Emphasis on frog, chick, and human development. [Lecture 2 hr, laboratory 6 hrs]

*334. Essentials of Cell Biology (3) F,S Jenkins

Prerequisites: Completion of lower-division Biology degree requirements, organic chemistry recommended. The fine structure of eucaryotic cells, the chemical composition and organization of cells, cell metabolism and bioenergetics, the molecular and supramolecular organization and function of cell organelles. Not open to students with credit in BIOL 430. (Lecture 3 hours.)

*350. General Ecology (3) F,S Clover, Miller, Rainey

Prerequisites: BIOL 212, 216; MATH 112. Chemistry and physics recommended. Relationships of plants and animals to their physical and biological environment; structure and function of populations, communities and ecosystems. (Lecture 3 hours, and two required Saturday field trips.)

*351. Animal Behavior (4) F,S Nelson

Prerequisite: BIOL 216. Introduction to vertebrate and invertebrate ethology; innate and learned behavior, sensory adaptation and communication, activity rhythms, navigation and migration, predator-prey interactions, and social behaviors including aggression, courtship and mating. Emphasis on ecological and evolutionary aspects. (Lecture 3 hours, laboratory 3 hours.)

*353. Marine Biology (3) F,S Galt

Prerequisites: BIOL 212, 260, 313. Study of pelagic and benthic marine ecosystems, including topics of food resources, mariculture and pollution. Weekend field trips may be required. Not open to students with credit in BIOL 416. (Lecture 2 hours, laboratory and field 3 hours.)

*360. Microtechniques (3) F Alfieri

Prerequisites: Five units of biological science, consent of instructor. Principles and methods employed in preparation of plant and animal tissue for microscopic study. (Lecture 1 hour, laboratory 6 hours.)

364. Biomedical Illustration-Plants (2) F Cox

Prerequisites: Degree in biology or art in progress, consent of instructor. Completion of, or concurrent enrollment in, ART 374A-B. (Activity 4 hours.)

370. General Genetics (4) F,S Hrubant

Prerequisites: BIOL 212 or 216, MATH 112 and either MATH 115S or BIOL 260. Detailed study of classical transmission genetics and an introduction to the principles of human and microbial genetics, radiation biology, and the current observations and concepts of the nature, organization and action of the genetic material. (Lecture 3 hours, laboratory 3 hours.)

412./512. Evolutionary Biology (3) S Kroman

Prerequisite: BIOL 370 or an equivalent course in genetics. Introduction to the theory of evolution including the origin of life, an examination of the mechanisms involved in its continued adaptation and a description of the results of that adaptation.(Lecture 3 hours.)

413./513. Marine Zooplankton (4) S Galt

Prerequisite: BIOL 313, may be taken concurrently. Diversity, natural history, taxonomy and identification of marine zooplankton, including ichthyoplankton. Emphasis on fauna of the California coast. (Lecture 2 hours, laboratory and field 6 hours.)

*417. Marine Benthic Invertebrates (3) S Reish

Prerequisite: BIOL 313. Identification of benthic invertebrates, emphasizing intertidal forms of Southern California. Includes cooperative student field project. (Lecture 1 hour, laboratory and field 6 hours.)

*418. Systematic Entomology (3) S Sleeper

Prerequisite: BIOL 316. Classification of insects, taxonomic categories and procedure; bibliographical methods; nomenclature; museum practices. (Lecture 2 hours, laboratory and field 3 hours.)

*419. Ichthyology (3) F Bray

Prerequisites: BIOL 216 and eight units of upper division biology. Taxonomy, morphology, physiology and ecology of fishes. Emphasis on local marine forms. (Lecture 2 hours, laboratory 3 hours.)

420./519. Immature Insects (3) F Sleeper

Prerequisite: BIOL 316. Morphology and taxonomy of immature insects of all major orders; emphasis on identification of larvae of economically important orders; Coleoptera, Lepidoptera, Diptera and Hymenoptera. (Lecture 2 hours, laboratory 3 hours.)

*421. Herpetology (3) S Faculty

Prerequisites: BIOL 216 and eight units of upper division biology. Taxonomy, natural history, ecology and distribution of amphibians and reptiles; emphasis on local forms. (Lecture 2 hours, laboratory 3 hours.)

*423. Mammalogy (3) F Huckaby

Prerequisites: BIOL 216 and eight units of upper division biology; 324 or 332 recommended. Evolutionary survey of the living mammals of the world. Emphasis on the adaptation of the major taxa to their environments. (Lecture 2 hours, laboratory 3 hours.)

*424. Ornithology (3) S Collins, Warter

Prerequisites: BIOL 216 and eight units of upper division biology. Morphology, physiology, taxonomy, ecology and behavior of birds; emphasis on laboratory and field study of adaptations of local forms. (Lecture 2 hours, laboratory and field 3 hours.)

*425. Algae (3) F,S Faculty

Prerequisite: BIOL 212. Systematics, morphology, ecology and phylogeny of marine and freshwater algae, emphasis on forms of Southern California. (Lecture 2 hours, laboratory and field 3 hours.)

*426. Fungi (3) F Bourret

Prerequisite: BIOL 212. Morphology, physiology and biology of fungi. (Lecture 2 hours, laboratory 3 hours.)

*427. Taxonomy of Vascular Plants (4) S Baker

Prerequisite: BIOL 212. Principles and methods of vascular plant systematics, including history, nomenclature and phylogeny; emphasis in the laboratory is on the identification and classification of native and introduced plants of Southern California. (Lecture 2 hours, laboratory and field 6 hours.)

*429. Plant Pathology (3) S Bourret

Prerequisites: BIOL 212, CHEM 111A-B. Principles and practices of plant pathology. Structure, development and classification of pathogens. Emphasis on diagnosis, treatment and control of diseases affecting cultivated plants. (Lecture 3 hours.)

437./537. Vertebrate Paleontology (3) S Callison

Prerequisite: BIOL 332 or GEOL 140 or 341. Evolution of vertebrates as related to earth history, paleoecology and functional morphology. Laboratory: techniques of phylogenesis, biostratigraphy and analysis of paleofaunas. (Lecture 2 hours, laboratory and field 3 hours.)

*438. Plant Anatomy (3) F,S Alfieri

Prerequisite: BIOL 212. Structure and growth of meristems; development and structure of cells, tissues and tissue systems; comparative anatomy of leaf, stem and root. (Lecture 2 hours, laboratory 3 hours.)

*439. Plant Morphology (4) F,S Mansfield-Jones

Prerequisite: BIOL 212. Comparative structure, life history and phylogenetic relationships of plants. (Lecture 2 hours, laboratory 6 hours.)

*447. Plant Physiology (3) F,S Faculty

Prerequisites: BIOL 212 and CHEM 327. Photosynthesis and other anabolic syntheses, respiration, mineral nutrition, water relationships, growth and development of plants. (Lecture 3 hours.)

*447L. Plant Physiology Laboratory (1) F,S Faculty

Prerequisite: BIOL 447 (may be taken concurrently). Laboratory experiments in plant physiology.

450./549. Plant Ecology (3) S Mansfield-Jones

Prerequisite: BIOL 427 (may be taken concurrently). Relationship of plants to their environment and principles of plant distribution. (Lecture 2 hours, laboratory and field 3 hours.)

*451. Field Studies in Biology (1-6) F,S Faculty

Prerequisites: Six units of upper division biological science and consent of instructor. Field studies in behavioral or environmental or taxonomic biology at the organism, population or community level. Emphasis on application of field techniques to the solution of biological problems. May be repeated for credit up to a maximum of six units toward the major. Topics to be announced in the Schedule of Classes. (Lecture, laboratory and field arranged.)

*453. Insect Ecology (3) S Sleeper

Prerequisite: BIOL 316 or 317. Field and experimental studies of abundance dispersal, distribution and behavior. (Lecture 2 hours, laboratory and field 3 hours.)

456./556. Ecology of Animal Populations (3) F Rainey

Prerequisite: BIOL 350. Detailed analysis of animal populations including reproduction, growth, mortality and survivorship, intraspecific and interspecific relationships, regulation of numbers and evolutionary responses. Stresses pertinent aspects of wildlife biology. (Lecture 3 hours.)

457./557. Field Methods in Ecology (3) S Clover, Miller

Prerequisite: BIOL 350. Recommended: BIOL 360. Training in the design of field research projects, data collection and analysis and report writing and presentation. Emphasis on the use of various types of field sampling techniques. Five weekend field trips required. (Lecture 2 hours, laboratory 3 hours.)

458./558. Ecology of Marine Plankton (3) F Galt

Prerequisites: BIOL 353, CHEM 327; MATH 112 and 115S are recommended. Physiological ecology of marine phytoplankton and zooplankton as a basis for study of structure, dynamics and modeling of plankton communities. Topics include productivity, trophic relations and energy flow, distribution and abundance of marine plankton. (Lecture 3 hours.)

458L./558L. Laboratory in the Ecology of Marine Plankton (1) F Galt

Prerequisite: BIOL 458 (may be taken concurrently); BIOL 260, MATH 115S and computer experience recommended. Application of modern analytical instrumentation and computer analyses to studies of population dynamics, growth, feeding behavior, and biological interactions of marine phytoplankton and zooplankton. Student projects required.) Laboratory and field 3 hours.)

459. Southern California Vegetation (3) S Mansfield-Jones

Prerequisite: BIOL 212 or permission of instructor. A study of Southern California plant communities and the environmental conditions which control their distribution. Five weekend field trips required. Not open to students with credit in BIOL 490, So. California Vegetation. (3 hours lecture/demonstration each week.)

460./560. Biological Control (3) F Sleeper

Prerequisites: BIOL 316. Natural and artificial control of pest species of insects, other arthropods, and weeds, through the use of predators, parasites, and fungal, viral, and bacterial diseases. (Lecture 3 hours)

*461. Toxicology of Pesticides (3) S Faculty

Prerequisite: CHEM 327 or equivalent. Invertebrate and mammalian toxicity of materials used for protection of food, fiber, and human health; mode of action, chemical properties, bioassay, phytotoxicity, insecticide residues, hazards, legal aspects, effect on aquatic and terrestrial wildlife, and environment. (Lecture 2 hours, laboratory 3 hours.)

463./563. Computer Applications in Biology (4) S Bray

Prerequisites: BIOL 260, 350 or consent of instructor. Computer programming in the biological sciences. Emphasis on simulation, modeling, and use of statistical packages. Not open to students with credit in BIOL 362. (Lecture 3 hours, laboratory 3 hours) Grading: Traditional only.

*464. Environmental Toxicology (3) F Faculty

Prerequisites: BIOL 212 or 216, CHEM 327. Metabolism, mode of action and detoxication mechanisms of toxic substances in organisms. Effects of pollutants, waste products, chemicals of commerce, warfare agents, drugs and narcotics on human health and the environment, their regulation and control.(Lecture 3 hours.)

468./568. Techniques of Electron Microscopy (3) S Alfieri

Prerequisites: A course in cell biology, consent of instructor. Experience in specimen preparation, instrumentation and photographic methods for both transmission and scanning electron microscopy. Individual research project required. Enrollment limited. Not open to students with credit in BIOL 431. (Lecture 1 hour, laboratory 6 hours.)

472./572. Quantitative Genetics (3) S, alternate years Leamy

Prerequisite: BIOL 260, 370. Analysis and application of genetic principles underlying genetic characters exhibiting continuous variation. Responses to inbreeding and selection and the role of quantitative characters in evolutionary theory. (Lecture 3 hours.)

473./573. Molecular Genetics (3) S

Prerequisites: BIOL 370, CHEM 327. Nature, replication, regulation and mode of action of the genetic material. (Lecture 3 hours.)

480./580. Seminars (1) F,S Faculty

Prerequisites: Consent of instructor. Weekly meetings at which professional biologists present the results of their research. Requires participation in the organization and the critical evaluation of these presentations. May not be repeated for credit towards any single degree. Grading: Traditional only.

*490. Special Topics in Biology (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics from selected areas of biology. Course content will vary from section to section. May be repeated for credit with the consent of instructor. Maximum credit for BIOL 490 and/or BIOL 490L limited to six units. Topics to be announced in the Schedule of Classes. (Lecture 1-3 hours.)

*490L. Laboratory in Special Topics in Biology (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics from selected areas of biology. Course content will vary from section to section. May be repeated for credit with the consent of instructor. Maximum credit for BIOL 490 and/or BIOL 490L limited to six units. Topics to be announced in the Schedule of Classes. (Laboratory 3-9 hours.)

495. Supervised Laboratory Techniques (1-2) F,S Faculty

Prerequisite: BIOL 202 or 208 or both 212 and 216, and consent of instructor. Experience for upper division students in the organization of and techniques for a laboratory in biology. Includes individual supervision of directed teaching. A written report will usually be required. May be repeated for a maximum of two units. (Conference 1 hour, laboratory 3 hours.)

496. Investigations in Biology (1-3) F,S Faculty

Prerequisite: Consent of instructor. Research in a specific subject in biology. Topic of study to be approved and directed by a faculty member in the Department of Biology. A written report will usually be required. May be repeated to a maximum of 3 units. (Conference 1 hour, laboratory 3 hours per unit.) Graduate Division

500. Topics in Biology (2) On demand Faculty

Prerequisite: Consent of instructor. A course to supplement and extend knowledge of recent biological developments and trends in research. May be repeated once for credit with consent of instructor. Maximum credit 4 units. (Lecture 2 hours.)

512./412. Evolutionary Biology (3) S Kroman

Prerequisite: BIOL 370 or an equivalent course in genetics. Introduction to the theory of evolution including the origin of life, an examination of the mechanisms involved in its continued adaptation and a description of the results of that adaptation. (Lecture 3 hours.)

513./413. Marine Zooplankton (4) S Galt

Prerequisite: BIOL 313, may be taken concurrently. Diversity, natural history, taxonomy and identification of marine zooplankton, including ichthyoplankton. Emphasis on fauna of the California coast. (Lecture 2 hours, laboratory and field 6 hours.)

519./420. Immature Insects (3) F Sleeper

Prerequisite: BIOL 316. Morphology and taxonomy of immature insects of all major orders; emphasis on identification of larvae of economically important orders; Coleoptera, Lepidoptera, Diptera and Hymenoptera. (Lecture 2 hours, laboratory 3 hours.)

520. Advanced Ichthyology (2) F Bray

Prerequisite: BIOL 419. Selected subjects on distribution, classification, physiology, adaptations and life histories of fishes, emphasis on recent studies and new concepts. (Lecture 1 hour, laboratory and field 3 hours.)

522. Advanced Ornithology (2) F Collins, Warter

Prerequisites: BIOL 424 or consent of instructor. Systematic survey of birds of the world with emphasis on systems of classification, morphology, evolution and distribution. Special consideration will be given to recent studies and new concepts. (Lecture 1 hour, laboratory 3 hours.)

524. Principles of Animal Taxonomy (2) F Sleeper

Rules and problems in animal systematics; taxonomy as a tool in zoological studies. (Lecture 2 hours.)

525. Advanced Parasitology (2) F Dailey

Prerequisite: BIOL 315 or consent of instructor. The metabolism, zoogeography, ecology and host-parasite relationships of animal parasites. (Lecture 2 hours.)

537./437. Vertebrate Paleontology (3) S Callison

Prerequisite: BIOL 332 or GEOL 140 or 341. Evolution of vertebrates as related to earth history, paleoecology and functional morphology. Laboratory: techniques of phylogenesis, biostratigraphy and analysis of paleofaunas. (Lecture 2 hours, laboratory and field 3 hours.)

542. Plant Growth and Development (3) F Faculty

Prerequisites: BIOL 447, and one of the following: BIOL 438, 439; consent of instructor. Laboratory techniques basic to an understanding of plant growth and development. Quantitative experiments concerning chemical and environmental control of differentiation both at the cellular and organismic level. (Lecture 1 hour, laboratory 6 hours.)

549./450. Plant Ecology (3) S Mansfield-Jones

Prerequisite: BIOL 427 (may be taken concurrently). Relationship of plants to their environment and principles of plant distribution. (Lecture 2 hours, laboratory and field 3 hours.)

550. Ecology of Marine Communities (3) S, alternate years Miller

Prerequisites: BIOL 350 or 456 and 260. Discussions of and field studies on ecological principles related to marine communities. (Lecture 2 hours, field 3 hours.)

552. Zoogeography (2) S Warter

Discussions of ecological and historical patterns of distribution of vertebrates on a world-wide basis. Current theories regarding origins of these patterns are examined. (Lecture 2 hours.)

556./456. Ecology of Animal Populations (3) F Rainey

Prerequisite: BIOL 350. Detailed analysis of animal populations including reproduction, growth, mortality and survivorship, intraspecific and interspecific relationships, regulation of numbers and evolutionary responses. Stresses pertinent aspects of wildlife biology. (Lecture 3 hours.)

557./457. Field Methods in Ecology (3) S Clover, Miller

Prerequisite: BIOL 350. Recommended: BIOL 260. Training in the design of field research projects, data collection and analysis and report writing and presentation. Emphasis on the use of various types of field sampling techniques. Five weekend field trips required. (Lecture 2 hours, laboratory 3 hours.)

558./458. Ecology of Marine Plankton (3) F Galt

Prerequisites: BIOL 353, CHEM 327; MATH 112 and 115S are recommended. Physiological ecology of marine phytoplankton and zooplankton as a basis for study of structure, dynamics and modeling of plankton communities. Topics include productivity, trophic relations and energy flow, distribution and abundance of marine plankton. (Lecture 3 hours.)

558L./458L. Laboratory in the Ecology of Marine Plankton (1) F Galt

Prerequisite: BIOL 458 (may be taken concurrently); BIOL 260, MATH 115S and computer experience recommended. Application of modern analytical instrumentation and computer analyses to studies of population dynamics, growth, feeding behavior, and biological interactions of marine phytoplankton and zooplankton. Student projects required. (Laboratory and field 3 hours.)

560./460. Biological Control (3) F Sleeper

Prerequisites: BIOL 316. Natural and artificial control of pest species of insects, other arthropods, and weeds, through the use of predators, parasites, and fungal, viral, and bacterial diseases. (Lecture 3 hours)

562. Biometry (4) F,S Clover, Kroman

Biostatistical analyses including data reduction and transformations; Gaussian, binomial and Poisson and probability models; significance tests and non-parametric methods; goodness of fit; correlation and linear regression; and the analysis of variance and co-variance and experimental design. Laboratory includes solving problems by calculators and computers. (Lecture 3 hours, laboratory 3 hours.)

563./463. Computer Applications in Biology (4) S Bray

Prerequisites: BIOL 260, 350 or consent of instructor. Computer programming in the biological ciences. Emphasis on simulation, modeling, and use of statistical packages. Not open to students with credit in BIOL 362. [Lecture 3 hours, laboratory 3 hours]

566. Research Methods (3) F,S Faculty

Practical experience in the skills necessary for publication and presentation of biological research, including writing, computer editing, figure preparation and photography. Not open to students with credit in BIOL 696. (Lecture 2 hours, laboratory, 3 hours.)

568./468. Techniques of Electron Microscopy (3) S Alfieri

Prerequisites: A course in cell biology, consent of instructor. Experience in specimen preparation, instrumentation and photographic methods for both transmission and scanning electron microscopy. Individual research project required. Enrollment limited. Not open to students with credit in BIOL 431. (Lecture 1 hour, laboratory 6 hours.)

572./472. Quantitative Genetics (3) S, alternate years Leamy

Prerequisite: BIOL 260, 370. Analysis and application of genetic principles underlying genetic characters exhibiting continuous variation. Responses to inbreeding and selection and the role of quantitative characters in evolutionary theory. (Lecture 3 hours.) 573./473. Molecular Genetics (3) S Prerequisites: BIOL 370, CHEM 327. Nature, replication, regulation and mode of action of the genetic material. (Lecture 3 hours.)

580./480. Seminars (1) F,S Faculty

Prerequisites: Consent of instructor. Weekly meetings at which professional biologists present the results of their research. Requires participation in the organization and the critical evaluation of these presentations. May not be repeated for credit towards any single degree.

590. Special Topics in Biology (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics from selected areas of biology. Course content will vary from section to section. May be repeated for credit with the consent of instructor. Maximum credit for BIOL 590 and/or 590L limited to six units. Topics will be announced in the Schedule of Classes. (Lecture 1-3 hours).

590L. Laboratory in Special Topics in Biology (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics from selected areas of biology. Course content will vary from section to section. May be repeated for credit with the consent of instructor. Maximum credit for BIOL 590 and/or 590L limited to six units. Topics will be announced in the Schedule of Classes. (Laboratory 3-9 hours.)

661. Seminar in Biology (1) On Demand Faculty

Critical evaluation of the primary literature of this field, including oral and/or written presentation of critiques.

662. Seminar in Botany (1) F Faculty

Critical evaluation of the primary literature of this field, including oral and/or written presentation of critiques.

663. Seminar in Genetics and Development (1) F Faculty

Critical evaluation of the primary literature of this field, including oral and/or written presentation of critiques.

664. Seminar in Marine Biology (1) S Faculty

Critical evaluation of the primary literature of this field, including oral and/or written presentation of critiques.

665. Seminar in Terrestrial Zoology (1) S Faculty

Critical evaluation of the primary literature of this field, including oral and/or written presentation of critiques.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of instructor. Research on a specific subject in biology. Topic for study to be approved and directed by a faculty member in biological sciences. A written report will be required. (May be repeated to a maximum of 3 units.)

698. Thesis (1-6) F,S Faculty

Prerequisite: Consent of departmental graduate advisor. Planning preparation and completion of a thesis in the biological sciences.

Chemistry

School of Natural Sciences

Department Chair: Kenneth L. Marsi
Department Office: PH3-242
Telephone: 498-4941
Faculty: Professors: Roger D. Bauer, Arnold J. Berry, Jerald A. Devore, Dorothy M. Goldish, Edwin R. Harris, James L. Jensen, Gene E. Kalbus, Van T. Lieu, Robert L. Loeschen, Tom J. Maricich, Kenneth L. Marsi, Darwin L. Mayfield, Henry N. Po, Nail M. Senozan, John H. Stern, A.G. Tharp, Leslie K. Wynston; Associate Professors: Roger A. Acey, Peter Baine, Stuart R. Berryhill, Jeffrey A. Cohlberg; Assistant Professors: Dennis M. Anjo, M. Steven McDowell, Margaret L. Merryfield. Emeritus Faculty: Edwin N. Becker, Julie V. N. Kierbow, Clyde E. Osborne, Louis E. Perlgut, Donald H. Simonsen
Department Secretary: Jeannette Santage

Students desiring information should contact the department office for referral to one of the faculty advisors:

Undergraduate Advisors: Acey, Berryhill, Goldish, Harris, Loeschen, Marsi, Mayfield, McDowell, Tharp, Wynston; Graduate Advisor in Chemistry: Po; Graduate Advisor Biochemistry: Cohlberg; Graduate Studies Committee: Acey, Berryhill, Cohlberg, Marsi, Po, Senozan.

Chemistry Department Advisory Council

This council, including persons prominent in the community, fosters communication between academic and industrial chemistry. It advises the department concerning the instructional program and informs the department of opportunities for interaction with the community.

Ms. Danute Basiulis, Section Head, Hughes Aircraft Co.; Dr. Norman Byrd, Branch Manager of Chemical Research, Douglas Aircraft Co.; Mr. Ancel Calloway, Alumni Representative, Aerospace Corp.; Dr. Robert M. Carlson, Chevron Oil Field Research Co.; Mr. Robert H. Collins, III, Getty Synthetic Fuels; Mr. Terry Cox, Dow Chemical USA; Mr. Dennis Dingle, Hewlett Packard; Dr. John Farrar, Manager, Materials and Processes Laboratories Engineering, Rockwell International; Dr. Michael Gardner, Manager, Chemistry Dept., TRW; Dr. Norman Hester, Technical Director, Truesdail Laboratories, Inc.; Mr. LaMar Hill, Product Manager, Cahn Instruments, Inc.; Mr. Stephen L. Holst, Hyland Laboratories; Dr. Richard Jenkins, Manager, Hazardous Waste Management, Envirosphere; Dr. Steve Jones, Laboratory Manager, IT Analytical Service; Mr. Kenneth Kennedy, Plant Manager, Monsanto Industrial Chemicals Co.; Dr. John Kuebrich, Manager of Quality Administration, ARCO Company; Mr. John Kulnane, Technical Manager, Ameritone Paint Corp.; Mr. William Lane, Sargent-Welch Scientific Co.; Dr. Andrew J. Masley, TRW; Mr. Richard Stegemeier, President, Unocal; Mr. Gary Valentine, Manager, Hughes Aircraft; Dr. Harry Walter, Chief, Laboratory of Chemical Biology, Veterans Administration Medical Center; Mr. Charles Walz, Texaco, Inc.; Mr. Edward Wilson, Laboratory Director, Brown and Caldwell; Mr. Rodney W. Wirtz, Plant Engineer, Kaiser Aluminum and Chemical Corp.

The program in chemistry at the bachelor's degree level is planned to promote development of both a broad and specialized background in a specific science, to serve as preparation for graduate work in chemistry or biochemistry, and to provide a foundation for those students seeking careers in teaching, law, medicine, dentistry, pharmacy and other health-related professions, and in industrial and governmental scientific endeavors. The B.S. degree in chemistry is certified by the American Chemical Society.

The Department of Chemistry offers graduate study leading to research-based master of science degrees in chemistry and biochemistry. The candidate is urged to observe the general requirements stated in this Bulletin as well as the specific departmental requirements stated here and, more fully, in the Graduate Studies Brochure of the Department of Chemistry, available upon request.

A limited number of teaching, graduate and research assistantships are available. Usually, these involve half-time work in the instructional program at the freshman and sophomore level or work in the laboratory. Application forms for these positions are available from the Graduate Advisor, Department of Chemistry.

Transfer Students: A student who transfers to the University must take at least 16 units of upper division chemistry courses here. To receive credit towards the major for courses taken elsewhere in place of CHEM 321A-B and/or 371A-B and/or 377A-B, consent of the department chair is required. Satisfactory performance on appropriate proficiency examinations may also be required.

Bachelor of Science in Chemistry (code 3-7661)

The bachelor of science degree program is intended to provide a thorough background in chemistry for those planning to pursue careers as professional chemists or to do graduate study in chemistry or biochemistry. This program, when supplemented with study in other appropriate areas, can serve as preparation for admission to the health professional schools (medicine, dentistry, pharmacy, etc.). Each student should consult with a faculty advisor (Professors Acey, Berryhill, Goldish, Harris, Loeschen, Marsi, Mayfield, McDowell, Tharp, or Wynston) to plan his or her individual program.

Chemistry majors must achieve a grade of C or better in all chemistry courses required for the major.

Requirements for the Bachelor of Science

Lower Division:

CHEM 111A-B, 251; courses to support the major to include PHYS 151, 152, 153 and MATH 122, 123, 224, and one of the following: MICR 210, BIOL 212, 216.

Upper Division:

CHEM 321A-B, 371A-B, 373, 385, 431, 451, ENG 300 or 317, and an additional six units of upper division chemistry which must include at least one unit of CHEM 496. A maximum of three units from CHEM 496 and CH E 330, 425, 430 or 475 may be used to fulfill this six-unit requirement.

B.S. candidates are strongly encouraged to acquire competence in reading scientific German, French, Russian, Chinese or Japanese.

Bachelor of Arts in Chemistry (code 2-7661)

The bachelor of arts degree program in chemistry is intended to provide a general background in chemistry, but not in the depth required for a bachelor of science degree. This program, when complemented with study in other areas, will serve as preparation for a career in chemical and related industries or secondary science education. The bachelor of arts program is also an appropriate preparation for medical and dental schools, and for graduate programs in the life sciences. In order to take full advantage of the bachelor of arts program for various career objectives, adequate counseling by chemistry advisors is indispensable. Each student must confer with an advisor to set up his/her individually tailored program in chemistry and one or more complementary areas prior to beginning the course of study.

Chemistry majors must achieve a grade of C or better in all chemistry courses required for the major.

Requirements for the Bachelor of Arts:

Lower Division:

CHEM 111A-B, 251; courses to support the major to include PHYS 100A-B or 151, 152; and MATH 122, 123.

Upper Division:

CHEM 321A-B, 371A-B or 377A-B, 451; ENG 300 or 317. A minimum of 3 additional units to be chosen in consultation with an advisor must be taken from CHEM 373, 385, 421, 422, 431, 441A, 441B, 471, 472 or 496. A minimum of 2 additional units involving computer programming must be taken from CHEM 385, QS 240, 242, or 243; MATH 270; EE 346 or 407; ME 205, CE 206, or CH E 210. Other computer courses may be substituted for the above with the approval of the chemistry department chair. Students must consult an advisor to select additional courses to meet the student's individual goals and interests.

Bachelor of Science in Biochemistry (code 3-7658)

The Bachelor of Science degree Biochemistry is intended to provide a rigorous background in chemistry and biochemistry for those planning to do graduate study in biochemistry or for careers in biochemical and related industries. This program is also an appropriate preparation for medicine, dentistry, pharmacy and clinical chemistry at the graduate level. Students must confer with an advisor to set up an appropriate program for their goals.

Biochemistry majors must achieve a grade of C or better in all Chemistry and Biochemistry courses required for the major.

Requirements for the Bachelor of Science in Biochemistry (code 3- 7658):

Lower Division:

CHEM 111A/B, 251; courses to support the major to include BIOL 216, MICR 210, MATH 122, 123, and PHYS 100A/B or 151, 152.

Upper Division:

CHEM 321A/B, 371A or 377A, 377B, 441A/B, 443 and 3 units chosen from CHEM 373, 421, 422, 431, 451, BIOL 334, 443, 473, MICR 452, 473. Courses to support the major must include A/P 342 and 342L (or 440), MICR 450 and 451 (or BIOL 370), ENGL 317, and a computer course which includes programming.

Transfer students:

Students who transfer to the University must take at least 16 units of upper-division Chemistry courses at C.S.U.L.B. To receive credit toward the major for courses taken elsewhere in place of CHEM 321A/B, 371A or 377B, consent of the Department Chair is required. In addition, satisfactory performance on appropriate proficiency examinations may be required.

Minor in Chemistry (code 0-7661)

A minimum of 20 units of chemistry which must include CHEM 111A/B. Nine units must be taken from upper division chemistry courses.

Transfer Students:

A student who transfers to the University must take at least 12 units of upper division chemistry courses here. To receive credit toward the major for CHEM 321A-B, CHEM 371A-B or CHEM 377A-B which have been taken elsewhere, consent of the department chairman is required; also satisfactory performance on appropriate proficiency examinations may be required.

Concurrent and/or Summer Enrollment in Another College

Students who wish to take course work in a community or other college to meet curricular requirements while enrolled as undergraduates in the School of Natural Sciences must petition the appropriate department for prior approval to enroll in specific courses. This policy is for either concurrent enrollment or summer enrollment. University policy must also be complied with. See "Concurrent Enrollment" and "Transfer of Undergraduate Credit" in this Bulletin. Courses not receiving prior approval will not be accepted for credit by the department.

Graduate Credit Earned as an Undergraduate Chemistry Major

Graduate credit usually may not be earned in advance of the baccalaureate degree. However, based upon the recommendation of the Chemistry Department Chairman and the Chairman of the Chemistry Department Graduate Studies Committee, academic performance (a grade point average of 3.00 overall and 3.00 in the major), and promise of academic achievement in postgraduate study, a student in his/her senior year may be granted approval to earn a maximum of 12 units of course work in the 400 and 500 level taken at this University toward his/her prospective graduate program, subject to the following conditions:

1. The course work must be in addition to that required by the Chemistry Department for the B.A. or B.S. degree in Chemistry.
2. The undergraduate student must have a "Petition to Earn Credit in the Senior Year" approved by the appropriate Department graduate advisor, the Director of Graduate Studies for the School of Natural Sciences, and the Dean of Graduate Studies.

Master of Science in Chemistry (code 6-7661)

Prerequisites

1. Acceptance as a graduate student by the Chemistry Department.
2. A bachelor's degree with a major in chemistry, or:
3. A bachelor's degree with undergraduate preparation in chemistry, physics and mathematics equivalent to that required for the bachelor of science degree with a major in chemistry at this University.
4. Entering graduate students are required to take placement examinations in analytical, inorganic, organic and physical chemistry. Any student failing to take and pass a placement examination in any of these subjects is required to enroll in an appropriate course as recommended by the Graduate Studies Committee. Usually the recommended courses are:

   CHEM 451 if the subject is analytical chemistry

   CHEM 431 if the subject is inorganic chemistry

   CHEM 321A and/or 322 if the subject is organic chemistry

   CHEM 371A and/or 371B if the subject is physical chemistry
5. The placement examinations will be given on Monday and Tuesday of the week preceding the first day of instruction. The Graduate Studies Committee evaluates the examinations and recommends appropriate courses to correct for any deficiencies in chemistry. The chemistry graduate advisor meets with the student at this time to prepare a tentative degree program.

Advancement to Candidacy:

The department recommends advancement to candidacy after the graduate student has:

1. Either passed the placement examinations in analytical, inorganic, organic and physical chemistry or passed the courses as recommended by the Graduate Studies Committee for correcting deficiencies.
2. Earned an average of at least 3.0 (B) in all work completed at this University as a graduate student.
3. Passed the Writing Proficiency Examination.
4. Obtained approval of a graduate degree program by the chemistry graduate advisor, the department chairman (in consultation with the Graduate Studies Committee) and the Dean of Graduate Studies.

The student is expected to be advanced to candidacy by the beginning of the third semester of graduate work. Upon advancement to candidacy, a Thesis Committee will be selected in consultation with the Graduate Studies Committee.

Requirements for the Master of Science in Chemistry:

1. Advancement to candidacy at least one semester before the graduation date.
2. The completion of a minimum of 30 units to be distributed in the following way:
   (a) Minimum of nine units in chemistry lecture courses in the 500 series (excluding CHEM 595). These courses must be selected from at least two of the following fields: analytical, inorganic, organic, physical and biological chemistry.
   (b) Two units of CHEM 595.
   (c) One unit of CHEM 660, a maximum of 3 units of CHEM 697 and/or 695 and 4 to 6 units of 698.
   (d) Nine to 12 units from 400 and 500 series courses (excluding CHEM 595). The exact number of units depends on the number of 600 level courses taken. A minimum of six units is recommended from two of the following three areas: CHEM 471 (or 472), 441A, 421. At the discretion of the Graduate Studies Committee equivalent courses taken as an undergraduate may meet these requirements but may not count toward the 30 unit requirement.

   Changes in the above pattern of course requirements may be made only at the discretion of the Graduate Studies Committee and the chemistry graduate advisor.
3. Completion of an acceptable thesis.

Master of Science in Biochemistry (code 6-7658)

Prerequisites:

1. Acceptance as a graduate student by the Chemistry Department.
2. A bachelor's degree with a major in chemistry or one of the biological sciences. Prerequisite courses include CHEM 251, 321A,B, 377A,B, 441A,B, MATH 122, 123, or their equivalents, and courses in general biology and microbiology. A student deficient in any of these courses must complete the course as a graduate student.
3. Entering graduate students are required to take placement examinations in analytical, biological, organic and physical chemistry. Any student failing to take and pass a placement examination in any of these subjects is required to enroll in an appropriate course. The designated courses are:

   CHEM 451 if the subject is analytical chemistry

   CHEM 441A and/or 441B if the subject is biochemistry

   CHEM 321A and/or 322 if the subject is organic chemistry

   CHEM 371A and/or 371B; or 377A and/or 377B if the subject is physical chemistry
4. The placement examinations will be given on Monday and Tuesday of the week preceding the first day of instruction. Entering students should correspond with the biochemistry graduate advisor before arrival to arrange to take these examinations. The Graduate Studies Committee evaluates the examinations and recommends appropriate courses to correct any deficiencies in chemistry. The biochemistry graduate advisor will meet with the student at this time to prepare a tentative degree program.

Advancement to Candidacy:

The department recommends advancement to candidacy after the graduate student has:

1. Either passed the placement examinations in analytical, biological, organic and physical chemistry or passed courses recommended by the Graduate Studies Committee for correcting the deficiencies.
2. Earned at least a 3.0 (B) average in all graduate work completed at this University or transferred to meet degree requirements.
3. Passed the Writing Proficiency Examination.
4. Obtained approval of a graduate degree program by the graduate advisor, the department chairman (in consultation with the Graduate Studies Committee) and the Dean of Graduate Studies.

The criteria above should be met by the beginning of the third semester of graduate study. Deficient students may continue at the discretion of the Department Graduate Studies Committee.

Requirements for the Master of Science in Biochemistry

1. Advancement to candidacy.
2. The completion of all requirements in the graduate degree program as established by the graduate advisor. The graduate program must include a minimum of 30 units with:
   (a) A minimum of nine units in chemistry lecture courses in the 500 series (excluding CHEM 595).
   (b) Three units of CHEM 595.
   (c) One unit of CHEM 660, and maximum of 3 units of CHEM 697 and 4 to 6 units of CHEM 698.
   (d) CHEM 371A and 371B or 377A and 377B; 443 and 451 taken either prior to or during the course of this program. Credit earned in CHEM 371A, 371B, 377A, 377B and all approved 400 level courses, must be applied toward the M.S. in biochemistry when it is a part of the graduate program.
3. Completion of an acceptable thesis.

Changes in the above pattern of course requirements may be made only at the discretion of the Graduate Student's Committee and the graduate advisor.

Courses (CHEM):

Lower Division:

100. Chemistry and Today's World (4) F,S Faculty

Prerequisite: One year of high school algebra. Introduction to the basic principles of chemistry and a consideration of the benefits and problems arising from applications of chemistry. Discussions of foods and food additives, drugs, plastics and other materials of everyday life, fuel sources, the atmosphere, and fresh water. Suitable for general education credit. Not open for credit to chemistry majors or students with credit in CHEM 111A or 200. (Lecture 3 hours, laboratory 3 hours.)

101. Introduction to General Chemistry (3) F,S Faculty

Prerequisite: One year of high school algebra. (This course is a prerequisite to CHEM 111A if the student fails to pass the Chemistry Placement Examination.) Basic principles and concepts including atomic structure, nomenclature and chemical calculations with emphasis on problem solving. Does not count for General Education credit. Offered on a credit-no credit basis only. (Lecture 3 hours, laboratory-problem session 3 hours. Course begins the fourth week of the semester.)

111A. General Chemistry (5) F,S Faculty

(Recommended for students who intend to pursue careers in science or engineering.) Prerequisite: A passing score on the Chemistry Placement Examination and two years of high school algebra or equivalent; one year of high school chemistry is strongly recommended. The first semester of a two-semester sequence (CHEM 111A and CHEM 111B). Introduction to the principles of chemistry including chemical bonding, solution properties and chemical equilibrium and kinetics. (Lecture 3 hours, laboratory and problem session 6 hours.)

111B. General Chemistry (5) F,S Faculty

Prerequisite: CHEM 111A with a grade of C or better. The second semester of a two-semester sequence (CHEM 111A and 111B). Continuation of the study of chemical principles with application to inorganic systems. Includes application of modern bonding theories to inorganic molecules and study of trends and reactivities of the elements and their compounds. Qualitative inorganic analysis and extensive solving of aqueous equilibrium problems are emphasized in laboratory and problem solving sessions. (Lecture 3 hours, laboratory and problem solving sessions 6 hours.)

200. Introduction to General and Organic Chemistry (4) F,S Faculty

Prerequisite: One year of high school algebra and passage of the Entry Level Mathematics examination. The first semester of a two-semester sequence (CHEM 200 and 300) covering general, organic, and biochemistry. CHEM 200 deals with general chemistry and a portion of organic chemistry. Not open for credit to students with credit in CHEM 111A. (Lecture 3 hours, laboratory 3 hours.)

251. Quantitative Analysis (4) F,S Faculty

Prerequisite: CHEM 111B. Introduction to the techniques and theory of gravimetric and volumetric analysis, spectrophotometry, potentiometry and chromatography. This course meets the requirements of most medical and dental schools. (Lecture: 2 hours; laboratory 6 hours)

Upper Division:

300. Basic Concepts of Organic and Biochemistry (4) F,S Acey, Berry, Cohlberg, Merryfield, Wynston

Prerequisite: CHEM 200 with a grade of C or better and satisfactory performance on a qualifying examination. The second semester of a two-semester sequence (CHEM 200 and 300). Study of organic chemistry; structures, metabolic reactions and functions of the major classes of biochemical compounds and the mechanisms of vitamin and enzyme action, kinetics, bioenergetics, and biochemical genetics. Does not meet the requirements of medical or dental schools. (Lecture 3 hours, laboratory 3 hours.)

321A. Organic Chemistry (5) F,S Berryhill, Goldish, Harris, Jensen, Loeschen, Maricich, Marsi, Mayfield

Prerequisite: CHEM 111B with a grade of C or better. CHEM 251 is recommended. The first semester of a two-semester sequence (CHEM 321A and either 321B or 322). Designed primarily for chemistry majors, but open to other students who desire a broad background in this field. This sequence meets the requirements for medical and dental schools. Emphasis is upon the application of modern principles to structure, reactivity, methods of synthesis and physical properties of organic compounds; spectroscopy including UV, IR, NMR and mass spectroscopy. (Lecture 3 hours, laboratory and quiz section 6 hours.)

321B. Organic Chemistry (5) F,S Berryhill, Goldish, Harris, Jensen, Loeschen, Maricich, Marsi, Mayfield

Prerequisite: CHEM 321A with a grade of C or better. The second semester of a two-semester sequence (CHEM 321A and 321B) for students desiring 10 units of organic chemistry. A continuation of the study of organic chemistry including heterocycles, nitrogen compounds, natural products and special topics. (Lecture 3 hours, laboratory and quiz section 6 hours.)

322. Organic Chemistry Lecture (3) F,S Berryhill, Goldish, Harris, Jensen, Loeschen, Maricich, Marsi, Mayfield

Prerequisite: CHEM 321A with a grade of C or better. The second semester of a two-semester sequence (CHEM 321A and 322) for students desiring 8 units of organic chemistry. Not open to chemistry majors or to students with credit in CHEM 321B. Similar to the lecture portion of CHEM 321B. (Lecture 3 hours.)

323. Organic Chemistry Laboratory (2) F,S Berryhill, Goldish, Harris, Jensen, Loeschen, Maricich, Marsi, Mayfield

Prerequisites: CHEM 322 with a grade of C or better and consent of department chairperson. For students who have credit in CHEM 322 and change to a major requiring 10 units of organic chemistry. (Laboratory 6 hours.)

327. Organic Chemistry (3) F,S Berryhill, Goldish, Harris, Jensen, Loeschen, Maricich, Marsi, Mayfield

Prerequisite: CHEM 111A with a grade of C or better. CHEM 200 may not substitute for CHEM 111A. Lecture course in the chemistry of the carbon compounds. Not applicable to a degree in chemistry. (Lecture 3 hours.)

327L. Laboratory in Organic Chemistry (1) F,S Berryhill, Goldish, Harris, Jensen, Loeschen, Maricich, Marsi, Mayfield

Corequisite: CHEM 327 or consent of instructor. This laboratory augments CHEM 327 by providing experience with organic chemical techniques including chromatography, extraction and distillation. In addition some synthetic and qualitative laboratory work is done with typical organic compounds and organic compounds of biological interest. Does not meet the requirements for dental or medical schools. Not open to students with credit in CHEM 321A,B or 328. (Laboratory 3 hours.)

371A. Physical Chemistry (3) F,S Baine, Devore, Senozan, Stern

Prerequisite: CHEM 111B and 251 with a grade of C or better, MATH 224 (may be taken concurrently), PHYS 152. The first semester of a two-semester sequence (CHEM 371A and either CHEM 371B or 372.) Principles and applications of classical thermodynamics. Introduction to statistical thermodynamics. (Lecture 3 hours.)

371B. Physical Chemistry (3) S Baine, Devore, Senozan, Stern

Prerequisite: CHEM 371A with a grade of C or better. The second semester of a two-semester sequence (CHEM 371A and 371B) in physical chemistry. Introduction to quantum chemistry, spectroscopy and chemical kinetics. (Lecture 3 hours.)

372. Physical Chemistry (3) F Baine, Devore, Senozan, Stern

Prerequisite: CHEM 371A with a grade of C or better. Selected topics in physical chemistry of particular interest to chemical engineers. Equilibrium and steady state thermodynamics of multi-component systems including combustion gases, strong electrolytes, fused salts and alloys, transport phenomena, chemical kinetics and topics in atmospheric chemistry. (Lecture 3 hours.)

373. Physical Chemistry Laboratory (3) F,S Baine, Devore, Senozan, Stern

Prerequisites: CHEM 251, 371A, or 377A and CHEM 371B or 377B (which may be taken concurrently), all with a grade of C or better. Introduction to basic apparatus and techniques of physico-chemical experimentation and research and application of the principles discussed in 371A-B. Reference to chemical literature is required. (Lecture 1 hour, laboratory 6 hours.)

377A. Fundamentals of Physical Chemistry (3) F Baine, Devore, Senozan, Stern

Prerequisites: CHEM 111B with a grade of 'C' or better; MATH 123 (may be taken concurrently); PHYS 100B or 152. The first semester of a two-semester sequence. Principles of physical chemistry with emphasis on thermodynamics and chemical kinetics. Examples from biological and environmental sciences will be used to illustrate the principles. (Lecture 3 hours.)

377B. Fundamentals of Physical Chemistry (3) S Baine, Devore, Senozan, Stern

Prerequisite: CHEM 377A or 371A, each with a grade of 'C' or better. The second semester of a two-semester sequence. Principles of physical chemistry with emphasis on molecular structure and spectroscopy. (Lecture 3 hours.)

385. Computer Methods in Chemistry (2) F Anjo, Baine, Devore

Prerequisites: CHEM 111B with a grade of 'C' or better. MATH 224, PHYS 152. Beginning Fortran programming applied to typical problems in chemical engineering and chemistry. (Lecture 1 hour, laboratory 3 hours.) Not open to students with credit in CH E 210.

421./521. Physical Organic Chemistry (3) F Berryhill, Goldish, Harris, Jensen, Loeschen, Maricich, Marsi, Mayfield

Prerequisites: CHEM 321B or 322 with a grade of 'C' or better or pass the organic entrance exam; 371B or 377B (may be taken concurrently). Theoretical interpretation of the chemical and physical properties of organic compounds including the following: mathematical derivations of rate equations from experimental results, calculations of reaction rate constants from experimental data, quantitative comparison of the reactivities of organic compounds, mathematical correlations of structure and properties. Practice in solving problems relating reaction mechanisms to the factors derived above. (Lecture 3 hours.)

422./524. Identification of Organic Compounds (3) S Berryhill, Goldish, Harris, Jensen, Loeschen, Maricich, Marsi, Mayfield

Prerequisites: CHEM 251, 321B, 371A (or 377A), all with a grade of 'C' or better, or pass the organic entrance exam. Characterization of organic compounds through study of their chemical and physical properties. (Lecture 1 hour, laboratory 6 hours.)

***431. Advanced Inorganic Chemistry (3) S McDowell, Po, Tharp**

Prerequisite: CHEM 371A with a grade of 'C' or better and CHEM 371B (may be taken concurrently). Detailed quantitative study of chemical bonding in inorganic molecules with emphasis on molecular orbital theory. Extensive coverage of transition metal chemistry including coordination chemistry, ligand field theory, application of spectroscopy to structural analysis of inorganic molecules and a review of properties and reactivities of the elements and their compounds.

***441A. Biological Chemistry (3) F,S Acey, Berry, Cohlberg, Merryfield, Wynston**

Prerequisites: CHEM 111B, 321B or 322 (may be taken concurrently) or CHEM 327, all with a grade of 'C' or better; a biology or microbiology course is recommended. The first semester of a two-semester sequence (CHEM 441A and 441B) in biochemistry. A chemical and mathematical treatment of the energetics and kinetics of reactions in living systems, including the chemistry and metabolism of carbohydrates and the chemistry of proteins. (Lecture 3 hours.)

***441B. Biological Chemistry (3) F,S Acey, Berry, Cohlberg, Merryfield, Wynston**

Prerequisite: CHEM 441A with a grade of 'C' or better. The second semester of a two-semester sequence (CHEM 441A and 441B) in biochemistry. Metabolism of lipids, proteins and nucleic acids and other advanced topics in metabolism. (Lecture 3 hours.)

***443. Biological Chemistry Laboratory (3) F,S Acey, Berry, Cohlberg, Merryfield, Wynston**

Prerequisites: CHEM 251 and 441B (which may be taken concurrently), all with a grade of 'C' or better. Laboratory techniques used in biochemical research. (Lecture 1 hour, laboratory 6 hours.)

447. Clinical Chemistry (3) F,S Berry, Cohlberg, Wynston

Prerequisites: CHEM 251 and either 448M or 441A and 441B, all with grades of C or better (CHEM 441B may be taken concurrently). Methods of analysis and chemical properties of blood, urine, and other biological materials. (Lecture 1 hour, laboratory 6 hours.)

448. Fundamentals of Biological Chemistry (3) F,S Acey, Berry, Cohlberg, Merryfield, Wynston

Prerequisite: CHEM 111A and CHEM 327, both with a grade of C or better. Major principles of biochemistry including metabolic processes, biological control and regulatory processes, nutrition and chemical energetics and kinetics of animals, plants and microorganisms. Emphasis on major concepts and problem solving. Not open to chemistry majors. (Lecture 3 hours.)

448M. Fundamentals of Biological Chemistry for Medical Microbiologists (3) F,S Acey, Berry, Cohlberg, Merryfield, Wynston

Prerequisite: CHEM 327 with a grade of 'C' or better. Similar to CHEM 448 with special emphasis on topics related to clinical chemistry. Open to medical microbiology majors only; other students admitted only by consent of instructor. (Lecture 3 hours.)

449. Nutritional Biochemistry Laboratory (3) F,S Faculty

Prerequisite: CHEM 448 with a grade of 'C' or better. Analytical and biochemical analyses of foodstuffs and other compounds of biochemical interest. (Lecture 1 hour, laboratory 6 hours.)

***451. Instrumental Methods of Analysis (4) F,S Anjo, Kalbus, Lieu**

Prerequisites: CHEM 251 and 371A or 377A, all with a grade of C or better, or consent of instructor. Theory and application of instrumental methods to chemical problems. Techniques covered include the following: atomic and molecular absorption and emission, electroanalytical chemistry, techniques of separations, mass spectroscopy, magnetic resonance and other modern methods of analysis. (Lecture 2 hours, laboratory 6 hours.)

461. Scientific Glass Blowing (1) F,S Faculty

Demonstrations and practice in elementary laboratory glass manipulation. Open only to natural science majors. Offered only on credit/no credit basis. May be repeated once for credit, but not more than one unit is applicable toward the B.S. degree in Chemistry. (Laboratory 3 hours.)

***471. Chemical Thermodynamics (3) F or S Baine, Devore, Senozan, Stern**

Prerequisites: CHEM 371A with a grade of 'C' or better and consent of instructor. Mathematical derivation and quantitative application of thermodynamic relationships of particular importance in all fields of chemistry with extensive problem solving to show the application of these relationships. (Lecture 3 hours.)

***472. Advanced Physical Chemistry (3) S Baine, Devore, Senozan, Stern**

Prerequisite: CHEM 371B with a grade of 'C' or better. Topics in physical chemistry, including quantum chemistry and spectroscopy. The mathematical method required by these topics is used to calculate exact solutions to various physico-chemical problems.

496. Special Problems in Chemistry (1-3) F,S,SS,EXED Faculty

Prerequisite: Consent of instructor. Problems selected for considered and mature analysis. A written report will be required. May be repeated to a maximum of six units. [Independent Study]

499. Directed Reading (1) F,S Faculty

Thorough survey of the chemical literature on some topic of current interest under the supervision of a faculty member. Preparation of a written report based on this reading. Not open to graduate students.

Graduate Division:

521./421. Physical Organic Chemistry (3) F Berryhill, Goldish, Harris, Jensen, Loeschen, Maricich, Marsi, Mayfield

Prerequisites: CHEM 321B or 322 with a grade of 'C' or better or pass the organic entrance exam; 371B or 377B (may be taken concurrently). Theoretical interpretation of the chemical and physical properties of organic compounds including the following: mathematical derivations of rate equations from experimental results, calculations of reaction rate constants from experimental data, quantitative comparison of the reactivities of organic compounds, mathematical correlations of structure and properties. Practice in solving problems relating reaction mechanisms to the factors derived above. (Lecture 3 hours.)

522. Special Topics in Organic Chemistry (3) ForS Berryhill, Goldish, Harris, Jensen, Loeschen, Maricich, Marsi, Mayfield

Prerequisite: CHEM 421 or consent of instructor. Areas of current interest in organic chemistry. Normally two of the following topics are treated. May be repeated with different topics to a maximum of six units.

Natural Products: Structure, biological activity, biogenesis and synthesis of selected naturally occurring compounds.

Organic Synthesis: Modern synthetic reactions as demonstrated in recent syntheses of molecules of biological or theoretical interest.

Organophosphorus Chemistry: Nomenclature, synthesis and reactivity of phosphorus-containing organic compounds. Emphasis is placed upon mechanisms of reactions of such compounds. Some discussion of the biochemistry of organophosphorus compounds will be given.

Photochemistry: The effects of light absorption by organic compounds. Involves a study of the types and mechanisms of reactions, energy transfer, fluorescence and phosphorescence.

Kinetics and Mechanism: A survey of methods of elucidation of reaction mechanisms. Theory and application of kinetics, isotope effects, acidity functions. Catalysis and linear free energy relationships may be included as related to molecular rearrangements, hydrolyses, hydration reactions and intramolecular catalysis.

Bioorganic Mechanisms: The application of mechanistic organic chemistry to the mechanism of action of biological compounds. Emphasis may center on drug action or enzyme catalysis.

Stereochemistry: Molecular configurations, conformations and stereochemical effects in the organic reactions of carbon and heteroatom compounds.

Reactive Intermediates: Organic chemistry of reactive intermediates such as carbenes, nitrenes and free radicals.

524./422. Identification of Organic Compounds (3) S Berryhill, Goldish, Harris, Jensen, Loeschen, Maricich, Marsi, Mayfield

Prerequisites: CHEM 251, 321B, 371A (or 377A), all with a grade of 'C' or better, or pass the organic entrance exam. Characterization of organic compounds through study of their chemical and physical properties. (Lecture 1 hour, laboratory 6 hours.)

531. Advances in Inorganic Chemistry (3) F, Alternate years McDowell, Po, Tharp

Prerequisite: CHEM 431 or consent of instructor. Current topics and advances in inorganic chemistry. May be repeated with different topics to a maximum of six units.

Metallo-organic Chemistry: Complexes of transition metals in low oxidation states, emphasizing structure of complexes and bonding, reaction types and homogeneous catalysis.

Physical Methods of Inorganic Chemistry: A brief survey of the basic theoretical principles of the quantum mechanics of bonding, followed by an intensive discussion of modern physical techniques. Application of most physical methods to selected inorganic compounds will be discussed.

Mechanisms of Inorganic Reactions: Inorganic reactions in aqueous solution, emphasizing the substitution mechanisms of octahedral complexes, types of electron-transfer reactions of complexes, application of Marcus-Hush theory and catalysis by transition metal complexes.

Boranes and Boron Chemistry: Synthesis, structure, reactivity and new bonding concepts in boranes and boron compounds.

541. Biochemistry of Macromolecules (3) F, Alternate years Wynston

Prerequisite: CHEM 441B or consent of instructor. Studies of the chemical, physical and biological structures and functions of proteins, nucleic acids and other biopolymers.

542. Special Topics in Biochemistry (3) S, alternate years Acey, Berry, Cohlberg, Merryfield, Wynston

Prerequisite: CHEM 441B or consent of instructor. A detailed intensive discussion of a limited aspect of biochemistry with reference to current literature. Course content will vary from year to year. May be repeated for credit with consent of instructor.

544. Physical Biochemistry (3) F, Alternate years Cohlberg

Prerequisites: Either CHEM 371B, 372 or 377B, or consent of instructor and CHEM 441B. Physical chemical aspects of protein and nucleic acid chemistry and related analytical methods.

545. Enzymology (3) S, alternate years Merryfield

Prerequisites: CHEM 371A and 441B, or consent of instructor. Detailed study of the mechanisms and kinetics of enzyme-catalyzed reactions and mechanisms of enzyme regulation.

546. Clinical Biochemistry (3) F or S Berry

Prerequisite: CHEM 441B. Chemistry and methodology of clinically important analyses of biological fluids.

547. Biochemistry of Nucleic Acids (3) S Acey

Prerequisites: Chem 441A and 441B or consent of instructor. A detailed treatment of gene expression with emphasis on regulatory mechanisms. Analytical techniques for isolation, purification, and characterization of nucleic acid.

552. Special Topics in Analytical Chemistry (3) F, Alternate years Anjo, Kalbus, Lieu

Prerequisite: CHEM 451 or consent of instructor. Selected topics including electrochemical measurements, chromatographic techniques, spectroscopic techniques (molecular and atomic absorption and emission), radiochemical analysis and basic electronic components of instrumentation. Emphasis will be placed on an in-depth understanding of the chemical principles involved, along with the utility and limitations of each method. Other topics include trace analysis by electrochemical methods and instrumental analysis of water and air pollution control. May be repeated with different topics to a maximum of six units.

571. Advanced Thermodynamics (3) F or S Baine, Devore, Senozan, Stern

Prerequisite: CHEM 371A. Continuation of Chemistry 371A to include statistical and solution thermodynamics.

572. Advanced Physical Chemistry (3) S Baine, Devore, Senozan, Stern

Prerequisite: CHEM 371B or consent of instructor. Special topics in physical chemistry. May be repeated with different topics to a maximum of six units.

Group Theory: Group theory and its application in chemistry. Topics covered will include hybridization, molecular orbital theory, crystal and ligand field theories and molecular vibrations.

Spectroscopy and Molecular Structure: The use of spectroscopic methods to elucidate molecular structure. Topics covered will include microwave, infrared, visible, ultraviolet, Raman, nuclear magnetic resonance, electron spin resonance, nuclear quadrupole and Mossbauer spectroscopy.

Dynamics of Chemical Reactions: Review of phenomenological kinetics equations; methods of elucidating complex photochemical and thermal gas phase reaction mechanisms; theoretical approaches to physico-chemical reactions including the RRKM method and quantum mechanical scattering; applications of kinetics to the various fields of chemistry.

595A. Colloquium in Biochemistry (1) F,S Faculty

595B. Colloquium in Organic Chemistry (1) F,S Faculty

595C. Colloquium in Analytical, Physical and Inorganic Chemistry (1) F,S Faculty

Prerequisite: Graduate standing or consent of instructor. Discussion of advances in chemistry as reported in recent literature. Designed to give experience in library use, organization and presentation and critical evaluation of the chemical literature. May be repeated for credit, but not more than a total of three units may be earned in any combination of 595 courses.

660. Seminar in Chemistry (1) F,S Faculty

Weekly meetings for presentation and discussion of advanced work in special fields including original research by faculty and graduate students.

695. Directed Reading (1) F,S Faculty

Survey of the information in chemical literature on a current research topic, under the direction of a faculty member. Preparation of a written report based on this reading.

697. Directed Research (1-3) F,S,SS,EXED Faculty

Prerequisite: Arrangement with instructor. Laboratory work supervised on an individual basis. A written report will be required. May be repeated for credit. [Independent Study]

698. Research and Thesis (1-4) F,S Faculty

Prerequisite: Arrangement with instructor. Chemical laboratory investigations to be terminated by a thesis.

Center for Environmental Studies

School of Natural Sciences

Director: Dr. Roswitha B. Grannell
Location: Peterson Hall 3 (PH3), Room 130
Telephone: 498-4927 or 498-4809

Students desiring information should contact the department office for referral to one of the faculty advisors.

Director: Dr. Roswitha B. Grannell.

Certificate in Environmental Studies

The Center for Environmental Studies has as its objectives (1) creation of an awareness of the kind and scope of environmental problems, (2) preparation to analyze environmental problems and issues and (3) training in research in, and solution of, environmental problems.

The center offers the Environmental Studies Certificate Program which is comparable to an academic minor. It has three components: natural environment prerequisites (or corequisites), core requirements, and elective courses distributed in human behavior, resources and analysis and application.

The pattern of completion for the certificate is directed toward both the technically trained, research oriented student and the liberal arts, humanistically oriented student. Students in both areas must contact the Director, Center for Environmental Studies, for entry into the program. This contact should be made as early as possible in the student's academic career so that he or she may receive counseling in the most appropriate course work.

Requirements for the Certificate in Environmental Studies:

1. A bachelor's degree (may be completed concurrently).
2. Consultation with the director of the program.
3. Overall grade point average of 2.0 in all work attempted.
4. 33 units distributed as follows:
   A. Prerequisite or Corequisite Courses (nine units outside the major department selected from the three categories below; at least one laboratory course from categories a. or b. must be included, and a second is highly recommended).
      a. Life Sciences: At least three units from BIOL 200, 201, 212, 216, 313, 324, 350, 351, 353, 427, 450, 453, 464; MICR 100, 210, 441.
      b. Physical Sciences: At least three units from CHEM 100, 111A, 111B, 200, 300; GEOL 100, 102, 104, 105, 160, 163, 331, 463, 464, 465, 490g; PHYS 100A, 100B, 104, 105, 106, 151, 152.
      c. Geography: 140, 440, 442, 444.
   B. Core requirements (nine units; upon petition to the Director, three units of E/ST 499 may be substituted for one of the following);
      a. PHIL 360;
      b. E/ST 490 (2 units) and 490L (1 unit), taken concurrently (only the sections entitled Environmental Field Studies may be used; the prerequisite for these courses is prior completion of six units of Section A, above, including the laboratory).
      c. E/ST 496.
   C. Elective Requirements (15 units, distributed over the following three categories; nine of these units must be outside the major department, six units must be outside the school, and six units must be at upper division level).
      a. Human Behavior: At least three units outside the major department from ECON 334; HIST 405; MICR 321; POSC 442; PSY 351 or SOC 335; SOC 350.
      b. Man and Resources: At least three units outside the major department from BIOL 100, 203; CH E 475; C E 364, 460, 461, 467, 468; ECON305; GEOG 160, 204, 304, 356, 455, 460, 467; GEOL 190, 191, 305; H SC 422; PHSC 100; SOC 410.
      c. Analysis and Application: Three units from BIOL 260, 451; C/ST 210;ECON 380; GEOG 486, 490; GEOL 306; H SC 485; MATH 180; PSY 310. (Upon approval of the Director, one additional course from this category may be used to fulfill Section C, Elective Requirements in lieu of a course from a. or b. above).

Courses (E/ST):

Upper Division:

490. Special Topics in Environmental Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in environmental studies selected for intensive development. May be repeated (with change of topic) for a maximum of six units of credit. Topics will be announced in the Schedule of Classes. Upon approval of the director of the Center for Environmental Studies, this course is acceptable for credit in lieu of equivalent units in Section C, Elective Requirements.

490L. Special Topics Laboratory (1-2) F,S Faculty

Prerequisite: Consent of instructor. Laboratory in topics of current interest in environmental studies selected for intensive development. May be repeated for a maximum of four units of credit. Topics will be announced in the Schedule of Classes. Upon approval of the director of the Center for Environmental Studies, this course is acceptable for credit toward the Environmental Studies Certificate in lieu of equivalent units in appropriate subject areas.

496. Practical Involvement in Environmental Issues (3) F,S

Prerequisite: Consent of instructor, intern experience in public agencies and private industry.

499. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent study under the supervision of a faculty member. Upon approval of the director of the Center for Environmental Studies this course is acceptable for credit toward the Environmental Studies Certificate in lieu of equivalent units in Sections B and C (Core Requirements and Elective Requirements).

Geological Sciences

School of Natural Sciences

Department Chair: Charles T. Walker
Department Office: PH3 102A
Telephone: 498-4809
Faculty: Professors: Kwan M. Chan, Bert L. Conrey, John G. Dennis, Albert L. Ehrreich, Stanley C. Finney, Paul J. Fritts, Roswitha B. Grannell, Jack Green, Charles T. Walker, Robert E. Winchell.
Department Secretary: Maureen E. Rutherford

Geological Sciences Professional Advisory Council

The Geological Sciences Advisory and Development Council consists of outstanding geologists, engineers, and executives from industry and government. The function of the council is to provide a liaison between the University and Industry. This will insure that the curriculum is appropriate in light of modern practice. The council also advises the department on employment opportunities for students who are majoring in geology.

Students desiring information should contact the department office for referral to one of the faculty advisors:

Undergraduate Advisor: Geological Sciences; Walker; Earth Science, Grannell.
Graduate Advisor: Grannell.

The Geological Sciences include the study of the solid earth, the hydrosphere, and atmosphere. Within the broad field of Geological Science students may elect to take coursework leading to professional careers in such areas as geohydrology, urban geology, engineering geology, petroleum geology, mineral exploration and government service. The degree programs also prepare students for academic careers in schools or universities although additional work is required for such careers. All Earth Science and Geology majors must contact the department office to obtain a departmental advisor prior to the first semester in residence.

The Geological Sciences Department participates in the interdisciplinary Center for Ocean Science Studies. See the Ocean Science Studies section of this Bulletin for additional information.

Bachelor of Science in Geology (code 3-7664)

Within the broad field of geology, undergraduate students may elect to follow one of several alternative routes: general geology, marine geology, mineralogy-petrology, paleontology-stratigraphy, structural geology, petroleum geology.

Bachelor of Science in Earth Science (code 3-7663)

The Earth Science program prepares students to understand the natural environment, earth resources, land use, pollution and other areas of critical importance to present and future world problems. The following career-oriented interdisciplinary emphases are offered: (1) Engineering Geology, (2) Exploration Geophysics, (3) Earth Materials, and (4) Oceanography.

Concurrent and/or Summer Enrollment in Another College

Students who wish to take course work in a community or another college to meet curricular requirements while enrolled as undergraduates in the School of Natural Sciences must petition the appropriate department for prior approval to enroll in specific courses. This policy is for either concurrent enrollment or summer enrollment. University policy must also be complied with. See 'Concurrent Enrollment' and 'Transfer of Undergraduate Credit' in this Bulletin. Courses not receiving prior approval will not be accepted for credit by the department.

Master of Science in Geology (code 6-7664)

Admission to the Program

The basic requirement of admission to this graduate program is possession of a B.S. degree in geology or its equivalent. The student normally will be expected to have completed acceptable upper division course work in three of the following areas: geochemistry, stratigraphy, igneous and metamorphic petrology and optical crystallography. Computer competency and a strong field geology background is also expected of all geology majors. Students who do not have appropriate upper division course work in these areas may be admitted to the program but will be expected to remove deficiencies or present acceptable alternatives.

All students are required to take the verbal, quantitative, and analytical portions of the Graduate Record Examination and attain a satisfactory score before or during their first semester of attendance. Failure to meet this requirement will prevent admission to candidacy and/or removal of the student from the MS program.

An examination may be given to transfer students each fall, for evaluation of possible deficiencies in course work already completed. This examination will consist of written and/or field evaluations, and will be used for advising purposes.

Requirements for the Bachelor of Science in Geology (code 3-7664)

Lower Division:
GEOL 102, 104; PHYS 151, 152; MATH 117, 122, 123; CHEM 11A-B; either BIOL 216 or a combination of BIOL 200 and one of the following: GEOL 442, 443, BIOL 437. Additional required courses for the various emphases are listed below.

Upper Division:
GEOL 321, 324, 326, 330, 341, 342, 372, 373, 441, 448, 449, 472. Additional required courses for the various emphases are listed below.

(1) General Geology

Upper Division:
GEOL 420, 421, 424, 425, 450 and nine units of upper division courses approved in advance by departmental advisor.

(2) Marine Geology

Lower Division:
MATH 224.

Upper Division:
GEOL 420, 421, 424, 425, 260, 466.

(3) Mineralogy-petrology

Lower Division:
MATH 224; CHEM 251.

Upper Division:
GEOL 420, 421, 424, 425, 450, 491; CHEM 377A, 451.

(4) Paleontology-stratigraphy

Upper Division:
GEOL 420, 421, 424, 425, 442, 443, 450; one course in statistics approved by advisor; and one course selected from GEOL 461, 464, 465, BIOL 437.

(5) Petroleum Geology

Lower Division:
MATH 224.

Upper Division:
GEOL 419, 427, 450, 460, 471 and three additional units approved in advance by the appropriate advisor.

(6) Structural Geology

Lower Division:
MATH 224.

Upper Division:
GEOL 420, 421, 424, 425, 450, 460, 490J, and four additional units approved in advance by the appropriate advisor.

Bachelor of Science in Earth Science (code 3-7663)

Lower Division:
GEOL 102; CHEM 111A, 111B; MATH 117, 112, 123, 224; PHYS 151, 152.

Upper Division:
GEOL 324.

Additional courses required for the various emphases are listed below. The specified units required beyond those in the listed courses must be approved in advance by the departmental advisor in the selected emphasis.

(1) Engineering Geology

Lower Division:
GEOL 104; CE 205, 206.

Upper Division:
GEOL 321, 326, 330, 341, 342, 372, 420, 421, 424, 425, 441, 448, 449, 450; CE 345, 346, 445; ME 373, 374; nine additional units in mathematics, engineering or science approved in advance by the appropriate departmental advisor.

(2) Exploration Geophysics

Lower Division:
MATH 270; GEOL 140; PHYS 153.

Upper Division:
GEOL 330, 342, 372, 419, 441, 448, 449 or equivalent, 460, 467; MATH 345, 370A, 370B, 380; PHYS 310, 340A, 402; PHYS 340B, PHYS 403, GEOL 104, GEOL 326, and MATH 323 are highly recommended.

(3) Earth Materials

Lower Division:
GEOL 104; CHEM 251, 251L; PHYS 153.

Upper Division:
GEOL 321, 326, 342, 420, 421, 424, 425, 427, 461, 461L, 491; CHEM 371A, 371B, 431, 451, 385 or CE 305; MATH 346; M.E. 322, 423; nine additional units in geology, mathematics, physics, or chemistry approved in advance by the appropriate departmental advisor.

(4) Oceanography

Lower Division:
GEOL 104, 160, 191; MATH 270; BIOL 200; ME 265.

Upper Division:
GEOL 326, 341, 460, 461, 463, 464, 465, 466, 496 (3); BIOL 313; 20 additional units in engineering and science approved in advance by the appropriate departmental advisor.

Minor in Geology (code 0-7664)

Twenty units which must include:

Lower Division:
GEOL 102, 104, 140.

Upper Division:
Nine units of geology.

Concentration in Geology for the Bachelor of Arts in Liberal Studies

A minimum of 25 units will be required, 15 of which must be upper division.

Required courses:
GEOL 102, or 103 and 104, 140, 306, and 310; one course selected from the following: GEOL 160, 163, 190, or 191. Students may select any upper division Geology courses to fill remaining units. However, the following are recommended as being appropriate and require a minimum of prerequisite courses: GEOL 306, 324, 326, 341, 419, 431, 463, or 490I.

Master of Science Degree in Geology

The Department of Geological Sciences is one of three departments in The California State University and Colleges in Southern California which offer courses leading to a master of science degree in geology. The three universities in the joint program are California State University, Long Beach, California State University, Northridge and California State University, Los Angeles.

The objectives of the master of science program in geology are (1) to offer a degree program which will train individuals with the competence required by the geological profession for employment in industry and government agencies, (2) to enable promising students to attain a level of knowledge and research ability required for admission to a Ph.D. program at other universities, (3) to provide an M.S. program with basic course work and research requirements for students planning to teach geology at the community college level.

Areas of specialization include Structural and Field Geology, Geochemistry, Geophysics, Marine Geology, Mineralogy and Petrology, Paleontology, Stratigraphy, Petroleum Geology, Micropaleontology,Sedimentology, and Engineering Geology.

Equipment for these specializations includes Atomic Absorption P.E. 5000 and Graphite Furnace, Carbon-Sulphur analyzer, 3.2 meter Emission Spectograph, Electron Microprobe, Flame photometer, Hammer Seismic Unit (Engineering application), Gravity Meter (D-level), S.E.M., Surface Resistivity/Self Potential Apparatus, Telluric Current Recording Meter, Vertical Field Magnetometer, X-ray (XRD and XRF).

Advancement to candidacy:

Before the student can complete the M.S., he or she must be advanced to candidacy. The requirements for advancement are as follows:

1. Completion of the Graduate Record Exam with an acceptable score.
2. Completion of the writing proficiency examination requirement with a passing score.
3. Completion of six units of graduate level courses with a 3.0 grade point average, and attainment of a 3.0 grade point average in all upper division and graduate work attempted, as well as in the courses listed in the graduate program.
4. Prior completion of all deficiencies and incompletes.

Requirements for the Master of Science

The advising of incoming graduate students is carried out by the graduate advisor, who explains the requirements of the program and carries out the initial academic advising. Graduate students are normally expected to complete one of the undergraduate emphases, in addition to graduate work appropriate to the emphasis. Once an emphasis is chosen, a graduate committee is selected with the help of the graduate advisor. The final academic program is approved by the graduate committee, the department chairman, and the graduate advisor.

All students must take 6 units of GEOL 698, Thesis. Directed Research, GEOL 697, may be used to fulfill up to four units of course requirements for the degree; however, they cannot normally be taken unless the student has completed 12 units of the graduate program with a grade point average of 3.0 or higher.

Candidates must take a minimum of 15 semester units of 500 or 600 level courses, including Thesis, and an additional 15 semester units of 300, 400, 500 and 600 level courses chosen with the approval of the graduate committee. Units may be taken at another university in the joint program if suitable courses are not offered at CSULB. Note that 4½ quarter units are the equivalent of 3 semester units; also, off campus courses are not required.

With prior approval of the graduate committee, the graduate advisor and the chairman, appropriate 300, 400, 500 or 600 level courses from related areas in science, mathematics or engineering may be substituted within limits.

Courses (GEOL):

Lower Division:

102. General Geology (3) F,S Faculty
Broad based introductory study of geology. Includes the structure, composition, distribution and modification of earth materials and also the elementary geological history of the earth. (Lecture, demonstration). Not open to students with credit in Geology 103 or 107. Grading: Traditional or CR/NC. Approved G.E.: B.1B

103. Introductory Geology (2) F S SS
Prerequisite: Concurrent enrollment in Geology 104. Elementary study of the earth, particularly the structure, composition, origin, distribution and modification of earth materials. Not open to students with credit in Geology 100, 102, or 107. (Lecture, demonstration)

104. Geology Laboratory (1) F,S Faculty
Prerequisite: Concurrent or prior enrollment in Geology 102 or 103. Laboratory study of earth materials. (Laboratory 3 hours)

105. Geology Field Laboratory (1) F,S Faculty
Prerequisite: Concurrent or prior enrollment in Geology 100, 102, 103, or 107. Field trips to areas of geologic significance and field study of earth materials. May be repeated for credit with consent of instructor to a maximum of 3 units. (Field trips, 6 days per unit.) A fee may be charged for gas trips.

107. Introductory Geology (Keller Plan) (3) F,S Faculty
Elementary study of the earth, particularly the structure, composition, origin, distribution and modification of earth materials. Laboratory study of earth materials. Offered in a personalized instruction (Keller Plan) format. Not open to students with credit in Geology 102. (Lecture 2 hours, laboratory 3 hours.) Traditional grading only.

140. Historical Geology (3) S Fritts, Lumsden
Prerequisite: GEOL 104. History of the earth and evolution of plants and animals. (Lecture 2 hours, laboratory 3 hours, field trips.)

160. Introduction to Oceanography (3) F,S Faculty
Origin and extent of the oceans; nature of the ocean floor, cause and effect of currents, tides and waves; and life in the sea. (Lecture, discussion.)

160L. Introduction to Oceanography Laboratory (1) F,S Chan, Conrey
Prerequisite: Previous credit or concurrent registration in GEOL 160. Field and laboratory study of the marine environment. Sea trips for experience in the use of oceanographic instruments. Analysis and interpretation of results. (Laboratory and field 3 hours.)

163. Science of the Atmosphere and Weather (3) F,S Chan, Walker
Introduction to the physical and chemical processes of the atmosphere, science of weather and weather disturbances. Emphasis on understanding the atmospheric environment rather than technical calculations.

190. Environmental Geology (3) F,S Grannell
Interrelationships of man and landslides, floods, erosion, subsidence, volcanism, earthquakes and seismic sea waves. Case histories will be discussed.

191. Air and Water Pollution (3) F,S Chan, Walker
Survey course dealing with the causes and nature of pollution of the air, fresh water lakes and streams and the ocean. Effects of pollution on man's environment.

Upper Division:

305IC. Resources and Man (4) S Dennis
Occurrence and setting of non-renewable resources: ore deposits, fuels and water. Extraction and conservation. Demand for resources: economic and population growth, technology, pollution control, recycling, imports and exports. Taxation and government regulation of mineral industries. (Same course as ECON 305.)

321. Optical Crystallography (4) S Ehrreich, Winchell
Prerequisites: GEOL 324, 326 and MATH 122, or upper division standing in chemistry or physics. Optical properties of crystals. Laboratory study of crystals in immersion liquids and thin sections with polarizing microscope. (Lecture 2 hours, laboratory 6 hours.)

324. Mineralogy (3) F Winchell
Prerequisites: GEOL 102, 104; CHEM 111A, corequisite: GEOL 326. Crystallography, structure, chemistry, classification, origin, occurrence and association of minerals. Megascopic and instrumental analysis identification of minerals in the laboratory. (Lecture - 2 hours, laboratory - 3 hours, field trips)

326. Crystallography (2) F Winchell
Prerequisite: GEOL 102, 104; CHEM 111A; corequisite: GEOL 324. Introduction to morphological and structural crystallography and crystal chemistry and their application to mineralogy. (Lecture - 1 hour, laboratory - 3 hours)

330. Structural Geology (3) S Dennis
Prerequisites: GEOL 324, 326, 372, PHYS 151, MATH 117 or consent of instructor. Deformation of earth's crust, fracturing, folding and flow of rocks; graphic solutions of structural problems, structure from geological maps and other geological records. (Lecture 2 hours, laboratory 3 hours, field trips.)

341. Principles of Paleontology (4) F Lumsden
Prerequisites: GEOL 104 and either BIOL 200 or 216. Morphologic, systematic, and ecologic aspects of invertebrate fossils; uses of fossils in stratigraphic work. (Lecture 2 hours, laboratory 6 hours, field trips.)

342. Sedimentary Rocks (3) S Conrey
Prerequisites: GEOL 324, 326. Methods of analysis; description and classification of, and processes involved in, the formation of sedimentary rocks. (Lecture 2 hours, laboratory 3 hours, field trips.)

370. Engineering Geology (2) F,S Fritts, Green
Prerequisites: ME 172, CE225. Earth processes and materials which influence the design, construction and operation of engineering works, construction materials. Not open for credit to geology majors. (Lecture 2 hours, field trips.)

372. Graphical Methods in Geology (2) F Fritts
Prerequisites: GEOL 104, MATH 101 or high school trigonometry. Introduction to graphical solutions of problems in structural geology and stratigraphy. (Lecture 1 hour, laboratory 3 hours, field trips.)

373. Computer Methods in Geology (1) F,S Grannell, Winchell
Prerequisite: Upper-division standing in geology or earth science. Application of computers to the solution of problems in the geological sciences. A materials fee may be charged. (Laboratory-3 hours)

419. Macroscopic Petrography of Igneous and Metamorphic Rocks (1) F Ehrreich, Winchell
(No credit for students who take GEOL 320B, 421, or 425.) Prerequisites: GEOL 324 and 326. Study of macroscopic characteristics of igneous and metamorphic rocks and their causes. (Laboratory-3 hours, field trips)

***420. Petrogenesis of Igneous Rocks (2) F Ehrreich, Winchell**
Prerequisites: CHEM 111B and GEOL 321; corequisite: GEOL 421. Origin and evolution of igneous rocks. (Lecture - 2 hours)

***421. Petrography of Igneous Rocks (1) F Ehrreich, Winchell**
Prerequisites: CHEM 111B and GEOL 321, corequisite: GEOL 420. Study of macroscopic and microscopic characteristics of igneous rocks and their origins. (Laboratory - 3 hours, field trips)

***424. Petrogenesis of Metamorphic Rocks (2) F Ehrreich, Winchell**
Prerequisites: CHEM 111B and GEOL 321; corequisite: GEOL 425. Origin and evolution of metamorphic rocks. (Lecture - 2 hours)

***425. Petrography of Metamorphic Rocks (1) F Ehrreich, Winchell**
Prerequisites: CHEM 111B and GEOL 321; corequisite: GEOL 424. Study of macroscopic and microscopic characteristics of metamorphic rocks and their causes. (Laboratory - 3 hours, field trips)

***427. Microscopic Sedimentary Petrography (1) F Walker**
Prerequisites: GEOL 321, 342. Microscopic study of sedimentary rocks, especially identification of minerals in rocks and recognition of textures. Identification of rocks and inference of their depositional environment from results of microscopic examination. (Laboratory - 3 hours)

431./531. Geomorphology (3) F Conrey
(Undergraduates register in GEOL 431; graduate students register in GEOL 531.) Prerequisite: GEOL 330. Nature and origin of land forms. Application of concepts by analyzing land forms displayed on maps and aerial photos in the laboratory and local field studies. (Lecture 2 hours, laboratory 3 hours, field trips.)

434./534. Aerial Photo Interpretation (2)
Prerequisite: GEOL 330, Corequisite: GEOL 449. Terrain analysis using aerial photographs. Emphasizes photogeologic interpretation using stereoscope, basic photogrammetric techniques for quantitative data, and construction of geologic maps. (1 hour lecture, 3 hours laboratory, and field trip)

***441. Principles of Stratigraphy (3) F Fritts, Walker**
Prerequisites: GEOL 321, 330, 341, 342. Occurrence, lithology, fossil content, succession and mutual relations of rocks and their classification. (Lecture 2 hours, laboratory 3 hours, field trips.)

442./542. Paleoecology (3) F Lumsden
(Undergraduates register in GEOL 442, graduate students register in GEOL 542.) Prerequisite: GEOL 341. Environmental significance and age of occurrence of fossil assemblages. Understanding of fossil communities. (Lecture 2 hours, Laboratory 3 hours.)

***443. Micropaleontology (3) S Fritts**
Prerequisites: GEOL 104, 341; or upper division standing in biology with consent of instructor. Morphology, taxonomy and ecology of microfaunas; biostratigraphy. (Lecture 2 hours, laboratory 3 hours, field trips.)

***444. Palynology (3) S Faculty**
Prerequisites: GEOL 341 and 441, or BIOL 427 and GEOL 140 (GEOL 140 may be taken concurrently). Study of fossil and modern pollen and spores, including morphology, taxonomy, paleoecology, and fossil assemblages through time. Laboratory to emphasize identification and description of fossil and modern forms. (Lecture - 2 hours, laboratory - 3 hours)

448. Geological Surveying (2) F Fritts
Prerequisites: GEOL 330, 372 and 441 (may be taken concurrently). Principles of geological surveying with emphasis on the plane table; application of surveying techniques to field mapping of geological structures; determination of true thickness of strata. (Lecture 1 hour, laboratory 3 hours, field trips.)

449. Field Geology (3) S Faculty
Prerequisites: GEOL 421 (plus 425, or 427), 441 and 448. Geologic mapping; interpretation of geologic maps and aerial photographs, preparation of geologic reports and illustrations. Fifteen days of fieldwork during registration week, spring vacation and/or weekends of the spring semester. Students must contact the department by November 1 and register by Computer Assisted Registration. (Laboratory 3 hours, field trips 8-5 Saturdays.)

***450. Advanced Field Geology (6) S,S Faculty**
Prerequisites: GEOL 330, 449. Six weeks of geological mapping at a selected area. Preparation of a geological report of the field problem which is to be turned in to the instructor not later than two weeks following the completion of the field work. (Lectures as needed, field 6 days per week, 8-5.)

***460. Introduction to Geophysics (3) F Grannell**
Prerequisites: PHYS 100B, MATH 122. Introduction to geophysics; principles and processes; methods of investigation. (Lecture 2 hours, laboratory 3 hours, field trips.)

***461. Introduction to Geochemistry (2) S Walker**
Prerequisites: CHEM 11B, MATH 123. Abundance, migration and concentration of the elements in the earth; chemical processes in the evolution of the earth and its crust. (Lecture 2 hours, field trips.)

461L./561L. Laboratory in Geochemistry (1) S Walker
(Undergraduates register in GEOL 461L; graduates register in GEOL 561L.) Prerequisite: Concurrent or prior enrollment in GEOL 461, or consent of instructor. Analysis of silicate rocks by flame photometry, spectrophotometry, atomic absorption, and emission spectrography. (Laboratory 3 hours.)

463. General Meteorology (3) S Chan
Prerequisite: PHYS 100B or GEOL 163 or GEOG 444 or consent of instructor. Composition, structure, and circulation of the atmosphere, including elementary theory of storms and other weather disturbances, meteorological instruments and observations. (Lecture 3 hours, field trips.)

***464. Geological Oceanography (3) S Conrey**
Prerequisites: GEOL 102 or 370; GEOL 160 or 465 or ME 434; CHEM 111B and PHYS 100B. Sediments, topography and structure of the ocean floor; sedimentary processes as they affect the shore, continental shelf and ocean basins. (Lecture 2 hours, laboratory 3 hours, 2 day field trip.)

465./565. Physical and Chemical Oceanography (3) F,S Chan
(Undergraduates register in GEOL 465; graduates register in GEOL 565.) Prerequisites: CHEM 111B, PHYS 100B, and upper division standing in the Natural Sciences or Engineering. Physical and chemical oceanography; the carbonate cycle; minor elements and micronutrient elements in sea water; water masses of the oceans; the physical concepts and interpretative theories related to ocean circulation. (Lecture 3 hours.)

***466. Oceanography Laboratory and Ocean Studies (1) F,S Chan**
Prerequisite: Concurrent or prior enrollment in GEOL 465. Instruments and techniques in physical and chemical oceanography; sea trips to areas of oceanographic significance, water quality analysis and interpretation of oceanographic data. Not open to students with credit in GEOL 462. (Laboratory 3 hours, sea trips.)

467./567. Petroleum Geophysics (3) S Grannell
(Undergraduates register in GEOL 467; graduates register in GEOL 567.) Prerequisites: PHYS 152, MATH 224, GEOL 441, 460. Applications of seismic reflection and potential field methods to petroleum exploration. Includes processing and interpretation of collected data, and integration of geophysical data with surface and subsurface geology. (Lecture 2 hours, laboratory 3 hours.)

***470. Well Log Analysis (2) F Fritts, Walker**
Prerequisites: PHYS 152, MATH 122, GEOL 330 and GEOL 342. Basic well logging techniques as employed in the petroleum (and other) industries; includes data collection, reduction, interpretation, and integration among various well logging methods as well as with surface geological and geophysical data. (Lecture 1 hour, laboratory 3 hours, field trips.)

***471. Petroleum Geology (2) Fritts, Walker**
Prerequisite: GEOL 330. Application of geology to the exploration and production of petroleum/includes use of both surface and sub-surface geologic methods. (Lecture 1 hour, laboratory 3 hours, field trips.)

***472. Regional Geology of North America (3) S Dennis, Fritts, Grannell**
Prerequisite: GEOL 441. Regional stratigraphy, structure and geologic history of major provinces of North America, including theoretical concepts of the origin of these features. (Lecture 2 hours, discussion session 2 hours, field trips.)

***490. Current Topics in Geological Sciences (103) F,S Faculty**
Prerequisite: Consent of instructor. Topics of current interest in the geological sciences selected for intensive development. Topics to be selected from such areas as (a) Geochronology, (b) Ground water geology, (f) Aerial photo interpretation, (h) Statistical methods in geology, (i) Planetary geology, (j) Tectonics, (k) Economic mineral deposits, (m) Volcanology, (n) Carbonate petrology, (u) Urban geology. May be repeated for a maximum of 6 units. (Field trips may be required.)

491./591. X-ray Crystallography (3) S Winchell
(Undergraduates register in GEOL 491; graduate students register in GEOL 591.) Prerequisite: GEOL 326 or equivalent or consent of instructor. Theory of x-ray diffraction and its application to the analysis and identification of crystalline phases. Not open to students with credit in GEOL 490d. (Lecture 2 hours, laboratory 3 hours.)

496. Investigations in Geology and Other Earth Sciences (1-4) F,S Faculty
Prerequisites: Senior standing in geology, earth science or related fields, completion of an upper division course in geology or earth science in the area of the topics chosen and approval of the topic chosen by the geology faculty. Supervised research in geology or the other earth sciences. (Field trips may be required.)

Graduate Division:

510. Advanced Paleontology (3) F Lumsden
Prerequisites: Upper division courses in invertebrate paleontology, stratigraphy and micro paleontology. Seminars in various topics in invertebrate paleontology, such as biostratigraphy, paleoecology, functional morphology, etc. May include field and laboratory investigations. May be repeated for credit as topic changes.

515. Advanced Micropaleontology (3) Fritts
Prerequisites: Three units of micropaleontology or consent of instructor. Advanced studies in morphology, taxonomy, ecology and paleoecology of microfossils; biostratigraphy and age determination of sedimentary rocks. (Lecture 1 hour, laboratory 6 hours.)

520. Advanced Stratigraphic Analysis (3) Walker
Prerequisites: Introductory course in stratigraphy, sedimentary petrology and paleontology or consent of instructor. Principles and techniques of stratigraphic analysis with emphasis on interpreting the stratigraphic record to aid in reconstruction of environment of deposition and paleogeography. Course will revolve around a field problem and include application of methods from physical stratigraphy, biostratigraphy and sedimentary petrology to solution of the problem. (Lecture 1 hour, laboratory 3 hours, field work 8 days.)

530. Seminar in Structural Geology and Tectonics (3) Dennis
Prerequisite: Upper division structural geology. Critical review of selected topics concerning the analysis, interpretation and origin of geologic structures, the mechanics of rock deformation and of large scale crustal deformation.

531./431. Geomorphology (3) S Conrey
Same course as 431/531.

534./434. Aerial Photo Interpretation (2)

Prerequisite: GEOL 330. Corequisite: GEOL 449. Terrain analysis using aerial photographs. Emphasizes photogeologic interpretation using stereoscope, basic photogrammetric techniques for quantitative data, and construction of geologic maps. (1 hour lecture, 3 hours laboratory, and field trip)

535. Remote Sensing (3) F S (3) Faculty.

Prerequisite: GEOL 330. Remote sensing of the environment; different types of imagery (Landsat, radar, infrared) and digital image processing. Resource exploration, properties of rocks, land use and hazard applications.

542./442. Paleoecology (3) F Lumsden

Same course as 442/542.

543. Carbonate Petrology (3) F S Geol 543 Carbonate Petrology (3) Faculty

Prerequisites: GEOL 321 and 342. Microscopic description and characteristics of carbonate rocks in relation to their origin. (Lecture 2 hours, laboratory 3 hours)

544. Clastic Petrology (3) F S

Prerequisites: GEOL 321 and 342. Advanced study of clastic sedimentary rock using petrographic microscope, scanning electronic microscope and microprobe to evaluate their composition and origin. (Lecture 2 hours, laboratory 3 hours).

545. Rock Mechanics in Engineering Practice (3) F Yen

Prerequisites: CE 345, 346. Principles of rock mechanics with emphasis on engineering practices for problems of slopes, foundations and tunnels. Same course as CE 545. (Lecture, problems 3 hours.)

550. Advanced Crystal Chemistry (3) Winchell

Prerequisites: GEOL 324, 326. Seminars and laboratory in crystal chemistry emphasizing structural and chemical mineralogy, determinative methods, mineral synthesis and computer applications. May be repeated for credit with consent of instructor. (Seminar 2 hours, laboratory 3 hours.)

555. Advanced Geochemistry (3) Walker

Prerequisite: Consent of instructor. Methods of radiometric age determination including dating of igneous and metamorphic rocks and sediments; use of lead and strontium as natural tracers; light stable isotopes, oxygen, carbon and sulfur as petrogenetic indicators in igneous rocks and ore-forming processes. (Seminar 2 hours, laboratory 3 hours.)

556. Organic Geochemistry (3) Faculty

Prerequisites: Chemistry 111B, GEOL 441. Principles of organic geochemistry. Origin, occurrence, and migration of hydrocarbons. (Seminar, 3 hours).

561./461. Lab in Geochemistry (1) S Walker

Same course as 461/561.

562. Chemical Oceanography (3) Chan

Prerequisites: Physical and chemical oceanography and mathematics through the first course in calculus. Advanced studies in the lithosphere, atmosphere and biosphere. Critical review of literature and reports in chemical oceanography which may include chemical equilibria, chemical thermodynamics and inorganic and organic constituents of the ocean, emphasis on recent studies and new concepts.

564. Advanced Marine Geology (3) Conrey

Prerequisites: Upper division courses in marine geology, oceanography and consent of instructor. Studies in marine geomorphology, tectonics, sedimentation, stratigraphy, coastal development and allied topics.

565./465. Physical and Chemical Oceanography (3) F,S Chan

Same course as 465/565.

567./467. Petroleum Geophysics (3) S Grannell

Same course as 467/567.

570. Special Topics in Geology (1-3) Faculty

Prerequisite: Consent of instructor. Investigation of selected topics in geology. May be repeated for credit with consent of instructor as topic changes. Seminars with laboratories as appropriate.

580. Special Topics in Geophysics (1-6) S

Prerequisite: Consent of instructor. Investigation of selected topics in geophysics such as Numerical Methods in Geophysics, Seismology, Advanced Gravity and Magnetics, Seismic Migration, Physics of the Earth, Engineering Geophysics, Electrical Methods, and Geophysical Field Methods. May be repeated for credit with consent of instructor as topics change. Seminars with laboratories and/or field work as appropriate.

581. Seminar in Engineering Geology (3) Fritts

Prerequisite: Upper division course in engineering geology or consent of instructor. Advanced study relating geologic factors to engineering projects, with emphasis on slope stability, subsidence, engineering seismology and construction problems related to engineering geology.

582. Seismic Stratigraphy (3) F S Grannell

Prerequisites: GEOL 441, 460. Use of seismic wave characteristics (amplitude, polarity, presence of diffractions) to interpret lithologic composition and structure from seismic record sections. (Lecture 2 hours, laboratory 3 hours)

583. Advanced Seismic Reflection (3) F S

Prerequisites: GEOL 467, MATH 270 and 370 A-B. Mathematical principles underlying seismic data processing: Fourier transforms, sampling theorems, deconvolution and filtering. (Lecture 2 hours, laboratory 3 hours).

584. Geothermal Exploration (3) F S

Prerequisites: GEOL 330, 460. Occurrence and origin of geothermal resources. Heat transfer and fluid migration. Exploration techniques using geophysical, geological and geochemical methods. (Lecture 2 hours, laboratory 3 hours).

591./491. X-ray Crystallography (3) S Winchell

Same course of 491/591.

697. Directed Research (1-3) F Walker

Prerequisite: Consent of instructor. Research on a specific subject in geology. Topic for study to be approved and directed by a staff member in geological sciences.

698. Thesis (1-6) F Walker

Prerequisite: Consent of Graduate Committee and graduate advisor. Either laboratory or field investigations, or both, for a total of six semester units to culminate in an approved thesis.

Microbiology

School of Natural Sciences

Department Chair: Vern (L.K.) Eveland
Department Office: MIC-108
Telephone: 498-4858
Faculty: Professors: Carl R. Anselmo, David M. Carlberg, Vern (L.K.) Eveland, Henry C. Fung, Juhee Kim, Harkisan D. Raj, Ruth L. Russell, Frank E. Swatek; Associate Professors: Gill G. Geesey, Laura Kingsford, Steven H. Wool; Assistant Professor: Carol A. Itatani.
Emeritus Faculty: Betty H. Kazan, Lucile McD. Logan, Milton A. Petty
Department Secretary: Marguerite Smith

Students desiring information should contact the Department office for referral to one of the faculty advisors.

Microbiology is the study of microorganisms and their interactions with people and the environment. There are two options leading to the bachelor of science degree in microbiology that enable students to prepare for a variety of professional goals. The general microbiology option is of a broad nature which emphasizes the genetics and biochemistry of the microbes and prepares students for careers in molecular biology, graduate school and related areas. The medical microbiology option emphasizes the host-parasite relationships of microbes and man and prepares students for careers in clinical laboratory technology, medical research and related areas. Either option, with the inclusion of appropriate classes, may be utilized by pre-professional students who are preparing for medical, dental, pharmacy and veterinary school. A major in microbiology prepares students for a wide range of employment opportunities in clinical and public health fields, genetic engineering, environmentally related fields, and industries concerning food, pharmaceuticals and hospital supplies. In addition, a degree in microbiology, combined with appropriate courses in education, can be utilized for a community college teaching credential. There is a common core of courses for these varied educational and employment opportunities and specific programs can be arranged by counseling with advisors in the Microbiology Department.

The Master of Science and Master of Public Health degrees are available to qualified students preparing for professional careers in the fields of the paramedical sciences, industry, government and teaching, and those preparing for further studies at the doctoral level.

Programs Conducted by the Department

Bachelor of Science Degree in Microbiology
General Microbiology (code 3-7654)
Medical Microbiology (Laboratory/Medical Technology; (code 3-7655))

Pre-professional Microbiology (pre-medical, pre-dental, pre-pharmacy, pre-veterinary)

The pre-professional option follows either the General Microbiology or the Medical Microbiology options with the exception that CHEM 321A and 321B be completed in lieu of CHEM 327.

Bachelor of Science in Microbiology

Option in General Microbiology, Requirements (code 3-7654)

Lower Division:

CHEM 111A-B, 251; MATH 112 or 115S or an appropriate college-level course selected in consultation with a departmental advisor; PHYS 100A-B; MICRO 210; BIOL 216.

Upper Division:

A/P 342; and a minimum of 39 units including the following: MICR 320, 330, 360, 452, 471; MICR 450, 451, or BIOL 370; CHEM 327, 441A-B, and a minimum of 6 units in microbiology to be selected in consultation with the major advisor from upper division microbiology courses.

Option in Medical Microbiology Requirements (Laboratory Technology) (code 3-7655)

Lower Division:

CHEM 111A-B, 251; MATH 112 or 115S or an appropriate college-level course selected in consultation with a departmental advisor; PHYS 100A-B; MICR 210; BIOL 216.

Upper Division:

A/P 342; and a minimum of 39 units including the following: MICR 320, 322, 323, 330, 360, 452; CHEM 327; and 448M, 447; or 441A-B, 447, and a minimum of 6 units in microbiology to be selected in consultation with the major advisor from upper division microbiology courses.

Additional units are selected (in consultation with the major advisor) to satisfy the specific course requirements of the professional school to which the student seeks admission.

Minor in Microbiology (code 0-7654)

Requirements for the Minor in Microbiology (code 0-7654)

A minimum of 21 units which must include:

Lower Division:

MICR 210.

Upper Division:

MICR 320, 330, 471 and any one of the following sequences: (a) MICR 322 and 496 or (b) 360 or (c) 452 and 453.

Concurrent and/or Summer Enrollment in Another College

Students who wish to take course work in a community or another college to meet curricular requirements while enrolled as undergraduates in the School of Natural Sciences must petition the appropriate department for prior approval to enroll in specific courses. This policy applies to either concurrent enrollment and/or summer enrollment. University policy must also be met. See 'Concurrent' and 'Transfer of undergraduate Credit' in this Bulletin. Courses not receiving prior approval will not be accepted for credit by the Department.

Master of Science in Microbiology (code 6-7654)

Inquiries concerning the graduate program in Microbiology and requests for application forms for graduate admission should be directed to the Department Graduate Advisor. Preference will be given to applicants filing applications before March 15 for the fall semester and before October 15 for the spring

semester. All applicants are urged to submit their applications, transcripts and three letters of recommendation to the Graduate Advisor before the above dates. Students must qualify physically as well as academically to participate in this degree program.

Teaching assistantships and graduate assistantships are available within the resources of the Department to qualified individuals. Requests for application forms should be directed to the graduate advisor.

Prerequisites:

A bachelor's degree with a major in microbiology from this University with a GPA of 3.0 or better, or:

A bachelor's degree with a major in microbiology, bacteriology or related fields from an accredited institution, with a GPA of 3.0 or better on the condition of completing deficiencies, if any, in the upper division course work as required of a microbiology major at this University, or:

A bachelor's degree in any academic area from an accredited institution with an undergraduate overall grade point average of 3.0 or better, on the condition of completing a minimum of 24 semester units (or the equivalent) of upper division courses in microbiology or related fields before starting the full graduate program. These courses must be comparable to those required of a major in microbiology at this University, and should include but not be limited to: medical bacteriology, immunology and serology, organic chemistry and biochemistry (two semesters). Unit credit for a course in General Microbiology, if taken as an upper division course, may apply to the graduate program, or:

A student whose overall undergraduate GPA is less than 3.0, but who shows promise in all other respects, may be given special consideration for admission.

Following admission to the University and tentative acceptance by the Department, each student will be interviewed by the Department Graduate Committee or the Graduate Advisor to formalize the acceptance by the Department, determine the student's overall caliber for graduate studies, evaluate transcript records to detect any scholastic deficiencies and counsel the student in his/her chosen discipline. A qualified student is thus admitted to the graduate degree curriculum in microbiology with conditionally classified graduate standing.

Advancement to Candidacy:

1. A 3.0 GPA and the completion of all scholastic deficiencies.
2. The satisfactory completion of the University Writing Proficiency Examination, and the portion(s) of the Departmental Qualifying Examination indicated by the Department Graduate Committee.
3. As early as possible each graduate student must choose a thesis advisor who will establish the student's thesis committee consisting of at least three members (including the thesis advisor and at least one other member of the Department with expertise specific to the student's chosen field of interest in microbiology.
4. The thesis committee will formulate the student's graduate degree program (a minimum of 30 units) and forward it to the Associate Dean for Graduate Studies for final approval. This should be done as early as possible, but not later than one year prior to anticipated graduation.
5. Upon evidence of satisfactory progress and completion of the University Writing Proficiency Examination, and the Departmental Qualifying Examination, the thesis Committee may recommend the student to the Dean of Graduate Studies for advancement to candidacy, by forwarding its recommendation to the Department Graduate Advisor, Department Chairman, and Associate Dean in the School of Natural Sciences. This should occur at least one year before graduation. Upon approval by the Associate Dean, the student will attain the status of classified graduate standing.

Requirements for the Master of Science:

1. A minimum of 30 units of upper division and graduate courses of which a minimum of 20 units must be in the MICR 500-600 series courses. All students must complete MICR 450, 471, 694A,B and 697; other courses in related subject matter must be approved by the candidate's Thesis Committee.
2. A reading knowledge of German, French or other foreign language may be required, depending upon the candidate's program of study as recommended by the candidate's Thesis Committee.
3. Thesis, MICR 698.
4. Final oral examination — A final comprehensive oral examination including the defense of the thesis will be administered by each candidate's Thesis Committee. It will be open to all faculty and to the public.

Master of Public Health

General Information

The Master of Public Health degree is planned for professionals who have already had experience within a health-related field. It is designed to be completed within 12 months of full-time study. There is a core curriculum and two options. Rather than a thesis, field experience and a comprehensive examination are required. The program has few elective courses. The Department of Microbiology offers two options under this degree program and the Department of Health Science offers the Option in Community Health Education.

Option in Medical Laboratory Supervision (code 7-7657)

This option provides advanced instruction necessary for laboratory personnel to advance to senior laboratory and supervisory positions.

Option in Nursing Epidemiology (code 7-7656)

This option provides advanced instruction for nurses with bachelor degrees who wish to be injection control nurses or practicing epidemiologists in hospitals and hospital-related environments.

Prerequisites:

Criteria for admission to the program are: (1) a bachelor's degree in biological science with medical laboratory emphasis for the medical laboratory supervisor option, or a bachelor's degree in nursing for the nurse epidemiology option; (2) minimum overall GPA of 2.5; (3) three letters of recommendation; and (4) two years of full professional experience.

Advancement to Candidacy:

1. Upon acceptance by the Department, a committee will be established for each student specific to her/his chosen and related fields of interest.
2. After satisfactory completion of all prerequisites, the committee will recommend the qualified student for advancement to candidacy.

Requirements for the Master of Public Health

1. Completion of 30 units of approved course work, of which at least 15 must be in 500 and 600 level courses.
2. Satisfactory performance in the field experience.
3. A final comprehensive examination after course work and field experience are completed.

All students must take the following core curriculum: BIOL 562, MICR 429, HCA 400, HSC 528.

For Option I, Medical Laboratory Supervisor, the following courses are required: EE 407, MICR 526, 546, 691, 696.

For Option II, Nurse Epidemiologist, the following courses are required: EE 407, MICR 425, 427, 691, 696.

For both degree options a student who wishes to demonstrate prior competence by examination and/or course work in either a core or option requirement may be permitted to substitute a course(s) in the same or a related area with the approval of both the student's faculty advisor and an instructor of the specific course(s) in which the student seeks to demonstrate her/his prior competence to complete the total of 30 units required for the degree. Elective courses for the two options may be selected from upper division or graduate courses in microbiology, biology, chemistry, psychology or business administration, in consultation with the faculty advisor and the advisory committee.

Courses (MICR):

Lower Division:

100. Microbiology (3) F,S Kim

Life processes and roles of micro-organisms in ecological systems; emphasis on harmful and beneficial interrelationships with man and his environment. Not open for credit to majors in microbiology. (Lecture 2 hours, laboratory 3 hours.)

101. Man and Disease (3) F,S Faculty

Cause and prevention of the common diseases of man. Not open for credit to majors in Microbiology. (Lecture 3 hours.)

210. General Microbiology (4) F,S Kim, Raj

Prerequisites: BIOL 200 or 216 and CHEM 111B or equivalents. CHEM 200 may be substituted for CHEM 111B for Nursing students only. Introduction to micro-organisms, their morphology, metabolism and cultural characteristics. (Lecture 2 hours, laboratory 6 hours.)

Upper Division:

301. Advances in Biotechnology (3) S Carlberg

Survey of recent advances in biotechnology for the non-science major. Subjects to be included: recombinant DNA research, cloning (molecular, cell, organ and organism), gene therapy, artificial organs (bionics), genetic diagnosis and predictive medicine. Prerequisite: one course in a biological science (Lecture 3 hours)

302 IC. Molecular Biology and Bioethics (3) F Bonis, Carlberg

Same course as HUM 302. A systematic study of some of the advances in molecular biology and the main genetic and ethical issues these advances have raised.

320. Medical Bacteriology (5) F,S Anselmo

Prerequisites: MICR 210 and CHEM 327. Pathogenic bacteria of man and animals; emphasis on isolation and identification of micro-organisms by morphological and cultural characteristics; their reaction to various antibiotics. (Lecture 3 hours, laboratory 6 hours.)

321. Public Health and Pollution (3) F,S Faculty

Survey of public health and ecological problems in the community, control of communicable diseases; air, water and soil contamination. Recommended for non-majors interested in ecology and pollution control. (Lecture 3 hours.)

322. Medical Parasitology (3) F,S Faculty

Prerequisites: BIOL 216 or consent of instructor. Survey of parasitic protozoa and helminths of animals; emphasis on human parasites. Identification of fresh and preserved specimens. (Lecture 2 hours, laboratory 3 hours.)

323. Hematology (4) F,S Itatani

Prerequisites: Six units of biological science, MICR 210. Physiology and pathology of blood; preparation of blood for counts, hemoglobin determination, and related procedures. (Lecture 3 hours, laboratory 3 hours.)

330. Immunology and Serology (5) F,S Fung

Prerequisites: MICR 320, CHEM 327 or consent of instructor. Principles of immunity, immune response in vivo and in vitro, immunohematology, forensic serology, syphilis serology, and the principles and uses of serologic methods for the qualitative and quantitative evaluation of the immune response. (Lecture 3 hours, laboratory 6 hours.)

340. Microbial Taxonomy (3) F Faculty

Prerequisites: MICR 210, CHEM 327. Principles and theories of naming organisms. Advanced laboratory procedures in differentiation of micro-organisms. (Lecture 1 hour, laboratory 6 hours.)

345. Pathobiology (2) F,S Faculty

Prerequisite: NURS 250 or admission to R.N. program. Introduction to the pathological processes in man, including host-parasite relationships, cellular changes, inflammation, immunological responses, neoplasm, genetically determined biological variations, degenerative diseases and the aging process. Not open to students with credit in MICR 361 or NURS 361. Not open to microbiology majors. (Lecture, demonstration 2 hours.)

360. Medical Mycology (4) F,S Swatek

Prerequisites: MICR 210, 320, CHEM 327. Introduction to pathogenic fungi commonly responsible for mycotic infections of man. (Lecture 2 hour, laboratory 6 hours.)

412. Laboratory Techniques (2) F,S Faculty

Prerequisite: Consent of instructor. Experience for advanced students in organization and techniques of a microbiology laboratory. (Conference 1 hour, laboratory 6 hours.)

420. Epidemiology and Biomedical Statistic (3) S Faculty

Prerequisites: MICR 320 or consent of the instructor. The concepts of epidemiology, use of biomedical statistics, and the factors related to the natural history, control and prevention of disease. Either 420 or 425, but not both, will be accepted toward fulfillment of the 6 units of upper division Microbiology electives. (Lecture 3 hours)

***424. Advanced Hematology (3) F Itatani**

Prerequisites: Medical technology license or a grade of 'B' or better in MICR 323. Investigation into blood cell formation in bone marrow and the reticuloendothelial system. Response of these cells to disease processes. (Lecture and demonstration 3 hours.) Either 424 or 432, but not both, will be accepted toward fulfillment of the 6 units of upper-division microbiology electives.

***425. Public Health Microbiology and Diagnostic Procedures (2) F,S Russell**

Prerequisites: MICR 320. Diagnostic procedures for bacterial, mycobacterial, spirochaetal, viral and rickettsial agents of public health importance. Standard methods for the examination of food, water and dairy products. (Lecture 2 hours.)

***426. Laboratory Methods in Public Health Microbiology (2) F,S Russell, Faculty**

Prerequisite: MICR 425 (May be taken concurrently) Laboratory course for studying diagnostic procedures for infectious agents of public health importance and examination of food, water and dairy products. (Laboratory 6 hours.)

***427. Public Health and Diagnostic Procedures Laboratory (2) F,S Russell**

Prerequisite: Concurrent enrollment in MICR 425. Laboratory course in the techniques for studying those microbes involved in hospital and other institutionally acquired infections. Not available for credit for microbiology majors. (Laboratory 6 hours.)

***429. Control of Disease Patterns in the Community (3) S Faculty**

Principles of epidemiology and their application to health; fundamentals of biomedical statistics; basic factors in classic epidemiological studies and the prevention and control of infectious and non-infectious diseases. May be included only in graduate MPH programs. (Lecture 3 hours.)

***431. Principles of Immunobiology (3) S Fung**

Prerequisites: MICR 330, CHEM 441A-B, consent of instructor. Integrated biological and chemical consideration of immunology. Host-parasite-relationships and immune response of antigens and antibodies, their physical, chemical and biological properties and the mechanisms, dynamics and kinetics of the antigen-antibody reaction. (Lecture 1 hour, laboratory 6 hours.)

432./532. Immunohematology (2) S Fung, Itatani

(Either MICR 424 or 432, but not both, will be accepted toward fulfillment of the 6 units of upper-division microbiology electives.) (Undergraduates register in MICR 432; graduate students register in MICR 532.) Prerequisites: A final grade of B or better in MICR 323 and 330 or consent of instructor required. Physical and biochemical characteristics of human erythrocytes. Detailed study of isoantigens and isoantibodies associated with human red blood cells; their detection, mechanisms of cellular destruction and relationship to hematopoietic disease. (Lecture 2 hours.)

***441. Marine Microbiology (3) F,S Geesey**

Prerequisites: MICR 210 or consent of instructor. Survey of the interactions of microorganisms in the sea. Emphasis on the elements, cycles and metabolic conversion of environmental material. (Lecture 1 hour, laboratory 6 hours.)

***450. Microbial Genetics (2) F,S Carlberg**

Prerequisites: MICR 210, CHEM 441A-B or 448M, consent of instructor. Biochemical and cytological bases of microbial genetics; nature, replication, modification and transfer of genetic material. (Lecture 2 hours.)

*451. Microbial Genetics Laboratory (2) F Carlberg

Prerequisites: MICR 450 (may be taken concurrently), consent of instructor. Laboratory study of microbial genetics. (Laboratory 6 hours.)

*452. Virology (3) F,S Kingsford

Prerequisites: MICR 210, CHEM 327. It is recommended that CHEM 448M or 441B be taken prior to or concurrently with this course. Virology at a molecular level including virus replication and the molecular basis for viral pathogenesis; a survey of human and animal viral diseases. Current trends for prevention and treatment of viral diseases. (Lecture 3 hours.)

*453. Virology Laboratory (2) S Kingsford

Prerequisites: MICR 320, 452 (may be taken concurrently), consent of instructor. Laboratory study of bacteriophage and animal viruses. Propagation, titration methods, and cytopathological effects of viruses will be considered. Emphasis is placed on cell culture techniques applicable to the study of viruses.

*461. Mycology (3) F,S Swatek

Prerequisite: MICR 210 or BIOL 322. Structural development and classification of the important genera and species of fungi. (Lecture 2 hours, laboratory 3 hours.)

470./570. Bacterial Anatomy and Cytochemistry (3) S Raj

(Undergraduates register in MICR 470; graduate students register in MICR 570.) Prerequisites: A final grade of B or better in MICR 320, CHEM 441A (may be taken concurrently) or consent of instructor required. Morphogenesis, fine structure and chemical composition of bacterial cells. (Lecture-demonstration 3 hours.)

*471. Bacterial Physiology (3) F,S Raj

Prerequisites: MICR 320, CHEM 441A, consent of instructor. Cellular physiology at the molecular level as related to bacterial growth, reproduction, nutrition, metabolism and ecology. (Lecture 3 hours.)

472./572. Bacterial Structure and Physiology Laboratory (2) S Raj

(Undergraduates register in 472; graduate students register in 572.) Prerequisites: A final grade of B or better in MICR 470 or 471, or consent of instructor. Laboratory techniques used in the study of bacterial structure and physiology. (Laboratory 6 hours.)

*473. Food and Industrial Microbiology (3) F,S Faculty

Prerequisites: MICR 210, CHEM 441A or consent of instructor. Role of micro-organisms in food and other industrial processes; emphasis on bacteria, yeasts and molds. (Lecture 2 hours, laboratory 3 hours.)

480. Selected Topics in Microbiology (2) F,S Faculty

Prerequisites: Senior standing in microbiology, and consent of instructor. Faculty and student discussion and analysis of current topic in microbiology. This course may be repeated for credit with different topics. (2 hours weekly.)

496. Investigations in Microbiology (1-3) F,S Faculty

Prerequisite: Consent of instructor. Research in a specific subject in microbiological sciences to be approved and directed by a faculty member. The one unit course involves library research. The two and three units courses involve library and experimental research. Special projects may include experience with such techniques as ultracentrifugation, electron microscopy, radio tracers, tissue culture, etc.

Graduate Division:

514. Microbiological Instrumental Methods and Analysis (3) S Carlberg

Prerequisites: MICR 471, CHEM 441B. Theory and application of instrumental methods in microbiological problems. (Lecture 1 hour, laboratory 6 hours.)

526. Biochemical Diagnostic Procedures in Microbiology (3) F Russell, Wool

Prerequisites: MICR 330, CHEM 441A-B, 447. Medical laboratory experience is recommended. Theory and application of diagnostic procedures for the clinical microbiology research laboratories. (Lecture 1 hour, laboratory 6 hours.)

532./432. Immunohematology (2) S Fung, Itatani

Same course as MICR 432/532.

546. Clinical Diagnosis by Laboratory Methods and Quality Control (4) S Faculty

Prerequisite: California Clinical Laboratory Technologist licensed or equivalent with consent of instructor. Correlation of laboratory tests in relation to alterations in normal physiology. Result of laboratory measurement of pathology of the cardiovascular, gastrointestinal, renal and endocrine systems will be interpreted in relationship to laboratory evaluation of these diseases. This course does not study techniques of laboratory tests. Students must already be familiar with the methods of performing general laboratory tests.

550. Experimental Microbiology

Detailed study of selected topics in microbiology, with emphasis on laboratory approaches to the problem. (A) Microbial Ecology (B) Immunochemistry, (C) Microbial Metabolism, (D) Molecular Biology of Lower Eucaryotes, (F) Pathoparasitology, (G) Schizomycetes, (H) Molecular Virology. May be repeated for credit with different topics. (Lecture 1 hour, laboratory 6 hours.)

A. Microbial Ecology (3) F,S Geesey

Prerequisites: MICRO 210 or consent of instructor. Microbial populations as they occur in the natural environment and their interactions with the environment. (Lecture 1 hour, laboratory 6 hours.)

B. Immunochemistry (3) S Faculty

Prerequisite: MICR 431. The chemical bases of the immune response as well as the use of precise, sensitive and specific immunochemical methods for the characterization and study of various biological processes and materials.

C. Microbial Metabolism (3) F Raj

Prerequisites: MICR 471, CHEM 441B (may be taken concurrently), consent of instructor. Advanced concepts of microbial physiology with emphasis on their chemical activities and metabolic pathways.

D. Molecular Biology of Eukaryotes (3) F Swatek

Prerequisites: MICRO 450, 451, 471, CHEM 441B and consent of instructor. Original experimental research on the molecular biology and physiology of yeasts and fungi especially as model systems for studying fundamental questions about the structure and function of cells.

F. Pathoparasitology (3) S Eveland

Prerequisites: MICR 322, 330. Pathogenesis of medically important endo- and ectoparasites; emphasis on specialized procedures and techniques.

G. Schizomycetes (3) S Faculty

Prerequisite: MICR 471. Detailed study of the bacteria; special emphasis on heterotrophic and autotrophic forms.

H. Molecular Virology (3) F Faculty

Prerequisites: CHEM 441B, MICRO 320, 453, consent of instructor. Experimental research problems directed to learning more about structure of viruses and the function of viral components in a biological system. Emphasis will be placed on the molecular biology of viruses and current methodology used in virus research.

570./470. Bacterial Anatomy and Cytochemistry (3) S Raj

Same course as MICR 470/570.

572./472. Bacterial Structure and Physiology Laboratory (2) S Raj

Same course as MICR 472/572.

691. Supervised Independent Study (1-4) F,S Faculty

Advanced independent study in the field of the candidate's option for the master of public health degree. The subject of the study may be different from the field training in the option.

694A,B. Seminar in Principles and Theories of Microbiology (1,1) F,S Faculty

Prerequisite: Graduate standing in microbiology. Presentation and discussion of advanced work in special fields including original research of faculty and graduate students. (Weekly meetings.)

695. Seminar on Selected Topics in Microbiology (2) F,S Faculty

Prerequisites: Consent of instructor. Topics are from selected areas of microbiology and will be announced each semester. (2 hours weekly.)

696. Field Experience in Medical Laboratory Supervision (2-4) S Faculty

Field experience in hospitals and other health-related facilities is required for all candidates for the master of public health degree.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of instructor. Laboratory work supervised on an individual basis.

698. Thesis (1-6) F,S Faculty

Prerequisite: Consent of instructor. Original research in microbiology carried out under supervision of the faculty on an approved topic of mutual interest and the formal report of this research.

Physics — Astronomy

School of Natural Sciences

Department Chair: Sema'an I. Salem
Department Office: PH3-27
Telephone: 498-4924/494-7925/7924
Faculty: Professors: M. Zahur Anwar, R. Dean Ayers, Chia-Hwa Chen, Lowell J. Eliason, Simon George, Chi-Yu Hu, Lawrence S. Lerner, Keung P. Luke, Jack H. Munsee, Sema'an I. Salem, Richard Scalettar, Daniel Schechter, Cramer W. Schultz, Bruce L. Scott, Kwang Y. Shen, Edwin L. Woollett, Alva F. Yano; Associate Professor: Michael S. Belsky.
Emeritus Faculty: Olaf P. Anfinson, George L. Appleton, Reinhard K. Buchner, Richard H. Chow, John E. Fredrickson, John V. Hutcherson, Charles A. Roberts Jr.
Department Secretary:
Department of Physics/Astronomy Advisory Council: Mr. H. E. Adelson, Manager-Design Review Office, Applied Technology Division, TRW Defense Space Systems Group; Mr. George F. Aroyan, Division Manager, Space and Strategic Systems Division, Hughes Aircraft Corporation; Ms. Annette M. Baumgartner, Manager of Laboratory Administration, Chemistry and Physics Laboratory, The Aerospace Corporation; Mr. Moustafa Chahine, Chief Scientist, Jet Propulsion Laboratories, California Institute of Technology; Mr. F. Terry Cummings, Vice President and General Manager, Strategic and Information Systems Division, Logicon Corporation; Ms. Gisela Eckhardt, Senior Staff Scientist, Research Laboratory, Hughes Aircraft Company (Retired); Mr. Thomas L. Evans, General Manager, Applied Optics Division, The Perkin-Elmer Corporation; Mr. Ronald Herm, Head of Chemical Physics Department, Chemistry and Physics Laboratory, The Aerospace Corporation; Mr. Ronald J. Maiorano, Vice President, Human Resources, UVP, Inc.; Mr. Keith Myers, Vice President, Human Resources and Administration, Northrop Corporation; Mr. Willard Olson, Chief Engineer, Thermodynamics and Environmental and Biotechnology, McDonnell Douglas Astronautics; Mr. Thomas M. O'Neil, Professor of Physics, Department of Physics, University of California, San Diego; Mr. Nelson Urdaneta, Engineering Manager, Racal-Dana Instruments Corporation; Mr. Marty Wartenberg, Vice President, Engineering, Interstate Electronics Company; Mr. Robert G. Westmyer, Project Management, Fluor Engineers, Inc. Mr. William Wilson, Manager, Acoustic Research, Autonetics Marine Systems Division, Rockwell International; Mr. Berry S. Yolken, Manager, Program Management Operations, TRW System Engineering Development Division.

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisor: Salem; Graduate Advisor: Scott.

Concurrent and/or Summer Enrollment in Another College

Students who wish to take course work in a community or another college to meet curricular requirements while enrolled as undergraduates in the School of Natural Sciences must petition the appropriate department for prior approval to enroll in specific courses. This policy is for either concurrent enrollment or summer enrollment. University policy must also be complied with. See "Concurrent Enrollment" and "Transfer of Undergraduate Credit" in this Bulletin. Courses not receiving prior approval will not be accepted for credit by the department.

Bachelor of Science in Physics (code 3-7668)

The major in physics for the bachelor of science degree is offered for: the student seeking the doctor's degree and the position of professional physicist in the traditional sense, the student seeking a position in an industrial laboratory and the student seeking a career in teaching physics. This major program has been designed with the conviction that a student must first of all be a physicist and must have a program which penetrates the fundamental conceptual bases of physical phenomena, cultivates skill in the design of experiments and their practical execution and stimulates interest in the many means used to interpret the physical world.

Requirements for the Bachelor of Science

Lower Division:

ENG 317 (may be waived for students who achieved a standard score of 24 on the ACT English sub-test or who received and A or B grade in English 100); PHYS 151, 152, 153; courses to support the major to include MATH 122, 123, 224 and CHEM 111A-B, and a choice of one course among the following: BIOL 200, 212, 216 and MICR 210.

Upper Division:

MATH 370A-B or the following three courses MATH 364A, 346 and 461; 30 units of upper division physics including PHYS 310, 320, 341A-B, 450 and two laboratories chosen from PHYS 330, 380, 389, 403, 480, 486. The remaining units are to be chosen from PHYS 311, 330, 360, 380, 402, 410, 420, 434, 444, 451, 454, 470, 475, 480, 486, 490, 496.

Bachelor of Arts in Physics (code 2-7668)

The major in physics for the bachelor of arts degree is offered in the spirit of providing a curriculum devoted to "interpretation of physics and its reintegration with other parts of our culture." A primary purpose is to prepare teachers of physics and physical science for secondary schools.

Requirements for the Bachelor of Arts

Lower Division:

ENG 317 (may be waived for students who achieved a standard score of 24 on the ACT English sub-test or who received an A or B grade in ENG 100); PHYS 151, 152, 153; CHEM 111A-B; MATH 122, 123, 224; and one course from the following: BIOL 200, 212, 216 and MICR 210.

Upper Division:

A minimum of 24 units of courses selected in consultation with a major advisor. Work must be completed in each of the following fields: physics, chemistry and geology. At least 18 units of this work must be in physics. Candidates for a teaching credential must complete at least six units selected from GEOL 103, 460, 461, 463.

Minor in Physics (code 0-7668)

A minimum of 20 units which must include:

Lower Division:

PHYS 151, 152, 153.

Upper Division:

A minimum of nine units which may not include PHYS 360, 406 or 494.

Master of Arts in Physics (code 5-7668)

The Department of Physics-Astronomy offers graduate study leading to the master of arts degree. A student may choose to obtain the degree either through a six unit thesis (Option I) or through a comprehensive examination (Option II). Active areas of research are: optical and x-ray spectroscopy, nuclear physics, acoustics, atomic physics, intermediate energy nuclear physics, astrophysics, theoretical solid state, nuclear structure physics, many body problems, high energy physics, plasma physics, and the history of science. Additional information can be obtained from brochures available at the department office.

A limited number of teaching and graduate assistantships are available to students working on the master's degree. Normally the assistant, under the supervision of a faculty member, conducts the laboratory sessions of lower division courses.

Application should be made to the graduate advisor of the Department of Physics-Astronomy.

Prerequisites:

1. A bachelor's degree with a major in physics, or:
2. A bachelor's degree with at least 24 units of upper division physics. (Students deficient in undergraduate preparation must take courses to remove these deficiencies with or without credit toward the degree at the discretion of the department graduate advisor.)

Advancement to Candidacy:

1. The student must fulfill the general University requirements for advancement to candidacy and must satisfactorily pass a screening examination administered by the Department Graduate Committee. This examination may be repeated. Detailed information and copies of previous examinations are available from the department office. All prospective candidates are expected to take this examination during the first semester in which they are registered for courses acceptable for credit toward the master's degree.
2. A student must have a B average or better in nine units of physics applicable toward the master's degree of which at least three units are at the graduate level.

Requirements for the Master of Arts:

Option I

1. A minimum of 30 units of upper division and graduate courses including PHYS 540A, 550A, 560A and 695.
2. Not more than 9 units in related fields may be applied to the 30 unit total.
3. A thesis (PHYS 698).

Option II

1. A minimum of 30 units of upper division and graduate courses including PHYS 510, 540A, 560A, 695 and any two of the following: PHYS 540B, 550B, 560B.
2. Not more than 6 units in related fields may be applied to the 30 unit total.
3. Passing a comprehensive examination.

Master of Science in Physics (code 6-7668)

Option in Metals Physics

Metals physics is a specialized program which provides an intensive study of the solid state field from both the theoretical and experimental viewpoints. It is intended for students having background in physics or engineering or a closely allied field.

Prerequisites:

1. A bachelor's degree with a major in physics, or
2. A bachelor's degree with a major in engineering with upper division physics substantially equivalent to PHYS 310, 320, 340AB and 450, as determined by the Graduate Advisor, or
3. A bachelor's degree with upper division physics and mathematics courses substantially equivalent to PHYS 310, 320, 340AB, 450 and MATH 370AB as determined by the Graduate Advisor.

Students deficient in undergraduate preparation must take courses to remove these deficiencies with or without credit toward the degree at the discretion of the department graduate advisor.

Advancement to Candidacy:

1. Students must fulfill the general University requirements for advancement to candidacy and must satisfy the Graduate Committee as to the adequacy of their preparation by taking the Physics Department screening examination. This will be done in the first or second semester in which they are registered for courses acceptable for credit toward the M.S., except in individual cases to be determined by the Graduate Committee.
2. A student must have a B average or better in nine units of physics applicable toward the master's degree, of which at least three units are at the graduate level.

Requirements for the Master of Science:

Thirty units of upper division and graduate courses including:

1. PHYS 540A, 550A, 560A, 695, 697 (three units).
2. Six units of electives from among the physics graduate courses and PHYS 420, 444, 451, and 490. These 400 series courses are to be taken with prior consent of the Metals Physics Advisory Committee.
3. A thesis (PHYS 698), six units.

Courses (PHYS):

Lower Division:

100A-B. General Physics (4,4) F, S Faculty

Not open to students with credit in PHYS 105, 106, 105E or 106E. Prerequisite: MATH 101 or 102. PHYS 100A is a prerequisite for PHYS 100B. Year course in the introduction to physics. First semester considers properties of matter, mechanics, wave motion and heat. Second semester considers electricity, light and atomic and nuclear physics. (Lecture 3 hours, laboratory 3 hours.)

102. Introduction to Physics (3) F, S Schultz

Prerequisite: MATH 117 (which may be taken concurrently) or three-and-one-half years of high school mathematics including two years of algebra, one year of geometry and one-half year of trigonometry. This course is designed to assist students who need additional preparation before enrolling in PHYS 151. Basic problems and concepts in physics, particularly in mechanics. Credit/No Credit grading only. (Lectures, and problem sessions 4 hours.) Course begins in the fourth week of the semester.

103. Introduction to Experimentation (1) F, S Munsee

Prerequisite: PHYS 100A or 104 (may be taken concurrently with these courses). Objective is to give an idea of how an experimentalist operates and a first-hand knowledge and an in-depth feeling for the physics involved in a few situations. The first project is to build a Heathkit oscilloscope. Subsequent projects will be chosen by the student according to his interests. May be taken for up to six units of credit.

104. Survey of General Physics (4) F,S Roberts, Woollett

Prerequisite: One year of high school mathematics. Designed to acquaint the student with the more important aspects of elementary physics. Emphasis on physiological physics, color and sound. Recommended for art, music and physical education majors. (Lecture 3 hours, laboratory 3 hours.)

151. Mechanics and Heat (4) F,S Faculty

Prerequisite: MATH 122. Kinematics, Newton's Laws, rotational motion, fluid statics, laws of thermodynamics. (Lecture 3 hours, laboratory-recitation 3 hours.)

152. Electricity and Magnetism (4) F,S Faculty

Prerequisites: PHYS 151, MATH 123. Mechanical waves, Coulomb's law, electrostatics, electric circuits, introductory electronics, magnetic fields, induction and Maxwell's equations. (Lecture 3 hours, laboratory 3 hours.)

153. Modern Physics and Light (4) F,S Faculty

Prerequisites: PHYS 152, MATH 224. Relativity, photoelectric effect, quantum theory, Bohr model of the atom, wave mechanics, geometrical optics, interference, diffraction and polarization. Not open to students with credit in PHYS 154. (Lecture 3 hours, laboratory 3 hours.)

154. Modern Physics and Light (3) F,S Faculty

Prerequisites: PHYS 152, MATH 224. Relativity, photoelectric effect; quantum theory, Bohr model of the atom, wave mechanics, geometrical optics, interference, diffraction and polarization. Not open to students with credit in PHYS 153. (Lecture 3 hours.)

155. Laboratory on Light and Modern Physics (1) F,S

Prerequisite: PHYS 154 which may be taken concurrently. Experimental work in geometrical and physical optics and atomic and nuclear physics. Not open to students with credit in PHYS 153. PHYS 154 and 155 together are equivalent to PHYS 153. (Laboratory 3 hours)

Upper Division:

310. Mechanics I (3) F Salem, Schultz

Prerequisites: PHYS 151, MATH 370A (may be taken concurrently). Kinematics and dynamics of mass points and systems of particles. Conservation laws. Harmonic motion. Central force problem. Noninertial frames of reference. Lagrangian and Hamiltonian formulation of the laws of mechanics. Not open to students with credit in PHYS 310A. (Lecture 3 hours.)

311. Mechanics II (3) S 1986 and alternate years Faculty

Prerequisite: PHYS 310. Dynamics of rigid body. Constraints. Inertia tensor, Gyroscopic motion. Deformable media: Waves on strings and in fluids. Variational methods. Non-linear mechanics. Not open to students with credit in PHYS 310B. (Lecture 3 hours.)

320. Thermodynamics and Kinetic Theory (3) S Lerner, Woollett

Prerequisites: PHYS 153 and MATH 224. Equations of state and thermodynamic functions. First and Second Laws. Introduction to kinetic theory and statistical mechanics. (Lecture 3 hours.)

330. Experimental Optics and Spectroscopy (3) S George

Prerequisite: PHYS 153. Interference, diffraction, polarization and elementary spectroscopy. (Lecture 2 hours, laboratory 3 hours.)

340A-B. Electricity and Magnetism (3,3) F,S Appleton, Shen

Prerequisites: PHYS 310, MATH 370A. Laws of electricity and magnetism in vector analytic form and the formulation of Maxwell's equations. Application of Maxwell's equations to radiation problems and the interaction of electromagnetic waves and matter. (Lecture-discussion 3 hours.)

360. Numerical Methods in Physics (3) F Schultz

Prerequisite: MATH 370A (may be taken concurrently). Techniques of solving physics problems requiring numerical or graphical analysis. Computer methods. Problems selected from optics, electrostatics, mechanics, relativity. Not open to students with credit in MATH 323. (Lecture-discussion 3 hours.)

380. Fundamentals of Electronics (3) F Eliason

Prerequisite: PHYS 152. Electronic phenomena in vacuum and solids applied to electron device structures; circuit models of electron tubes and transistors. Fundamental electronic circuits. (Lecture 2 hours, laboratory 3 hours.)

389. Selected Experiments in Physics (3) F Chow, Lerner

Prerequisite: PHYS 153. Experiments in atomic physics, modern physics, solid-state and nuclear physics. Designed to provide a general understanding of experimental physics and instrumentation. (Lecture 2 hours, laboratory 3 hours.)

400IC. Origins of Scientific Thought (3) F,S Faculty

Same as HIST 400 IC. An interdisciplinary introduction to the history of science for both scientists and non-scientists. Evolution of the scientists' views of the means and ends of their own activities; the ways in which science is affected by and affects contemporary cultures.

402./502. Fourier methods in Physics (3) F Ayers

Prerequisite: PHYS 310, MATH 370B. Fourier transforms in time and space, convolution, generalized functions, impulse response and transfer function. Application of Fourier techniques to problems in classical acoustics and optics: oscillators, directional radiators, holography and imaging in general. (Lecture 3 hours.)

403./503. Fourier Physics Laboratory (1) F Ayers

Concurrent enrollment in PHYS 402. Selected experiments in acoustics and optics illustrating Fourier techniques in wave physics. Detailed study of the discrete Fourier transform and its application to experimental measurements and calculations. (Laboratory 3 hours.)

406. Laboratory Techniques (1-2) F,S Eliason

Prerequisite: Previous enrollment in a lower division physics course comparable to the one to which the student will be assigned. There will be regular formal lectures for this course. May be repeated to a maximum of four units of credit.

410./515. Relativity (3) F 1985 and alternate years Scalettar, Shen

Prerequisites: PHYS 340A, MATH 370B. The Lorentz transformation, 4-vectors, relativistic kinematics, electromagnetic fields and introduction to general relativity and cosmology. Application to classical and modern physics. (Lecture-discussion 3 hours.)

420./520. Statistical Physics (3) S 1985 and alternate years Lerner, Munsee

Prerequisite: PHYS 320. Fundamental hypotheses of statistical mechanics. Applications include classical and quantum gases, electric and magnetic systems, fluctuations and condensation.

434./534. Astrophysics (3) F 1986 and alternate years Shen

Prerequisite: Senior standing in physics or consent of instructor. Review of observational data of astronomy, elementary theory of stellar structure, model stellar calculation and simple stellar systems. (Lecture 3 hours.)

444./544. Plasma Physics (3) S 1986 and alternate years Woollett

Prerequisites: PHYS 320, 340A. Characteristic behavior of high temperature plasma. Particle trajectories, two-fluid and hydromagnetic models, waves, instabilities and transport processes. Applications to astrophysical, geophysical and laboratory plasmas.

450. Quantum Physics I (3) F Salem, Scott, Munsee

Prerequisites: PHYS 310, MATH 370A. Introduction to twentieth century physics with an emphasis on the experimental facts and the understanding of them through quantum mechanics. Topics will include black-body radiation, photoelectric effect, Compton scattering, pair production, Bohr model, Schrodinger equation, one-electron atoms, angular momentum. (Lecture-discussion 3 hours.)

451./552. Quantum Physics II (3) S Hu, Scalettar, Shen

Prerequisite: PHYS 450. Continuation of PHYS 450. Topics will include multi-electron atoms, the Pauli principle, transition rates, selection rules, X-ray spectra, nuclear models, nuclear reactions and elementary particles. (Lecture-discussion 3 hours.)

454./555. Elementary Particle Physics (3) S 1985 and alternate years Scalettar, Woollett

Prerequisite: PHYS 450. Particle detectors and accelerators; ionization and radiation energy loss; invariance principles, conservation laws, particle properties, elementary scattering theory; weak, electromagnetic and strong interactions; particle models. (Lecture-discussion 3 hours.)

470./569. Introduction to Solid State Physics (3) S Anwar

Prerequisite: PHYS 450. Study of the properties of solids from a quantum theoretical viewpoint. Topics include lattice vibrations, elastic constants, and thermal, electric and magnetic properties. (Lecture 3 hours.)

475./575. Modern Optics (3) F Faculty

Prerequisite: PHYS 340A. Propagation of electromagnetic waves, optical resonators, laser spectroscopy and operation, optical phase conjugation, nonlinear optics and selected application.

480. Electronic Instrumentation (3) S

Prerequisite: PHYS 380 or consent of instructor. Topics include the design of electronic instrumentation and of analog feedback control systems. Additional topics such as filter theory, n-port analysis, digital feedback control systems, operational amplifier circuits, and high-frequency techniques will be discussed. [Lecture 2 hours, laboratory 3 hours]

486./586. Experimental Physics-Radiation (3) S 1985 and alternate years Salem

Prerequisite: Consent of instructor. Interaction of gamma rays with matter. X-ray techniques. Charged particle range and energy loss. Radiation detectors. Neutron production and detection. (Lecture 1 hour, laboratory-demonstration and/or special project 3 hours.)

490./590. Special Topics in Physics (3) F,S Faculty

Prerequisite: Consent of instructor. Topics of interest in physics selected from such areas as atomic and nuclear physics, astrophysics, physics of materials, low temperature physics, acoustics and theoretical physics. Both undergraduate and graduate students may take the course for a maximum of 6 units of credit. (Lecture 3 hours.)

494. History of Science: Selected Topics (3) S Lerner

Interdisciplinary introduction to the history of science for scientist and non-scientists. Evolution of the scientist's view of the means and ends of his own activities; the two-way interactions of these views with more general contemporary ideas and attitudes. May be repeated with consent of instructor up to a maximum of six units. (Same course as HIST 494.)

School of Social and Behavioral Sciences

Dean: Dr. Chae-Jin Lee
Acting Associate Dean: Dr. Dorothy deF. Abrahamse
School Office: Liberal Arts 4-202 (LA4)
Telephone: 498-5381

Students in the School of Social and Behavioral Sciences explore the applied, historical and theoretical aspects of social and individual behavior. In addition to its degree and certificate programs, the School serves general education students and other qualified individuals seeking a broadened understanding of individual and collective behavior.

Degree programs offered by the School are:

Bachelor of Arts

Anthropology, Asian Studies, Black Studies, Economics, Geography, History, Human Development, Mexican-American Studies, Political Science, Psychology, Social Work, and Sociology.

Master of Arts

Anthropology, Asian Studies, Economics, Geography, History, Political Science, Psychology.

Master of Science

Psychology, with options in Community Clinical Psychology and Industrial Psychology.

Master of Social Work

In addition to the degree programs, the School offers a variety of special programs and curricula.

Certificate Programs

American Indian Studies, Asian American Studies, Black Studies, Computer Studies in the Liberal Arts, Legal Studies in the Liberal Arts, Russian-East European Studies, and Urban and Regional Studies.

Minors

American Indian Studies, American Studies, Anthropology, Asian-American Studies, Black Studies, Economics, Business Economics, Geography, History, Mexican-American Studies, Political Science, Public Policy, Psychology, Sociology, Women's Studies.

Language Courses

Bilingual English-Spanish, English-Chinese, and English-Japanese.

Special Facilities

The School operates special facilities including an anthropology laboratory, a geography laboratory, psychology laboratories, and computer laboratories.

Individuals seeking academic advisement should consult with the undergraduate or graduate program advisor listed for the particular area in the Schedule of Classes.

Student Organizations

American Indian Student Association, American Studies Student Association, Anthropology Students Association, Asian American Students Association, Associated Students of Social Work, Black Studies Student Association, Economics Student Association, Geography Students Association, History Students Association, Human Development Students Association, La Raza, Political Science Students Association, Psychology Students Association, Sociology Students Association, Women's Studies Student Association.

School Programs and Courses

Pre-Legal Program

Professional schools in many universities either require or recommend that applicants complete four-year programs for admission. Although the professional schools do not always require a bachelor's degree, they generally encourage basic preparation and a general education leading to that degree before beginning specialization.

Students planning to enter law school may elect any one of several majors. However, the major chosen and the courses should be selected recognizing the need for performance in reading difficult material, writing clearly and understanding abstract concepts. Pre-legal students are advised to take the minimum program to meet the requirements of their chosen major and courses beyond the introductory survey level in other selected fields. A distribution of course sequences between the social sciences, the natural sciences and the humanities is desirable. Students should consult with designated pre-law advisors in the Finance Department or the Political Science Department concerning entrance requirements of specific law schools.

Interdisciplinary Minor in Public Policy

The purpose of this program is to enable persons majoring in fields related to public policy to gain a broader understanding of the substance of public policies, the underlying social, economic and political factors related to policy alternatives, the dynamics of the public policy decision-making process, the values implicit in these decisions, and methods by which these aspects of public policy may be analyzed.

The minor consists of 21 units including a core curriculum of 12 units and 9 units of electives. A maximum of 6 units may be taken in the student's major department, but no units may be counted in both the major and the minor.

Requirements for the Interdisciplinary Minor in Public Policy

1. Core Curriculum: (12 units required)
   A. Introduction to Public Policy. Three units chosen from among the following courses: ECON 352, GEOG 466, POSC 328, PSY 375, SOC 349, U/ST 401.
   B. PPA 350
   C. PPA 400
   D. PPA 450

Note: It is strongly recommended that students take the core curriculum courses in sequence, the first two during the Junior year; the second two during the Senior year.

2. Electives: (9 units required)

   At least six units of the nine elective units must be taken in one of the policy area concentrations outlined below. The remaining three units may be taken from among any of the elective courses approved for the minor. See program director or a member of the Faculty Advisory Committee for a student handbook that lists all courses approved as electives.

Policy Area Concentrations: Community Relations and Social Services, Health Care, Housing and Recreation, Education, Economic Regulation, Justice and Law, Land Use and Ecology, Computational Skills for Public Policy, Foreign Policy and International Relations, Values and Public Policy, Government Processes and Policy.

Courses (PPOL):

Upper Division:

PPOL 350. The Policy Making Process (3) F,S Hardy, R.Schmidt

Examination of the processes through which public policies are formulated, adopted and implemented, and the political and organizational contexts which condition these processes.

PPOL 400IC. Program Evaluation and Policy Analysis (3) F,S Dowell

Examination of the meaning and use of concepts and methods employed in public policy decision analysis, including an overview of the decision process, sources and methods of handling policy-relevant data, and methods and techniques of program evaluation and policy analysis.

PPOL 450. Public Values and Public Policy (3) F,S Leiter, R. Schmidt

Critical examination of selected value choices involving how and by whom public policy is to be made, and choices involving what should be the content and goals of public policy.

Oral History Program

The Oral History Program has been established to preserve a record of events of historical significance. The Program supports research into the sources of unwritten historical information. The Oral History Resource Center offers advice to C.S.U.L.B. students and faculty about designing oral history projects and conducting interviews. It also offers a one-unit workshop in oral history methods as well as directed studies in oral history and local history.

SBS 485. Oral History Methods (1) F,S Faculty

Through a series of workshops and through field experience, skills in oral history will be developed which will enable students to use oral history either for their own personal use in family history or for class projects in their specific fields.

SBS 494. Washington Center Internship (9) F,S,SS Faculty

Prerequisites: Upper-division standing and consent of chair of major department. Students who are accepted by the Washington Center will be assisted in locating a 30-35-hour-per-week career-related internship in a federal-, corporate- or independent-sector agency located in Washington, D.C. All participants utilize a learning contract. A final written report is required. CR/NC only. Students must participate concurrently in a weekly seminar, for which credit will be awarded through the major department's independent studies course.

SBS 498. Directed Studies in Oral History (1-4) F,S Faculty

Permission of faculty required. Directed study on a research topic using the methodology of oral history. May be repeated for a maximum of 4 units.

Other School-Based Courses (SBS):

Lower Division:

250. Elementary Statistics in Social and Behavioral Sciences (4) F,S Faculty

Prerequisite: Knowledge of mathematical procedures usually covered in elementary high school algebra, as demonstrated on a screening examination the semester prior to enrollment. Introduction to descriptive and inferential statistics and their applications in social and behavioral science research; performance of statistical exercises by interactive computer. Emphasis upon knowledge of which statistical tests to use and how to interpret their results. Not open to students with credit in ANTH 302, C/ST 210, MATH 180, PSY 210 or SOC 255. [Discussion, Laboratory] Same course as HDEV 250 and SOC 250.

300. Student Life in London (2) F Axelrad and Cressy

Prerequisites: None. Orientation to the culture and conditions of modern Britain, designed as preparation for the London Semester Program. Essentials of English history, literature, and contemporary life. Strongly recommended for all participants in the London Semester Program. One hour of in-class discussion and two hours of supervised activities. CR/NC only. Grading: CR/NC only. Same course as HUM 300.

317IC. Problems in International Social Conflict (3) Faculty

Prerequisites: Upper-division standing and at least one introductory course in the Social Sciences. An interdisciplinary analysis of the causes, human costs, and possible remedies of social conflict in the world today. Primary emphasis on the social sciences, incorporating in addition the perspectives of humanities and technological disciplines. Problem areas of international conflict will be discussed, such as ethics, nationalism, scarcity, warfare, governmental policies, dependency, and technological innovations. Students may take either SBS 317IC or SBS 318IC, and in any sequence.

318IC. Cases in International Social Conflict (3) F,S Faculty

Prerequisites: Upper-division standing and at least one introductory course in the Social Sciences. Interdisciplinary analysis of the causes, human costs, and possible remedies of social conflict in the world today. Primary emphasis on the social sciences, incorporating in addition the perspectives of the humanities and technological disciplines. Options in a case study format will be discussed, such as conflict in a multinational state — USSR — political and economic democracy in Eastern Europe, Asia and the West; impact of modernization in Latin America; nuclear warfare and competing ideologies. Students may take either SBS 317IC or SBS 318IC, and in any sequence.

319. International Development (3) S, Debysingh, Glezakos, Marsot

This course focuses on the issues and problems of development confronting the countries of the Third World. The causes and theories of underdevelopment will provide a background for identifying the problems of underdevelopment and for exploring regional, national and global strategies for development.

American Indian Studies

School of Social and Behavioral Sciences

Acting Director: Richard Glazer-Danay
Telephone: 498-5293
Professor: C.B. Clark
Associate Professor: Richard Glazer-Danay
Academic Advisor: Richard Glazer-Danay
Department Secretary: Victoria Van Thuy Nguyen

The American Indian Studies program exists to explore and make more widely known the American Indian heritage and role in the development of America and to investigate the condition and problems of the American Indian today with a view to formulating possible solutions and publicizing the results of its investigations. The program aims not only to meet the intellectual needs of the reservation and urban American Indian but also to enlighten students who are interested in widening their own understanding of American Indian culture. The program draws upon a variety of disciplines in which the student will be exposed to diverse courses designed to present various aspects of the American Indian culture. The program is designed to serve the interests and goals of students who wish to broaden their knowledge about American Indians and American Indian affairs. Students may pursue a program in American Indian Studies through a minor or certificate, a concentration in American Indian Studies within the liberal studies degree program or an individually-designed undergraduate special major program under the Special Programs Office.

Advisement in American Indian Studies is available in the program office, FO4-175 or 165.

Certificate in American Indian Studies

Students pursuing any approved degree or credential program of the University may at the same time earn a Certificate in American Indian Studies. Courses taken to meet the requirements may also simultaneously be used, where applicable, to meet General Education requirements or the degree or credential requirements of cooperating departments. Certification of successful completion of requirements will be issued upon the recommendation of the Director of the American Indian Studies Program.

Requirements for the Certificate in American Indian Studies

1. A bachelor's degree with a major in a traditional discipline. (Certificate requirements may be completed prior to or concurrently with the baccalaureate requirements.)
2. Submission of all college/university transcripts to the academic advising coordinator, who will work with the student to develop a well integrated program of studies. Interested students are strongly encouraged to meet with the undergraduate advisor after having completed the lower division core courses.
3. A minimum of 24 units, distributed as follows:
   a. Lower division core courses (six units): AIS 100 and 101.
   b. Upper division core course (three units): AIS 335.
   c. Upper division regional history course (three units), selected from AIS 303, 304, 305, and any other such course offered by the program.
   d. Upper division community studies course (three units), AIS 310, and any other such course offered by American Indian Studies, and,
   e. Upper division elective courses (nine units), selected from American Indian Studies, ART 411C, ANTH 321, 322, 347, 349, HIST 473, and any other related course approved by the undergraduate advisor. (The student is advised to employ these elective units in the development of an area of emphasis.)

Minor in American Indian Studies (code 0-8420)

A minimum of 18 units which must include AIS 100, 101, 335; three units selected from AIS 303, 304, 305; AIS 310; three units selected from an AIS course, ART 411C, ANTH 321, 322, 347, 349, HIST 473.

Concentration in American Studies for the Bachelor of Arts Degree in Liberal Studies

A minimum of 24 units will be required; 18 of which must be upper division.

Lower Division:

AIS 100 and 101.

Upper Division:

AIS 335, one course selected from the regional history series (AIS 300-319), one course selected from the community studies series (AIS 310-319), and a minimum of 9 units selected from any upper division AIS course or ANTH 321, 322, or 347.

Courses (AIS):

Lower Division:

100. American Indian History: Pre 1871 (3) F,S Clark

A survey of the histories and cultures of American Indian peoples in North America from pre-contact to 1871 and an analysis of the political, cultural, legal and military relationships that developed between the American Indians and foreign nations. Not open to students with credit in AIS 130.

101. American Indian History: Post 1871 (3) F,S Faculty

A survey of the histories and cultures of American Indian peoples in North America from 1871 to the present. Not open to students with credit in AIS 131.

070. Language Skills (3) F,S Faculty

Not open to students with credit in L/SK 170. Focuses on intensive development of grammatical skills and expository writing. Primarily for American Indian students. Credit/no credit only. Counts as part of student's course load but does not carry graduation credit.

170. Language Skills (3) F,S Faculty

Not open to students with credit in L/SK 170. Prerequisite: successful completion of AIS 070. Focuses on organizational methods and techniques for writing compositional and expository prose, advanced grammar and some critical reading techniques for term papers. Primarily for American Indian students.

200. Contemporary Issues in American Indian Studies (3) F,S Faculty

Current issues: the relevance of treaties, self-determination and sovereignty, assimilation and traditionalism, conflicts with local governments and corporate interests, the development of economic resources (coal, uranium, oil, gas, timber, water), the roles of women, traditional philosophy, political movements, and additional topics of interest to the class.

297. Fieldwork in American Indian Studies (3) F,S Clark

Prerequisites: Lower division standing, consent of instructor. Supervised experiences relevant to specific aspects of the American Indian community in off-campus settings. Regular meetings with faculty supervisor and written reports required. Must be taken Credit/No Credit.

Upper Division:

303. California Indian History (3) F 1988 Clark

Histories and cultures of the American Indian peoples in California, emphasizing Spanish and American influences. (Lecture-discussion 3 hours.)

304. Southwest Indian History (3) F 1987 Clark

Histories and cultures of the American Indian peoples in the Southwest; a major focus on Spanish and American colonization. (Lecture-discussion 3 hours.)

305. Plains Indian History (3) F 1989 Clark

Histories and cultures of the American Indian peoples in the Plains, with an emphasis on their relationships with the United States government. Not open to students with credit in AIS 331.

310. American Indian Community Development (3) S Clark

Overview of the economic structure of Indian reservations and Indian urban communities, describing in detail the economic base and development of resources. Attention will be given to the historical interplay of Indian resources and non-Indian resources and the possible future of this interplay, especially in the light of Indian demands for sovereignty.

320. American Indian Art (3) F,S Glazer-Danay

A survey of North American Indian and Alaskan native arts ranging from pre-Columbian through current personal and production-for-sale arts. Designed to expose the student to the wide range of American Indian materials, use, styles, regional characteristics and color use employed in the arts, including and beyond those in current popularity. Not open to students with credit in AIS 132.

335. American Indian Philosophies (3) S Faculty

A study of the philosophical traditions of the American Indian, with emphases on systems of knowledge, explanations of natural phenomena, and relation of the American Indian to nature through ritual and ceremonial observances.

339. American Indian Psychology (3) F 1987 Faculty

Indian behavior will be studied at the level of the individual person, rather than at the more commonly used level of general culture. Areas to be covered include self-concept, Indian reactions to prejudice, special problems in adjustment that have led to drug and alcohol abuse, personality and contemporary life styles, and issues in education.

340. American Indian Literature (3) F Clark

An analysis of the written and oral literary traditions developed by American Indians. Not open to students with credit in AIS 333.

345. The American Indian and the Mass Media (3) F 1988 Faculty

An analysis of the role and image of the American Indian in media especially as concerns the television and film industries. (Lecture-discussion 3 hours.)

361. American Indian Education (3) S Faculty

A study of the historical developments of American Indian education and proposed solutions to selected problems of education in the various types of schools. (Lecture-discussion 3 hours.)

370. American Indian Women (3) S 1987 Faculty

Overview of the role of women in traditional Indian societies and in the modern world. Changes in Indian societies occasioned by contact with Europeans and how these changes have altered sexual role definitions will be examined. (Lecture-discussion 3 hours.)

383. Healing and Health: American Indian Concepts and Practices (3) S 1988 Faculty

Analysis of American Indian healing techniques and their relation to traditional Western Civilization and its practices of healing and health theory. Necessary interweaving of thoughts and practices as new programs are being fostered and experimented with by the American Indian Public Health Service and other health organizations.

385. American Indian Leaders (3) F 1987

Overview of the diverse philosophies of the leaders of various Indian nations, the political, sociological and religious aspects of their lives and the conditions that cause them to rise to power. Attention will be given to the impact of Indian-White relations. (Lecture-discussion 3 hours.)

420. American Indian Studio Art (3) F 1988 Glazer-Danay

Selected arts and crafts. Designed for student practice in North American Indian arts. Manual demonstration and instruction in some of the widely practiced Indian art expressions and film instruction in some of the lesser known arts. (Lecture-activity 6 hours.)

490. Special Topics in American Indian Studies (1-3) F,S

Prerequisite: Consent of instructor. Topics of current interest in American Indian studies selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

497. Fieldwork in American Indian Studies (1-3) F,S Clark

Prerequisites: Upper division standing, consent of instructor. Supervised experiences relevant to specific aspects of the American Indian community in off-campus settings. The fieldwork project must be directly related to the student's major or certificate program. Regular meetings with faculty supervisor and written reports required. May be repeated for a maximum of six units.

499. Directed Studies (1-3) F,S Clark

Prerequisite: Consent of instructor. Directed Studies to permit individual students to pursue topics of special interest. May be repeated for a maximum of six units.

American Studies

School of Social and Behavioral Sciences

Director: David R. Peck
Telephone: 498-4262
Faculty Advisors: David Bernstein (History), Robert Brophy (English), John Buchanan (History), Gene L. Dinielli (English), David Fine (English), Albert Gunns (History), Jack Higgins (History), Joe Krause (Art), William Leiter (Political Science), Doris Nelson (English), David Peck (English), Charles Pomeroy (English), Federico Sanchez (Mexican-American Studies), Ora Williams (English).
Department Secretary: Diane Mac Millan (FO2-104, 213-494-7809)

Students desiring information should contact the department office for referral to one of the faculty advisors.

American studies is an interdisciplinary study of American culture. The American Studies Program offers a major leading to the bachelor's degree, a minor, a single subject teaching credential (in cooperation with English), a Liberal Studies concentration. The program also offers a variety of general education and interdisciplinary courses. Most students majoring or minoring in American Studies are interested in both (1) studying American culture as a whole from several disciplinary perspectives and (2) studying in depth a problem or theme according to individual choice. Reflecting these two interests, the major consists of a six course core sequence and a five course elective pattern that centers on one theme or problem.

The American Studies Program is governed by a committee of faculty from various departments and schools who also serve as advisors. Students majoring in American Studies confer with advisors to plan their programs, which are recorded on official advising forms.

In addition to providing a broad liberal education focusing on American culture, traditions and institutions, the major in American Studies offers a useful background for careers in law, journalism, public service, government, business and teaching. The program also provides the foundation for graduate work in American Studies and related fields.

In preparation for the upper division major in American Studies, students are expected to have completed lower division courses appropriate as background to the study of American culture. Students planning to major in American Studies should consult the program director or one of the above-named faculty advisors early in their academic careers for general education and preparatory course recommendations and for teaching credential information.

Bachelor of Arts in American Studies (code 2-8004)

A minimum of 33 units distributed as follows:

Six core courses:

AMST 300, 477A,B, 490, 498, and one course in American literature chosen from ENGL 370A,B, 474, 475, 476, 477A,B. Elective pattern: The student chooses one of the following topics or themes and with an advisor (who will have an up-to-date master list of appropriate courses) plans an elective pattern of a five course sequence with no more than two courses coming from any one department:

A. American Institutions
B. American People
C. Women in America
D. American Environment
E. Arts and Communication in America
F. American Mind
G. Student Designed Pattern. In place of one of the above topics or themes, the American Studies major, with the approval of the advisor and the program director, may design a sequence of courses focusing on a topic, theme, or problem in which he or she is particularly interested.

Minor in American Studies (code 0-6004)

A minimum of 18 units, including 12 in American Studies (300, 477A,B, and 498) and 6 or more chosen from at least two of the following categories:

A. AMST 490.
B. ENGL 370A,B, 474, 475, 476, 477A,B.
C. ART 413A, 413B, MUS 393.
D. GEOG 306, POSC 308, SOC 445, Ethnic Studies.

Concentration in American Studies for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required; 18 of which must be upper division.

Required Courses:

AMST 300, 490 and 498. In addition to the required courses, the concentration consists of 15 units to be selected from one of the disciplines listed below:

History:

HIST 172, 173, 174, 372, 373, 375, 376, 377, 378, 379, 471, 472, 473, 474IC, 475IC, 477A,B, 478, 479, 482IC, or 489

Political Science:

POSC 100, 314, 315, 322, 327, 391, 412, 423, 482, or 486

English:

ENGL 370A,B, 474, 475, 476, 477A,B, or 478.

Courses (AMST):

Lower Division:

100. Popular Culture in America (3) F,S Bernstein, Peck

Examines popular culture as a sensitive and accurate reflector of the attitudes and concerns of the society for which it is produced; alerts students to the profound impact popular culture exerts on our society and develops the critical and analytical skills needed to meet these influences with conscious rational responses.

190. Topics in American Studies (1-4) F,S Brophy, Sanchez

Exploration of a significant topic, theme, issue or problem in American culture, using interdisciplinary materials and methods. Topics shall be listed in the Schedule of Classes. May be repeated for credit with a different topic to a maximum of six units.

Upper Division:

300. Introduction to American Studies (3) F,S Faculty

Interdisciplinary approaches to the study of American civilization. Significant issues and problems in American life will be examined from the perspectives of several disciplines.

350IC. California Culture (3) F,S Fine, Krause, McFaul, Leiter (C.3, D.2)

(Same course as HUM 350IC) This course examines the culture of California from several distinct disciplinary perspectives including history, political science, geography, sociology, art, and literature. It seeks to integrate the knowledge and methodologies of these disciplines as they converge on the study of California. The course is team-taught and modular in format. Students take three four-week intensive modules and a final three-week synthesizing module.

477A,B. American Cultural History (3,3) F,S Faculty

Development of a distinctive American way of life treated in terms of values, behavior, and institutions. Themes of individualism, community, ethnic diversity, and social reform seen within the changing complex of national character. (Same course as HIST 477A,B.)

490. Special Topics in American Civilization (1-4) F,S Faculty

Prerequisite: AMST 300. Intensive study of a selected major theme in American civilization using materials drawn from a variety of disciplines. May be repeated with a different topic for elective credit toward the major requirements if appropriate to the student's area of specialization. Topics to be announced in the Schedule of Classes.

498. Senior Colloquium in American Studies (3) S Fine, Higgins,Peck

Prerequisite: AMST 300. Investigation of significant problems in American civilization using interdisciplinary methods and materials and culminating in an original research paper or project related to the student's area of specialization. This course is designed as the capstone to the degree program and is open to seniors only.

499. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent study of American culture taken under the supervision of a faculty member.

Anthropology

School of Social and Behavioral Sciences

Department Chair: Eleanor Bates
Telephone: 498-5171
Faculty: Professor: Eleanor H. Bates, Keith A. Dixon, James R. Gregory, Robert C. Harman, Gretha S. Kershaw, Eugene E. Ruyle; Associate Professors: Dorothy Libby, Stewart Shermis
Emeritus Faculty: Carol F. Eckhardt, Ethel E. Ewing, Franklin Fenenga, Harold H. Key, R. Clyde McCone, H. Thomas McCorkle, Douglas Osborne, William J. Wallace
Department Secretary: Donna Yankovich

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisor: Libby; Graduate Advisor: Bates.

Anthropology is the systematic study of our own species in our biological, social, and cultural aspects. Anthropologists study the full range of the human experience in both the past and the present. The breadth of anthropological studies gives students a unique perspective to understand both other societies and their own. The programs offered by the Department of Anthropology are designed to enrich the personal and professional lives of our students.

The undergraduate major in Anthropology is designed to provide students with knowledge of the various fields of Anthropology and with opportunities for emphasis in particular topical and geographical interests. The Anthropology major provides a strong liberal arts background that can contribute to success in many fields, such as teaching, public service, or business. Anthropology majors intending to pursue careers in these fields are urged to consider minoring in fields which provide appropriate entry-level skills, such as the Minor in Business Economics or in Public Policy. The major also prepares students for advanced studies in Anthropology.

The undergraduate minor in Anthropology is recommended for students preparing for careers which will require practical knowledge of different cultural backgrounds, such as teaching, international business and engineering, foreign service, and public and social services within our own multicultural society. Such students will find that Anthropology provides a useful perspective that has many applications in daily social interaction.

The Department of Anthropology also offers a graduate program leading to the Master of Arts degree. The graduate program is designed to meet the needs of students who are: 1) seeking teaching credentials where the master's degree is required; 2) seeking to expand their knowledge and increase their competence in Anthropology, or 3) preparing for further advanced degrees, such as the Ph.D. Graduate students are responsible for observing the general requirements for the M.A. degree as stated in this Bulletin. Prospective graduate students should consult the Handbook for the Master's Degree in Anthropology which is available from the Department office upon request. It is also recommended that prospective students consult with the Graduate Advisor at their earliest opportunity.

Bachelor of Arts (code 2-8505)

Lower Division Requirements:

ANTH 110, 120, 202. Recommended: ANTH 140, 170, PSY 100, SOC 100, GEOL 102, 160, BIOL 200, MKTG 380.

Upper Division:

A minimum of 27 units in a program approved by the major advisor as follows:

Required core courses:

ANTH 3IIIC, and 314; one course selected from each of the following:

Comparative Cultures, Ethnology: ANTH 321, 322, 323, 324, 331, 332, 335, or 336.
Comparative Cultures, Prehistory: ANTH 342, 345, 347, 349, or 362;
Biological Anthropology: ANTH 318, 319, 363, 430, or 436;
Contemporary Issues: ANTH 351, 352, 353, 412IC, 416, 421, or 456;
Linguistics: ANTH 413 or 412IC;

Electives: additional courses to make up the 30 units may be selected from the above or any of the following courses: ANTH 305IC, 307IC, 317, 411, 439, 450, 460, 461, 480a, 485, 490, or 499. ANTH 170 may be used to fulfill the Linguistics requirement, in which case an additional elective course must be used to make up the required 30 units of upper division course work. In consultation with the advisor six upper division units must also be taken from any Social or Behavioral Science department outside of Anthropology. These courses shall be in addition to courses selected to fulfill the requirements of General Education.

Minor in Anthropology (code 0-8505)

A minimum of 21 units in a program approved by the major advisor, as follows:

Lower Division: Required:

ANTH 110 and 120.

Upper Division: Required Core courses:

ANTH 311IC, 313, and 314; Electives: six additional units in Anthropology selected in consultation with the advisor to meet the specific needs of the student.

Concentration in Anthropology for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required; of which 6 are lower division and 18 upper division.

Required Courses:

ANTH 311IC, 313, 314; 6 units from ANTH 110, 120, 140, or 170; 3 units from ANTH 312; 3 units from ANTH 317, 319, or 411; 3 units from ANTH 351, 412IC, or 421; 3 units from electives in the course offerings in the curriculum.

Master of Arts in Anthropology (code 5-8505)

Prerequisites

1. A bachelor's degree in anthropology, or:
2. A bachelor's degree with 24 units of upper division courses in anthropology, comparable to those required of anthropology majors at this University.
3. Students whose undergraduate work in anthropology seems inadequate will be required to fulfill specific undergraduate deficiencies before admission to candidacy. Deficiencies will be determined by the departmental graduate advisor after consultation with the student and a review of the student's transcript records.

Advancement to Candidacy:

1. Acceptance into the M.A. program by the department.
2. Satisfaction of the general University requirements for advancement to candidacy.
3. Approval of the candidate's graduate program by the departmental graduate advisor.
4. The candidate must have taken ANTH 501 (Development of Anthropological Theory) and ANTH 510 (Proseminar) or equivalent, or must be registered in the courses at the time of advancement to candidacy.

Requirements for the Master of Arts:

1. A minimum of 30 units of upper division and graduate courses, including 2l units at the 500-600 level in a program approved by the Graduate Advisor. These 30 units must include the following courses: ANTH 50l, 510.
2. Up to six units of course work outside the Department of Anthropology may be included in the 30-unit total.
3. Competence in appropriate research skills. These may include: familiarity with computer languages and use of computers, or statistical training and facility, or a reading knowledge of a foreign language.
4. Either A) a Comprehensive Examination, or B) a M.A. Thesis.

Courses (ANTH)

Lower Division:

100. General Anthropology (3) F,S Faculty
General introduction to anthropology including biological and cultural aspects. Recommended for non-majors.

110. Introduction to Physical Anthropology (3) F,S Bates, Shermis
Physical nature of human beings; relation of humans to other animals; heredity and principles of biological evolution; human fossils; significance of physical variation in modern populations; the origin and adaptive value of cultural behavior.

120. Introduction to Cultural Anthropology (3) F,S Faculty
Nature of culture; a comparative and historical approach to the religion, social organization, subsistence patterns and other aspects of the great variety of cultures around the world; the meanings of human nature, cultural universals and cultural differences.

140. Introduction to Archaeology (3) F Dixon
Survey of methods used by archaeologists to understand the growth and development of human cultures; discoveries in world-wide prehistory from the Old Stone Age to the Iron Age.

150. Elements of Human Integration (3) S Shermis
An integration of social, physiological and psychological factors which influence or determine our daily lives; taught from an anthropological perspective.

170. Introduction to Linguistics (3) S Harman, Shermis
Nature of language; its relation to culture; language structure and processes of change; language universals, contrasts and relationships.

202. Quantitative Methods in Anthropology (3) F Bates
Survey of sampling statistics with emphasis on anthropological data. Basic statistical measures, common sampling distributions, tests of hypotheses. Not open to students with credit in ANTH 302.

Upper Division:

305IC. Radical Social Analysis (3) F, Odd years Ruyle
Radical analysis of society and culture, focusing on classic Marxian texts as well as current critical theory and analysis.

307IC. Modernization in Global Perspective (3) S Libby
(Same course as HIST 307IC and GEOG 307IC.) An exploration of the ways in which the current psychological and material problems in modern society (both western and Third World) can be traced to a process of accelerating change which began with the advance of technology, the rise of capitalism, the abandonment of "old values," the increasing complexity of bureaucracy, and a lowering of social barriers. Exploration of all facets of modernization utilizing films, discussions and readings (fiction and non-fiction).

311IC. The Human Adventure: Anthropological Perspectives (3) F,S Ruyle
The development of Anthropology and its place within the Social and Behavioral Sciences, stressing a unified, natural history approach to understanding our species. Human societies are viewed as parts of larger ecosystems in which biological, cultural, and environmental factors interact to produce the major adaptations of the past and contemporary worlds.

313. Peoples of the World: Prehistory (3) S Dixon
The origin of human beings and their cultures, the development of agriculture, the growth of city life, and the rise of civilization; a survey of world-wide prehistory from the Old Stone Age to the Iron Age.

314. Peoples of the World: Ethnography (3) F Gregory, Kershaw
Recent and contemporary cultures around the world; a comparative survey of their ecological adaptations, social institutions, technology, subsistence strategies, degrees of complexity, and patterns of change.

*317. Non-Industrial Technology (3) S, Even years
Anthropological examination of the techniques used in making and using tools, weapons and other equipment in the world's traditional cultures; includes stone-working, ceramics, weaving, and metallurgy.

*318. People, Genes and Society (3) F, Even years Bates
Genetic background for normal and abnormal human development; population differences; human reproduction, pregnancy, prenatal diagnosis and birth defects in a cross-cultural and evolutionary setting; application to social, moral, legal and ethical problems and to genetic counseling.

*319. Growth, Development and Variation (3) F, Odd years Shermis
Analysis of the sequence of events in the development of people from conception to death; organ development; rapid and retarded growth patterns; the processes of aging and death from a broad ethnic and ecological perspective.

*320. Comparative Religion and Folklore (3) F, Even years
A cross-cultural survey of religion and folklore; cultural realities expressed in myth, ritual and world view; theories on origin, meaning and function of myth and ritual. Not open to students with credit in ANTH 439.

*321. North American Indians (3) F
Comparative study of traditional Native American societies, social organization, belief systems and religions, crafts and adaptation to varied environments; cultural changes in response to European contacts.

*322. California Indians (3) S
Survey of native Californian groups; discussion of the diversity of aboriginal culture prior to western contact as background for analysis of the impact of Europeans; problems of intercultural relations; and the current status of native Californians.

*323. Peoples of Mexico and Central America (3) F Harman
Cultural background and present-day economic, social, and religious life; recent change in Indian and Mestizo communities.

*324. Peoples of South America (3) S Gregory
Survey of the present day peoples of South America; tribal Indians, peasant communities, village life, the emerging middle class, and other social groups; examination of the Indian, European, and African heritage and present day cultural and social changes.

*331. Peoples of the USSR (3) F, Odd years Libby
Development of traditional cultural patterns from the ecological and historical perspective; modernization of the peoples of the Soviet Union.

*332. Chinese Culture and Society (3) S, Even years Ruyle
Cultural and social institutions; kinship, family structure, lineage organization, religion, law, politics and economy in traditional, and modern times.

*335. Japanese Culture and Society (3) S, Odd years Ruyle
Cultural and social institutions; kinship, family structure, religion, law, politics and economy from traditional to modern times.

*336. Peoples of Africa (3) F, Odd years Kershaw
Survey of the peoples of Africa; social and cultural organization in 19th and 20th centuries; problems of colonialism and development.

*342. The Rise of Civilizations in the Middle East (3) S, Odd years Faculty
Origin and growth of early civilizations including Egypt, Mesopotamia, Greece, Turkey and India; analysis of growth patterns, comparative study of religious, social and political institutions.

*345. Ancient Civilizations of Mexico and Central America (3) F, Even years Dixon
Origin and growth of the Aztec, Maya and other civilizations of Mexico and Central America.

*347. Prehistoric Cultures of North America (3) S, Even years Dixon
Archaeological evidence of origin and growth of the native American cultures north of Mexico; regional cultures and broad continental patterns of development.

*349. The Prehistory of California and the Southwestern United States (3) F, Odd years Dixon
Development of the native cultures of California and American Southwest from the earliest human occupation to the historic period.

*351. Sex Roles and Culture (3) F Gregory, Libby
Interaction of biological, cultural and historical factors on male/female roles and status in traditional and contemporary cultures and societies.

*352. Alternative Styles of Aging (3) S, Odd years Libby
Cross-cultural survey of the different ways cultures define the aging process. Special attention to the roles and statuses based on age and sex over the life cycle and the values attached to these by different cultures. Various theoretical approaches in gerontology are evaluated in light of the cross-cultural data.

*353. Health and Healing (3) S Harman
Cultural perspective of health and health care delivery. Holistic approach considers social, biological, and psychological factors in different cultural settings. Emphasis on increasing personal awareness through exposure to diverse perceptions of illness and treatment.

*362. Biblical Archaeology (3) S, Even years Faculty
Archaeological view of the Biblical era; the language, people and culture of Biblical times and places in light of current archaeological finds.

*363. Primate Studies (3) S, Odd years Shermis
Description of the several spheres of primatology including gross morphology, taxonomy, phylogeny, behavioral studies and ecology. Not open to students with credit in ANTH 432.

*411. Culture and Personality (3) S, Even years Faculty
Cultural factors in personality development and disorganization; psychological factors in cultural organization and problems of culture contact and change.

412IC. Culture and Communication (3) S Harman
Introduction to culture and its influence on the communication process in the 1980s. Emphasis on practical application to intercultural and multicultural situations. Attention to cultural patterns in America and abroad and their effect on verbal and nonverbal communicative behavior; cultural dimensions of ethnocentrism, stereotypes, and prejudices and their effect on communication; multicultural approaches to human interaction.

413. Language and Culture (3) S Harman
Relation of language patterns to social life; problems of meaning in cross-cultural communication and language translation; practical application to business, government and religious contacts. Not open to students with credit in ANTH 440.

416./516. Urban Culture: The Anthropology of Complex Societies (3) F, Odd years Kershaw, Ruyle
Comparative analysis of development and role of urban centers in ancient and modern cultures; interrelationships of urban and rural populations; patterns of similarity and difference in urbanism of contrasting cultures; implications for a multi-national world.

*418. Inequality and Social Organization (3) F, Even years Ruyle
Organizational forms from kinship to bureaucracy; organizational complexity and inequality in bands, tribes, feudal caste and class systems. Not open to students with credit in ANTH 455.

*421. Education across Cultures (3) S, Odd years Faculty
Cross cultural perspectives on education in modern society; problems in education of non-western peoples by those from western cultural backgrounds.

*435. Human Evolution (3) S, Even years Bates, Shermis
Fossil evidence for human evolution with a consideration of the importance of cultural factors. Not open to students with credit in ANTH 430.

*436. Ecology, Disease and Adaptation (3) S, Even years Bates Harman
Interaction of cultural, biological and environmental elements in human response to disease; emphasis on an ecosystems approach with evolutionary and comparative perspectives.

*450. Archaeological Field Methods (4) S, Odd years
Methods of recording field data including mapping, drawing and photography; practice in the use of field equipment; participation in local site surveys and excavations when feasible. May be offered on Saturdays.

*460. Ethnographic Methods (4) S, Odd years Gregory, Kershaw, Ruyle
Fundamentals of ethnographic research; participant-observation, interviewing, use of informants and related techniques; research design, organization of field materials and report writing. (Lecture 3 hours, activity 2 hours.)

470./570. Linguistic Field Methods (3) F,S Faculty
This course introduces the student to the practical study of unfamiliar languages. Through the help of a native speaker of a non-European language, the student will learn how to write down the sounds of the language and how to determine the structure of the language. Prerequisite: an introductory linguistics course. [Lecture/Discussion: 3 hours]

*480A. Osteology (4) F, Even years Shermis
Instruction in osteology, landmarks and methods in anthropometry and somatology; measurement and analysis of osteological collections, applied anthropometry and somatotyping. (Lecture 3 hours, laboratory 3 hours.)

*485. Paleopathology (4) F, Odd years Shermis
Survey of the major skeletal diseases as seen in archaeological populations. Mechanics of orthopedic disease stressed. Will include field trips. (Lecture 3 hours, laboratory 3 hours.)

*490. Special Topics in Anthropology (3) F, 1984 and Alternate years Faculty
Topics of current interest in anthropology selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

499. Guided Studies in Anthropology (1-3) F,S Faculty
Prerequisite: Consent of department. Selected topics in anthropology and preparation of a research report. May be repeated for a maximum of 6 units.

Graduate Division:

501. Development of Anthropological Theory (3) S, Even years
Prerequisites: Fifteen upper division units in anthropology and senior or graduate standing. A systematic survey of the development of anthropology as a scientific field; and examination of the principal ideas and theories of leading anthropologists, past and present. Not open to students with credit in ANTH 4985.

510. Proseminar (3) F,S Faculty
Prerequisites: Six units of upper division anthropology courses, consent of instructor. Survey of anthropological research methods, gathering of data, data manipulation and the writing of technical and interpretive reports. Not open to students with credit in ANTH 502.

516./416. Urban Culture: The Anthropology of Complex Societies (3) F, Odd years Kershaw, Ruyle
Comparative analysis of development and role of urban centers in ancient and modern cultures; interrelationships of urban and rural populations; patterns of similarity and difference in urbanism of contrasting cultures; implications for a multi-national world.

570./470. Linguistic Field Methods (3) F,S Faculty
This course introduces the student to the practical study of unfamiliar languages. Through the help of a native speaker of a non-European language, the student will learn how to write down the sounds of the language and how to determine the structure of the language. Prerequisite: an introductory linguistics course. [Lecture/Discussion: 3 hours]

597. Directed Readings in Anthropology (1-3) F,S Faculty
Prerequisites: Senior or graduate standing and consent of instructor. Selected topics in anthropology will be studied in depth. A written report will be prepared.

600. Seminar in Ethnology and Social Anthropology (3) F, Even years Faculty
Topics of substantive and theoretical importance and their application to research problems. May be repeated for a maximum of six units.

620. Seminar in Archaeology (3) S, Even years Faculty
Prerequisites: Six upper division units in archaeological courses or consent of instructor. Important recent discoveries; contemporary ideas, trends and problems. May be repeated for a maximum of six units.

630. Seminar in Anthropological Linguistics (3) F, Even years
Prerequisite: Consent of instructor. Areas and methods of linguistic study and research; evaluation and intensive scrutiny. May be repeated for a maximum of six units.

640. Seminar in Physical Anthropology (3) S, Odd years Faculty
Prerequisite: ANTH 480A or consent of instructor. Materials and methods of research in human evolution. May be repeated for a maximum of six units.

697. Directed Research (1-3) F,S Faculty
Prerequisite: Consent of department. Research in anthropology on an individual basis.

698. Thesis (1-4) F,S Faculty
Prerequisite: Consent of department. Planning, preparation and completion of a thesis in anthropology.

Asian American Studies and Asian Languages

School of Social and Behavioral Sciences

Director: Lloyd Inui
Department Office: Faculty Office 4 (FO4), Room 165
Telephone: 498-4821
Faculty: Professor: Lloyd Inui, Henry Johnson, San-pao Li; Associate Professor: Akira Miyazaki; Assistant Professor: Yoko Pusavat
Academic Advising Coordinator: Lloyd Inui
Program Secretary: Victoria Nguyen

Students desiring information should contact the department office for referral to one of the faculty advisors.

The Asian American Studies curriculum enables students to explore the Asian American experience, cultures and issues within an interdisciplinary framework. The curriculum provides students with knowledge and training necessary for (1) various occupations and careers including teaching, school administration, social work, public service, urban planning, communications and the media, (2) professional work in the Asian American community, (3) exploring an educational dimension by emphasizing and focusing on ethnic minorities.

Chinese and Japanese language curricula are liberal arts programs which provide students with basic foreign language training and an understanding of Asian cultures and civilizations. Language study provides the student with a skill useful in advanced study, educational enhancement, and self-development. Asian language courses are also appropriate electives to support several of the majors offered by the University.

Concentration in Asian American Studies for the Bachelor of Arts in Liberal Studies

A minimum of 25 units will be required 16 of which must be upper division.

Required Lower Division:

ASAM 102 and 220.

Required Upper Division:

ASAM 310, 345, and 380; a minimum of 9 units from the following: ASAM 340, 341, 370, 430, 450, 471, 490 or 499.

Please see Asian Studies for requirements for a B.A. in Asian Studies with an option in Asian American Studies.

Certificate in Asian American Studies

Students pursuing any approved degree or credential program of the University may at the same time earn a Certificate in Asian American Studies. Courses taken to meet the requirements may also simultaneously be used, where applicable, to meet General Education requirements or the degree or credential requirements of cooperating departments. Certification of successful completion of requirements will be issued upon the recommendation of the Director of the Asian American Studies Program.

Requirements for the Certificate in Asian American Studies

1. A bachelor's degree with a major in a traditional discipline. (Certificate requirements may be completed prior to the completion of the B.A. requirement.)
2. A minimum of 30 units distributed as follows: eight units of an Asian language; ASAM 102, 220, 345 and 370 which are core courses; additional courses selected from ASAM 200, 310, 340, 341, 380, 430, 450, 471, 490, 499.

Interested students should apply to the Director, Asian American Studies Program, Mr. Lloyd Inui.

Minor in Asian American Studies (code 0-8430)

A minimum of 22 units which must include: (a) Asian American Studies 200, 220, 310, 345; (b) nine units selected from Groups I and II with at least three units selected from Group II courses.

Group I:

ASAM 340, 341, 370, 380, 490, 499.

Group II:

ASAM 430, 450, 471.

Requirements for the Concentration in Japanese for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required; the following must be included: JAPN 331A, 331B, 405A, and 441A.

Certificate in Japanese

Advisory Committee: Miyazaki, Pusavat.

The Certificate Program in Japanese offers students an opportunity to develop spoken and written competency in modern Japanese, and to acquire a broad introduction to various aspects of traditional and modern Japan.

The program is designed for students who intend to pursue a career in the private or public sectors, for which knowledge of Japan and the command of the language is useful or necessary, and also for students who intend to pursue a graduate program in which such knowledge and competency are required.

Requirements for the Certificate in Japanese

1. A bachelor's degree (may be earned concurrently with the certificate).
2. 15 units of 400 level Japanese language courses.
3. 12 units of related upper division work from at least two disciplines. These units must be approved by a member of the advisory committee.

Courses:

Asian-American Studies (ASAM):

Lower Division:

102. Asian American Experience (3) F,S Inui, Johnson
Quest for identity of the Asian minorities in America; issues, problems and alternatives which confront the Asian American. Emphasis on small group interaction and counseling of individual students.

070. Language Skills (3) F,S Faculty
Not open to students with credit in L/SK 170. Focuses on intensive development of grammatical skills and expository writing. Primarily for Asian American students. Credit/no credit only. Counts as part of student course load but does not carry graduation credit.

170. Language Skills (3) F,S Faculty
Prerequisite: successful completion of ASAM 070. Focuses on organizational methods and techniques for writing compositional and expository prose, advanced grammar, and some critical reading techniques for term papers. Primarily for Asian American students.

190. The Tao Primer of Basic Reasoning (3) F,S Johnson
This course focuses on the natural language of Tao aphorisms used for informal and formal types of reasoning; learning the Yin and Yang basic analytic steps of clear, critical, and creative thinking; and applying the Tao principles and processes of reasoning to contemporary, commonplace, and intercultural issues and problems logically and practically.

200. Asian American Inter-Ethnic Relations (3) F,S Faculty
Behavior and orientation of the Asian Americans as a minority group; emphasis on the nature of their relations and their patterns of interaction with other minorities as well as the majority culture.

220. Asian American History (3) F,S Inui
History of the arrival, settlement and experiences of Asians in America from the 1840's to the present.

Upper Division:

310. Education and the Asian American (3) F,S Johnson
Examining problems and potentials of a multi-racial classroom for the understanding of, and relating to students of, diverse cultural backgrounds, with an emphasis on the Asian American. Small group interaction and counseling of individual students.

340. Asian American Family (3) F,S Inui
Study of the Asian American family as a social institution; emphasis on the influence and consequences of the traditional Asian values and the impact of Western culture in the formation of a distinct family life style.

341. Asian American Women (3) F,S Faculty
An interdisciplinary examination of the roles, expectations, status and contributions of Asian women in the experience of Asians in America.

345. Asian American Community Analysis (4) F Faculty
Prerequisite: ASAM 102 or consent of instructor. Socioeconomic, political and cultural profile of Asian American communities; role and function of community organizations. Training in community surveys and service. (Lecture, activity.)

370. Asian Man and Woman in America (3) F,S Johnson
Prerequisite: ASAM 102 or consent of instructor. Roles as individuals, as sexual counterparts and their relationship to each other and to the majority culture. Small group interaction and counseling of individual students.

380. Asian Philosophies and Religions in America (3) F,S Inui, Johnson
Influence of and changes in Asian philosophies and religions in the American environment. Emphasis on Confucianism, Taoism, Hinduism, Buddhism and Shintoism in relation to individual and social values in America.

430. Japanese Americans and World War II (3) S Inui
Prerequisite: ASAM 102 or 220 or consent of instructor. Background to and impact of evacuation and incarceration of Japanese Americans during World War II. Consideration of constitutional, economic, social and literary issues.

450. Indochinese in America (3) F,S Faculty
Introduction to the languages, culture, socio-psychological and educational orientations that Vietnamese, Cambodian and Laotian peoples bring to the United States, and the problems and issues related to establishing themselves in their new homeland.

471. Holistic Health and Asian Americans (3) F,S Johnson
An upper-division General Education course that focuses on the Asian and Western holistic physical, social and mental-health principles are presented to facilitate the student's understanding of such issues as sexuality, stress, nutrition, pain control, relaxation, and exercise that may be incorporated into the individual's daily life-style plan.

490. Special Topics in Asian American Studies (1-3) F,S
Prerequisite: Consent of instructor. Topics of current interest in Asian American Studies selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

499. Directed Studies (1-3) F,S Inui, Johnson
Prerequisite: Consent of Instructor. Directed studies to permit individual students to pursue topics of special research interest. May be repeated to a maximum of six units.

Courses:

Chinese (CHIN)

Lower Division:

221A-B. Fundamentals of Chinese (4,4) F,S Li
Prerequisite for 221B: CHIN 221A. Introduction to grammar, reading, pronunciation, writing and conversation. Not open to students with previous training or to native speakers of Chinese.

Upper Division:

331A-B. Intermediate Chinese (4,4) F,S Li
331A prerequisite: CHIN 221B. 331B prerequisite: CHIN 331A. Continuation of first year Chinese. Reading and translation of simple stories and essays; emphasis on grammar, composition and conversation.

370. Chinese Literature in Translation (3) S Li
Readings in translation of representative works of the major literary genres in China covering both the classical and the modern period. Previous knowledge of the language is highly desirable, but not necessary.

441A,B. Advanced Chinese (3,3) F Li
Prerequisite: CHIN 331B or its equivalent as determined by the instructor. Study of modern spoken and written Chinese involving advanced patterns and expressions. Emphasis on reading, comprehension, vocabulary building and idiomatic usage.

490. Special Topics in Chinese (1-3) F,S Li, Faculty
Prerequisite: Consent of instructor. Topics related to advanced Chinese language study and Chinese language instruction selected for intensive development.

499. Directed Studies in Chinese (1-3) F,S Li
Prerequisite: Consent of instructor. Independent study under supervision of a faculty member. May be repeated for a maximum of 6 units.

Courses:

Japanese (JAPN)

Lower Division:

221A-B. Fundamentals of Japanese (4,4) F,S Miyazaki, Pusavat
Introduction to grammar, reading, pronunciation, writing and conversation.

Upper Division:

300. Calligraphy (3) S Faculty
History and theory of Shodo (Japanese calligraphy). Practice in actual writing with a brush to develop skills in kanji and kana. Pursuit of simplified yet multi-dimensional beauty by means of one color which is sumi ink. Previous knowledge of Japanese is helpful, but not required. (Lecture 1 hour, laboratory 4 hours.)

331A-B. Intermediate Japanese (4,4) F,S Miyazaki, Pusavat
Continuation of first year Japanese. Progressive drill on syntax and grammar and sentence patterns: reading, translation and composition.

370. Japanese Literature in Translation (3) F,S Faculty
Readings in translation of representative works of the major literary genres in Japan covering both the classical and modern period. Previous knowledge of the language is highly desirable, but not necessary. (Lecture-discussion 3 hours.)

405A-B. Conversational Japanese (3,3) F,S Miyazaki, Pusavat
Prerequisite: JAPN 331B or its equivalent as determined by instructor. Advanced study in modern spoken Japanese.

441A-B. Advanced Japanese (3,3) F,S Miyazaki, Pusavat
Prerequisite: JAPN 331B or its equivalent as determined by the instructor. Study of modern spoken and written Japanese involving advanced patterns, expressions.

460. Selected Readings/Writing in Japanese (3) F,S Faculty
Prerequisite: Japanese 441B or consent of instructor. Readings from a selection of contemporary written materials including but not limited to literary works including poetry, magazines, newspapers, reports, instructional and technical explanatory materials. May be repeated under different topics to a total of 9 units.

490. Special Topics in Japanese (1-3) F,S Miyazaki, Pusavat
Prerequisite: Consent of instructor. Topics related to advanced Japanese language study and Japanese language instruction selected for intensive development.

499. Directed Studies in Japanese (1-3) F,S Miyazaki, Pusavat
Prerequisite: Consent of instructor. Independent study under supervision of a faculty member. May be repeated for a maximum of 6 units.

Asian Studies

School of Social and Behavioral Sciences

Director: San-pao Li
Department Office: Faculty Offices 4 (FO4), Room 165
Telephone: 498-5493
Faculty: Professor: Ingrid Aall, Sudershan Chawla, Molly Debysingh, Charlotte Furth, Lloyd Inui, Henry Johnson, John Kimura, Chae-Jin Lee, San-pao Li, Alain Marsot, Eugene Ruyle, Gail Shoup, Sharon Sievers; Associate Professors: Jeffrey Broughton, Arnold Kaminsky, Dorothy Libby, Akira Miyazaki; Assistant Professor: Yoko Pusavat
Emeritus faculty: Alexander Lipski
Department Secretary: Victoria Nguyen

Students desiring information should contact the department office for referral to one of the faculty advisors. The Asian Studies Program provides a framework for students to explore one or more Asian societies from an interdisciplinary perspective. The program encourages students to integrate the study of Asian peoples across the Pacific with that of Asian American communities in the United States and to support the study of culture and society with appropriate language training.

Through academic offerings of its own and those of 11 cooperating departments, the Asian Studies Program offers the B.A. and M.A. in Asian Studies and a Certificate in Asian Studies. Additional information and advice relative to the program are available through the director of the Asian Studies Program, FO4-178.

Bachelor of Arts in Asian Studies (code 2-8508)

Students choosing an Asian Studies major select one of two options for the degree. The student may concentrate in an area study — a social science and humanities based study of one or more specific Asian societies, such as China, Japan, or India. Or, the student may choose to study Asian American Studies and combine the study of Asian Americans as ethnic minorities with supporting investigation of the countries of historical origin.

Requirements for the Bachelor of Arts:

Required of all students:

A/ST 300IC, 301IC (6 units); three semesters (12 units) of an Asian language, chosen from among the following: CHIN 221A, 221B, 331A; JAPN 221A, 221B, 331A.

Upper Division:

A minimum of 21 units; students should select one of the following two options:

I Area Studies Option Twenty-one units of upper division work, selected from the list of approved electives with the following provisions: (1) no more than nine units shall be taken in a single discipline, such as art or history, (2) no more than twelve units shall be taken that concentrate upon any one area of Asia, chosen from among the following: China, India, Japan, Southeast Asia, the Americas (Asians in America). No more than six units of courses on the Americas can be applied toward this requirement.

II Asian American Studies Option

Lower Division:

ASAM 102 or 220.

Upper Division:

21 units of work, selected from the list of approved electives with the following provisions: (1) 12 units of upper division Asian American studies shall be required including ASAM 310 and 345, (2) of the remaining upper division units, no more than six shall focus on one geographical area of Asia, chosen from among the following: China, India, Japan, Southeast Asia.

Certificate in Asian Studies

A student may earn a Certificate in Asian Studies with a concentration on either China, Japan or India. Where applicable, courses used to meet the certificate requirements also may be used to satisfy the General Education requirement and the major and teaching minor requirements of the cooperating departments.

Requirements for the Certificate in Asian Studies:

1. A bachelor's degree, with a major in a discipline other than Asian Studies. May be completed concurrently.
2. A minimum of two semesters of an Asian language which is to be selected in accordance with the area of concentration.
3. A/ST 300IC, 301IC and 12 units of upper-division work divided among at least three disciplines. These are to be selected in accordance with the area of concentration and in consultation with the student's advisor. No more than six units in any one discipline shall apply towards the Certificate.

Approved courses:

A/ST 300IC, 301IC, 310, 320, 495IC; ANTH 332, 335; ART 113A-B, 466, 467, 468, 469, 470, 497, 611; C/LT 234, 325IC, 326IC, 403; GEOG 312; HIST 382A-B, 383A-B, 384, 386, 401, 406, 487, 488, 682; PHIL 306, 307; POSC 362, 364, 366, R/ST 152, 341, 343, 344, 351, 487; THEA 325IC, 326IC; JAPN 221A-B, 300, 331A-B, 370, 405A-B, 441A-B, 499; CHIN 221A-B, 331A-B, 370, 441A-B, 499.

Master of Arts in Asian Studies (code 5-0508)

The master of arts degree in Asian studies is an interdisciplinary degree offered by the Asian Studies faculty of the cooperating departments. It is especially aimed at those intending to go into teaching, foreign service, or foreign trade.

Prerequisites:

1. A bachelor's degree in one of the fields in social science, humanities, fine arts, or
2. The Certificate in Asian Studies, awarded at CSULB, or its equivalent as evaluated by the director of Asian Studies. An equivalence will, normally, be granted for work in Asian studies at CSULB and/or at other academic institutions, including a minimum of 18 units in no more than four disciplines with a minimum of six units in each of two disciplines of concentration plus two semesters of Asian language. Only courses dealing entirely with Asian studies are acceptable.
3. Other prerequisites to be determined by the director. Students whose undergraduate prerequisites are inadequate will be required to fulfill these deficiencies before advancement to candidacy and will receive unclassified graduate status until all deficiencies are removed.

Advancement to Candidacy:

1. Satisfaction of the general University requirements for advancement to candidacy.
2. Approval of proposed program of study.

Requirements for the Master of Arts:

1. In their first semester of work, students should complete the Writing Proficiency Examination.
2. A minimum of 30 units of approved upper-division and graduate courses including A/ST 610. At least 18 units must be in the 500-600 series composed of units earned at this University in graduate courses, graduate seminars, Directed Research or Thesis. Seminars can be repeated once, but no more than three units of 697 and three units of 695 may be used to satisfy degree requirements. A maximum of six units will be given for A/ST 698 for those following the thesis option.
3. A minimum of three upper-division units in each of two disciplines of concentration must be taken preparatory to seminar work. Students should take at least six units of 500/600 level work in each of the two disciplines or concentrations.
4. A comprehensive written examination in each of the two disciplines of concentration or a thesis.
5. Six units (beyond the BA level) in Chinese or Japanese, to be chosen in consultation with the director.

Upper Division Courses Acceptable for the Master's Degree:

Anthropology

332. Chinese Culture and Society (3)

335. Japanese Culture and Society (3)

Art

466. Buddhist Art of India and Southeast Asia (3)

467. Hindu and Islamic Art of India (3)

468. Early Chinese Art (3)

469. Later Chinese Art (3)

470. Japanese Art (3)

497. Special Studies in Art History (3)

611. Seminar in Art History (3)

Comparative Literature

325IC. Theatre and Drama of India and Southeast Asia (3)

326IC. Theatre and Drama of China, Korea and Japan (3)

403. Studies in Asian Literature (3)

Geography

312IC. East and South Asia (3)

History

382A. Imperial China (3)

382B. Modern China (3)

383A. Traditional Japanese Civilization (3)

383B. Modern Japan (3)

384. Contemporary Japan

385. History of India (3)

386. History of Modern Southeast Asia: Colonial Era to the Vietnam War (3)

406. Asian Women (3)

407. Japan and the U.S. in the 20th Century (3)

487. Social Change and Reconstruction of Japan (3)

488. Chinese Revolution (3)

682. Seminar East Asian History (3)

Philosophy

306. Philosophies of China and Japan (3)

307. Philosophies of India (3)

Political Science

362. Society and National Politics of China (3)

364. Society and National Politics of India (3)

366. Governments and Politics of Southeast Asia (3)

499. *Readings and Conference in Political Science (1-3)

Religious Studies

331IC. Islamic Religion and Culture (3)

341. Buddhism (3)

343. Religions of China (3)

344. Religions of Japan (3)

351. Hinduism (3)

Theatre Arts

325IC. Theatre and Drama of India and Southeast Asia (3)

326IC. Theatre and Drama of China, Korea, and Japan (3)

Asian Languages and Literature

CHIN 331A-B. Intermediate Chinese (4,4)

CHIN 370. Chinese Literature in English Translation (3)

CHIN 441A-B. Advanced Chinese (3,3)

CHIN 490. Special Topics in Chinese (3)

CHIN 499. Directed Studies in Chinese (1-3)

JAPN 331A-B. Intermediate Japanese (4,4)

JAPN 370. Japanese Literature in English Translation (3)

JAPN 405A-B. Conversational Japanese (3,3)

JAPN 441A-B. Advanced Japanese (3,3)

JAPN 490. Special Topics in Japanese (3)

JAPN. 499. Directed Studies in Japanese (1-3)

Courses Offered (A/ST):

Upper Division:

300IC. Traditional Asia (3) F Faculty
Introduction to traditional civilizations of China and India with some reference to Japan. Cultural aspects will be emphasized to illustrate the richness and diversity of Asia.

301IC. Modern Asia (3) S Faculty
Prerequisites: None. Emphasis on the development of Asia since the 18th century and its role in the modern world, with some attention to the experience of Asians in the U.S. Continuity and change; reform and revolution in culture, politics and the economy will be included.

310. United States and Asia (3) F Faculty
Prerequisites: None. This is a course designed to answer the basic question: How is Asia important to the United States and vice versa? Focusing on the post-1945 period and addressing the question of dependence vs. interdependence, four main areas will be examined: (1) key religious, social and political patterns in Asia; (2) cross-cultural images of Asia and America; (3) Asian-U.S. global economic relations; (4) Asian-U.S. strategic and political relationships in both the regional and global context.

***490. Special Topics in Asian Studies (1-3) F,S Faculty**
Topics of special interest in Asian Studies selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated with different topics to a maximum of six units.

***495IC. China Heritage (3) S Li**
Cultural heritage explored through history, philosophy, religion and science, side by side with the fine arts; seen as the totality of a people's humanistic experience. (Lecture, discussion and film.)

Graduate Division:

Graduate course descriptions are found in the departmental listings in which they are offered. Graduate courses applicable for the degree (when the focus is on Asia) are A/ST 610, 695, 697, 698; ART 611; HIST 510, 520, 682, 683; POSC 600, 610.

610. Seminar in Asian Studies (3) F Faculty
Selected topics in Asian studies. Area and discipline of emphasis will vary from year to year. Open to graduate students of Asian studies. Graduate students in other disciplines may enroll with consent of instructor. May be repeated for a maximum of six units.

695. Directed Readings (1-3) F,S Faculty
Prerequisite: Consent of Director of Asian Studies. Readings in Asian studies on an individual basis.

697. Directed Research (1-3) F,S Faculty
Prerequisite: Consent of Director of Asian Studies. Research in Asian studies on an individual basis.

698. Thesis (2-6) F,S Faculty
Prerequisite: Consent of Director of Asian Studies. Planning, preparation, and completion of a thesis in Asian studies.

Black Studies

School of Social and Behavioral Sciences

Department Chair: Skyne Uku-Wertimer
Department Office: Psychology Building (PSY), Room 306
Telephone: 498-4624
Faculty: Professor: Skyne Uku-Wertimer; Associate Professors: Arnett Hartsfield, Jr., Jim C. Robinson, Bede M. Ssensalo; Assistant Professors: Amen Rahh.
Department Secretary:

Students desiring information should contact the department office for referral or the faculty advisor Skyne Uku-Wertimer. The black studies curriculum is designed to provide general knowledge of black culture and history and to offer training for professional work in the black community. It offers programs to serve (1) teachers; (2) those entering a variety of occupations, including social case work, school administration, urban planning, government, recreation, journalism, business, criminology, law, foreign service, communications, speech and linguistics, psychology; (3) majors in other fields, such as history, literature, creative writing, anthropology, who wish to include additional dimensions to their course of study.

Bachelor of Arts in Black Studies (code 2-8425)

Requirements for the Bachelor of Arts

A minimum of 45 units is required for the major in black studies.

Lower Division:

B/ST 110, and three courses selected from the following: B/ST 115, 120, 121, 140, 155, 160, 190, 200, 210, 240, 270A, 270B.

Upper Division:

B/ST 330, 332, 335, and 495, plus 15 units of other Black Studies courses selected in consultation with an advisor.

Social Science Requirement:

Six upper division units from other departments or programs of the School of Social and Behavioral Sciences. These units are in addition to those used to fulfill the requirements of any General Education category.

Requirements for the Concentration in Black Studies for the Bachelor of Arts in Liberal Studies (code 2-0425)

A minimum of 24 units will be required; 15 of which must be upper division.

Lower Division:

B/ST 110, 120, or 121; one course from the following: B/ST 155, 160, 200 or 210.

Upper Division:

Six units from the following (humanities): B/ST 340, 343, 346, or 450; nine units from the following (social sciences): B/ST 304, 325, 330, 332, 335, 337, 400, or 410.

Certificate in Black Studies

Students majoring in other departments of the University but interested in Black Studies may at the same time pursue a program leading to a Certificate in Black Studies. Courses used to meet the certificate requirement may, where applicable, also be used simultaneously to meet General Education requirements or the major and minor requirements of cooperating departments.

Requirements for the Certificate in Black Studies

1. A bachelor's degree with a major in a traditional discipline. (Certificate can be completed prior to or simultaneously with completion of the B.A. requirement.)
2. A minimum of 24 units of which at least 12 must be in upper-division courses, with two or more courses selected from each of the following: Group A: B/ST 110, 210, 325, 330, 332, 335, 370, 420; Group B: B/ST 160, 340, 343, 346, 363, 450; Group C: B/ST 120, 121, 200, 201, 304, 337, 400, 410.

Requirements for the Minor in Black Studies (code 0-8425)

A minimum of 24 units of which at least 12 units must be in upper-division courses, with two or more courses selected from each of the following: Group A: B/ST 110, 210, 325, 330, 332, 335, 370, 420; Group B: B/ST 160, 340, 343, 346, 363, 450; Group C: B/ST 120, 121, 200, 201, 304, 337, 400, 410.

Cross-Cultural Specialist Credential

This is an advanced credential designed to prepare candidates for teaching in intercultural settings. The program, conducted jointly by the Black Studies Department and School of Education, qualifies the holder to obtain employment in the public and private schools as a teacher as defined by the California State Commission for Teacher Preparation and Licensing (Bilingual, Cross-Cultural Section).

Courses (B/ST):

Lower Division:

070. Language Skills (3) F,S
Not open to students with credit in Language Skills 170A. Focuses on intensive development of grammatical skills and expository writing. Primarily for Black students. Credit/no credit only. Counts as part of student's course load but does not carry graduation credit.

110. Introduction to Black Studies (3) F,S Robinson, Ssensalo
Survey of major themes, issues and concepts of Black Studies. Emphasis given to major schools of thought, research materials and sources, and major scholars of the discipline. Special attention will also be given to the historical evolution and academic rationale for Black Studies.

115. Introduction to African Politics (3) S Faculty
A review of recent developments or changes in the government, parties, political ideologies, politics, leadership and political processes in selected African countries.

120. Afro-American History to 1865 (3) F Robinson, Uku-Wertimer
Survey course which presents a description and analysis of African civilizations shortly before the coming of the European. It will also focus on the impact, significance and role played by the African from the colonial period through the American Revolution, to the Civil War.

121. Afro-American History 1865-Present (3) S Uku-Wertimer
Prerequisites: B/ST 120 or permission of instructor. Impact of social, economic and political change on Blacks in America after the Reconstruction period. Black migration, education, cultural development and business enterprises will be examined.

140. Introduction to African-American Literature (3) F,S

A study of selected or representative literature of the African-American writer. Special attention will be given to style, content, methodology and thematic approach.

150. Critical Thinking and the Minority Experience (3)

Provides analytical tools for applying critical thinking to the development of academic skills and to the analysis of social issues. Includes instruction in inductive and deductive reasoning: analyzing types of meaning (denotative vs. connotative) and their relevance to social issues, e.g., racism, sexism, elitism; distinguishing fact from opinion.

155. Afro-American Music (3) F Faculty

Nontechnical survey of African-American music. Some attention given to the impact of social movements on the musician and the music produced. Gospel, jazz and well-known derivatives will be highlighted.

160. Introduction to Black Arts (3) F,S Faculty

A presentation of prevailing themes, methodology, concepts and meaning in African art. Equal time is given to contemporary art and art of recent history. The work of some African artists highlighted as appropriate.

167. Exploitation of the Black Athlete (3) F Rahh

Study of the socio-dynamics of amateur, professional and collegiate sports activity in the United States as it relates to the African-American community. Case studies of well-known Black athletes will also be presented.

170. Language Skills (3) F,S

Not open to students with credit in Language Skills 170B. Prerequisite: successful completion of B/ST 070. Focuses on organizational methods and techniques for writing compositional and expository prose, advanced grammar and some critical reading techniques for term papers. Primarily for Black students.

180. Black Language in America (3) F

Historical, phonological, and sociological aspects of the language of Black Americans; traces Ebonics from early use in trading off west coast of Africa; linguistic development from lingua franca to pidgin and creole; linguistic symbols, terms, and analysis applied to Black English; difference versus deficit theories of learning.

190. Racism in the American Military (3) S Hartsfield

A concise review of the alternate policies of exclusion, restriction, segregation and conscription of the African-American in the armed services.

200. Ancient African Civilizations (3) S Uku-Wertimer

Prerequisite: B/ST 120. A study of ancient African empires and kingdoms. Topics include migration, education, family structure, political institutions, cultural transmission and commercial trade.

201. History of Slavery (3) F,S Uku-Wertimer

Historical examination of the trans-Atlantic slave trade and its impact on Africa and the Western Hemisphere, with major emphasis on the nature of slavery in Africa, Greece, Italy, the Caribbean, the Middle East, South America, and the United States. Slavery's aftermath on social integration in America and other countries.

210. African American Community (3) F,S Robinson

This course will examine the social structure and changes in the community life of African-Americans as compared to other ethnic groups. It will also explore and analyze how institutional and stratification patterns, demographic changes, social movements, and community organizational programs affect Blacks. Several case studies will be presented to underscore the strength and resiliency of the Black community.

240. African and African American Folklore and Culture (3) S Ssensalo

An examination and presentation of material on folklore, folk tales, and folk heroes in the Black community. Some attention also given to Black mythology.

Upper Division:

304. World Colonialism (3) F Uku-Wertimer

A survey of comparative historical and cross-national analysis of policy processes in Western Europe and America that influenced non-Western countries of the world with special focus on Africa, India, and China.

310. Black Male and Female Relationships (3) S

A comprehensive study of male/female patterns of interaction in the Black community. Some attention given to institutional impact, role changes and projected images of relationships.

325. Psychology of Minorities (3) F,S Rahh

Prerequisite: B/ST 110 or PSY 100. This course develops the concept of a minority psychology. Using comparative techniques and guest lecturers, this course introduces the student to common psychological consequences in the experience of being a minority person.

330. Politics of the Black Community (3) F,S Hartsfield, Rahh

Prerequisite: B/ST 210. Study of the perspectives, styles, problems and dynamics of political activity in the Black community.

331. Black Juvenile (3) F,S Hartsfield, Rahh

Prerequisite: B/ST 210 or consent of instructor. Critical approach to the problem of juvenile justice in the black community.

332. Civil Rights and the Law (3) F,S Hartsfield

Designed to provide the student with a basic understanding of the interaction between the American legal system and civil rights of Blacks, other minorities, women, and the general citizenry.

335. Economic Development in the Black Community (3) F,S Robinson

Prerequisite: B/ST 121. Development of business and banking institutions in the Black community. Some attention given to the impact of external factors on development.

337. Cultures of the Pan-African Peoples (3) F,S Uku-Wertimer

Prerequisite: B/ST 200 or consent of instructor. Presentation of a cultural map of African people emphasizing geography, migration and cultural similarities.

340. Research Topics in African-American Literature (3) F,S Ssensalo

Prerequisite: B/ST 140. In-depth presentation and analysis of selected issues and dominant personalities in African-American literature; personality and issue to be matched.

343. African and Caribbean Literature (3) F,S Ssensalo

General survey of contemporary African, Caribbean, and Afro-American literature within the context of the political, social, economic, and cultural movements. Comparison of Pan-African literature and Western Literature.

345. Politics of Black Power (3) F Rahh

Systematic analysis of the Black Power movement of the 1960's, including contributions and contradictions of major organizations, leadership, and ideologies.

346. Black Theatre (3) F,S Ssensalo

An introductory survey course of Black Theatre as an historic medium, profoundly revealing in its humanistic, literary, social and cultural heritage as it relates to Africa, America and the Caribbean.

353. Black Religion (3) F Ssensalo

The nature and use of religion in Africa and their manifestations in historical and contemporary African-American communities.

360. African-American Crafts to 1830 (3) F Faculty

Prerequisite: B/ST 160 or consent of instructor. Presentation of the carry-over effects of African crafts in the work of the African-American craftsmen.

361. African-American Crafts Since the 19th Century (3) S

Prerequisite: B/ST 160 or consent of instructor. A presentation of the artistry and skills of the African-American craftsmen from the beginning of the industrial revolution to 1920. Information on changes in the role of the craftsmen and the types of objects produced will also be given.

363. History of African Art (3) F,S Faculty

No Prerequisite. Survey of African art from antiquity to the present, with principal focus on sub-Saharan art.

370. Black Images in the Mass Media (3) F,S Robinson

Prerequisite: B/ST 121. Examination of the portrayal of Black people in the mass media, past and present. Primary emphasis on newspapers, radio, films and television.

375. Literacy for the Bidialectal and Educationally Handicapped (3) S

Covers theories of literacy, e.g. Freire, Lauback, Szwed; successful literacy methodologies; review of appropriate attitudes for literacy tutors/teachers; characteristics of dialects spoken by the illiterate; cross cultural learning and teaching styles, causes of illiteracy; and assessment of literacy. A field experience is required.

380. African Political Theory (3) S Faculty

Prerequisite: B/ST 115. Examination of theorists and theories which shape African political philosophy. Special attention given to the concepts of Pan-Africanism, African socialism, Negritude and revolution.

381. Blacks and Party Politics (3) S Rahh

An analysis of Black participation in the U.S. political party process. Special features will include information on Black participation in the Republican, Democratic and third-party organizations. Material and discussion on independent Black political party efforts will also be included.

400. Afro-American Social Thought (3) S Faculty

Survey of African-American intellectual history, with emphasis on social theories and opposing schools of intellectual thought.

404. Contemporary Issues of the Third World Nations (3) F,S Rahh

Study of the shifting power and international status of the Black world. Geo-politics and the diplomatic policies of selected countries will be highlighted.

410. The Black Family (3) F

Prerequisite: B/ST 325 or consent of instructor. A systematic study and a social historical analysis of the structure and function of the Black family in the United States. There will also be a sociological/theoretical analysis and review of the models of family units, roles and interpersonal relations in society. The theoretical perspective will provide a framework to compare and contrast the Black family and other family units in America.

420. Black Children in Public Schools (3) F,S

Theories, concepts and principles relating to the intellectual growth, development and learning of Black children.

421. Teaching Black Children (3) S

Application of information, theories, concepts and principles relative to teaching Black children. Field experiences in a variety of settings which provide opportunities for students to work with Black children within an educational setting. (Discussion 2 hours, field work 3 hours.)

422. Counseling African Americans (3) F Faculty

Prerequisites: upper-division standing or permission of instructor. Examination of current theories of counseling; theoretical issues and special problems encountered in counseling African Americans. Goals, processes and techniques of counseling.

423. Problems in Psychological Assessment of African Americans (3) F Faculty

Prerequisites: candidates must have a working knowledge of statistical concepts, upper-division standing in Black Studies or permission of instructor. Examination of issues, problems, and practices in the assessment of African American children.

424. Advocacy for Black Child Mental Health (3) S Faculty

Prerequisites: Upper-division standing or consent of instructor. Examination of the essential mental health needs of Afro-American children, their legal and educational rights as well as preventive and remedial measures. Throughout the course, emphasis will be placed on many faces of advocacy — the building of a system of delivery of human services at neighborhood levels for vital preventive and remedial needs.

432. Advanced Studies in Afro-American Music (3) F,S Faculty

Prerequisite: B/ST 155. Study of the development, evolution and essence of Afro-American music in the 20th century from perspectives of Afro-American social and cultural history.

430. African Political Leadership in the Twentieth Century (3) S

The course is a critical examination of Africa's search in the 20th century for national liberation and cohesion, collectively built institutions, movement/parties, and ideological self-definition. A comparative study of traditional African leadership concepts and/or styles, and modern forms that have evolved since contact with the Europeans, will be undertaken. Focus will be on selected countries and major African leaders in Lusophone, Francophone, and Anglophone Africa. The content of the leaders' ideas will be analyzed; socio-politico-economic forces giving rise to those ideas will be studied.

450. Black Writers Workshop (3) S Ssensalo

Prerequisite: ENGL 100, B/ST 170, or equivalent. This course requires extensive writing in four major areas: poetry, drama, fiction and documentaries. It assumes that technical or grammatical problems of writing have been taken care of and focuses on themes which are Afro-centric.

451. Black Legal Remedies (3) S Hartsfield

Prerequisite: B/ST 331 or 332. A review of current or recent laws and court decisions which directly affect the African American. Issues of redress, judicial procedure and obtaining assistance from law enforcement agencies will be covered in considerable detail.

452. Ecology of Black Crime (3) F Hartsfield, Rahh

Prerequisite: B/ST 210, 331 or 332. Study of the interrelationships between the black criminal, the minority community and the criminal justice system.

460. African Thought (3) F Uku-Wertimer

Prerequisite: Background knowledge of Africa from history, political science, anthropology or sociology is highly recommended. Analysis of philosophical and religious systems of Africa from antiquity to present.

463. Black Images in the Ancient Mediterranean World (3) S

Black and mixed black-white types as represented by artists from pre-classical Greece to the fall of Rome is traced in a comprehensive survey of their roles in ancient Mediterranean society and illustrated in art objects.

475. Racism and Sexism: An Analytical Approach (3) F,S Uku-Wertimer

Prerequisite: B/ST 332. An examination of institutions and a study of legislation which has been written and implemented in consequence of racism and sexism in American society. Social theories used to support concepts of racism and sexism will also be presented.

490. Special Topics in Black Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in black studies selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

495. Research Methods in Black Studies (3) F,S Robinson

Prerequisites: B/ST 110, SOC 255 or equivalent statistics course, and six units upper-division work in Black Studies. This course is for the Department major. It will present information on the use of scientific methods in Black Studies, research theory, research design, sampling, measurement and science techniques. It will also focus on instrument construction as well as test reliability and validity.

499. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Permits individual students to pursue topics of special research interest. May be repeated to a maximum of six units.

Computer Studies

School of Social and Behavioral Sciences

Director: Glenn Walker
Department Office: Social Science/ Public Affairs (SPA), Room 207
Telephone: 498-4986

The Computer Studies Program operates the Social Science Computer Laboratory in SPA 207, and offers the following certificate program and courses.

Certificate in Computer Applications in the Liberal Arts

This program offers a broad background in applications of computers to prepare students to be effective computer users. It involves 24 to 27 units of coursework covering a variety of areas of computer use. Skills to be acquired include:

- Knowledge of computers and information systems sufficient to permit graduates to communicate effectively with computer experts.
- Ability to serve as a liaison between colleagues who lack computer expertise and technical computer personnel.
- Ability to run applications programs and explain the results to colleagues.
- Skills in the use of information systems.
- Ability to identify needs for and benefits derived from implementation of computer systems in an applications area.

Requirements for the Certificate in Computer Applications:

1. A bachelor's degree (may be completed concurrently).
2. Completion of at least eight approved computer applications courses (with a grade of C or better).
3. Approval from the Director of the Certificate Program for the student's course selections.

The coursework for this Certificate is organized into several categories. The first four categories contain required courses and students must complete all of the courses in the first four categories for a total of 15 or 16 semester units. The remaining categories include elective courses. Students must take four of these courses, including at least one from each category, for a total of twelve semester units. It is acceptable to substitute upper-division courses on computer applications which apply directly to the student's major area of study (or a directed studies course for this purpose) for one of the elective categories. Such substitutions require prior approval of the Director of the Program.

Most students will take nine courses (27-29 units) in order to obtain the Certificate. Students entering the program with sufficient prior computer experience may omit the introduction to Computers course if they receive approval from the Director of the Program. Thus, these students will only need to complete eight courses for the Certificate. Students seeking the Certificate in conjunction with a bachelor's degree may also count courses taken to complete the Certificate toward completion of their major (or the University general education requirements) where applicable.

Required Course Categories:

Students must complete all of the courses in these categories for a total of 15 or 16 semester units.

1. Introduction to Computers and Computer Programming: C/ST 200 or equivalent (3 units), and one of the following: C/ST 280 (3 units), or MATH 272 (4 units), or MATH 273 (3 units).
2. Social Impact of Computers: CSE 345 (3 units)
3. Seminar in Computer Applications: C/ST 493 (3 units)
4. Information Systems: IM 440 (3 units)

Elective Course Categories:

Students must complete four of the following courses, one of which must be taken from each category, for a total of 12 or 13 semester units:

1. Human/Computer Interface: C/ST 311 or 312, ENGL 317, or IM 411 (3 units each).
2. Data Analysis: C/ST 210 or 477, or ECON 380, or GEOG 490 (Quantitative Methods), or PSY 310 (3 units each).
3. Specialized Applications: ECON 486 (3 units) or ENGL 427 (4 units), or PSY 418, or IM 441 (3 units each).

Courses (C/ST):

200. Introduction to Data Analysis (3) F,S Faculty

A course for beginners in computer-aided data analysis and computer programming. Topics covered include principles of scientific research, data coding, entry, editing, and analysis, plus programming techniques. Students will use the Statistical Package for the Social Sciences to analyze research data and will learn to program in BASIC or Pascal.

210. Computer Statistics (3) F,S Hubbard

Prerequisite: Knowledge of mathematical procedures covered in elementary high school algebra. Use of on-line SPSS (Statistical Package for the Social Sciences) with statistical applications. Descriptive statistics; probability distributions; tests of hypotheses and estimation; contingency tables and their analysis; correlation and regression; nonparametric techniques.

280. Introduction to APL (3) F Walker

Fundamentals of the computer programming language APL, including on-line experience using APL interactive terminals. Examples and assignments covering applications to a wide variety of different fields. No previous computer experience necessary.

311. Human Interface Design (3) F Walker

Prerequisite: C/ST 200 or equivalent. Design of computer software and documentation to facilitate ease of use. Incorporation of help files and efficient error handling techniques into the design of systems. Application of social-psychological principles to these objectives.

312. Nonnumeric Information Processing (3) F,S Faculty

Prerequisite: C/ST 200 or equivalent. Use of computers as tools to expedite information processing tasks. Topics covered include text editing, word processing, information retrieval and communication systems. Applications for personal use and in the office environment.

477. Advanced Data Analysis (3) S Faculty

Prerequisite: One course in research methods, two courses in statistics, plus a course in statistical software (C/ST 210 or equivalent). Use of SPSS and BMDP to perform a wide variety of data analysis methods including multivariate analysis. Sample design, data screening and information retrieval techniques with special consideration for handling large data bases.

490. Special Topics in Computer Studies (3) F,S Faculty

Topics of special or current interest in computer studies selected for intensive study. [Lecture/Discussion: 3 hours] May be repeated to a total of six (6) units.

493. Seminar in Computer Applications (3) S Faculty

Prerequisite: Senior standing and at least three computer classes. The culmination of work for the Certificate in Computer Applications. Students will study computing facilities available in their chosen application area, prepare oral and written reports of their findings and demonstrate a selected example computer program.

Economics

School of Social and Behavioral Sciences

Department Chair: Joseph P. Magaddino
Department Office: Social Science Public Affairs (SS/PA), Room 361A
Telephone: 498-5061
Faculty: Professors: Marion S. Beaumont, Charles L. Cole, Simeon J. Crowther, Eldon J. Dvorak, Constantine Glezakos, Tomotaka Ishimine, Joseph P. Magaddino, Marshall H. Medoff, Robert F. Rooney, Elbert W. Segelhorst, Gene R. Simonson, Andrew Stern; Associate Professors: Roy C. Anderson, Michael J. Farrell, Darwin C. Hall, Dennis D. Muraoka, Iva Lee Skov, Davinder Singh.
Assistant Professors: Alejandra C. Edwards, Judith A. Roberts, John F. Scoggins.
Emeritus Faculty: J. Richard Powell, Robert E. Strain
Department Secretary: Rosalinda O'Brien

Students desiring information should contact the department office for referral to one of the faculty advisors: **Credential Advisor:** Skov; **Undergraduate Advisor:** Muraoka; **Graduate Advisor:** Segelhorst

When resources are scarce, difficult choices must be made on how resources are to be divided among competing uses. Economics is a social science that addresses the allocation of scarce resources. When applied to individuals, economics attempts to explain and predict the behavior of individuals as consumers, as managers of firms and as government officials. When applied to society as a whole, economics attempts to explain and predict the economy's total output, level of employment and price level (inflation). The tools of economics can be used to analyze and predict the effects of changes in the economic or institutional environment on the behavior of individuals or society.

Bachelor of Arts in Economics

The bachelor of arts degree with a major in economics prepares the student to qualify for a variety of positions in business and government. The degree also provides the foundation for teaching in elementary and secondary schools and for more advanced study in economics, business, law and other related fields.

Requirements for the Bachelor of Arts in Economics (code 2-8510)

Lower Division:

ECON 201, 202, ACCT 205, C/ST 200, and MATH 115B. Under certain circumstances, the student who declares Economics as a major in upper-division status may, with departmental consent, substitute ECON 300 for ECON 201 and 202.

Upper Division:

ECON 310, 311, 380 and a minimum of six additional upper division economics courses, exclusive of ECON 300, 303, 305IC, 308, 309IC, 334, 352, 495, and 499.

The Department also requires a minimum of two courses outside of Economics (totaling six or more units), in addition to courses fulfilling any categories of the General Education requirement. Students may take any upper-division courses from the departments listed below, or any of the following lower division courses: ANTH 100; GEOG 100; HIST 131, 132; MATH 117, 122, 123, 224, 246; POSC 201; PSY 100; S W 220; SOC 100.

While students may freely choose from the Department's upper division courses, exclusive of the courses listed above, the Department strongly recommends that the student consult with the undergraduate advisor in planning his or her program. The Department is especially concerned that students select a program of study that not only satisfies their intellectual curiosity but also serves their career aspirations. The following program areas* have been devised to aid students in selecting upper division courses:

Business Economics:

Students interested in preparing for a career in business or government are advised to select at least two courses from Group I: Business Economics — ECON 320, 333, 422, 430, 432, 434, 455; at least one course from Group II: Quantitative Economics — ECON 420, 481, 486; and at least one course from Group III: Accounting-Finance — ACCT 310, 410, ECON 433, FIN 362, 464, or C E 406.

Pre-Law Economics:

Students interested in preparing for a career in law are strongly recommended to choose from the following: ECON 313, 320, 430, 432, 434, 450, 451, and 455.

General Economics:

Students interested in obtaining a general background in economics are encouraged to take at least one course from three of the following concentrations.

Group I:

Economic History, Systems and Institutions: ECON 313, 360, 361, 368.

Group II:

International Trade and Development: ECON 465, 471, 472.

Group III:

Human Resource Economics: ECON 441, 444, 445.

Group IV:

Public Economics: ECON 436, 437, 450, 451.

Group V:

Quantitative Economics: ECON 420, 422, 481, 486, 583.

Theoretical Economics:

Students wishing to prepare for graduate training in economics are advised to select from ECON 303, 320, 420, 481, 486, and 583. In addition, students are recommended to enroll in the following mathematics courses: MATH 122, 123, 224, 246, 380, and 381. Students considering graduate study in economics should consult an advisor or the Chairman early in their senior year.

*Not all programs are available for students enrolled exclusively in the evening. Evening students should seek counseling from the undergraduate advisor in planning their program.

Minor in Economics (code 0-8510)

The economics minor is particularly suitable for students planning careers in primary or secondary education or students desiring a broad-based introduction to the methods of economic analysis. A minimum of 21 units which must include ECON 201, 202, 310; either 311 or 320; one of the following: ECON 313, 360, 361, 368; and at least two upper-division electives, of which at least one is at the 400 level. Under certain circumstances the student who declared Economics as a minor in upper-division status may, with departmental consent, substitute ECON 300 for ECON 201 and 202.

Minor in Business Economics (code 0-2775)

The minor in business economics is equally suitable for students pursuing baccalaureate degrees in non-business and business fields. The minor provides students with a strong concentration in the techniques of economic analysis most closely related to business decision-making. A minimum of 24 units which must include:

Lower Division:

ACCT 205 or MATH 115B or a departmentally approved computer science course; ECON 201, 202. (Under certain circumstances the student who declares Business Economics as a minor in upper-division status, may, with departmental consent, substitute ECON 300 for ECON 201 and 202.)

Upper Division:

ECON 310 or 333, 311 or 320, and any three of the following: ECON 380, 420, 430, 432, 434.

Concentration in Economics for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required; 15 of which must be upper-division, excluding ECON 305IC and ECON 309IC.

Required courses

ECON 201, 202, 308 and 360.

Note: With departmental permission, ECON 300 and an additional 3-unit course in Economics may be substituted for ECON 201 and 202.

Master of Arts in Economics (code 5-8510)

The master of arts degree in economics is designed to provide academic preparation for positions in industry, government, consulting agencies and teaching. The emphasis is on the immediate application of more advanced principles of analysis to business, management and government. Candidates are responsible for observing the general requirements stated in the Bulletin as well as requirements specified by the Economics Department. Detailed information on requirements may be obtained from the departmental graduate advisor.

A limited number of graduate assistantships are available to qualified students.

Prerequisites

1. A bachelor's degree with a major in economics, or
2. A bachelor's degree with 24 units of upper division courses comparable to those required of a major in economics at this University. (Deficiencies will be determined by the Economics Department.)
3. A minimum undergraduate grade point average of 3.0 (B) in upper division economics courses. (A student who fails to meet this requirement may submit Graduate Record Examination scores on the verbal, quantitative and advanced economics sections, and petition the Economics Department for a waiver.)
4. Graduate students must consult with the graduate advisor for information concerning department procedures and for approval of their course of study before entering the master of arts program in economics.

Advancement to Candidacy

1. Satisfy the general requirements of the University for advancement to candidacy.

Requirements for the Master of Arts

1. Thirty units of upper division and graduate courses approved by the Economics Department (courses approved by the Economics Department (courses marked with an asterisk), of which 24 must be in economics with a minimum of 15 units in the 500 and/or 600 series. All students must develop two fields of concentration in economics, including economic theory (micro and macro).
2. Satisfactory completion of ECON 581, 586 and 583.
3. A comprehensive examination in economic theory and successful completion of course work in an elective field of concentration with the grade of B or better in the appropriate 600-level course; or completion of a comprehensive examination in economic theory and a thesis.

Courses (ECON):

Lower Division:

201. Principles of Economics (3) F,S Faculty

Business organization, price theory, allocation of resources, distribution of income, public economy. (Microeconomics.)

202. Principle of Economics (3) F,S Faculty

Money and banking, price changes, national income analysis, business cycles, economic growth, fiscal and monetary policy, international trade. (Macroeconomics.) (Not open to students with credit in Economics 200.)

Upper Division:

300. Fundamentals of Economics (3) F,S Faculty

Designed for non-majors. Presents basic training in economics for social studies teachers or citizens who wish to exercise a reasoned judgment about economic issues in public affairs. Content generally same as ECON 201, 202 in condensed form. Not open to students with credit in ECON 201 or 202 except by consent of the Economics Department.

303. Current Economic Thought (3) S Simonson

Covers ideas and philosophies of famous economists and leading present-day schools of economic thought. Includes study of main ideas of such important economic philosophers as Galbraith, Myrdal, Samuelson, Friedman, Sweezy, Mises, Hayek, Rothbard and several others. Emphasis on modern institutionalist school, post-Keynesian school, Chicago monetarist school, neo-Marxist radical school and libertarian school.

305IC. Resources and Man (3) S Rooney

Occurrence and setting of non-renewable resources: ore deposits, fuels and water. Extraction and conservation. Demand for resources: Economic and population growth, technology, pollution control, recycling, imports and exports. Taxation and government regulation of mineral industries. (Same course as GEOL 305IC.)

308. Consumer Economics (3) F Skov

Consumer demand; advertising and other influences affecting demand; consumer sovereignty; patterns of consumer expenditure; the consumer protection movement; consumer taxes, family incomes and related public policy issues.

309IC. Consumer Survival in the Legal and Economic Environment: Selected Topics (3) F,S Buckner, George, Skov (D.2,E)

A general consumer survival course with consideration of selected topics including the consumer as buyer of goods and services, the consumer as an investor, and the consumer in personal partnerships.

310. Microeconomic Theory (3) F,S Faculty

Prerequisites: ECON 201, 202, and MATH 115B. Analysis of economic concepts and their applications to business situations. Emphasis on supply and demand analysis, costs of production, variations of competition and monopoly, revenues, prices, profits and losses, and other aspects of the operations of the business enterprise.

311. Macroeconomic Theory (3) F,S Faculty

Prerequisites: ECON 201, 202, and MATH 115B. Determinants of levels of income, employment, and prices; of secular and cyclical changes in economic activity; and or the effects of public policies upon aggregative economic experience.

313. History of Economic Thought (3) F,S Cole, Simonson

Prerequisites: ECON 201 and 202, or 300. Evolution of economics as a science. Doctrines of the different schools of economic thought. Study of the contributions of outstanding economists.

320. Money and Banking (3) F,S Dvorak, Farrell, Scoggins

Prerequisites: ECON 201, 202 and MATH 115B. Nature and functions of money and its relation to prices; the monetary system of the United States; the functions of banks, bank credit, foreign exchange and monetary control.

333. Managerial Economics (3) F,S Faculty

Prerequisites: ECON 201, 202 and MATH 115B (core requirement for business students); Applications of microeconomic and macroeconomic theory to managerial decisions and planning. Analysis of the firms' resource and product markets. Production functions; cost and output decisions. Pricing strategies under various market constraints. Investment in fixed assets. Business forecasting. Emphasis upon the calculation of solutions to operational problems of the business firm.

334. Environmental Economics (3) S Muraoka, Rooney

Relationship to economic policy and environmental degradation of the goal to maximize wealth; historical and economic roots of the goal to maximize wealth; economic and population growth and the environment; implications for environmental protection policy; alternative economic goals implied by increasing environmental and natural resource constraints.

352. Public Economy (3) F Beaumont

The public economy: alternative economic models; social goals and fiscal institutions; the fiscal decision process; the theory of public choice; government expenditures, taxation, and public debt; overview of state and local fiscal systems; intergovernmental fiscal relations.

360. American Economic History (3) F,S Crowther, Simonson

Prerequisites: ECON 201 and 202, or 300. Economic analysis of growth and welfare in the American economy from the beginnings of industrialization to the present, with emphasis upon the material and social factors affecting the transformation of our economy since the early nineteenth century.

361. European Economic History (3) F Crowther

Prerequisites: ECON 201 and 202, or 300. Economic analysis of the principal features of the European economy from the Industrial Revolution to the present, with emphasis upon the problems of economic growth, capital formation and technological and demographic change in this era.

363. Latin America and Industrialization (3) S Edwards

Prerequisites: ECON 201, 202, OR 300. Economic, political and historical analysis of process of economic development and industrialization of Latin America. Analyzes different approaches to economic development; the relationship between economic growth and international trade; the import substitution policies of industrialization and the markets liberalization efforts of the late 70'S. Case study of one country.

368. Comparative Economic Systems (3) S Skov

Handling of economic problems in differing national and ideological contexts. Combines an overall conceptual framework with the study of specific national approaches.

380. Economic Statistics (4) F,S Faculty

Prerequisite: MATH 115B. Elementary statistical analysis of economic data, probability theory, sampling, distributions, statistical inference, testing of hypotheses, simple linear regression and correlation, time series, index numbers. [Lecture 3 hours, laboratory 2 hours]

*420. Forecasting (3) F Hall, Roberts, Stern

Prerequisite: ECON 311 or 320. Principles and methods of forecasting. Evaluation of the reliability of existing forecasting techniques. Also covers use of the macroeconomic model as a basis for forecasting and the role of forecasts in the formulation of national economic policy.

*422. Macroeconomics for Management (3) S Beaumont

Prerequisites: ECON 311 AND C/ST 200. Managerial applications of macroeconomic concepts. Emphasis on developing tools to analyze and predict aggregate economic activity and on promoting understanding of interrelationships and interdependencies of the macroeconomic environment for managerial decision making. Topics include: macroeconomic goals and efficient management; measurement and sources of economic data; modeling the macroeconomy; structural, or supply-side, changes affecting the macroeconomy; business cycle forecasts and the use of economic indicators; econometric forecasting, input-output analysis.

*430. Industrial Organization (3) F,S Cole, Scoggins

Prerequisites: ECON 201 and 202, or 300. Exploration of corporate economics. The structure, behavior and performance of the relatively few large enterprises that originate more than two-thirds of the GNP of the U.S. An economic analysis of the arguments for and against 'big business.' Implications of separation of ownership and control Corporate social responsibility and the profit motive. The dilemma of size versus competition.

*432. Economics of Antitrust (3) F,S Cole, Rooney

Prerequisites: ECON 201 and 202, or 300. The attempt of government to produce superior economic practices and results by the legal imposition of purportedly more competitive market structures and behavior patterns on business firms. An economic analysis of the leading judicial decisions comprising the modern law of antitrust. A rigorous examination of the underlying presupposition of antitrust that competition is the best model for economic activity. The future of antitrust including a discussion of proposals for legislative overhaul, including repeal or existing antitrust law.

*433. Capital Theory and Financial Analysis (3) S Muraoka

Prerequisite: ECON 333 or consent of instructor. Capital budgeting under conditions of certainty and uncertainty, investment criteria, risk analysis, optimal capital structure, mergers and consolidations, inventory theory, macroeconomic influences on managerial economics.

*434. Economics of Regulation (3) S Cole, Rooney

Prerequisites: ECON 201, 202, or 300. The attempt of government to intervene in the existing market sector for the purpose of producing more competitive and socially acceptable practices and results while retaining the efficiency of large-scale economic organization. A comprehensive survey of the past, present and future of the political regulation of economic and business activity. Consideration of the rationale for regulation and deregulation and the creation, design and removal of regulatory practices. The changing concept of the public interest.

436./536. Urban Economic Problems (3) F Segelhorst, Skov

Prerequisites: ECON 201, 202, or 300. Intensive study and analysis of selected urban economic problems. Students prepare reports for class discussion, proposing policy solutions for such problems as poverty, political fragmentation, segregated housing and traffic congestion.

437./537. Urban and Regional Economics (3) S Segelhorst, Skov

Prerequisites: ECON 201, 202, or 300. Examines the location, spatial organization, economic adjustment and development of urban and metropolitan regions. Application of analytical tools to the problems of the Los Angeles region.

*441. Labor Economics (3) F Anderson, Edwards, Medoff, Singh

Prerequisites: ECON 201 and 202, or 300. Manpower resources and their utilization, with particular reference to labor unions, collective bargaining and related public policies. Effects of these institutions on production, employment, prices and patterns of income distribution.

*444. Economics of Poverty (3) S Singh

Prerequisites: ECON 201, 202, or 300. Incidence and causes of poverty in the United States. Welfare and other programs designed to alleviate poverty. Procedures stress individual studies and reports.

*445. Economics of Health (3) F Faculty

Prerequisite: ECON 201 or 300. Analysis of health as an economic good. Health services as scarce resources. Use of tools of economic theory in study of special problems of health resources, markets, manpower shortages, non-profit enterprises, insurance programs and Medicare. Procedures stress individual studies and reports. Not open to students with credit in ECON 345.

*450. Public Sector Economics (3) F Beaumont, Magaddino, Roberts

Prerequisites: ECON 201, 202, or 300. The economic role of government. Analysis of the theory of public goods. Criteria for efficient allocation of resources between the private and the public sector. Possible responses of government externalities, such as environmental degradation. Emphasis of the allocation and distribution effects of government expenditures and taxation. Not open to students with credit in ECON 350.

*451. Economics of State and Local Governments (3) S Beaumont, Roberts

Prerequisites: ECON 201, 202, or 300. State and local fiscal systems; economic analysis of government functions, revenues and intergovernmental relations; implications for regional development. Not open to students with credit in ECON 351.

455. Law and Economics (3) S Magaddino, Roberts

Prerequisite: ECON 201 and 202, or consent of instructor. Analysis of economic concepts and their application to law and legal institutions. Emphasis on property law, contract law, accident law, crime control and judicial administration.

464. Natural Resource Economics (3) F Hall, Muraoka

Prerequisites: Economics majors — lower-division requirements; other majors — consent of instructor. Microeconomic and capital theory applied to problems of conserving and managing natural resources. Analysis of public policies affecting renewable and nonrenewable resources including price controls including price controls, taxation and leasing. Representative topics include: forestry, fishery, energy, water, and mineral economics.

465./565. Economic Development (3) F Edwards, Glezakos, Farrell

Prerequisites: ECON 201, 202, or 300. Economic and social factors underlying economic development. Analysis of problems associated with the economic growth of the less developed countries. Evaluation of development policies. Not open to students with credit in ECON 365.

471./571. International Economics (3) F Ishimine

Prerequisites: ECON 201, 202, or 300. International trade and exchange rate theory. Types of trade control: tariffs, quotas, exchange manipulation, monopolies. Basic U.S. and European commercial policies since 1930. Not open to students with credit in ECON 370.

472. /572. International Trade and Finance (3) S Ishimine, Stern

Prerequisite: ECON 471. Pure theory of trade. Consequences of balance of payments disequilibrium for national income and prices. Tariffs, customs, unions and the theory of commercial policy. Foreign exchange market and international financial institutions. Not open to students with credit in ECON 470.

481./581. Intermediate Economic Statistics (4) F Glezakos, Hall, Medoff, Singh

Prerequisite: none. A rigorous treatment of statistics emphasizing aspects relevant to economics. Statistical inference, probability distributions, application of simple and multiple regression analysis to economic problems, analysis of variance and structural analysis of time series. (Lecture 3 hours, laboratory 2 hours.)

486./586. Introduction to Econometrics (3) S Glezakos, Hall, Medoff, Roberts

Prerequisites: MATH 115B, ECON 380, or consent of instructor. Elementary mathematical expression of economic theory. Combined use of mathematics and statistics to solve economic problems. Use of econometric models for formulation economic policy. (Lecture 3 hours, laboratory 2 hours)

*490. Special Topics in Economics (3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in economics selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

*491. Senior Seminar in Economics (3) F,S Faculty

Prerequisites: Senior status, ECON 481 or 486, and consent of the instructor. Provides the opportunity for students to integrate their knowledge of economics, statistics-econometrics and computer studies. Designed as a seminar in research where students will be expected to write a paper and present their research results orally. Research topics must be approved by the instructor.

495. Field Studies Practicum (3 or 6) F,S Magaddino

Prerequisites: ECON 310 or 333 and consent of instructor. Observation and practical experience, at a managerial level, in an appropriate business or government enterprise. Applications for permission to enroll must be filed with the Economics Department at least six weeks prior to beginning of the semester involved. Course may be repeated for a maximum of six units.

499. Directed Study (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent study under the supervision of a faculty member. May be repeated for a maximum of six units of credit.

Graduate Division:

500. Business Economics (3) F,S Faculty

Workings of the price system in the allocation of resources, and the determination of the level and fluctuations of aggregate economic activity, with special emphasis on the role of business enterprise in the economy. Analysis of the economic implications of various forms of industrial organization and the application of public policy to business activity, including antitrust policy and regulation. Not open to students majoring in economics.

510. Advanced Microeconomics (3) F Muraoka, Rooney

Prerequisites: ECON 310, consent of instructor. Applications of microeconomic theory. Detailed examination and analysis of particular markets and contemporary issues in light of economic theory. Specific emphasis on policy analysis for government and business decisions.

511. Advanced Macroeconomics and Forecasting (3) S Stern

Prerequisites: ECON 311, consent of instructor. Applications of macroeconomics, monetary and forecasting theory to operational management and planning decisions of government and business.

536./436. Urban Economic Problems (3) F Segelhorst, Skov

Prerequisites: ECON 201, 202, or 300. Intensive study and analysis of selected urban economic problems. Students prepare reports for class discussion, proposing policy solutions for such problems as poverty, political fragmentation, segregated housing and traffic congestion.

537./437. Urban and Regional Economics (3) S Segelhorst, Skov

Prerequisites: ECON 201, 202, or 300. Examines the location, spatial organization, economic adjustment and development of urban and metropolitan regions. Application of analytical tools to the problems of the Los Angeles region.

565./465. Economic Development (3) F Edwards, Glezakos, Farrell

Prerequisites: ECON 201, 202 or 300. Economic and social factors underlying economic development. Analysis of problems associated with the economic growth of the less developed countries. Evaluation of development policies. Not open to students with credit in ECON 365.

571./471. International Economics (3) F Ishimine

Prerequisites: ECON 201, 202, or 300. International trade and exchange rate theory. Types of trade control: tariffs, quotas, exchange manipulation, monopolies. Basic U.S. and European commercial policies since 1930. Not open to students with credit in ECON 370.

572./472. International Trade and Finance (3) S Ishimine, Stern

Prerequisite: ECON 471. Pure theory of trade. Consequences of balance of payments disequilibrium for national income and prices. Tariffs, customs, unions and the theory of commercial policy. Foreign exchange market and international financial institutions. Not open to students with credit in ECON 470.

581./481. Intermediate Economic Statistics (4) F Glezakos, Hall, Medoff, Singh

Prerequisite: none. A rigorous treatment of statistics emphasizing aspects relevant to economics. Statistical inference, probability distributions, application of simple and multiple regression analysis to economic problems, analysis of variance and structural analysis of time series. (Lecture 3 hours, laboratory 2 hours.)

583. Mathematical Economics (3) SS Glezakos

Prerequisites: ECON 310, 311, MATH 115 or consent of instructor. Applications of calculus, linear algebra and other mathematical tools in formulating and solving economic problems. Not open to students with credit in ECON 483.

586./486. Introduction to Econometrics (3) S Glezakos, Hall, Medoff, Roberts

Prerequisites: MATH 115B, ECON 380, or consent of instructor. Elementary mathematical expression of economic theory. Combined use of mathematics and statistics to solve economic problems. Use of econometric models for formulation economic policy. (Lecture 3 hours, laboratory 2 hours)

597. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Intensive reading and/or practical research in economics.

636. Seminar in Urban and Regional Economics (3) S Segelhorst

Prerequisites: ECON 436 or 437, consent of instructor. Applications of analytical tools to selected topics and problems in urban regional economics and finance.

640. Seminar in Labor Economics (3) F Anderson, Edwards

Prerequisites: ECON 441, consent of instructor. Selected topics in the economics of labor markets and industrial relations.

650. Seminar in Public Sector Economics (3) F Beaumont, Segelhorst

Prerequisites: ECON 450 or 451 and consent of instructor. Selected topics in the theory of public finance: theories of budgetary policy, tax justice, shifting and incidence, other effects of taxation, fiscal policy.

670. Seminar in International Trade and Development (3) S Ishimine

Prerequisite: ECON 471 or 465 or consent of instructor. Selected topics dealing simple and multiple regression analysis to economic problems, analysis of variance and structural analysis of time series.

686. Seminar in Econometrics (3) F Glezakos, Hall

Prerequisites: ECON 486, 583, or consent of instructor. Development of methods for the estimation and testing of the relationships among economic variables and use of econometric models for prediction and economic policy purposes.

690. Seminar in Economics (3) F,S

Prerequisite: Consent of instructor. Seminar on topics of current interest in economics. May be repeated for a maximum of six units with different topics.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent research under the guidance of a faculty member.

698. Thesis (2-6) F,S Faculty

Prerequisite: Consent of faculty advisor. Planning, preparation and completion of a thesis related to a field in economics.

Geography

School of Social and Behavioral Sciences

Department Chair: Gary Peters
Department Office: Liberal Arts 4 (LA4), Room 106
Telephone: 498-4977
Faculty: Professors: Molly Debysingh, Edward Karabenick, John Kimura, Richard Outwater, Gary Peters, Joel Splansky, Rodney Steiner, Judith Tyner; Associate Professor: Jean Wheeler
Emeritus Faculty: Sheldon Ericksen, Frederick Scantling, James Wilson
Department Secretary: June Elliott

Students desiring information should contact the department office for referral to one of the faculty advisors. Credential Advisor: Wheeler; Undergraduate Advisor: Peters; Graduate Advisor: Peters.

Geography integrates information from many social and natural sciences by focusing upon human activities within the context of their physical and cultural environment. Because of the diversity of subject matter which it considers, geography offers a broad, liberal education which is applicable to many careers. These include elementary, secondary and college teaching; cartography; regional, urban and environmental planning; business; government and the foreign service.

The Geography Department offers the bachelor of arts and master of arts degrees, as well as a minor. Certain geography courses are applicable to teaching credential programs; to the degree in liberal studies and to certificate programs in environmental, liberal, urban, Asian, Latin American, and Russian and East European studies.

Students may obtain materials from the department describing the geography programs and courses recommended for career preparation.

The master of arts degree in geography is designed for those wishing to expand their geographic competence beyond that expected of the bachelor's degree, for those seeking teaching credentials where the master's degree is required and as preparation for further study elsewhere. Candidates are responsible for observing the general requirements stated in the Bulletin as well as the specific departmental requirements contained in the Geography Master of Arts Handbook.

Bachelor of Arts in Geography (code 2-8515)

Requirements for the Bachelor of Arts in Geography

Lower Division:

GEOG 100, 140, 160.

Upper Division:

24 units distributed as follows:

(1) Regional courses: 3 units chosen from GEOG 304, 306, 310IC, 312IC, 316, 1318, 320IC, 326; and
(2) Systematic courses: 15 units distributed as follows:
  (a) 3 units chosen from GEOG 440, 442, 444; and
  (b) 3 units chosen from GEOG 452, 455, 460, 466, 467, 470; and
  (c) 9 units chosen from the above-cited systematic courses not otherwise chosen; and
(3) Methods and Techniques courses: 6 units chosen from GEOG 380, 400, 482, 483, 484, 485, 486; and

Electives:

6 units chosen from GEOG 152, 494*, 497*, and/or any of the above-cited Geography courses not otherwise chosen; and

Breadth Requirement:

6 units of upper-division courses outside Geography and in addition to work credited toward general education requirements, in the fields of Anthropology, Economics, History, Political Science, Psychology, or Sociology, or in any discipline deemed more appropriate to the student's area of concentration, as approved in writing by the Geography Department.

Recommendation:

Courses should be selected in consultation with the undergraduate advisor for the purpose of planning career objectives.

* At the time of enrollment in 494 or 497 the student must obtain written departmental notification whether the course will meet systematic or methods and techniques or regional requirements for the major.

Concentration in Geography for the Bachelor of Arts in Liberal Studies

A minimum of 24 units will be required.

Lower Division:

Three courses selected from the following: GEOG 100*, 140, 152, or 160*.

Upper Division:

GEOG 380; one course selected from the following: GEOG 460, 466, or 470; one course selected from the following: GEOG 440, 442, 444, 452, 455, 460, 466, or 470; one course selected from GEOG 304, or 306; one course selected from GEOG 304, 306, 310IC, 312IC, 316, 318, 320IC, or 326.

Note: *Courses also available in the core.

Minor in Geography (code 0-8515)

A minimum of 21 units consisting of Geography 380 and 18 units chosen in consultation with an advisor. At least 12 units must be in upper division.

Certificate in Cartography

Director: Dr. Judith Tyner (Geography)
Advisory Committee:
Dr. Robert Alexander (Civil Engineering).
Dr. Robert Kunst (Industrial Education).
Dr. Rodney Steiner (Geography).

The Cartography Certificate program offers specialized training in a variety of theoretical and applied cartographic techniques. The program is designed to provide experience in communication through maps and serves as a supplement to standard degree programs. It provides essential training for those seeking map making careers in both the public and private sector.

The program is characterized by an interdisciplinary approach reflecting the nature of the field, which has two major aspects — thematic and topographic. Those skills required by both branches are encompassed by a core program and the two concentrations provide specific training for each of the two types of cartography.

The Thematic/General concentration is designed for students whose goals involve graduate programs in cartography or map librarianship or working for commercial map making firms, planning departments and the like. The Topographic concentration is designed for the student who intends to work for engineering or geological research firms or agencies.

Requirements for the Certificate in Cartography:

1. A Bachelor's Degree, which may be earned concurrently;
2. Consultation with the Director of the Program;
3. An overall grade point average of 2.5;
4. 32-33 units distributed as follows:

(A) Core: 18 units (of which 9 must be taken at CSULB)
GEOG 380, 482, 483, 484, 485, and IA 352.
(B) Areas: 14-15 units from the following groups:

Group A:

Mathematics and Computers — 9 units
GEOG 400; C/ST 200; EIT 315, 315L; MATH 101, 115S, 116, 120, 170.

Group B:

Graphic Techniques and Reproduction — One course
IA 141, 341, or 454.

Group C:

Fieldwork — 3 units
CE 225, GEOG 486.

Certificate in Urban and Regional Studies

The Urban and Regional Studies Program conducted by the Department of Geography and faculty of several other departments offers training in a variety of significant urban and regional problem areas. The certificate program is designed to provide exposure to the analysis of urban and regional problems and serves as an excellent supplement to standard degree programs at both the undergraduate and graduate levels. It offers essential training for those seeking both private sector and public sector careers in fields concerned with the urban region, its development, problems, and special communities.

Because urban and regional problems cut across such a variety of disciplines, the program is characterized by an interdisciplinary approach. This is accomplished within the core curriculum by utilization of faculty with interdisciplinary training and experience and within elective elements of the certificate curriculum by allowing students to draw together in a distinctive mix related courses from a variety of other departments. The result is a program that provides essential knowledge of the dynamics of urban regions. This approach assures a common core of essential knowledge, while allowing flexibility to each student in designing an individualized program of study using electives drawn from a variety of relevant disciplinary concentrations. The Certificate Program in Urban and Regional Studies is a 21-unit course of study comprised of 6 units of core requirements and 15 elective units.

A brochure describing the Urban and Regional Studies Certificate Program in greater detail is available in the Office of the School of Social and Behavioral Sciences.

Faculty Advisors: Margaret J. Green (Urban Studies), August Cerillo (History), Joseph Krause (Art), Richard Outwater (Geography), Gary Peters (Geography), Robert Rooney (Economics), Eugene Ruyle (Anthropology), Paul Schmidt (Political Science), Elbert Segelhorst (Economics), Joel Splansky (Geography)

The University/Community Model

California State University, Long Beach is ideally situated for the development of university/community programs focusing on the development and problems of urban regions. Located in the City of Long Beach (population 350,000), in the southeastern portion of Los Angeles County, the University has ready access to the greater Los Angeles/Orange County metropolitan area. This large urban region provides a rich laboratory for the study of a broad spectrum of urban/regional situations, ranging from a variety of concerns related to the redevelopment of older core areas, to the development of outlying areas of housing, commercial, and industrial park uses in the newer areas of Orange County.

Urban Internship Program

The Urban Internship Program is implemented through U/ST 494. Through the program students have the opportunity to work directly in private sector offices and public sector agencies working on significant urban problems and/or projects in the Los Angeles/Orange County metropolitan area. Placements are made in such diverse areas as land use planning, urban redevelopment, environmental impact assessment, economic development (commercial/industrial), housing and community development, transportation, historic preservation, coastal resource management, port planning and management, delinquency and probation, health care systems, the urban elderly and many others.

Community Service

It is the intent of the Center for Urban Studies to act as a coordinator of university resources, both physical and human, in an attempt to direct attention toward the concerns of urban communities and regions. Individuals, citizen groups, private sector institutions and public agencies are encouraged to direct inquiries concerning the needs of urban communities and regions to faculty working within the center. Students interested in the Urban and Regional Studies Certificate Program should apply to the Director of Urban and Regional Studies, Department of Geography.

Requirements for the Certificate in Urban Studies

1. A bachelor's degree.
2. Consultation with the director of the program.
3. Twenty-one units distributed as follows:

Core requirements:

U/ST 401IC and either Geography 466 or 467.

Elective Courses:

15 units to be selected from the following, with no more than six units taken from any one department: AIS 310; ANTH 469; ART 367; Asian American Studies 345; B/ST 210; 442; PSY 375; SOC 347, 349; ECON 300, 334, 436, 437, 441, 451; FIN 448, 452; GEOG 304, 466, 467; HIST 468, 474IC; HEC 342; MGMT 425; MEXA 350; POSC 327, 426, 442; U/ST 402, 446, 468, 490, 494, 499.

Master of Arts in Geography (code 5-8515)

Prerequisites:

1. A bachelor's degree in geography; or,
2. A bachelor's degree with 24 units of upper division courses in geography substantially equivalent to those required for a geography major at this University; or,
3. A bachelor's degree in a related discipline with 24 units of upper division courses in a combination of geography and approved courses in related disciplines.
4. Completion of 3 units chosen from GEOG 400, 482, 486.
5. An undergraduate grade point average of 3.0 (B) or better in geography, or alternative evidence of ability to do graduate work.
6. File with the department a declaration of intent to seek the master's degree in geography. Advancement to Candidacy
   1. See the Geography Graduate Study Handbook.
   2. See the general University requirements.

Requirements for the Master of Arts

1. Completion of courses required to remove prerequisite deficiencies.
2. Passage of the Writing Proficiency Examination.
3. Completion of 30 units of approved upper division and graduate courses. A minimum of 24 units must be in Geography, to include 6 units chosen from GEOG 400, 482, and 486 (when not taken as prerequisites to the master's degree program), and 18 units of 500- and 600-level courses, among them GEOG 596, one geography seminar, and 6 units of thesis (GEOG 698).

Courses (GEOG):

Lower Division:

100. World Regional Geography (3) F,S Debysingh, Karabenick, Kimura, Splansky
An introductory regional geography of the world, treating the major countries in terms of their population, resources, economic development, physical environment and geographic problems. Especially recommended for elementary teaching majors.

140. Introduction to Physical Geography (3) F,S Kimura, Peters, Steiner, Wheeler
Systematic study of the physical environment with an emphasis on human-environmental interaction and perceptions of environmental hazards and resources.

152. Introduction to Economic Geography (3) F,S Karabenick, Peters
Location and organization of the world's major types of production, including agriculture, mining, forest products, fisheries, manufacturing and associated service industries.

160. Introduction to Cultural Geography (3) F,S Debysingh, Splansky
Geographic aspects of culture, including the past and present social, political and economic factors that are related to man's perception, organization and use of his environment.

204. The Southern California Urban Environment (3) F,S Outwater, Steiner
Spatial features, issues and problems that characterize the Southern California urban environment. Attention is focused on the Greater Los Angeles area embracing Ventura, Los Angeles, Orange and adjacent urbanized portions of Riverside and San Bernardino counties. Not applicable toward a geography major.

Upper Division:

Regional

These courses examine the relationships between peoples, cultures and their landscapes in specific areas of the world. There are no prerequisites for these courses; their broad scope provides the student with a better understanding and appreciation of the world in which we live. Thus, they are ideally suited for general education and liberal studies.

301. National Parks of Western United States (1) F,S Kimura, Peters, Steiner
Not applicable toward a geography major. The concept of national parks and their role in the management of land uses in the United States. Parks in the western half of the nation serve as case examples for consideration of their physical geography and human uses. (Lecture 1 hour.)

302. The World of Wines and Vines (3) F Peters
Not applicable to the geography major. Prerequisite: Students must be at least 21 years old. This course provides students with an overview of the world's major grape-growing and wine-producing regions, from California to France, from Argentina and Chile to Australia. The focus is on the requirements, both natural and cultural, that must be met in order to develop wine regions. Furthermore, the course will consider world patterns of trade in wine, as it flows between and among producing and consuming areas. Course activities will include at least two organized wine tastings.

304. California (3) F,S Splansky, Steiner, Wheeler
California's diverse natural and cultural environment with emphasis upon social and economic problems and the human response to environmental hazards.

306. United States and Canada (3) F,S Outwater, Wheeler
Common social, economic and political interests of the major human use regions of the United States and Canada. The study describes and interprets the culture patterns of each region in relation to the natural settings in which they have developed.

307IC. Modernization in Global Perspective (3) F,S Debysingh
(Same course as HIST 307IC and ANTH 307IC.) An exploration of the ways in which the current psychological and material problems in modern society (both western and Third World) can be traced to a process of accelerating change which began with the advance of technology, the rise of capitalism, the abandonment of "old values," the increasing complexity of bureaucracy and a lowering of social barriers. Exploration of all facets of modernization utilizing films, discussions and readings (fiction and non-fiction).

310IC. Africa and the Middle East (3) F Karabenick, Splansky
Human and physical settings of Africa and the Middle East and the cultural, economic, settlement, and political relationships that characterize them stressing those factors which underlie the region's instability.

312IC. Eastern and Southern Asia (3) F Debysingh, Kimura
Characteristics and problems of population, cultural patterns, resource utilization, and economic development in eastern and southern Asia from Japan to Pakistan and China to Viet Nam.

316. Europe (3) S Karabenick, Wheeler.
The human and physical patterns of Europe. Current cultural conditions and environmental problems.

318. The Soviet Union (3) F,S Faculty
Systematic and regional study of the physical, economic and cultural geography of the Soviet Union.

320IC. Latin America (3) S Debysingh
Human and environmental characteristics of Middle and South America with a focus on the historical-cultural factors which shaped their present-day societies and the problems of population growth, resource utilization and economic development.

326. Pacific Ocean Area (3) S Wheeler
Regional synthesis of the physical and cultural geography of Australia, New Zealand and the island groups of Oceania.

Systematic Geography

These courses deal with diverse subjects and are organized to provide the basic framework for the physical and cultural sub-fields of the discipline.

352. Geography of Travel and Tourism (3) F Splansky
Spatial characteristics of recreational and tourist activity. Factors of tourism, travel patterns, environmental and economic impacts, and analysis of regional tourism patterns.

356. Man and the Coastal Environment (3) F,S Splansky, Steiner
Coastal zones as unique geographic environments. Man's past and present impact upon the coastal environment. Special emphasis is given to coastal settlement patterns, open space needs, planning problems and controls. Not applicable toward a geography major. (Lecture 1 hour, field study 4 hours.)

358. Environmental Perception (3) S Peters
Environmental perception as a theme in modern geography, viewed at various scales, from the local to the world. Emphasis on the role of values and attitudes in shaping cultural landscapes.

440./540. Land and Water Environments (3) S Steiner
Prerequisites: GEOG 140 and 380 or consent of instructor. Landforms and related soil and water resources as physical components of the human environment. (Lecture-problems and field experience.)

***442. Biogeography (3) F Wheeler**
Prerequisite: GEOG 140. A course in biology is strongly recommended. Methods of mapping plant and animal distributions, spatial interaction with environmental limiting factors and man's role in temporal and spatial variation of ecosystems. (Lecture-problems and field experience.)

***444. Climatology (3) F,S Kimura**
Prerequisite: GEOG 140 or GEOL 463. Descriptive and explanatory analysis of the elements and controls of climate. Climates of the world with emphasis on California and North America. (Lecture, problems 3 hours.)

*452. Economic Geography (3) F Outwater, Peters

Prerequisite: GEOG 152 or consent of instructor. Location theory and its application to the study of the distribution of various economic activities, international and inter-regional changes in the spatial structure of economic activities and the role of these changes in international and regional development. (Lecture, problems.)

*455. Man as an Agent of Environmental Change (3) F Splansky

Spatial variations in environmental change as effected by man. A systematic and regional analysis at both macro and micro levels. (Lecture 3 hours.)

*460. Population Geography (3) F,S Peters

Introduction to the geographic study of population. Includes growth and distribution of world population; results of changing births, deaths, and migration; variations in population composition; related problems such as food supplies and environmental deterioration.

*466. Urban Geography: Principles (3) F,S Karabenick, Outwater

Examination of cities; their location, shape, structure and function. Selected world population clusters, theoretical and practical application of urban planning and the evolution of cities are studied. (Lecture-problems.)

467./567. Urban Geography: Metropolitan Problems (3) S Outwater

Prerequisite: GEOG 466 or consent of instructor. Geographic components of metropolitan problems and their solutions. Problems related to transportation systems, housing, evolution of ghettos, urban perception and behavioral patterns will be discussed in terms of theoretical and practically applied urban planning solutions. (Lecture, problems 3 hours.)

*470. Political Geography (3) F,S Debysingh

Prerequisite: GEOG 100 or consent of instructor. Comparative study of the earth's politically organized regions and related systems. Varied approaches are explored, such as power analysis, genetic analysis and functional analysis of political units. Stress is upon political geographic concepts used in analyzing the viability of states and nations. (Lecture, problems.)

Methods and Techniques

These courses develop skills in graphic and statistical communication and field analysis which are used within the various sub-fields of the discipline.

380. Map Reading and Interpretation (3) F,S Debysingh, Tyner

Interpretation and understanding of maps as graphic communication, with particular emphasis on symbolization, scale, and projection. Information retrieval skills applicable to general, thematic, and topographic maps are developed. (Lecture, problems 3 hours.)

*400. Introduction to Geographic Analysis (3) F Peters

Prerequisites: Six units of geography. Application of quantitative methods to the analysis of spatial distributions, associations, and interactions. Not open to students with credit in another statistics course.

*482. Elements of Cartography (3) F,S Tyner

Prerequisites: GEOG 380, consent of instructor. Theory and techniques in the design and construction of thematic maps, including experience in the use of basic cartographic tools. (Lecture-discussion 2 hours, laboratory 3 hours.)

*483. Aerial Photo Interpretation and Remote Sensing (3) F Tyner

Prerequisite: Consent of instructor. Introduction to the interpretation of air photos and other remotely sensed imagery. Includes determination of scale and height, acquisition of imagery and the electromagnetic spectrum. Special emphasis is placed on the recognition of physical and cultural features. (Lecture 2 hour, laboratory activities 2 hours.)

484./584. Advanced Cartography (3) S Tyner

Prerequisite: GEOG 482. Advanced theory and techniques in cartographic communication, including map perception, terrain representation, history of cartography, computer mapping and color. (Lecture-discussion 2 hours, laboratory 3 hours.)

485./585. Computer Cartography (3) S Peters, Tyner

Prerequisites: GEOG 380. Theory and methods of mapping geographic data with a computer. Includes problems of acquiring and processing machine-readable map data and creation of maps by line printer, plotter and CRT. (Lecture — Discussion — Laboratory) Grading: Traditional only.

*486. Field Methods in Landscape Analysis (3) Karabenick, Outwater, Splansky

Prerequisite: GEOG 380 or consent of instructor. Introduction to field techniques, including formulation of field plans, recording direct observation, field mapping, sampling techniques, interviewing, and organizing and evaluating data for presentation. (Lecture-discussion 2 hours, supervised field work 2 hours.)

General

*494. Special Topics (1-3) F,S Faculty

Prerequisite: Consent of instructor. Application of geographical concepts and methodology to selected contemporary problems. Themes will be announced in the Schedule of Classes. May be repeated for a maximum of six units with consent of department chairperson. May not be credited toward the major in geography without written department consent in advance of enrollment.

*497. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Individually directed studies of special problems in geography. May be repeated for a maximum of six units with consent of department chairperson. May not be credited toward the major in geography without written department consent in advance of enrollment.

Graduate Division:

540./440. Land and Water Environments (3) F,S Steiner

Prerequisites: GEOG 140 and 380 or consent of instructor. Landforms and related soil and water resources as physical components of the human environment. (Lecture-problems and field experience.)

567./467. Urban Geography: Metropolitan Problems (3) S Outwater

Prerequisite: GEOG 466 or consent of instructor. Geographic components of metropolitan problems and their solutions. Problems related to transportation systems, housing, evolution of ghettos, urban perception and behavioral patterns will be discussed in terms of theoretical and practically applied urban planning solutions. (Lecture, problems 3 hours.)

584./484. Advanced Cartography (3) S Tyner

Prerequisite: GEOG 482. Advanced theory and techniques in cartographic communication, including map perception, terrain representation, history of cartography, computer mapping and color. (Lecture-discussion 2 hours, laboratory 3 hours.)

596. Literature and Methods in Geography (3) F Faculty

Prerequisite: Consent of instructor. Proseminar in the methods, theory and techniques of geographic investigation with emphasis upon classical and contemporary literature.

600. Seminar in Regional Geography (3) S Faculty

Prerequisite: Consent of instructor. Regional methods of study common to geographic research, and their utilization in developing regional concepts.

640. Seminar in Physical Geography (3) S Kimura, Steiner, Wheeler

Prerequisite: Consent of instructor. Advanced study of areal variations in the physical landscape. Research methods and resources. Individual investigation of selected local area. May be repeated once with consent of department advisor.

650. Seminar in Cultural Geography (3) F Debysingh, Splansky

Prerequisite: Consent of instructor. Systematic investigation of human occupancy in its varied environmental and regional settings. May be repeated once with consent of department advisor.

652. Seminar in Economic Geography (3) F Peters

Prerequisite: Consent of instructor. Fundamental resources and basic industries of the modern world. May be repeated once with consent of department advisor.

666. Seminar in Urban Geography (3) S Karabenick, Outwater, Splansky

Prerequisite: Consent of instructor. Geographic concepts and techniques of research applied to specific urban areas. May be repeated once with consent of department advisor.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of instructor. Research in geography supervised on an individual basis.

698. Thesis (1-6) F,S Faculty

Prerequisite: Consent of instructor. Planning, preparation and completion of thesis for the master's degree.

Urban Studies Courses (U-ST):

Upper Division:

401IC. Urban Life and Problems (3) F,S Green, Karabenick, Outwater

Not open to students with credit in SOC 419. Review and analysis of the changing urban scene: urban life-styles; community patterns of land use and design; population trends; conflicts in the increasingly multicultural setting of the central city; housing and community development; suburban-central city relationships; human utilization or urban life spaces; examination of the views of landmark urbanists; and future trends.

402. Methods in Urban and Regional Studies (3) S Green

Comparative study of specific community problems with thorough field investigation and research using available community data sources, including primary public agency documents and U.S. Bureau of the Census block and tract level data. Comprehensive research and analysis skills are developed and students learn effective methods of presentation of their analyses and findings using verbal, graphic and written media.

446. Urban Land Use Planning (3) F,S Green

Not open to students with credit in U/ST 490 — Land Use Planning. This course provides an examination of urban land use planning from the perspective of professional urban planners. The course will focus on planning issues and responses in some of the following major areas: land use; coastal zone planning; resource planning; urban growth, speculation, and economics; design and aesthetic issues; planning parameters for residences, shopping centers, and industrial parks; revitalization of built-up core areas and transportation.

468. Local History: Communities (3) F,S Faculty

(Same course as HIST 468.) Description and analysis of selected communities within the greater Los Angeles-Long Beach area from an historical perspective, with emphasis on population and migration patterns, the development of economic forces shaping the area and techniques of local history. Specific focus will be announced in the Schedule of Classes.

490. Special Topics in Urban and Regional Studies (1-3) F,S

Prerequisite: Consent of instructor: Topics of current interest in urban and regional studies selected for intensive development: Topics will be announced in the Schedule of Classes:

494A-B. Urban Internship Program (3) F,S Green

Prerequisite: Consent of instructor. Student internship experience in a variety of Los Angeles and Orange County private sector and public sector offices in order to gain an understanding of the processes used and complexities involved in attempting to solve problems of urban communities. Students meet weekly, either in a seminar format or individually with the instructor to discuss urban problems and proposed strategies of treatment, as well as to report on observations and insights gained from the field placement experience. May be repeated for a maximum of six units, under U/ST 494.

499. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent study under the supervision of a faculty member.

History

School of Social and Behavioral Sciences

Department Chair: Edward A. Gosselin
Department Office: Faculty Offices 2 (FO2), Room 106
Telephone: 498-4431
Faculty: Professor: Rifaat A. Abou-El-Haj, Dorothy deF. Abrahamse, Irving F. Ahlquist, Eugene Asher, David A. Bernstein, Paul V. Black, Donna L. Boutelle, John G. Buchanan, Albie Burke, Augustus Cerillo, Jr., David A. Cressy, Charlotte Furth, Edward A. Gosselin, Albert F. Gunns, John E. Higgins, David C. Hood, John M. McFaul, Theodore E. Nichols, Keith I. Polakoff, Toivo U. Raun, William F. Sater, Sharon L. Sievers, Arnold R. Springer, Jack M. Stuart, William R. Svec. John F. Walzer, William A. Weber, Richard H. Wilde; Associate Professors: Stephen E. Berk, Keith E. Collins, Arnold Kaminsky.
Emeritus Faculty: Irving F. Ahlquist, Robert W. Frazer, Nicholas P. Hardeman, Howard Kimball, Raymond E. Lindgren, Alexander Lipski, Halvor G. Melom, Theodore E. Nichols, Donald W. Peters, James F. Ragland, Richard H. Wilde, David A. Williams
Department Secretary: Diane Mac Millan

Students desiring information should contact the department office for referral to one of the faculty advisors: Credential Advisor: Caughron; Coordinator, Social Science Certificate Program: Caughron; Minority Advisor: Hood; Graduate Coordinator: Weber; Undergraduate Coordinator: Cerillo, Jr.

The study of history is intended to serve as a cultural background, as a preparation for graduate work in history and the other social sciences, or as a foundation for those planning to enter teaching, law, librarianship, government, foreign service, and related fields.

History majors who are contemplating graduate work in history are advised that many master's programs and most doctoral programs require competency in foreign language(s). Interested undergraduates should begin such language study as early as possible.

The Stuart L. Bernath Memorial Prize, named for a late member of the faculty, is awarded annually to the student who writes the best essay on some aspect of history. The award consists of a modest sum, a certificate and an entry on the official transcript of the recipient. Further information may be obtained from the prize committee of the History Department.

The Department of History offers graduate study leading to the master of arts degree. The candidate is responsible for the observation of the general requirements stated in this Bulletin as well as the specific departmental requirements stated here and, more fully, in the Master of Arts Brochure, available from the History Department office upon request.

Graduate assistantships and departmental reading positions are sometimes available for qualified persons. The graduate assistant works closely with a member of the graduate faculty, but is not responsible for instruction.

General Education Requirement in United States History

Baccalaureate students may satisfy the requirement as follows: Lower Division Students — HIST 162A and 162B, or 172, or 173, or 174. Upper Division Students — HIST 300.

Bachelor of Arts in History

Requirements for the Bachelor of Arts in History (code 2-8525)

Lower Division:

A minimum of 12 units, except that History majors may apply only 6 units from 162A, 162B, 172, 173, and 174 to the degree.

Upper Division:

(1) HIST 301; HIST 495 or, with approved petition, 501. (2) 21 additional units, which must include either nine units in each of two of the following areas or six units in each of three of the following areas: (a) Ancient and Medieval, (b) Modern European, (c) Russian, (d) British, (e) Latin American, (f) United States, (g) Asian. With the approval of the department, students may design a topical area as a substitute for one of the geographical areas.

Breadth Requirement:

The total 39 units requirement for the major must include at least three units in each of the following areas: (1) Modern Western History: 112, 132, 152, 162A, 162B, 172, 173, 174, or any upper division course in United States, Latin American, British or Modern European history (with the exception of 332, 333, 353). (2) Ancient, Medieval and Early Modern Western History: 110, 131, 151, 313, 314, 316, 317, 318, 332, 333, 351, 353, 4111C. (3) Non-Western History: 110 and 112, 180, or any upper division course in African, Asian or Russian History.

Social Science Requirement:

Six upper-division units from other departments or programs of the School of Social and Behavioral Sciences. These units are in addition to those used to fulfill the requirements of General Education.

Note: History majors are strongly encouraged to include the study of a foreign language in their program. Students working for a single-subject credential in secondary education must consult with the department's secondary education advisor as to the applicable credential major requirements.

Bachelor of Arts in History with Honors

Students with a major in history may be admitted to the History Department honors program (option of the University Scholar's Program) provided they have:

(1) Completed at least 30 semester units of college- or university-level courses, including at least two history courses.
(2) A minimum cumulative grade point average (GPA) of 3.3, and a 3.5 in history courses.
(3) Submitted to the Department Honors Committee chairperson two letters of recommendation from faculty members.
(4) Received admission approval from the departmental (honors) committee.

Students who have the minimum GPA requirements established by the University Scholars Program (3.0 overall and 3.3 in the major, but who do not meet History Departmental GPA requirements (2 above) may petition the Department Honors Committee for conditional admission to the Department Honors Program.

In order to graduate with Honors in history a student must:

(1) Complete all regular requirements for the history major
(2) Complete 3 units in HIST 497H:Honors Colloquium
(3) Complete 3 units in HIST 498H: Honors Research
(4) Complete 3 units of HIST 499H: Honors Thesis
(5) Complete 6 units of additional course work chosen in consultation with the Department Honors Advisor. Such courses normally will require two analytical papers or a research paper in a honors level of performance.
(6) Complete U.S.P. 499 Synthesis, as partial fulfillment of the University's requirement of 6 upper-division IC units (IC).
(7) Have at the time of graduation a cumulative GPA of at least 3.3 and a GPA of at least 3.5 in history.

Students admitted to the program must maintain a file in the University Scholar's Program which will include copies of proposals for 498H and 499H.

Concentration in History for the Bachelor of Arts in Liberal Studies

A minimum of 24 units of which 15 units must be selected from upper-division courses.

1. Required Course: HIST 301
2. Eighteen (18) units selected from three of the following areas; six units must be taken in each area.

World Area:

HIST 110, 111, 112, 492.

European Area:

HIST 131, 132, 313, 314, 316, 317, 318, 332, 335, 336, 337, 339, 341A, 341B, 411, 432, 433, 437, 438, 439, 441.

British Area:

HIST 151, 152, 351, 353, 356, 357, 451.

Latin American Area:

162A, 162B, 362, 364, 462, 463, 466.

United States Area:

HIST 172, 173, 300, 372, 373, 375, 376, 377, 378, 379, 380, 469, 471, 472, 473, 474IC, 475IC, 477A, 477B, 478, 479, 480, 482IC, 486, 489.

Asian Area:

HIST 382A, 382B, 383A, 383B, 385, 386, 406, 407, 487, 488.

3. Any other 3-unit course in History.

Minor in History (code 9-8525)

A minimum of 21 units which must include:

Lower Division:

A minimum of six units, which must include a six-unit sequence from the following: HIST 112 and 110 or 111, 131 and 132, 151 and 152.

Upper Division:

A minimum of 12 units, which must include at least six units in each of two areas of defined for the major.

Master of Arts in History (code 5-8525)

Prerequisites

1. A bachelor's degree with a major in history, or
2. A bachelor's degree with 24 units of upper division courses in history. These courses must be comparable to those required of a major in history at this University. Deficiencies will be determined by the graduate advisor after consultation with the student and after study of transcript records.

Advancement to Candidacy is a statement of how the student plans to complete all courses and requirements for the degree, including setting a date and a committee for the comprehensive examination. It is best done as early as possible and it must take place before the end of the semester preceding the examination. Students writing a thesis are advanced to candidacy at the time that they begin their thesis work.

Requirements for the Master of Arts

1. A minimum of 30 units of upper division and graduate courses including at least 18 units from 500- and 600-level courses. Six units can come from other departments if they suit the student's program and are approved by the Graduate Advisor. All students must take HIST 501, HIST 590, at least one 600-level seminar and distribute the rest of the courses by one of two options:

(a) A minimum of 15 units in one of the following fields: Ancient-Medieval Europe, Modern Europe (including at least one 500- or 600-level course in this field, and at least one such course in another field),

or

(b) A minimum of 9 units in each of two fields (as defined above), including at least one 500- or 600-level course in each one.

The courses for Directed Study, HIST 695 and 697, may be applied toward the 18 units of 500- and 600-level course in each one.

A student may propose a field other than those cited above (such as Britain or Latin America) with the consent of the Graduate Advisor and her/his graduate committee.

2. A reading knowledge of German, French or other foreign language may be required, depending upon the candidate's program of study as recommended by her/his graduate committee.
3. A comprehensive written examination on two major periods, unless permission is given by the History Department to substitute a thesis for this requirement.

Courses (HIST):

Lower Division:

110. Historical Beginnings: World History in Antiquity (3) F Furth, Abrahamse

An introduction to the earliest stages of human culture and civilization from paleolithic times down through the establishment of the classical high civilizations of the Eurasian continent.

111. History of World Civilization, 500-1700 A.D. (3) F,S Abrahamse

The development of world civilization from the end of the ancient world to 1700, with emphasis on the interactions of major cultures. Topics will include migration and settlement patterns, the role of universal religions, major medieval civilizations, technology and the global effects of exploration and colonization movements.

112. The World Since 1700 (3) F,S Faculty

A look at the old regimes in major world civilizations at the start of European expansion. Main trends in modern European history (world conquest and colonization; science, technology and industrialization; the nation state; classical liberal and the capitalist world systems; challenges to these ideas and systems) and the impact of these upon the non-European world. Replaces HIST 290: The World Since 1700.

131. Early Western Civilization (3) F,S Abou-El-Haj, Boutelle, Gosselin, Hood

Not open to students with credit in HIST 131A. The history of western civilization from its origins through the 16th century. Stresses the society, culture and political institutions of the ancient Near East, the classical world, the medieval west and renaissance and reformation Europe.

132. Modern Western Civilization (3) F,S Abou-El-Haj, Gosselin, Raun, Springer, Weber

Not open to students with credit in HIST 131B. European society from the 17th century to the present. Stresses events and phenomena which reshaped the political, economic and social structures of the west and their impact throughout the world. Emphasis on the intellectual, social and psychological transformation of modern life.

151. England: Earliest Times to 1688 (3) F,S Cressy, Wilde

Not open to students with credit in HIST 151A. English society from earliest times to the Glorious Revolution. Anglo-Saxons; Norman rule; medieval ideas, institutions and life; Tudor and Stuart England; Anglican Church origins and the Puritan revolt; overseas exploration and relations with Wales, Scotland, Ireland and the continent. Emphasis on the evolution of values and of legal and governmental institutions inherited by the United States.

152. Britain in Modern Times (3) F,S Cressy, Wilde

Not open to students with credit in HIST 151B. Britain from 1688 to the present. The ideas and way of life of the Georgian, Victorian, Edwardian and 20th-century peoples of the British Isles. Political parties and the evolution of parliamentary (cabinet) government, its dissemination to colonies; mercantilist duels for empire; first industrial nation; urbanization, democratization, free trade, imperialism and the development of the welfare state; two world wars and Britain's changing political position; recent events.

162A,B. Comparative History of the United States and Latin America (3,3) F,S Nichols, Sater

The history of the Western hemisphere from European contact to the present, with emphasis on institutions and traditions. (These two courses together meet the State of California requirement in U.S. History.)

172. Early United States History (3) F,S Faculty

Survey of the political, social, economic and cultural development of the United States from discovery through reconstruction. Attention to the colonial era, establishment of the new nation, sectional problems, national growth, disunion and reconstruction. Material may be covered chronologically or topically. Fulfills the general education requirement for U.S. history. Not open to students with credit in HIST 162A or 171A or *both* 173 and 174.

173. Recent United States History (3) F,S Faculty

Survey of the political, social, economic and cultural development of the United States from reconstructon to the present. Attention to the rise of industrial America, the United States as a world power, welfare democracy and the Cold War era. Material may be covered chronologically or topically. Fulfills the general education requirement for United States history. Not open to students with credit in HIST 162B or 171B or *both* 172 and 174.

174. Major Themes in the United States History (3) F,S Faculty

Examination of major issues, problems and crises in American history. Course will focus on contemporary values and institutions, placing them in historical perspective. Fulfills the general education requirement for U.S. history. Not open to students with credit in HIST 162A or 162B or *both* 172 and 173.

180. Eastern Civilizations (3) F Furth, Sievers

An introduction to the cultural heritage of the major Asian civilizations of China, India and Japan. Students will read selected literary, philosophical and political classics in their historical context and from a comparative perspective.

201. Facts, Evidence and Explanation (3) F,S Gosselin, Burke

Critical examination of evidence supportive of inference drawing; differences between direct, circumstantial, physical and statistical evidence; the determination of relevancy of facts; whether facts are objective, whether they exist independently of the interpreter, or whether they are theory laden.

290. Special Topics in History (1-3) F,S Faculty

Topics of current interest in history. May be repeated with different topics to a maximum of six units. Applicability to major requirements will be specified in description of individual topics, as announced in the Schedule of Classes.

General

301. Methodology of History (3) F,S Faculty

Required of all history majors in the first semester of upper division work. How historians ask interpretive and methodological questions and how these questions are answered intellectually and technically (including bibliography, structure and writing). Practice in the use of primary sources, reconstruction of events and presentation of findings. Preparation and analysis of written student exercises.

309. Men and Masculinity (3) F,S Stuart, Fiebert

Prerequisites: None. Exploration of male roles from an interdisciplinary perspective focusing on men as workers, friends, lovers and fathers. Consideration of the choices available to men under the impact of tradition, feminism and a changing job market. Gender-oriented social and political movements. Grading: Traditional only.

402. Oral History Methods (1) F,S Faculty

Through a series of workshops and through field experience, skills in oral history will be developed which will enable students to use oral history either for their own personal use in family history or for class projects in their specific fields. (Same course as SBS 485.)

408./508. The History of the Family (3) S

Cressy History of the family from the medieval period to the 20th century, with emphasis on its changing economic, social and emotional functions. The historical development of women's roles, childhood, marriage patterns, domestic labor and extended family relations will be considered, with special attention to contrasting developments during different historical periods and within different civilizations. Emphasis will vary between Europe, the U.S. and East Asia but with special attention to the early modern era. Students will have the opportunity to work on a family history project.

484. Topics in Women's Oral History (3) F,S Faculty

Using oral history, this course will focus on women's experience in different periods in the 20th century. Different topics will be emphasized each semester, including a study of women's changing history through a comparison of generational groups, the "feminine-mystique" of 1920 and 1950; Rosie the Riveter, women during World War II. May be repeated with different topics for a total of six units. (Same course as W/ST 405.)

490. Special Topics in History (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in history selected for intensive development. May be repeated with different topics to a maximum of six units, but no more than three units may be used to satisfy the requirements for the major. Topics will be announced in the Schedule of Classes.

*491. Modern and Contemporary Africa (3) F Collins

Conquest of Africa by European states, contrasting colonial systems as they evolved, anti-colonial movements and progress towards self-governement or independence, problems of economic and political development, and race tensions in areas of white settlement. Not open to students with credit in HIST 491B.

492./592. Proseminar in World History (3) F 86 Faculty

Prerequisite: Consent of the instructor. Discussion and analysis of recently published historical works and materials from a world history perspective. May be repeated to a maximum of six units.

*495. Colloquium (3) F,S Faculty

Prerequisite: Consent of instructor. Analysis and interpretation of significant documents and works of history. Individual works discussed will center about a general theme selected by the instructor. May be repeated with different topics to a maximum of six units, but no more than three units may be used to satisfy the requirements for the major.

497H. Honors Colloquium (3) F Faculty

The development of History as a discipline, major schools of historical interpretation, and recent developments in analysis and theory. Emphasis on the interrelationship of History to other disciplines in the social sciences and humanities.

*498. Directed Studies (1-3) F,S Faculty

Research for and writing of a senior thesis under the direction of a departmental advisor.

499H. Honors Thesis (3) F,S Faculty

Prerequisite: HIST 498H. Research, writing, and presentation of a senior honors thesis under the direction of departmental faculty advisor.

498O. Directed Studies in Oral History (1-3) F,S Faculty

Permission of faculty required. Directed study on a research topic using the methodology of oral history. May be repeated for a maximum of 3 units.

Interdisciplinary Courses

303IC. Rebels and Renegades (3) F,S Stuart

The young rebels of the depression decade grew up to become the parents of the dissidents of the affluent sixties. The course will examine the generational conflict of those turbulent years as a clash of values, exploring the nature of those values, the cultural and social influences that shaped them, and some key ways they were manifested. The course will concentrate on four areas: Social Change, Life-styles, Popular Culture, and High Culture with emphasis on Literature and Theater. (This course may not be taken to fulfill the 39-unit requirement in the History major.)

307IC. Modernization in Global Perspective (3) F,S [D.2] Gosselin, Gunns

An exploration of the ways in which the current psychological and material problems in modern society (both western and Third World) can be traced to a process of accelerating change which began with the advance of technology, the rise of capitalism, the abandonment of "old values," the increasing complexity of bureaucracy, and a lowering of social barriers. Exploration of all facets of modernization utilizing films, discussions and readings (fiction and nonfiction). (This course may not be taken to fulfill the 39-unit requirement in the History major.)

308IC. Law and Civilization (3) F,S Burke, McGowan, Stuart, Leiter [D.2]

An exploration of law as an intellectual effort to define direct and administer human experience. Examination of theories of knowledge, language, meaning, mental processes, social organization, personal responsibility and freedom underlying legal analysis and decision-making in the courts as well as in administrative/bureaucratic settings. (This course may not be taken to fulfill the 39-unit requirement in the History major.)

310IC. The Greek World (3) F,S Hood, Jernigan [C.2.a, D.2]

Prerequisites: None. An interdisciplinary examination of major events and ideas in the society and culture of ancient Greece with an emphasis on literature, the arts, and the historical forces at work. Topics include the foundations of Greek culture, Minoan civilization, Homer and the Trojan War, mythology and religion, lyric poetry, the Persian Wars, the "Golden Age" of Athens, the Peloponesian War, Hellenistic culture and the contributions of the Greeks to the modern world. (Same course as C/LT 420IC.)

404IC. Social History of Musical Life (3) F Weber [D.2]

Social evolution of musical life — publics, institutions, professions, and taste — in Europe and the U.S. (This course may not be taken to fulfill the 39-unit requirement in the History major.)

405IC. Environmental History (3) F Hood

Historical attitudes toward the natural environment with emphasis on rise of the conservation movement. Explores relationship between the wilderness and man, its history, meaning and management. Course will include case studies and a wilderness field trip.

414IC. Medieval World (3) F,S Abrahamse, Jernigan [C.3., D.2]

An interdisciplinary examination of major themes in medieval society and culture with emphasis on literature, the arts, and the historical forces at work. Topics will include the Roman heritage of the middle ages, barbarian culture, Romanesque and Gothic worlds, crusades and pilgrimages, commerce and cathedrals, and late medieval problems. (Same course as C/LT 349.) (This course may not be taken to fulfill the 29-unit requirement in the History major.)

Upper Division — Areas:

Ancient and Medieval

313. Ancient Greece (3) F,S Hood

History of the Greeks and the Greek world from the earliest times to the Roman conquest.

314. Roman History (3) F,S Hood

History of Rome and the Roman world from the Eighth Century B.C. to the Fifth Century A.D.

*316. Early Middle Ages (3) F Abrahamse, Boutelle

History of Western Civilization from the fall of the Roman Empire in the West to the Crusades. Germanization of the West, evolution of Christian institutions, Slavic expansion, Byzantinization of the Eastern Empire, Islamic civilization, Carolingian age, feudal and manorial institutions.

*317. High Middle Ages (3) S Abrahamse, Boutelle

History of Western Civilization from the Crusades to the end of the Middle Ages. Revival of trade, growth of towns and of capitalism; origins of modern political institutions; and medieval learning and art.

*318. Byzantine Empire (3) S Abrahamse

Political and social development of the Byzantine Empire from the 4th century A.D. to the fall of Constantinople in 1453; the cultural heritage of the Roman Empire in the eastern Mediterranean; religious controversies and the development of eastern Christianity; relations with Islam and medieval Europe.

323IC. The Renaissance World (3) S, Gosselin, Forney

An interdisciplinary view of selected topics of Renaissance culture and society, emphasizing the arts and literature within the historical context of the era. Topics span social, economic, intellectual, institutional, religious, and cultural issues and their influences on music, art, literature, and philosophy. (Same course as MUS 368IC.) (This course may not be taken to fulfill the 39-unit requirement in the History major.)

*351. Medieval England (3) F Boutelle

Analysis of English political institutions, society, religion and economy in the Anglo-Saxon, Norman, Plantaganet and late medieval eras.

411IC. Early Christianity and Society (3) F Abrahamse [C.3, D.2]

Development of Christianity from the New Testament period to the Renaissance with emphases on the growth of doctrine, church institutions and the role of Christianity in ancient and medieval society. (Same course as R/ST 471.)

Asian

382A. Imperial China (3) F Furth

Introduction to the classical civilization stressing the evolution of imperial institutions, the Chinese world order and China's traditional cultural heritage. Not open to students with credit in HIST 482A.

382B. Modern China (3) S Furth

Chinese society since 1800. Impact of imperialism, reform and revolutionary movements, the background of Chinese communism. Not open to students with credit in HIST 482B.

383A. Traditional Japanese Civilization (3) F Sievers

Japanese civilization from its origins to the 19th Century. Emphasis of intellectual and cultural developments on the selective adoption and modification of Chinese culture. Not open to students with credit in HIST 483A.

383B. Modern Japan (3) S Sievers

Japan from 1850 to 1945; collapse of Tokugawa bakufu and rise of the Meiji state; industrialization; social change and protest; "Taisho democracy," the Pacific War.

*384. Contemporary Japan (3) S Sievers

Japan since 1945; impact of Hiroshima and Nagasaki; American occupation of Japan; Japan's "economic miracle," social change and social criticism in literature and film; Japan's role in the contemporary world; conflict with the U.S.

*385. History of India (3) F Kaminsky

This is a survey of the history of the South Asian subcontinent from its historic roots, through the founding and consolidation of the great Mughal Empire, to the beginnings of Western imperialism and the establishment of the British Raj, ending with nationalism and the course of events in post-independence India, Pakistan and Bangladesh.

*386. History of Modern Southeast Asia: Colonial Era to the Vietnam War (3) F Kaminsky

This is a survey course in the political and cultural history of the peoples of modern Southeast Asia. After an overview of traditional civilizations, the history of modern Southeast Asia (from roughly 1815) will emphasize expansion of European influence in the political and economic spheres, the growth of nationalism and the process of decolonization in Southeast Asia, and the post-WWII configuration of the area. Both mainland Southeast Asia (Vietnam Cambodia/Kampuchea, Laos, Burma, Malaysia) and insular Southeast Asia (Indonesia, Philippines) will be surveyed.

*406. Asian Women (3) S Furth, Sievers

(Same course as A/ST 406 and W/ST 406.) Historical experience of women in Asia, with emphasis on Chinese and Japanese societies; links with the experience Asian-American women.

407. Japan and the United States in the 20th Century (3) S Sievers

Examination of relationships between Japan and the United States, emphasizing culture, economic and political conflict and cooperation.

*488. The Chinese Revolution (3) F, Alternate years Furth

Prerequisite: HIST 181B or 382B or consent of instructor. Theory and practice of revolutionary socialism in the People's Republic of China, historical and ideological background of the Chinese revolution, Mao and Maoism, politics, culture and society in China.

British

*353. Tudor and Stuart England (3) F Cressy

New Monarchy; Renaissance and Reformation; rise of commercialism; capitalism; foundations of empire; age of Elizabeth I and Shakespeare; experiment in Divine Right Monarchy; triumph of Puritanism, Parliament and Common Law; the age of the Puritan and Milton; the Restoration; and the beginnings of party and cabinet government.

*356. Georgian and Victorian Britain (3) F Cressy

Georgian Britain (arts, ideas, institutions); world wars and changing empire; economic revolution (in commerce, transport, agriculture, industry); evangelical, humanitarian and romantic movements; evolution of cabinet government and political parties; challenge of urbanization and industrialization, institutional reforms and democratization; industrial supremacy and free trade; new concepts of Empire; Victorian life and thought; Irish problems.

*357. Recent Britain (3) S Cressy, Wilde

Irish "home-rule" controversy; loss of economic supremacy, imperialism and world rivalries; First World War; socialism, the rise of the Labour party, and Liberal decline; life in 1920s and 1930s; the Great Depression; collective security, appeasement, communism, fascism and the "Hitler War"; nationalization and the welfare state; anti-colonialism and the end of empire; the Cold War, NATO, and nuclear terror; economic integration with Europe; trade deficits, stagflation, unemployment and recent politics.

*451. British Empire and Commonwealth (3) S Wilde

Topics in British Empire and Commonwealth history in two basic formats. (1) comparative studies of major Commonwealth nations, e.g., South Africa and Canada; (2) the rise and fall of the British Empire examined in the light of various theories of imperialism, neo-colonialism and economic development. May be repeated for a maximum of six units if topics dealt with are different.

*455. English Constitutional and Legal History (3) F Wilde

Origin and development of the Common Law and of the English constitution and its elements, monarchy, Parliament, Church and courts, in medieval and early-modern times.

Latin American

362. Colonial Latin America (3) F Nichols, Svec

Iberian preparation for overseas expansion; discovery and conquest in America; evolution of colonial institutions; dynamic 18th century developments; Wars of Independence.

364. The Latin American Nations (3) S Sater, Svec

Political, economic, social and intellectual evolution of Latin American in the 19th and 20th centuries.

366. Latin American History and Literature (3) S Sater

Latin American history through the novel and the film will integrate literature and the cinema with traditional historical materials in order to provide the student with a deeper understanding of the development of Hispanic America.

461. History of Precolumbian Mexico (3) F 87 Sanchez

History of Meso-America from prehistoric times to the Spanish conquest, emphasizing the study of the societies and the religious and intellectual life of people of ancient middle America. Same course as MEXA 380.

*462. Mexico (3) F Nichols, Sater, Svec

Spanish conquest of Indian Mexico; settlement and exploration; colonial life and institutions; the achievement of independence from Spain; reform, foreign intervention, dictatorship in the 19th century; the Revolution of 1910 and after; contemporary Mexico. Not open to students with credit in HIST 462A or 462B.

*463. The Caribbean and Central America (3) F Nichols

History of the Caribbean Islands and Central America from European colonization to the present, with emphasis on Cuba and Central America. Economic, political and cultural development and relations with the United States.

*466. Topics in Latin American History (3) F,S Svec, Sater, Nichols

Selected topics in Latin American History, including: (a) Revolutionary Latin American — analyzing various 20th-century revolutionary movements, their social, political and cultural causes, and their international impact; (b) Slavery, Peasantry and Aristocracy — analyzing examples of black slavery, peasant societies, and elites from the 16th century to the present; (c) Comparative History: Argentina and Brazil, or other pairs and groups of states — colonial beginnings with emphasis on geographical, economic, social, ethnic, and vital institutional elements. May be repeated, with different topics, for a maximum of nine units.

Modern European

*331 Jewish History (3) Eisenman, Springer

A survey of Jewish history from early times to the present. Subjects such as the Babylonian captivity; the fall of the Temple; the rise of Rabbinic Judaism; the dispersion; the impact of anti-semitism; Jewish community and intellectual life in the Middle Ages; emancipation from the ghetto; political movements; the Holocaust; Israel. (Same course as R/ST 316.)

*332. The Italian Renaissance (3) F Gosselin

Examination and analysis of intellectual, cultural, political, and economic features of 14th- and 15th-century Italian civilization. Particular emphasis on interplay between new configurations and notions of power and their unique Italian cultural manifestations.

*333. Reformation Europe (3) S Gosselin

Examination and analysis of the "long 16th century," from the beginning of the Italian Wars (1494) to the Peace of Westphalia (1648). Emphasis on economic, institutional, intellectual and religious crises, and on their resolutions in the post-Reformation period.

*335. The Shaping of Modern Europe (3) F Springer, Weber

European political, social, economic and intellectual life from the Treaty of Westphalia (1648) to the French Revolution (1789). Emphasis on the rise of statism, the triumph of science and mechanistic philosophy, absolutist monarchs (e.g., Louis XIV), enlightened despots (e.g., Frederick the Great), and *philosophes* (e.g., Voltaire), and the crisis of traditional society.

*336. The French Revolution and Napoleon (3) S Springer

End of the Old Regime and the French Revolution. Decline of the feudal monarchy, failure of enlightened despotism, the rise of revolutionary thought, French Revolution, and Napoleonic imperialism.

337. Europe in the Nineteenth Century (3) F Abou-El-Haj, Weber

Apogee of European power, influence and confidence. Recovery from French Revolutionary and Napoleonic disturbances, reaction and revolution, nationalism, unification of Germany and Italy, triumph of liberalism, challenge of socialism, outburst of imperialism, alliances and alignments leading to World War I.

339. Europe Since 1914 (3) F,S Abou-El-Haj, Raun, Weber, Stuart

World War I; outstanding changes in Europe after the First World War with particular stress on the rise of Fascism in Italy, Nazism in Germany, Communism in Russia, and Social Democracy in Scandinavia and Great Britain; the failure of the League of Nations and the collapse of collective security, World War II; the United Nations; postwar problems.

400IC. Origins of Scientific Thought (3) F,S Gosselin, Gunns

Same course as PHYS 400. An interdisciplinary introduction to the history of science for both scientists and non-scientists. Evolution of the scientists' views of the means and ends of their own activities; the ways in which science is affected by and affects contemporary cultures.

*431. Arab and Islamic Civilization (3) F Abou-El-Haj

History and culture of the Arab and Islamic world from early origins in Arabia, and the establishment of the early Arab empires with emphasis on the recent period.

*432. Modern Scandinavia and the Baltic Region (3) F Raun

Political, economic, social, and cultural developments in Sweden, Denmark, Norway, Finland, Iceland, Estonia, Latvia, and Lithuania since 1721. Emphasis on the emergence of the modern welfare state, neutralism in foreign policy, distinctive socioeconomic and cultural patterns, and major contributions to the modern West.

*433. Spain and Portugal (3) F Svec

Rise of Portugal, Castile and Aragon, the Catholic kings, Imperial Spain, Portugal and its empire, Portugal and Spain in transition, the republics, Salazar and Franco.

434IC. Formation of Modern Christianity (3) F,S Battagilia

(Same course as Religious Studies 472.) Restructuring and renewal of Christianity from the Reformation through the dawn of modern consciousness to the challenge of 20th century secular life.

*437. History of Germany 1871 to Present (3) F Raun

History of Germany from unification: the First World War, the Weimar Republic, the National Socialist Reich and the Post-War Recovery.

*438. History of Marxist Thought (3) F Stuart

Survey of Marxist thought from the mid 19th century to the present. Intellectual precursors of Marxism; basic concepts of Marx and Engels; divergent paths of Marxism in the 20th century. No previous study of Marxism will be assumed but students will benefit from having some background in the history of western industrial societies.

Russian

341A. Foundations of Russia (3) F Springer

Evolution of the state structure, diverse cultural patterns, and social structures associated with ancient Kiev Russia: rise of Moscow, origins of autocracy and serfdom; westernization and modernization as problems during the Imperial period to 1801. Particular emphasis on social history.

341B. Modern Russia (3) S Raun

Interaction with the West from 1801; era of great reforms and revolutionary movements; downfall of Imperial Russia; establishment of the Soviet regime; chief political, social, economic and cultural developments in the Soviet era; role of the Soviet Union in world affairs.

*441. Russian and Soviet Cultural History (3) F Raun, Springer

Cultural development of Russia from the beginning of massive westernization to the present; emphasis on values, attitudes and society as seen through literary sources, major developments in painting, music, social thought.

United States

300. The United States — Past and Present (3) F,S Faculty

Concentrating on the rise of the U.S. to its present position as a world power, this course will explore the contributions of various racial and ethnic groups and of both men and women to that process, as well as the effects of developing political, economic, and social institutions and values upon that process.

*372. United States: Colonial Period (3) F Buchanan, Walzer

Discovery and settlement of the new world; European institutions in a new environment; development of colonial government, economy and social institutions; European dynastic rivalry and colonial America.

*373. United States: Age of Revolution (3) S Buchanan, Walzer

Clash between British attempts to control and tax the colonies and colonial distaste for both; growth of an independent spirit; the American Revolution; problems of the new nation; the Constitution.

*375. The United States Emerges as a Nation (3) F,S Bernstein, McFaul

An analysis of the political, economic, social, and intellectual forces from the adoption of the constitution through the 1840s.

*376. United States: Civil War and Reconstruction (3) F,S Ahlquist, Collins

Sectional rivalry, manifest destiny, mid-century divisive forces, Civil War and reconstruction.

*378. US History: 1877-1920 (3) S Cerillo, Gunns

The development of the U.S. as an urban, industrial, multicultural society; progressive reform movements at the city, state, and national level; rise of U.S. as a world power; WWI.

*379. United States: Twenties, Depression, and World War II (3) F Gunns

The prosperous 1920s; the Depression years and the beginnings of welfare democracy; the United States in World War II.

*380. United States Since 1945 (3) F,S Bernstein, Berk, Burke, Gunns, Stuart

The United States in the nuclear age: the development of the Cold War and its domestic ramifications, the "post-industrial" economy, the civil rights revolution, the rise of political dissent, the Watergate affair, and after.

409IC. Utopian Realities (3) F,S Buchanan

Must be taken concurrently with co-requisite Humanities 409 IC, Utopian Dreams. Intensive study in the theory and practice of utopia as social reality. Readings in the Western tradition of utopian experimentation, with special emphasis on the American experience. Seminar presentations on problems with utopia and possible solutions. The roles of utopian speculation and design in contemporary life, both social and individual, will be stressed.

468./568. Local History: Communities (3) F,S Springer

Description and analysis of selected communities within the greater Los Angeles-Long Beach area from an historical perspective, with emphasis on population and migration patterns, the development of economic forces shaping the area and techniques of local history. Specific focus will be announced in the Schedule of Classes.

*469. Ethnic Groups in Urban American: A Historical Examination (3) F,S Collins

An examination of the origin, migration, settlement and the assimilation problems of the various ethnic groups in major American cities since the late 19th century. Emphasis will be upon the economic, social, political and educational problems encountered by different groups attempting to adjust to urban life.

470. Chicano History (3) F S Sanchez

Chicanos in the settlement and development of the Southwest and in contemporary U.S. society; Chicano experience as a U.S. minority group; emerging civil rights movement of La Raza. [Lecture] Grading: Traditional only. Same course as MEXA 300.

*471. History of the Westward Movement (3) F,S Peters

Analysis of the frontier experience of the American people, expansion across the American continent and its influences on American ideas and institutions, special attention given to explorations, movement of populations, effects of sectionalism and the geographical bases for American development.

*472. History of the South (3) F Ahlquist, Collins

Survey of the economic, social, intellectual and political development of the South from colonial times, with emphasis on the period from 1820 to the present.

473. California History (3) F,S Faculty

Survey of California history from the arrival of Europeans to the present, with emphasis on significant social, political and economic developments.

474IC. The Urbanization of Modern America (3) S Cerillo, Collins

Survey of urban America from the colonial period to the present, with emphasis on the process of urbanization, urban problems and politics. Not open to students with credit in HIST 474A,B.

*475IC. History of Business in the United States (3) S Black

Institutional development of the American business firm and the changing role of entrepreneurs and managers in American society.

477A./577A. American Cultural History (3) F Berk

Development of American way of life treated in terms of values, behavior and institution, themes of individualism, community, ethnic diversity and social reform.

477B./577B. American Cultural History (3) S Berk, Higgins

Development of American way of life treated in terms of values, behavior and institution, themes of individualism, community, ethnic diversity and social reform.

478. Foreign Relations of the U.S. (3) F,S Stuart

Foreign relations from the American Revolution to the present. Special attention given to isolationism and the Monroe Doctrine, expansionism and manifest destiny, the Open Door and the Far East, the war with Spain, the two world wars, the cold war, and after.

*479. The U.S. Constitution: Origins and Early Development (3) F Burke

European sources of constitutional thought. Colonial background, impact of the American Revolution, the framing period and the rise of a judicial approach to constitutional interpretation under the Marshall and Taney Courts. Emphasis throughout is on the evolution of constitutionalism as a working ideal in American thought and institutions.

*480. Law and Fundamental Rights in American History (3) S Burke

Selected variable topics on civil-liberties issues addressing the historical development of constitutional guarantees in the areas of freedom of expression, privacy, church and state, due process, and equal protection. Students should consult the Schedule of Classes for the topic to be emphasized.

482IC. The American Religious Experience (3) F,S Berk

Survey of major themes in the unique American religious experience. Topics of significance will include the adaption of European Christianity to novel American circumstances, the proliferation of denominations and the varied religious resporise to a dynamic American society. (Same course as R/ST 482.)

485A. History of Women in the U.S. — Early Period (3) F

Provides a survey of the roles and activities of American women from colonial period to 1850; variety of female life experiences; slavery, immigration; relationships to the family, economy and political movements. Only 3 units of 485A,B may be applied to a field of concentration in U.S. history for the major. Same course as AMST 490 and W/ST 485A.

485B. History of Women in the U.S. — Since 1850 (3) S

Changing roles and status of women in economic and social change; suffrage movement; women in union movement and WW II; the decade of the sixties and the "secibd wave" of feminism. Only 3 units of 485A,B may be applied to a field of concentration in U.S. history for the major. Same course as AMST 490 and W/ST 485B.

*486. History of the Afro-American in the United States (3) F,S Collins

Survey of the role of the Afro-American in American history from colonial times to the present, including the African heritage, nature of the American slave system, emancipation and the struggle for equal rights.

*489. Topics in Legal History of the United States (3) F Burke

Case studies in American law from colonial times to the present: English common law heritage, puritan and frontier influences, the legal profession, judicial traditions, formative stages in criminal law, torts and contracts, and modern trends in legal thought. May be repeated with different topics to a maximum of six units.

Graduate Division:

501. Theories and Methodologies of History (3) F Faculty

The development of history as a discipline, major schools of historical interpretation, and recent developments in analysis and theory. Emphasis will be placed on the interrelationships of history with other disciplines in the social sciences and humanities. Required of all graduate students.

508./408. The History of the Family (3) S Cressy

History of the family from the medieval period to the 20th century, with emphasis on its changing economic, social and emotional functions. The historical development of women's roles, childhood, marriage patterns, domestic labor and extended family relations will be considered, with special attention to contrasting developments during different historical periods and within different civilizations. Emphasis will vary between Europe, the U.S. and East Asia but with special attention to the early modern era. Students will have the opportunity to work on a family history project.

510. The Literature of History (3) F Faculty

Reading and discussion of major works and intensive study of bibliography and bibliographical aids. May be repeated for a maximum of six units in (a) Ancient and Medieval, (b) Modern European (including Britain and Russia), (c) United States, (d) Asian.

568./468. Local History: Communities (3) F,S Springer

Description and analysis of selected communities within the greater Los Angeles-Long Beach area from an historical perspective, with emphasis on population and migration patterns, the development of economic forces shaping the area and techniques of local history. Specific focus will be announced in the Schedule of Classes.

577A./477A. American Cultural History (3) F Berk

Development of American way of life treated in terms of values, behavior and institution, themes of individualism, community, ethnic diversity and social reform.

577B./477B. American Cultural History (3) S Berk, Higgins

Prerequisites: None. Development of American way of life treated in terms of values, behavior and institution, themes of individualism, community, ethnic diversity and social reform.

590. Topics in Comparative History (3) S Faculty

Prerequisite: Consent of instructor. Selected themes in history involving cross-cultural and comparative approaches. May be repeated for a maximum of six units.

592./492. Proseminar in World History (3) F 86 Faculty

Prerequisite: Consent of the instructor. Discussion and analysis of recently published historical works and materials from a world history perspective. May be repeated to a maximum of six (6) units.

595. Special Preparation (3) F,S Faculty

Special preparation for the M.A. examinations under faculty direction. May be repeated for a maximum of 6 units. Cannot be applied to requirement of graduate courses. Permission of Graduate Advisor required.

611. Seminars in Ancient and Medieval History (3) S Faculty

Prerequisites: Six units of upper division ancient or medieval history or consent of instructor. Selected topics in ancient or medieval history. May be repeated for a maximum of six units.

631. Seminars in European History (including Britain and Russia) (3) F,S Faculty

Prerequisite: Consent of instructor. Directed reading and research in the political, economic, social and cultural hisory of Europe. May be repeated for a maximum of six units.

673. Seminars in United States History (3) F,S Faculty

Prerequisite: Six units of upper division United States history. Selected topics in domestic or international affairs from colonial times to the present. May be repeated for a maximum of six units.

682. Seminars in East Asian History (3) F Faculty

Prerequisites: Six units of upper division Asian history or consent of instructor. Selected topics in East Asian history. May be repeated for a maximum of six units.

695. Directed Readings (1-3) F,S Faculty

Prerequisite: Consent of instructor. Readings on an individual basis.

697. Directed Research (1-3) F,S Faculty

Prerequisite: Consent of instructor. Research on an individual basis.

698. Thesis (1-4) F,S Faculty

Planning, preparation and completion of non-curricular work in history for the master's degree.

Human Development

School of Social and Behavioral Sciences

Department Chair: Norma Bernstein Tarrow
Department Office: FO-4 165
Telephone: 498-4344
Advisory Council: Professors: Rajen Anand (Anatomy and Physiology), Robert Cash (Educational Psychology), Dorothy Fornia (Home Economics), Elaine Haglund (Educational Psychology), Dorothy Libby, (Anthropology), Norma Bernstein-Tarrow (Teacher Education), Associate Professors: Margaret Brady (Nursing), Phyllis Maslow (Educational Psychology).
Assistant Professors: Estela Andujo (Social Work), Kevin MacDonald (Psychology), Richard Tuveson (Home Economics).
Faculty: Professors: Robert Cash, Dorothy Libby, Norma Bernstein Tarrow.

The Human Development Program is designed to provide students with a fundamental interdisciplinary understanding of human growth and development throughout the life cycle. The program of study concentrates on the psychological, sociocultural and biological dimensions of human development and on the underlying processes and structures which support that development. In addition a variety of experiences in community agencies and/or educational settings enables students to integrate knowledge with career goals in a variety of human service fields. The curriculum is flexible and designed to help students meet a variety of educational needs through a wide selection of courses appropriate to individual interests and goals. Courses should be selected in consultation with the program advisor.

Students desiring information should contact the department office for referral to the faculty advisor. Advising is a two step process: monthly advisement orientations are presented in the student lounge (FO4-270) for all new students and any student seeking more information about the major or concentration. (Schedules are posted at the lounge and in the Program office — FO 4-165.) Following initial orientation, students meet in individual appointments with the advisor to develop individual plans, file graduation check sheets, and obtain other advisement information, as needed.

Students interested in Human Development may choose one of two options: B.A. in Human Development or Liberal Studies Major with Human Development Concentration. Graduate programs may be developed under the auspices of the Special Major Program.

Brochures, course sequence plans, listings and descriptions of specific courses within each area may be obtained from liberal studies or human development program offices. Students can plan a program geared to specific career requirements (i.e., Gerontology certificate, Child Development certificate, Children's Center Credential, Multiple Subjects Credential, or graduate work in human development and its related disciplines). Early Advisement is strongly recommended.

The Human Development Student Association is an active group open to all students enrolled in Human Development classes. The HDSA has regularly scheduled meetings and sponsors diverse activities including: speakers, films, and student-faculty parties. HDSA activities are announced in the HDSA Newsletter also available in the Program office.

Bachelor of Arts in Human Development

Requirements for the Bachelor of Arts in Human Development (code 2-8014)

Lower Division/Prerequisites:

ANTH 120 or SOC 100, A/P 107 or 207, HDEV 250 (or SBS 250), PSY 100.

Required Core Courses:

HDEV 307IC, 357IC, 320,401, 402, 434, and 470.

Foundation Areas:

Students will choose three units from each of the following areas:

Biological:

ANTH 318, ANTH 319 or A/P 400, A/P 401.

Psychological:

C/D 361, EDP 302, 305, GERN 400IC, H EC 311, 314, 411, PSY 331, 332, 333, 336, 337, 341, 345, 351, 356, 370, 438, 462.

Sociocultural:

AIS 339, ANTH 352, ASAM 340, B/ST 410, H EC 312IC, 412, 413, MEXA 350, SOC 320, 345, 464, GERN 400IC.

Specialization:

A minimum of 6 units of secondary specialization coursework selected in consultation with the program advisor. Concentration in Human Development for the Bachelor of Arts in Liberal Studies (code 2-0014)

Lower Division/Prerequisites:

ANTH 120 or SOC 100, A/P 107 or 207; HDEV 250 (or SBS 250), PSY 100.

Required Core Courses:

HDEV 307IC, 320, 357IC, 401, 402.

Each student will also select a minimum of 6 units from one of the five following areas:

Biological:

A/P 400 or ANTH 319, A/P 401, ANTH 318, PSY 241.

Psychological:

PSY 331, 332, 333, 336, 337, 341, 345, 351, 356, 370, 438, 462, C/D 361, EDP 305.

Sociocultural:

ANTH 352, ANTH 120 or SOC 100, H EC 312IC, 412, 413, SOC 320, 345, 464, ASAM 340 or B/ST 410 or MEXA 350 or AIS 339.

Child Development:

H EC 311, 312IC, 314, 411, 412, 413, 433.

Gerontology:

A/P 401, GERN 400IC, SOC 464.

Courses (HDEV):

250. Elementary Statistics in the Social and Behavioral Sciences (4) F, S Faculty

Not open to students with credit in ANTH 302, C/ST 210, MATH 180, PSY 210, SOC 255, or SBS 250. Prerequisite: Knowledge of mathematical procedure usually covered in elementary high school algebra, as demonstrated on a screening examination the semester prior to enrollment. Introduction to descriptive and inferential statistics and their applications in social and behavioral science research; performance of statistical exercises by interactive computer. Emphasis upon knowledge of which statistical tests to use and how to interpret their results. (Lecture 3 hours, laboratory 2 hours). Same course as SBS 250 and SOC 250.

307IC. Life Span Human Development I (3) F,S Faculty

Prerequisites: PSY 100, BIOL 107 or 207, ANTH 120 or SOC 100, junior standing. Biological, psychological, and sociocultural aspects in the growth of the individual from conception through early adolescence will be considered. Relevant topics and theoretical issues will be treated in an interdisciplinary manner. Not open to students with credit in NRSG 307.

320. Research Methods in Human Development (4) F,S Faculty

Prerequisites:ANTH 120 or SOC 100, BIOL 107 or 207, PSY 100, HDEV 250 or SBS 250, HDEV 307 or concurrent enrollment. Research methods in human development. Includes methods and models from anthropology, biology, psychology and sociology as applied to research. (Lecture 3 hours, laboratory 2 hours.)

357IC. Life Span Human Development II (3) F,S Faculty

Prerequisite: HDEV 307. Biological, psychological, and sociocultural aspects in the development of the individual from late adolescence or youth until death will be considered. Relevant topics and theoretical issues will be treated in an interdisciplinary manner. Not open to students with credit in NRSG 357.

380. Human Development Issues in the World of Work (3) F,S Faculty

The underlying processes and structures of human development and their relationships to the job world. Socialization across the life-span and subsequent work experiences. Aspects of mental and physical well-being and socio-cultural factors related to employment.

401. Cultural Influences on Human Development (3) F Faculty

Prerequisites: HDEV 307, 357. Study of how an individual's ethnic membership relates to various aspects of growth and development; the effects of culturally related influences on total development. Discussion and selected observations of individuals from diverse cultural backgrounds. (Lecture-discussion 3 hours.)

402. Development of Thought: Structure, Process and Cultural Influences across the Life Span (3) F Faculty

Prerequisites: HDEV 307, 357 or PSY 36I,365. Readings and discussion will focus on the examination of theories and current research concerned with the development of patterns of thinking and approaches to reality through a life-cycle approach in selected cultures. Specific topics include biological factors, child rearing, adult alternatives, communication and language, effects of schooling and education, and values of society. The perspective is interdisciplinary; the approach comparative and concerns itself with individuals, groups, and institutions in diverse cultures over their life span. (Lecture/Discussion: 3 hours)

434A,B,C. Interpersonal Skills in Human Resource Development (2,3,4) F,S Cash

Designed to develop interpersonal skills identified as necessary to have effective human relations and staff resources development. It includes a presentation of theory and research applicable to processes in interpersonal functioning and human relations. Didactic and experiential learning approaches. (Same course as ED P 434A,B,C.)

470. Seminar/Practicum (4) S Faculty

Prerequisites: HDEV 307, 320, 357, 401, ED P 434, and permission of instructor. The course provides for a sequence of observations and supervised participation with individuals in a variety of community agencies and/or educational settings. Practicum is supplemented by topical seminar discussions for one hour each week. (Seminar 1 hour, practicum 6 hours.)

490. Special Topics in Human Development (3) F,S Faculty

Prerequisites: HDEV 307, consent of instructor. Topics of current interest in human development selected for intensive study. May be repeated with different topics for a maximum of six units. Topics for a given semester will be announced in the Schedule of Classes.

499. Independent Study (1-3) F,S Faculty

Prerequisite: Consent of Program Director. Student will conduct independent laboratory, field, or library research and write a report of the research. May be repeated for a maximum of six units.

Latin American Studies

School of Social and Behavioral Sciences

Certificate in Latin American Studies

Latin American Studies administers an interdisciplinary program which offers students interested in this field the opportunity to pursue courses leading to a Certificate in Latin American Studies. Courses used to meet this certificate requirement may be counted also, where applicable, toward the General Education requirement and the major and teaching minor requirements of the cooperating departments.

Students interested in pursuing a master's degree emphasizing Latin American studies should read the second in this *Bulletin* entitled Special Major (Interdisciplinary Studies) and consult the Director of Latin American Studies.

Requirements for the Certificate in Latin American Studies

1. A bachelor's degree with a major in a traditional discipline.
2. 26 units distributed as follows:
   (a) SPAN 201A,B (4,4).
   (b) Core (required of all students) of 12 units: three units of anthropology selected from ANTH 323, 324 or 345, three units of GEOG 320, three units of history selected from HIST 162A, 162B, 362, 364, three units of political science selected from POSC 358, 359, 459 or 461.
   (c) Electives totaling six units from fields other than the student's major selected in consultation with an advisor from the following (cannot duplicate courses taken in the core): ANTH 323, 342, 345; ART 393A-B; C/LT 440; HIST 162A,B, 362, 364, 433, 462, 463, 466; MEXA 305, 312, 380, 400, 420, 425' POSC 358, 359, 459, 461**; SPAN 312, 313, 314, 337, 338, 411, 440, 445, 450, 451, 457 and courses in Spanish literature as permitted.

Concentration in Latin American Studies for the Bachelor of Arts in Liberal Studies

A minimum of 26 units will be required; 15 of which must be upper division

1. Required: SPAN 201A,B.
2. Four courses, two from the one discipline and one from each of two other disciplines: ANTH 323, 324 or 345; GEOG 320; HIS 162A-B, 362, or 364; POSC 358, 359, 459, or 461.
3. Two additional courses discipline emphasized above or from Spanish. ANTH 323, 324, or 345; HIST 162A,B, 362, 433, 462, 463, 466; POSC 358, 359, 459, 461**; SPAN 312, 313, 314, 331, 440, 445, 460, 461, 462.

Note: *Courses also available in the core.

*Students should note that if they take both HIST 162A and 162B they will have insufficient upper division units and will have to add an additional upper division course.

**POSC 461 may be taken during those semesters when the content emphasizes Latin American development.

Interested students should apply to the Director of Latin American Studies in PSY 141.

Legal Studies in the Liberal Arts

School of Social and Behavioral Sciences

Director: Albie Burke (History)
Telephone: 498-4458

Interested students should apply to the Director, Program for Legal Studies in the Liberal Arts, Dr. Albie Burke, History Department.

The Certificate Program in Legal Studies in the Liberal Arts is designed to promote an interdisciplinary study of law as a liberal art. The certificate may be earned in conjunction with any baccalaureate degree. It is especially useful to students preparing for careers in government service, business, journalism and education. Courses selected by the student for the certificate may be the same as those used to satisfy major, minor, credential or general education requirements. The program does not duplicate professional legal or para-legal education, nor does it equip a person to practice law. It is not the prescribed prelaw program of the University although prelaw students may elect to earn the certificate as part of a total prelegal program advisod by their counselors.

Requirements for the Certificate in Legal Studies in the Liberal Arts

1. A baccalaureate degree.
2. A cumulative grade point average of 3.0 in all courses in the student's approved certificate program.
3. Twenty-one units which must include HIST 489, POSC 318 or 414, PHIL 351 or 352 and at least 12 additional units selected from the secondary and specialized courses listed below. The 21 units must include courses from a minimum of five departments. No more than 12 units may be in the candidate's major.
4. Project paper (3 units). To be written ideally upon completion of all course work or during the last semester of the senior year, under the supervision of at least two faculty members participating in the certificate program. The paper can be either an exploratory project (in which a subject is researched in a detailed and original manner) or an analytic effort (where fewer sources are used but the discussion of the material is developed more fully).

It is strongly recommended that students take required courses first and then elective courses. The choice of electives is unrestricted: they may all be secondary or all specialized courses. The selection of electives should be made in consultation with an advisor who helps prepare a program. Thus the plan of study should have a focus and be directed toward the subject on which the student will write in the research paper.

Secondary courses:
ANTH 303, 403; ECON 430; HIST 308IC, 455, 479. 480; POSC 314, 315, PSY 351, SOC 441. Specialized courses: CRIM 301, 351; ECON 355; POSC 376, 412, 415, 424; FIN 222, 324, 444.

Mexican American Studies

School of Social and Behavioral Sciences

Department Chair: Francisco Hidalgo
Department Office: Faculty Offices 4(FO4), Rooms 275 & 165
Telephone: 498:4644
Faculty: Professors: Francisco Hidalgo, Genevieve Ramirez; Associate Professors: Alejandro Osuna, Federico Sanchez; Assistant Professor: Jose Lopez
Department Secretary: Victoria Van Thuy Nguyen

Students desiring information should contact the department office for referral to one of the faculty advisors: Academic

Advisor: Federico A. Sanchez

Mexican American Studies courses are designed to provide a general knowledge of the history and culture of the Mexican-Americans in the United States. The department offers programs to serve the interests and goals of (1) those entering a variety of occupations including urban studies, government, journalism, social work, school administration, business, criminology, law, foreign service and other related areas, (2) teachers, counselors, administrators, (3) majors in other fields such as history, sociology, psychology, literature, anthropology, who wish to include additional scope to their field of study.

Bachelor of Arts in Mexican American Studies

Requirements for the Bachelor of Arts in Mexican American Studies (code 2-8817)

Lower Division:

A minimum of 17 units distributed as follows:

MEXA 100, 103A, 203, 205, or 230.

Upper Division:

A minimum of 24 units distributed as follows: 12 units of Core requirements: three units from MEXA 405, 420, or 425, and nine units from the following:

MEXA 300, 310, 350, 443; nine units selected from one of the three groups:

Group I (Humanities) MEXA 305, 312, 402, 423, 405, 420, 425.

Group II (Social Science) MEXA 300, 304, 310, 350, 360, 375, 380, 400, 443.

Group III (Education) — MEXA 340, 442, 443; and three elective units from any group or MEXA 490 or 499.

Social and Behavioral Sciences Requirement:

The student will select six units of coursework in the Social and Behavioral Sciences from the options listed below, according to the area of concentration selected within the major. These courses shall be in addition to courses selected to fulfill the requirements of any General Education Category. Group I (Humanities): ALS 340, AASAM 380, B/ST 340, SOC 485, W/ST 410; Group II (Social Sciences): AIS 200, ANTH 345, ASAM 345, B/ST 400, ECON 444, HIST 364, GEOG 470, POSC 359, SOC 445, SW 370, W/ST 401. Group III (Education): AIS 337, 361, ASAM 310, ANTH 421, B/ST 420.

Departmental Requirement:

Two years of college Spanish, or a grade of C or better in MEXA 203, or the successful completion of a Spanish proficiency examination are required of all majors. (If the student is proficient in Spanish the two year's requirement may be met by successful completion of the proficiency examination.)

Minor in Mexican American Studies (code 0-8817)

A Prerequisite to taking this minor is successful completion of two Spanish courses, recommendation by the Mexican American Studies Department or the successful completion of a Spanish proficiency examination.

Requirements for the Minor:

Upper Division:

A minimum of 24 units distributed as follows: 12 units of core requirements one course selected from MEXA 405, 420, or 425, and any three of the following: MEXA 300, 310, 350, 443; nine units selected from one of the three groups: Group I (Humanities) — MEXA 302, 305, 312, 402, 403, 405, 420, 425; Group II (Social Science) — MEXA 300, 304, 310, 350, 360, 375, 380, 400, 443; Group III (Education) — MEXA 340, 442, 443; and three elective units from any group of MEXA 490 or 499.

Certificate in Mexican American Studies

The Mexican American Studies Department has established a program which offers students interested in this field the opportunity to pursue courses leading to a certificate in Mexican American Studies. Courses used to meet this certificate requirement may be counted also, where applicable, toward the General Education requirements and the major and teaching minor requirements of the cooperating departments. Requirements for the Certificate in Mexican American Studies:

1. A bachelor's degree with a major in a traditional discipline.
2. A minimum of 24 units distributed as follows: 12 units of Core requirements: three units from Mexican American Studies 305, 420 or 425, and nine units from the following: MEXA 300, 310, 350, 443; nine units selected from one of the three groups: Group I (Humanities) — MEXA 302, 305, 312, 402, 403, 405, 420, 425; Group II (Social Science) — MEXA 300, 304, 310, 350, 360, 375, 380, 400, 443; Group III (Education) — MEXA 340, 442, 443; and three elective units from any group of MEXA 490 or 499.

Concentration in Mexican American Studies for the Bachelor of Arts in Liberal Studies

A minimum of 24 units are required; 15 of which must be upper division.

Lower Division:

Three courses selected from MEXA 100, 203, 205, or 230.

Upper Division:

Either MEXA 420 or 425; either MEXA 310 or 405; three courses selected from MEXA 300, 340, 350, or 400.

Bilingual Concentration — Spanish and English

A 24-unit minimum, 15 of which must be upper division, 12 of which may also count as part of Liberal Studies Core. (These courses should be designated as applicable to the appropriate categories.)

Lower Division:

SPAN 201A (4) or MEXA 203 (3), SPAN 201B (4).

Upper Division:

SPAN 312 (3), SPAN 313 (3), ENGL 420 (3), MEXA 402 (4) or SPAN 427 and 425 (6), SPAN 320 (3).

Note: ENGL 420 should precede MEXA 402. SPAN 313 is prerequisite for SPAN 320.

Courses (MEXA):

Lower Division:

040. Bilingual Communication Skills-English (3) F,S Osuna, Ramirez, Faculty

Prerequisite: To be taken concurrently with MEXA 103A. Basic fundamentals of English communication for students of bilingual background. Credit/no credit only. Counts as part of student's course load but does not carry graduation credit.

100. The Chicano in United States Society (3) F,S Lopez, Sanchez

Focuses on the Hispano, Mexican and Indian heritage of the Chicanos of the Southwest and their contribution to the United States with emphasis on the political, education, literary, economic and sociological facets of their role in contemporary U.S. society.

103A. Bilingual Communication Skills-Spanish (4) F,S Osuna, Ramirez, Faculty

Prerequisite: Placement test. Designed for those students from a Spanish speaking background who have minimal ability in the Spanish language.

103B. Bilingual Communication Skills — Spanish (4) F,S Osuna, Ramirez

Prerequisite: Placement test or completion of 103A. Designed for those students from a Spanish-speaking background who have an oral-aural communicative skill in the language. Students completing this course may enroll in 203.

104. Bilingual Communication Skills-English (3) F,S Ramirez

Prerequisite: MEXA 040 or placement test, to be taken concurrently with MEXA 103A. Advanced fundamentals of English communication for students of bilingual background. (Fulfills ENGL 100 requirements.)

203. Spanish for the Native Speaker (3) F,S Osuna, Ramirez

Meets the needs of bilingual students whose cultural background has prepared them for special forms of accelerated Spanish instruction. The successful completion of this lower division course will enable the student to enter upper division classes in Spanish.

205. Introduction to Chicano Literary Studies (3) F,S Osuna, Ramirez.

Introductory survey course in Mexican and Chicano literature covering traditional and contemporary literary styles and forms from selected translated Mexican and Chicano readings.

230. Chicano Community Organization (3) F,S Lopez, Faculty

Analysis of Chicano, community groups; emphasis on development of community organizational techniques.

Upper Division:

300. Chicano History (3) F,S Sanchez

Chicano's role in the settlement and development of the Southwest and in contemporary U.S. minority group; emerging civil rights movement of La Raza. Same course as HIST 470. Approved G.E.: D.2.b.

302. Bilingual Skills Communication-English (3) F,S Ramirez

Prerequisites: MEXA 104 or other ENGL 100 equivalent course. Further development of intermediate/advanced writing skills for students of bilingual background. Course is recommended to be taken prior to the Graduate Writing Proficiency exam.

304. Mass Media and the Barrio (3) S Lopez, Faculty

Impact of American mass media in Chicano community life from the 19th Century to the present.

305. Mexican Literature in Translation (3) S Osuna, Ramirez

Prerequisite: Completion of MEXA 205 or any other lower division literature course. Survey of Mexican literature, with emphasis on the contemporary trends, authors and work which have most greatly influenced the Chicano writers of today.

310. Chicano Thought (3) F,S Sanchez

Study of the ideas, philosophies and events affecting Chicano life; identification and examination of the Chicano world view of a Chicano reality.

312. Mexican Thought (3) F Sanchez

Inquiry into the nature of Mexican thought and a critical examination of Mexican world views and views about the nature of morality, beauty, society, religion and intellect.

340. The Chicano and Education (3) F Hidalgo, Sanchez, Nieto

Analysis of the failure of school systems to meet the needs of Chicano students, evaluation and consideration of the changes in philosophy, curriculum, methodology and testing and guidance procedures that must be made.

350. Sociology of the Barrio (3) F,S Penalosa

Analysis of social institutions in the Chicano community. Survey of educational, political, religious, economical and social systems. Field work will be required to provide relative experiences.

352. Central American and Caribbean Peoples in California (3) S Penalosa

(Same course as SOC 341.) Survey of the socioeconomic conditions and cultural life of the Central American and Spanish-speaking Caribbean communities of California: Salvadorans, Guatemalans, Puerto Ricans, Cubans, etc. Not all groups will necessarily be dealt with each time the course is offered. Similarities with and differences from the Mexican American community will be examined.

360. Justice and the Chicano (3) F Lopez

Study of the administration of justice as it relates to the barrio and the Chicano; examination of police-community relations, administrative procedures, courts and jury systems and their relationships to Chicanos. Analysis of civil rights legislation and its effectiveness on the Chicano community.

375. The Chicano in the Penal System (3) S Lopez

Examines via discussion and observation rehabilitational, educational and vocational programs in the penal system in terms of overall effectiveness relative to the Chicano. Selected field trips will be scheduled throughout the semester.

380. History of PreColumbian Mexico (3) F Sanchez

History of Meso-America from prehistoric times to the Spanish conquest, emphasizing the study of the societies and the religious and intellectual life of people of ancient middle America. Same course as HIST 461.

390. The "Hispanic" Southwest: Historical and Literary Images (3) Sanchez, Faculty

Prerequisite: Junior Standing. Critical, interdisciplinary examination of selected events and periods in the history of the "Hispanic" Southwest as depicted in historical and literary works by both Anglo- and Mexican-Americans. [Lecture]

395. Latino Cultural Images in Film (3) F Sanchez, Faculty

Critical, interdisciplinary examination of selected Latino cultural traits and values as these are depicted in motion pictures, documentaries, and other types of film.

400. Chicano Roots in Modern Mexico (3) S Sanchez, Faculty

Effects of the political and cultural evolution of modern Mexico on the Chicanos of the Southwest as demonstrated by the conquest, War of Independence, the revolution and contemporary times.

402. Bilingual Linguistic Studies (4) F Osuna

Prerequisite: Two years of college level Spanish. Study of the Spanish and English linguistic patterns of the Chicano, specifically in the southwestern United States.

403. Dialectology of the Southwest (3) S Osuna

Prerequisite: MEXA 402 or equivalent. Analysis of the Spanish and English dialects of the Chicano, specifically in the Southwest United States. Students will complete field work projects.

405. Chicano Literature (3) F Osuna, Ramirez

Prerequisite: Reading and listening comprehension of Spanish language plus any upper division literature class. In depth study and analysis of the history, development, themes and genres of the literature of the Chicano and by the Chicano in English and Spanish language texts.

420. Chicano Heritage in the Arts of Mexico and the Southwest (3) S Faculty

Historical and philosophical analysis of Indian Mestizo and Chicano plastic arts, music and dances with a view to understanding the Chicano heritage.

425. Mexican and Chicano Folklore (3) F Osuna

Study of folklore with special reference to the folkloric contribution of Mexico and the Southwest to the United States. Emphasis on narrative genres of folklore employing a humanistic and cultural approach. Field work and recording of materials. Readings and aural comprehension of Spanish required.

430A,B. Ballet Folklorico (2,2) F,S Faculty

History and practice of traditional Mexican dances from Pre-Columbian time to the present. (Three hours practice, one hour lecture.)

442. Counseling Chicanos (3) F Faculty

Prerequisite: Upper division standing in Mexican American Studies or consent of instructor. Present day theories of counseling, theoretical issues and special problems encountered in counseling Chicanos. Goals, processes and techniques of counseling.

443. Psychology of the Chicano (3) F Faculty

Prerequisite: MEXA 100 or consent of instructor. Significance of the "psi" phenomena and its related variables on the cognitive and conative development of the Mexican American in the segregated barrio and integrated suburban environments. Will deal with basic physiological and psychological theories, principles and practices relative to the individual's personality dynamics. Included will be a comparison of Mexican and Western methodology in educational and psychological research endeavors.

490. Special Topics in Chicano Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in Mexican-American studies selected for intensive development. May be repeated for a maximum of six units. Topics will be announced in the Schedule of Classes.

499. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Preparation of research reports on selected topics relating to the Mexican-American. May be repeated for a maximum of six units.

Political Science

School of Social and Behavioral Sciences

Department Chair: Ronald J. Schmidt
Department Office: Social Science Public Affairs (SS/PA,) Room 257
Telephone: 498:4704
Faculty: Professors: Sudershan Chawla, Robert L. Delorme, Robert E. Hayes, Stephen Horn, Chae-Jin Lee, William M. Leiter, Alain-Gerald Marsot, Ronald J. Schmidt, Christian Soe, Barry H. Steiner, A. Jay Stevens, Thomas P. Trombetas; Associate Professors: Hans P. Ridder, Paul C. Schmidt, Joanna Vecchiarelli Scott.
Assistant Professor: Christopher Dennis.
Adjunct Professor: Maurice Harari
Emeritus Faculty: Ira S. Cohen, Leroy C. Hardy, George V. Kacewicz, J. C. Lien, A. Donald Urquhart
Department Secretary: Ruth Haydis

Students desiring information should contact the department office for referral to one of the faculty advisors: Credential Advisor: Caughron (History); Undergraduate Advisor: Ron Schmidt; Graduate Advisor: Delorme.

The political science major is designed to provide the student with a systematic knowledge of the nature and scope of political science. A student may elect to major in political science as a preparation for such fields as: (1) college or university teaching, (2) law, (3) government career service, (4) foreign career service, and (5) politics. In addition, a political science major is preparation for general education, good citizenship and participation in political life. Students interested in the fields mentioned above should consult with an advisor to secure aid in planning their programs.

General Education Requirements in Government

The Education Code requires each college graduate to meet (1) a federal government requirement and (2) a California state and local government requirement. Both of these requirements can be met by Political Science 100 (for lower division students) or Political Science 391 (for upper division students). If the student has completed the federal government requirement, but not the California state and local government requirement, the student should take Political Science 326. Students who have taken American federal, state or local government at another institution should check with the political science faculty before enrolling.

Bachelor of Arts in Political Science

Requirements for the Bachelor of Arts in Political Science (code 2-8536)

Lower Division requirement: (9 units)

Political Science 100 and 201 and one additional course from Political Science 210 or 215.

Breadth Requirement: (21 units)

Three upper division units from five of the following six areas plus six units of electives in Political Science which may include 494IC, 497, 498 or 499.

International Relations
Comparative Politics
Political Theory
Public Law
Politics and Policy Formation
Public Policy and Administration

Concentration Requirement: (9 units)

Nine units from a sixth area including POSC 409, 419, 429, 449, 469 OR 489.

Social Science Requirement: (6 units)

Six upper division units outside of Political Science taken in departments in the School of Social and Behavioral Sciences, chosen in consultation with a Political Science advisor.

Option in Public Administration (code 2-8540)

Lower Division core requirement: (15 units)

Political Science 100 and 201 and one additional course from Political Science 210 or 215. Three units of Economics and three units of statistics from an approved list of courses available in the department.

Breadth requirement: (21 units)

Three units from each of the following five areas plus 6 units of electives in Political Science which may include 494IC, 497, 498 or 499.

International Relations
Comparative Politics
Political Theory
Public Law
Politics and Policy Formation

Concentration Requirement: (15 units)

Political Science 331, 449 and Public Policy 400IC plus 6 additional units in the area of Public Policy and Administration.

Bachelor of Arts in Political Science with Honors

Students with a major in Political Science may be admitted to the Political Science Department's honors program (option of the University Scholar's Program) provided they have:

(1) Junior standing, completed POSC 201 and at least two upper-division courses in Political Science.
(2) A minimum of three semesters remaining before graduation.
(3) A minimum cumulative GPA of 3.3, and 3.5 in Political Science courses.
(4) Submitted to the Department Honors Committee two letters of recommendation from faculty members and an example of a research or analytical paper written for a previously taken course in Political Science.
(5) Received admission approval from the Department Honors Committee.

In order to graduate with Honors in Political Science a student must:

(1) Complete all regular requirements for the major in Political Science.
(2) Complete 3 units of Political Science 490H: Honors Seminar.
(3) Complete 3 units of Political Science 491H: Honors Thesis.
(4) Complete 3 units of Political Science 492H: Honors Research.
(5) Have at the time of graduation a cumulative GPA of at least 3.3 and a GPA of at least 3.5 in Political Science courses.

Minor in Political Science (code 0-8536)

A minimum of 21 units which must include:

Lower Division:

POSC 100 or 391, 201.

Upper Division:

Five courses selected from POSC 308, 314, 322, 326, 331, 353 or 371.

Minor in Public Administration in Political Science (code 0-8540)

A minimum of 21 units which must include:

(a) POSC 331.
(b) Nine additional units selected from POSC 334, 336, 338, 316, 348, 442, 447, 448, 449.
(c) Six additional units selected from the following: POSC 320, 322, 326, 327, 328, 420.
(d) Three elective units from any area in political science chosen in consultation with an advisor.

Master of Arts in Political Science (5-8536)

The Department of Political Science offers graduate study leading to the master of arts degree. The student is urged to become acquainted with the general requirements of the University and the specific requirements of the department as stated in this Bulletin. Important supplementary information about the steps leading to the master's degree in political science is contained in the Handbook for Graduate Students, which is available from the department upon request.

Before or soon after entering the program, the graduate student will normally consult with the department graduate advisor. The graduate advisor will, if necessary, assist the student in the selection of a faculty academic advisor and two other committee members.

After beginning graduate study, the student is responsible for obtaining the consent of three full-time members of the department's graduate faculty to serve on her/his graduate committee: one of these committee members, the chairman, will be drawn from the student's major field of concentration and will serve as the student's academic advisor while two others will be drawn from the second and third field of concentration respectively. The student should seek to have established her/his committee prior to the completion of the first semester or the first 12 units of work as a graduate student in political science unless an exception is granted by the Department Graduate Committee.

Prerequisites:

1. A bachelor's degree with a major in political science (deficiencies will be determined by the faculty advisor in consultation with the graduate committee of the department), or:
2. A bachelor's degree with 24 units of upper division political science comparable to those required of a major in political science at this University (deficiencies will be determined by the faculty advisor in consultation with the graduate committee of the department).
3. A 3.0 grade point average in political science courses taken as an undergraduate. A student whose grade point average is less than 3.0 may appeal to the Department Graduate Committee for a waiver of this requirement. Normally, satisfactory completion of the Graduate Record Examination (verbal and mathematical aptitude tests) will be required for those students seeking waivers of the 3.0 requirement.

Advancement to Candidacy:

1. Satisfy the general requirements of the University for advancement to candidacy.
2. In order to be recommended for advancement to candidacy, students must obtain the written approval of their master's degree program of course work by their committee advisor. The program must then be submitted to the department graduate advisor.

Requirements for the Master of Arts:

1. A student's program is formulated in consultation with an advisor selected from the department's faculty. A minimum of 30 units of acceptable upper-division and graduate courses is required. All students are required to take POSC 500 and either POSC 550 or 620. A minimum of 15 additional units must be concentrated in three of the fields into which the department's curriculum is divided. An additional six units may be taken in Political Science or in another field of study closely related to the candidate's educational objectives. The program must include a minimum of 18 units in the 600 series of Political Science courses.
2. The graduate student must complete one of the following requirements: (a) A comprehensive examination in each of two fields of Political Science and an oral examination (b) A thesis and an oral examination on the thesis. (Following completion of the written examinations or submission of the thesis, the student's committee may waive the requirement for an oral examination.)

   Students following the comprehensive examination option will earn three units of credit in POSC 697 and those writing a thesis will be granted three units of credit in POSC 698.
3. In addition to completing the above requirements, the graduate student must complete (or show that he/she has completed one of the following requirements); (a) A minimum of two semesters of an acceptable foreign language taken at the college level with a grade of B or better; (b) A demonstrated reading knowledge of an acceptable foreign language; (c) A minimum of two semesters of acceptable course work in statistics with a grade of B or better.

Courses (POSC):

Lower Division:

100. American Political Institutions (3) F,S Faculty
Survey of United States national, state and local governments with attention to unique aspects of California government. This course satisfies the general education requirement and the California teaching credential requirement.

201. Introduction to Political Science (3) F,S Faculty
Introduction to the principles of political science. Major terms, concepts, functions and institutions relating to the processes of politics. Not open to students with credit in POSC 109 or 200A.

210. Issues of American Politics (3) F,S Faculty
Prerequisite: POSC 100. Intensive study of issues associated with the concepts of democracy, limited government, federalism, separation of powers, judicial review and preservation of individual rights. Not open to students with credit in POSC 110.

215. Issues of Comparative Politics (3) F,S Faculty
Intensive study of issues associated with selected foreign governments, modernization, revolution, political change and world ideological conflict. Not open to students with credit in POSC 200B.

220. Culture and World Politics (3) F,S Steiner
Divergences between nations as they affect political differences between states. The political significance of the encounter of individuals with those of different nationalities.

225. Issues in Political Theory (3) F,S Scott
An introduction to key values and ideas in political life, such as justice, obligation, and democracy through an examination of works of political theory and political literature.

Upper Division:

Political Theory

301. The Development of Political Thought: Greece and Rome (3) S Scott
The roots of political inquiry in the works of ancient Greek and Roman political theorists such as Socrates and the Sophists, Plato, Aristotle, Cicero, Polybiuus, and the Stoics. Major themes will be the relationship between the individual citizen and the Polis, justice and equality, democracy and dictatorship, and the political culture of the Mediterranean world.

302. The Development of Political Thought: Middle Ages and Renaissance (3) F Scott
A critical examination of the origins of State and Church as institutions of governance in Western Europe from the 5th century to Niccolo Machiavelli's Renaissance Italy. Major themes will be the transition from Feudalism to the nation-state, the rise of urban culture and geographic exploration, the Crusades, and the articulation of civilian and canon legal systems.

***303. The Development of Political Thought: The Liberal and Conservative Traditions (3) F,S Faculty**
The emergence of modern political thought from the 17th through the 19th century in Western Europe in reaction to the English Civil War and Industrial and French Revolutions. Major themes and theorists will be the new Liberal and Conservative views of State and society expressed in the differing perspectives of John Locke, Thomas Hobbes, Jean Jacques Rousseau, John Stuart Mill, Edmund Burke and George Hegel.

***304. The Development of Political Thought: Recent Political Theory (3) F,S R.Schmidt, Soe**
A critical study of major themes in political thought in industrial and post-industrial society, from the late 19th century until today. Recent thinkers who have made significant contributions to the understanding of relationships among the individual, society and politics will be examined, including such theorists as Max Weber, Sigmund Freud, Herbert Marcuse, Hannah Arendt, Robert Dahl and John Rawls.

306. (385.) Contemporary Political Ideologies (3) F,S Scott, Soe
A critical examination of the nature and role of ideologies in contemporary politics. Among the major political belief systems studied will be important examples of conservatism, liberalism, socialism, communism and fascism in theory and practice.

***308. (375.) American Political Theory (3) S Scott**
Critical examination of theorists, concepts and forces which have shaped American political consciousness from the Puritans to the present. Not open to students with credit in POSC 375.

***409. (490C.) Proseminar in Political Theory (3) F,S Faculty**
Prerequisites: Six units in political theory courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in political theory. Not open to students with credit in POSC 490C.

Public Law

314. (400.) Constitutional Law: Rights (3) F,S Hayes, Leiter
Prerequisite: POSC 100 or 391 or equivalent. Analysis of the rights and guarantees contained in the Bill of Rights and other constitutional and statutory provisions with leading cases. Not open to students with credit in POSC 400.

***315. (405.) Constitutional Law: Power (3) F,S Hayes, Leiter**
Prerequisite: POSC 100 or 391 or equivalent. Power of the courts in interpreting and enforcing constitutional limitations in order to maintain the separation of powers, the division of powers between the national government and the states and establish governmental power to tax, spend, regulate commerce and conduct foreign relations with reference to leading cases. Not open to students with credit in POSC 405.

316. Administrative Justice and Law Making (3) S Faculty
Process by which administrative agencies decide quasi-judicial cases involving private rights, and make rules and regulations of a quasi-legislative nature affecting private rights with reference to leading judicial decisions. Not open to students with credit in POSC 346 or 465.

***318. (411.) Modern Legal Systems (3) F Hayes**
Nature of law, public and private, with emphasis upon cases and materials illustrating the development of Anglo-American legal institutions and processes. Background for the professional study of law. Not open to students with credit in POSC 411.

412. (408.) Law and Social Change (3) F,S Hayes
Issues currently being dealt with in the American legal system (e.g., busing, affirmative action, problems of the environment, sexual discrimination). Examination of both the courts' part in creating these problems and the degree to which the courts have the potential to correct them. Not open to students with credit in POSC 408.

***414. Jurisprudence (3) S Hayes**
Fundamental legal philosophies, sources and classifications of law. Relationship of law to other disciplines and societal institutions.

***415. Elements of Roman Jurisprudence (3) F Trombetas**
Growth and development of Roman law and its principles from the historical, legal and philosophical points of view. Not open to students with credit in POSC 395.

419. (490D.) Proseminar in Public Law (3) F,S Faculty
Prerequisites: Six units in public law courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in public law. Not open to students with credit in POSC 490D.

Politics and Policy Formation

***320. (445.) Conduct of Political Inquiry (3) S Dennis, Stevens**
Problems of data collection and analysis. Impact of research methods on findings. Not open to students with credit in POSC 495 or 445.

322. (430.) Political Parties (3) F,S Stevens
Organization, functions and practices of political parties in the United States with special emphasis on California parties. Analysis of the part the political parties play in government and the importance of the two-party system in American government. Party responsibility in the United States in comparison with parties in other countries. Not open to students with credit in POSC 430.

***326.(425.) State Government (3) F,S Delorme, Leiter**
Political structure and its operation, state-federal relations, state-local relations; particular emphasis on California. Not open to students with credit in POSC 425.

***327.(427.) American Local Government: Organization and Problems (3) S Leiter, P.Schmidt**
Functions and problems of counties, cities, towns and special districts. Emphasis will be placed on the approach by local governments to such problems as poverty, conservation, minority tensions, housing, transportation and crime. Not open to students with credit in POSC 427.

328.(450.) Introduction to Public Policy (3) S Dennis, Leiter
Analysis of major contemporary United States domestic policies including agriculture, income maintenance, economic regulations, manpower training, conservation, crime control and revenue-sharing. Not open to students with credit in POSC 450. Grading: Traditional only.

***420. Voting, Campaigns and Elections (3) F,S Stevens**
Analysis of factors influencing citizen's voting choices; methods used by candidates seeking electoral support; changes and trends in American elections.

***422. (432.) Public Opinion (3) F,S Stevens**
Formation and development of public opinion; methods of measuring public opinion in the political system. Not open to students with credit in POSC 432.

***423. The American Presidency (3) S Leiter**
Roles and powers of the American presidency.

***424. (440.) The Legislative Process (3) S Faculty**
Historical development of the legislature; functions of legislatures; organization and procedure of typical legislative bodies; current legislative and legislation tends; problems and principles of lawmaking. Special emphasis on the California legislature. Not open to students with credit in POSC 440.

***428.(441.) Political Behavior (3) F Stevens**
Introduction to the socio-psychological basis of individual political behavior. Emphasis upon political socialization, political culture and personality as explanations of political participation, the development of political values and political action. Not open to students with credit in POSC 441.

***429.(490F.) Proseminar in Politics and Policy Formation (3) F,S**
Prerequisites: Six units in politics and policy formation courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in policy formation and politics. Not open to students with credit in POSC 490F.

Public Policy and Administration

331.(460.) Introduction to Public Administration (3) F P. Schmidt, R. Schmidt
Principles and practices of federal, state and local administration. Not open to students with credit in POSC 460. Grading: Traditional only.

***334.(462.) Public Organization and Management (3) F P. Schmidt**
Theories of organization and management with emphasis on their relation to administrative problems in civilian and military spheres of American government. Not open to students with credit in POSC 462.

*336.(471.) Public Personnel Administration (3) S P. Schmidt

Survey of public personnel administration, including the growth and development of the civil service, the personnel agency, recruitment procedures, position classifications, training programs, employee organization and retirement systems. Not open to students with credit in POSC 471.

*338. Taxation and Budgetary Policy (3) F P. Schmidt

Social and political aspects of taxation policy. Current budgetary policymaking and administration at the federal, state and local levels. Politics and international finance and trade.

*348.(485.) Comparative Public Administration (3) F Faculty

Theories, models, structure and function of public administration in selected countries. Not open to students with credit in POSC 485.

*442. Planning Cities and Urban Regions (3) F P. Schmidt

Policymaking and the role of the planner in cities and urban regions. Activities of federal, state and local governments. Social and environmental consequences of land use, zoning, transportation and design. Historic preservation. New communities.

*447.(491.) Public Administration Trainee Program I (3) F Dennis

Prerequisite: Consent of instructor. Internships in one of the various federal, state or local governmental units in the immediate area. Not open to students with credit in POSC 491. Grading: CR/NC only.

*448.(492.) Public Administration Trainee Program II (3) S Dennis

Prerequisite: Consent of instructor. Internships in one of the various federal, state or local governmental units in the immediate area. Not open to students with credit in POSC 492. Grading: CR/NC only.

*449.(490G.) Proseminar in Public Policy and Administration (3) F,S Faculty

Prerequisites: Six units in public policy and administration courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in public policy and administration. Not open to students with credit in POSC 490G.

Comparative Politics

353.(330.) Government and Politics of Western Europe (3) F,S Soe, Trombetas

Governments of representative European democracies, with emphasis on governmental structure, functions and political processes and their relationship to current problems. Not open to students with credit in POSC 330.

*354.(333.) Government and Politics of Scandinavian Countries (3) F,S Soe

Comparative study of the politics of the Scandinavian "social democracies" with particular emphasis on political structures, processes and development in Sweden. Crossnational comparisons with the political systems of other West European countries and the United States. Not open to students with credit in POSC 333.

*356.(335.) Government and Politics of the USSR (3) F,S Kacewicz

Investigation of the Soviet structure of government and theory, legitimacy and practice of the Communist Party from its revolutionary beginnings to the present. Development of Soviet ideology and Marxist theory. Not open to students with credit in POSC 335.

*357.(337.) Governments of Eastern Europe (3) S Kacewicz

Recent political, economic, constitutional, governmental and interbloc developments in Eastern Europe. Emphasis on the separate roads to Communism and Communist internationalism. Not open to students with credit in POSC 337.

*358.(351.) Contemporary Latin American Politics (3) F Delorme

Role and characteristics of major socio-political groups; major problems of development and underdevelopment. Not open to students with credit in POSC 351.

*359.(350.) Latin American Comparative Political Systems (3) S Delorme

Government and politics of selected Latin American countries, including Mexico and Cuba, with special attention on revolution vs. evolution in the quest for modernization. Not open to students with credit in POSC 350.

*361. Canada and the United States (3) F Soe

Comparative study of society and politics in the two North American countries. Emphasis on national development, constitutional framework and governmental process. Significant political forces and aspects of public policy. Special attention also to the politics of the French Canadian cultural minority and to Canadian perceptions of the relationship with the United States.

*362.(341.) Society and National Politics of China (3) F Marsot

Developments in government, parties, process of elections and political ideology of China. Not open to students with credit in POSC 341.

*364.(345.) Society and National Politics of India (3) F Chawla

Developments in government, parties, process of elections and political ideology in India. Not open to students with credit in POSC 345.

*366.(347.) Government and Politics of Southeast Asia (3) S Marsot

Emergence and development of the contemporary political systems of Southeast Asia. Not open to students with credit in POSC 347.

*367.(355.) Governments and Politics in the Near and Middle East (3) F,S Marsot

Comparative study of political systems in the Near and Middle East with special emphasis on their political forms, governmental and social structure. Not open to students with credit in POSC 355.

*455. Comparative Revolutionary Change (3) S, 1983 and alternate years Kacewicz

Roots of revolution. Emphasis on the historical setting, ideology, socio-economic factors, political leadership, organization and nationalism. Analysis of revolutionary conditions, courses and tactics past and present.

*459.(352.) United States-Latin American Relations (3) F Delorme

United States policies toward Latin America and the political, economic, social and cultural effects of these policies on Latin American societies. Motivating factors behind U.S. policy. Not open to students with credit in POSC 352.

461IC.(365.) The Politics of Development (3) F,S Marsot

Problems of political development in the emergent nations of Asia, Africa and Latin America. Not open to students with credit in POSC 365.

*469.(490B.) Proseminar in Comparative Politics (3) F,S Faculty

Prerequisites: Six units of comparative politics courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in comparative politics. Not open to students with credit in POSC 490B.

International Relations

371.(300.) Introduction to International Politics (3) F,S Chawla, Ridder, Steiner

Interaction of "great powers"; the influence of balance of power, imperialism, prestige, and the preservation of the status quo in the international sphere. Not open to students with credit in POSC 300. Grading: Traditional only.

*376.(305.) International Law (3) F Ridder

Nature and historical development of international law. Determination of rules of international law. International community under law. Recognition of states and governments. Jurisdiction. Settlement of international disputes. War aggression and neutrality. Not open to students with credit in POSC 305.

*378.(307.) International Organization and Administration (3) S Ridder

Examination of historical development, of international organization from the Concert of Europe to the United Nations. Analysis of contemporary international organization, its functions, problems and prospects in the context of the world situation. Not open to students with credit in POSC 307.

482.(311.) American Foreign Policy (3) S Chawla, Steiner

Systematic study of the foreign policy of the United States. Contemporary problems receive special emphasis. Not open to students with credit in POSC 311.

*483.(312.) Foreign Policies of the Major Powers (3) F Chawla

Systematic examination of the national interests and foreign policies of the major world powers in terms of global political problems. Recommended: POSC 371. Not open to students with credit in POSC 312.

*484.(313.) Soviet Foreign Policy (3) F Kacewicz

Soviet foreign policy since 1917 — its origins, evolution, dynamics and objectives in selected areas of the world. Not open to students with credit in POSC 313.

*486.(321.) National Security Policies (3) F,S Steiner

Analysis of strategic posture with emphasis on military, political and economic interrelationships as they influence national security and international politics. Not open to students with credit in POSC 321.

*489.(490A.) Proseminar in International Relations (3) F,S Faculty

Prerequisites: Six units of international relations courses, consent of instructor. Intensive study of selected conceptual and theoretical problems in international relations. Not open to students with credit in POSC 490A.

General

391.(421.) American Government (3) F,S Faculty

Formation of the Constitution, federalism, civil liberties, politics, the legislature, executive, judiciary, state and local government. This course satisfies the federal, state and local government requirement. Not open to students with credit in POSC 100. Grading: Traditional only.

490H. Honors Seminar (3) F Faculty

Prerequisites: Admission to the Honors Program in Political Science The nature and development of political science and its relationship to other disciplines in the Social Sciences. Recent developments in conceptual analysis and theory are emphasized. [Seminar] Grading: Traditional only. Course meets with POSC 500.

491H. Honors Research (3) F Faculty

Prerequisite: Admission to the Honors Program in Political Science. Research for the writing of an Honors thesis under the direction of a faculty member. [Independent Study] Grading: Traditional only.

492H. Honors Thesis (3) S Faculty

Prerequisites: POSC 491H. Research and writing of an Honors thesis under the direction of a department faculty advisor. [Independent Study] Grading: Traditional only.

495. Public Policy and the Social Sciences (3) Faculty

An interdisciplinary focus upon the relationship of various disciplines to public policy, especially their contributions in terms of content and technique. Analysis of urban public policy from the perspective of methodologies used in economics, sociology and political science.

494IC. Politics of the Future (3) S Marsot

Study of present-day global problems: overpopulation, depletion of resources, environmental decay and their future political implications. Examination of alternative policies, future politics and institutional change. The technological revolutions and the totalitarian temptation.

*497. Special Topics (3) F,S Faculty

Prerequisite: Consent of instructor. Analysis of selected contemporary issues and problems. May be repeated for a maximum of six units with different topics. Topics to be announced in the Schedule of Classes.

*498. Practicum in Politics (1-3) F,S Faculty

Prerequisite: Consent of instructor and department chair-person. Political or governmental experience supplemented by reading and research under the direction of a faculty member. May be repeated for a maximum of six units. No more than three units may apply toward the major in political science. Not open to students with credit in POSC (491) 447 and/or (492)448. Grading: CR/NC only.

*499. Readings and Conference in Political Science (1-3) F,S

Prerequisite: Consent of instructor. Directed reading to permit independent pursuit by advanced students on topics of special interest. Hours to be arranged. Graduate students who have had this course as an undergraduate may repeat it.

Graduate Division:

500. Foundations and Scope of Political Science (3) S Faculty

Prerequisite: Graduate status or consent of instructor. Approaches applied to the conceptual analysis of political phenomena. Substantive models of social and political order and change as well as methodological arguments about the nature of explanation in political science.

550. Research Methods in Political Science (3) S Dennis

Prerequisite POSC 500. Methods of empirical research in political science including the formulation of hypotheses, problems and standards of measurement and observation, methods of data collection, research design and logic of data analysis.

600. Seminar in International Politics (3) F,S Chawla, Ridder, Steiner

Intensive study of selected topics in international politics such as nationalism, imperialism, judicial settlement of international disputes, collective security. Each semester a different topic will be stressed. May be repeated for a maximum of six units.

610. Seminar in Comparative Government (3) F,S Chawla, Delorme, Kacewicz, Marsot, Soe, Trombetas

Intensive study of the political institutions and policies of selected foreign governments. Emphasis on political parties and contemporary governmental policy. May be repeated for a maximum of six units.

620. Seminar in Political Theory (3) F,S Scott

Prerequisite: An upper division course in political theory. Analytical and critical examination of the major concepts of political theory. May be repeated for a maximum of six units.

640. Seminar in American Government and Public Law (3) F,S Leiter, Stevens

Intensive study of topics and problems in American government including issues in constitutional law and the judicial process.

660. Seminar in Public Policy and Administration (3) F P. Schmidt, R. Schmidt

Topics and problems in the field of public policy and administration. Problems of governmental policy, organization and management. May be repeated for a maximum of six units.

697. Directed Research (1-6) F,S Faculty

Prerequisite: Consent of Department Chair. Individual research or intensive study under the guidance of a faculty member. Three units required of non-thesis students who have been advanced to candidacy for the master's degree in political science. A maximum of three units may be earned by students with credit in POSC 698. May be repeated to a maximum of six units.

698. Thesis (1-4) F,S Faculty

Planning, preparation and completion of thesis for the master's degree.

Psychology

School of Social and Behavioral Sciences

Department Chair: Lyle R. Creamer
Department Office: Psychology Building (PSY), Room 100
Telephone: 498-5001
Faculty: Professors: Alexander L. Beckman, Virginia L. Binder, Earl R. Carlson, Lyle R. Creamer, Carl M. Danson, Doris C. DeHardt, David A. Dowell, Martin A. Fiebert, Kenneth F. Green, Raphael M. Hanson, Sally J. Haralson, Ralph B. Hupka, Dale O. Jorgenson, John R. Jung, Robert W. Kapche, James I. Linden, Rhoda Lindner, Alan S. Lowenthal, J. Robert Newman, Susan G. Nummedal, John E. Nygaard, William M. Resch, Sara W. Smith, Robert E. Thayer; Associate Professors: Keith R. Colman, Michael E. Connor, Roberto Flores de Apodaca, Joellen T. Hartley, Cherylynn M. Carrie-Thomas; Assistant Professors: Patricia Bachelor, Gerald L. Hanley, Kevin MacDonald.
Emeritus Faculty: Josephine B. Fiebiger, Roy K. Heintz, Hilton F. Jarrett, James N. McClelland, Charles F. Mason, Paul G. Petersen, Walter J. Raine, Leonard W. Towner.
Department Administrator: Joann Beers

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisors: Binder, Connor; Graduate Coordinator: Fiebert

Bachelor of Arts in Psychology

The psychology curriculum is designed to provide undergraduate students with a broad background in the principles of psychology. Three options are provided for the major in psychology.

The General Option (code 2-8130) is designed for the student who desires an understanding of human behavior as part of a liberal arts education, but who does not necessarily intend to do advanced study in psychology.

The Applied Option (code 2-8131) is designed for the student who desires an understanding of the knowledge, methods, and skills involved in research and/or the application of psychology in areas such as community, clinical, industrial, and organizational psychology. Completion of this plan can also facilitate advanced professional training in some area of applied psychology. The Research Option (code 2-8135) is designed to expose the student to the theory, content and research skills which will serve as necessary preparation for graduate study in all areas of psychology.

Requirements for the Bachelor of Arts in Psychology

Lower Division:

PSY 100, 200, and 210, PSY 241 or a comprehensive 3-unit course in anatomy and physiology or in physiology alone.

Upper Division:

A minimum of 24 units in psychology including: two courses from PSY 331, 332, 333, 336, 337, 341; one course from PSY 351, 356, 361, 365; and additional courses to meet the requirements for one of the following three options:

General Option (code 2-8130): 15 additional upper division units of electives in psychology.

Applied Option (code 2-8131): PSY 310 and 314; one course from PSY 370, 375, 381; one course from PSY 355, 407, 453, 473, 486, 495; and two courses from PSY 405, 406A or 406B, 415, 416, 418, 450, 471, 475, 481 (in addition to those requirements for all majors outlined above).

Research Option (code 2-8135): PSY 310, 401 or 402, and two courses from PSY 418, 433, 437, 441, 445, 451, 456, 461, 471, 481; and one additional upper division psychology elective for a total of 24 units.

An additional upper division requirement for all options is a minimum of six upper division units from courses in departments of the School of Social and Behavioral Sciences, or another School with permission of the Undergraduate Advisor if more appropriate to the student's area of concentration.

Minor in Psychology

A minimum of 20 units which must include; PSY 100, 200, 210, nine upper division psychology units including at least one course from PSY 331, 332, 333, 336, 337, or 341; and at least one course from 351, 356 or 361.

Concentration in Psychology for the Bachelor of Arts in Liberal Studies

A minimum of 26 units will be required; 15 of which must be upper division.

Required Lower Division:

PSY 100, 200, and 210.

Upper Division:

15 units in psychology: The Department suggests the following for a well-rounded program in Psychology: PSY 315 and 361; and additional courses from: PSY 331, 332, 333, 336, 337, 341, or PSY 345 and from: PSY 314, 351, 353, 356, 359, 370, 453, 457, 473, or 475. It is also helpful to have PSY 401 or 402.

The Department of Psychology offers graduate study leading to the master of arts degree in psychology and the master of science degree with options in community-clinical psychology and industrial psychology. In each program a basic core, including a thesis, is required, and there is opportunity for additional work in areas of special interest. Clinical electives are available in the master of arts program. The master of arts program prepares students for doctoral study and provides a general background in psychology. The two master of science programs prepare students for professional work; some graduates have entered doctoral programs. Admission to all three programs is limited.

The department has wide and varied course offerings and is housed in specially-designed facilities, including laboratories in physiological, social-personality, human factors and other areas of psychology. The community clinic operates both on and off campus.

Admission to Graduate Programs

Write directly to the Psychology Department for an application for admission to the graduate program in psychology. Acceptance by the department is contingent on (a) grade point average based on last 60 units of undergraduate work available at time of application; (b) Graduate Record Examination scores on the verbal and quantitative sections and on the advanced psychology test; and (c) three letters of recommendation.

All application materials, including complete transcripts, GRE scores and letters of recommendation, must be received by the department graduate advisor before April 25 for the fall semester and November 1 for the spring semester for the Master of Arts and Master of Science with the Industrial option. Deadline for the Master of Science with the Community-Clinical option is March 1 for the fall semester; there are no spring semester admissions.

A limited number of graduate assistantships are available. Students accepted into the program will receive an application. Work-study assignments are available in the department, but must be applied for through the University Financial Aids Office one or two semesters prior to obtaining the assignment.

Master of Arts in Psychology (code 5-8130)

Prerequisites:

1. A bachelor's degree with a major in psychology, or:
2. A bachelor's degree with a major other than psychology and 24 units of upper division psychology substantially equivalent to those required for the baccalaureate degree at this University, including PSY 310 and 18 units of upper division psychology including one of the following: 433, 437, 441, 445, 451, 456 or 461.
3. Six units of college level work in chemistry, physics, biology or mathematics as approved by the graduate advisor. No more than three of the six units may be in approved mathematics courses.

Advancement to Candidacy:

1. During the first semester in the M.A. program students must file a program of studies in psychology, approved by the graduate coordinator, indicating the courses which will be taken to complete the M.A. degree.
2. Recommendation for advancement to candidacy by the department is prerequisite for all 600 level courses. Prior to registration in every 600 level course, the student must obtain an admission slip from the graduate coordinator showing prerequisite fulfillment and that advancement to candidacy has been recommended.
3. See the general University requirements.

Requirements for the Master of Arts

The student must complete, as a graduate student, 30 units of upper division and graduate courses exclusive of PSY 499 with a minimum of 24 units in psychology including the following (if not taken previously as an undergraduate student or to fulfill the 24 unit prerequisite background):

1. PSY 310 and one of the following: 533, 537, 542, 545, 551, 556 or 561; 511 or 512; two of the following: 331, 332, 333, 336, 337, 341; and one of the following: 351, 356 or 361, or equivalents. No other 300-level course may be applied toward the M.A. degree.
2. A minimum of 21 units in graduate psychology (not including PSY 697 and including only three units of PSY 678) including 696C; one course chosen from PSY 631, 632, 634 or 637; one course chosen from PSY 651, 656, or 661; PSY 698 (thesis, six units).
3. Completion of all requirements as established by the M.A. Committee.
4. A written comprehensive examination.
5. With the graduate coordinator's approval, a maximum of six units from related areas may be substituted for six of the 30 units.
6. An oral examination on the thesis.

Master of Science in Psychology Option in Community-Clinical (code 6-8134)

Prerequisites:

1. A bachelor's degree with a major in psychology or a major in a related field and 24 units of upper division psychology or equivalent.
2. PSY 310, 333 or course in Behavior modification, PSY 473, 370 and course dealing with intragroup relations such as PSY 351 or 375.
3. A personal interview by a selection committee.

Advancement to Candidacy:

1. During the first semester in the M.S. Community-Clinical program students must file a program of studies in psychology, approved by the graduate advisor, indicating the courses which will be taken to complete the M.S. degree.
2. Recommendation for advancement to candidacy by the department is a prerequisite for all 600-level courses. Prior to registration in every 600-level course, the student must obtain an admission slip from the graduate coordinator showing prerequisite fulfillment and that advancement to candidacy has been recommended.
3. A personal interview by the selection committee.

Requirements of the Master of Science, Community-Clinical

1. The student must complete, as a graduate student, a minimum of 18 units of graduate courses including 672A-B, and 673A,B,C and 698; and four courses selected from a list available in the Psychology graduate coodinator's office which may include 6 units outside of psychology selected with the approval of the graduate coordinator.
2. If not taken prior to entry, PSY 310 must be taken the first semester in the program. These units may not be applied toward the MSCC degree.
3. An oral examinaton covering the thesis.
4. Completion of all requirements as established by the MSCC Committee.

Option in Industrial (code 6-8132)

Industrial Psychology Advisory Council

The Industrial Psychology Advisory Council functions as an important interface between the industrial community served by the University and the department. Its purpose is to assist as appropriate in the effective implementation of the department's master of science (industrial option) program. Membership of this council is as follows:

Dr. Richard F. Gabriel, Douglas Aircraft Company
Mr. Robert Hines, Innovative Management Systems
Mr. Terry L. Lantz, City of Garden Grove
Mr. John (Jack) Robinson, Hughes Fullerton

Prerequisites:

1. A bachelor's degree with a major in psychology, or:
2. A bachelor's degree with a major other than psychology and 24 units of upper division psychology substantially equivalent to those required for the baccalaureate degree at this University, including PSY 310 and an upper division laboratory course or equivalent.

Advancement to Candidacy:

1. During the first semester in the M.S. Industrial program students must file a program of studies in psychology, approved by the graduate coordinator, indicating the courses which will be taken to complete the M.S. degree.
2. Recommendation for advancement to candidacy by the department is prerequisite for all 600-level courses. Prior to registration in every 600-level course, the student must obtain an admission slip from the graduate coordinator showing prerequisite fulfillment and that advancement to candidacy has been recommended.
3. See the general University requirements.

Requirements for the Master of Science, Industrial

The student must complete a minimum of 30 units of upper division and graduate courses, with a minimum of 24 units in psychology including.

1. If not taken previously as an undergraduate student or to fulfill prerequisites: PSY 315, 511 or 512, 518, 351 or 553, 581 or equivalent, and two courses from PSY 331, 332, 333, 336, 337 and 345.
2. A minimum of 24 units in graduate level courses including PSY 527, 581, 585, 681, 688, 698 and 515 or 696I.
3. An oral examination covering the thesis.
4. A maximum of six units from related areas may be substituted for six of the 30 units with a maximum of three of these applicable to the 21-unit graduage-level course requirement, with the advisor's approval.
5. Substitutions for required courses are permitted if a petition to substitute is approved by the MSI Program Committee prior to enrollment in the course.

Courses (PSY):

Lower Division:

100. General Psychology (3) F,S Faculty

Introduction to the scientific study of human behavior. Designed to provide the student with a basic background for further study and for practical application in everyday life.

150. Personality and Social Behavior (3) F,S Faculty

Psychological principles pertinent to the understanding of personality and interpersonal adjustment. Discussion of research and theories of social motivation, conflict and anxiety, adjustment mechanisms and personality change.

200. Research Methods (4) F,S Faculty

Prerequisite: PSY 100. Introduction to basic research methods in Psychology. Principles of experimentation, naturalistic observation, correlational studies. (Lecture 3 hours, laboratory and field 3 hours.)

210. Introductory Statistics (4) F,S Faculty

Prerequisites: PSY 100 and completion of a mathematics course suitable for General Educational credit. Calculation and meaning of statisical measures. Descriptive and inferential statistics: probability, normal curve, correlation, sampling, hypothesis testing. (Lecture 3 hours, laboratory 2 hours.)

230. Critical Thinking (3) F,S Hanley, Nummedal

The nature of critical thinking; models and strategies; common fallacies of reasoning; self-regulation in the thinking process; application of critical thinking to specific areas.

241. Psychobiology (3) F,S Faculty

Prerequisite: PSY 100. Introduction to the study of behavior from a biological point of view. Biological systems and processes underlying behavior, with emphasis on brain mechanisms, presented in the context of fundamental concepts and issues in psychology.

Upper Division:

300IC. Mind Control and Freedom (3) Carlson

How people control others using informational, manipulative and coercive approaches. Consideration of basic processes of persuasion, coercive persuasion and coercive control; sources of power in society; and the psychological and ethical implications of freedom and responsibility in coping with control attempts by friends, government, advertisers, cults, etc.

***310. Intermediate Statistics (4) F,S Faculty**

Prerequisite: PSY 210 or introductory statistics course. Basic theoretical concepts of statistics and the use of these concepts in the selection and development of model testing, hypothesis testing and parameter estimation procedures. Both single measure (univariate) and correlation (bivariate) concepts are included. (Lecture 3 hours, laboratory 2 hours.)

***314. Psychological Assessment (3) F,S Kapche, Lindner**

Prerequisites:PSY 200 and 210. Principles of assessment applied to the measurement of individual behavior and to programs intended to affect behavior. Includes interviews, tests and other methods.

***315. Principles of Psychological Testing (3) F,S Rhodes**

Prerequisites: PSY 210 or one statistics course. Principles and practices of group and individual testing in the fields of intelligence, aptitude, achievement, personality and interest. Emphasis on the evaluation of tests as measuring devices, their applicability and limitations.

***331. Sensation and Perception (3) F,S Colman, Haralson**

Prerequisite: PSY 200 Basic phenomena of the senses, their physiological correlates and integration in complex perceptual judgments.

***332. Cognition (3) F,S Hanley, Hanson, Jung, Smith**

Prerequisite: PSY 200. Study of higher-order processes basic to the acquisition of knowledge. Includes thinking, problem solving, creativity, information processing, decision making, judgment, concepts and imagination.

***333. Psychology of Learning (3) F,S Danson, Hanley, Nygaard, Smith**

Prerequisite: PSY 200. Human and animal learning with special emphasis on experimental evidence and techniques.

***336. Psychology of Learning (3) F,S Danson, Hanley, Nygaard, Smith**

Prerequisite: PSY 200. Discussion of research, theories and coping mechanisms of human emotions.

***337. Psychology of Motivation (3) F Hupka, Jung, Thayer**

Prerequisite: PSY 200. Situational and physiological determinants of human and animal behavior, theories of motivation and emotion, discussion of techniques and problems in the study of motivation.

***341. Neuopsychology (3) S Green, Haralson**

Prerequisite: PSY 200. Neurological correlates of behavior with special emphasis upon central nervous system structure and function. Experimental evidence on which neuropsychological theories of behavior are based.

342. Psychopharmacology (3) S Faculty

Prerequisites: PSY 100, 241, or equivalent. This course offers a broad introduction to the effects of various medications on the central nervous system and behavior. This includes neurotransmitter functions, physiological and biochemical mechanisms of drug action with emphasis on the effect of psychiatric medications, common "street drugs" and those sold over the counter; their potential for abuse is also considered.

***343. Comparative Psychology (3) F Haralson**

Prerequisite: PSY 200. Phylogenetic differences in animal behavior leading to the development of psychological principles.

***345. Psychophysiology (3) F Green, Haralson**

Prerequisite: PSY 200. Physiological activity occurring in humans during particular behavior states. Theoretical problems and methodological approaches.

350IC. Psychology and Contemporary Social Issues (3) F,S Carlson

Prerequisite: PSY 100. Application of social psychological principles toward understanding major contemporary issues.

***351. Social Psychology (3) F,S Carlson, Jorgenson, Lindner, Thayer**

Prerequisite: PSY 100. Study of individuals and groups as they are affected by social interactions. Includes such topics as social perception and learning, attitudes and persuasion, social influence (conformity, obedience), interpersonal perception (liking and loving), anti- and prosocial behavior (aggression, violence, altruism), cooperation and competition, leadership, group dynamics, sexual behavior. Not open to students with credit in SOC 335.

352. Psychology of Male Roles (3) F,S Fiebert, Nygaard, Thayer

Prerequisite: PSY 100. Exploration of male roles as they affect interactions between men and men, men and women, and men and children, as well as interactions related to work and play. Course is designed to enhance personal understanding through an examination of theory, research and experience.

***353. Humanistic Psychology (3) F,S Fiebert, Linden**

Prerequisite: PSY 100. Examination of theories, findings and methods derived from humanistic psychology, including encounter groups, mediation, sex roles, ESP, dreams, death and application of humanistic approaches to social institutions, education and psychotherapy.

***354. Psychology of Women (3) F,S DeHardt**

Prerequisite: PSY 100. Psychology of sexism; the biological and social determinants of the psychology of women. Open to all qualified men and women students.

***355. Therapist and Experimenter Effects (3) F DeHardt**

Prerequisites: PSY 200 and 351 or 356 or 370. Examination of research and practice relative to cross-cultural and cross-sexual therapist-client problems. Particular emphasis on the advantages and disadvantages of white-nonwhite, male-female and straight-gay therapist-client combinations. Consideration of the validity of research and therapy generally on social minority persons.

***356. Personality (3) F,S Fiebert, Jung, Kapche, Lindner, Thayer**

Prerequisite: PSY 100. Discussion of theories, research and assessment in prsonality.

***359. Self-Observation and Self-Development (3) F,S Fiebert, Linden, Thayer**

Prerequisite: PSY 100. Examination of personal traits and behavior patterns as reflected by objective measures, group interactional procedures and video feedback. Development of self through exposure to new environments, experiences, self analysis and meditation.

361. Psychology of Child and Adolescent Development (3) F,S Hartley, Jung, Nummedal

Prerequisite: PSY 100. Methodological and theoretical problems and issues in the study of developmental change processes from prenatal development through adolescence. Topical coverage includes physical-motoric, social, physiological and intellectual aspects of behavioral functioning.

***365. Psychology of Adult Development and Aging (3) S Hartley**

Prerequisite: PSY 100. Methodological and theoretical problems and issues in the study of developmental change processes from young adulthood through old age. Topical coverage includes physical-motoric, social, physiological and intellectual aspects of behavioral functioning.

366. Fathers and Fathering: A Psychosocial View (3) S Connor

(This course is for both women and men.) Prerequisites: PSY 100, SOC 100 or H EC 111. An overview of the psychological literature on parenting with emphasis on fathers/fathering in the U.S. Focus on current literature and research regarding the perceived and changing roles of fathers, including ethnic fathers, in an effort to diminish stereotypes.

***370. Abnormal Psychology (3) F,S Faculty**

Prerequisite: PSY 100. Abnormal behavior as it throws light on normal personality adjustment. Consideration of the role of biological, psychological and social factors in personality disorders, together with the consideration of basic principles of mental hygiene.

***375. Community Psychology (3) F,S Dowell, Lowenthal**

Prerequisite: PSY 100. Basic concepts and skills of community psychology, including community assessment, community intervention, program evaluation and social policy analysis, relationships between social systems and individual behavior. Emphasis on the economically disadvantaged, minorities, women, youth and the aged.

***381. The Psychology of Work Behavior (3) F,S Carrie-Thomas**

Prerequisite: PSY 100. Problems and procedures in industrial psychology. Consideration of job analysis, personnel selection and appraisal, organizational and social context of human work, physical environment and consumer behavior.

***390. Special Topics in Psychology (3) F,S Faculty**

Prerequisite: Consent of instructor. Topics of current interest in psychology selected for intensive development. May be repeated with different topics to a maximum of nine units, but no more than six units may be used to satisfy requirements of the major.

401./501. History and Systems of Psychology (3) F Nygaard

Prerequisites: Six upper division units in psychology. Contributions to the development of psychology by prominent historical figures and systems from the early Greek philosophers through the early 20th century schools of structuralism, functionalism, behaviorism, gestaltism and psychoanalysis. [Lecture — Discussion] Grading: Traditional only.

402./502. Contemporary Systematic Psychology (3) S Nygaard

Prerequisites: Six upper division units in psychology. Examination of 20th century systematic formulations and general theoretical approaches. [Lecture — Discussion] Grading: Traditional only.

***403. Mathematical Models of Behavior (3) S Hanson**

Prerequisite: PSY 310. Use of mathematical models, especially stochastic models, for the descriptive and theoretical analysis of individual and group behavior. Topics in learning, perception, attitude change and other areas will be used in examples of fitting models to data. (Lecture 2 hours, laboratory 3 hours.)

***405. Field Work in Psychology (3) F,S Binder, DeHardt**

Prerequisites: Psychology major, junior or senior standing, PSY 200, 210, 12 upper division units in psychology, letter of recommendation, consent of instructor. Student works under the supervision of or in association with, a professional having an advanced degree in a psychological discipline and who is engaged in the practice of some aspect of psychology in the surrounding community. Placements include schools, hospitals, industries, alternative life style organizations, free clinics and community mental health agencies. Nine hours of field work per week for a minimum of 13 weeks. Offered CR/NC only except to graduate students who must petition the psychology graduate advisor. May be repeated to a total of six units.

406A,B. Applications of Psychology (3) F Faculty

Prerequisite: Consent of instructor. Students are expected to take 406B during the spring semester. Students apply for the 406A-B sequence during the spring of the academic year before the courses are taken. Theoretical and laboratory training in the topic areas are followed by applied work with clients, schools, businesses, etc., as appropriate. Students are supervised by the course instructor.

407./507. Introduction to Family Therapy (3) F Fiebert, Linden

Prerequisites: PSY 200, 473, 475 or consent of the instructor. Survey of the field of family therapy including origins of differences in family structure, historical development of family therapy theory and practice. [Lecture — Discussion] Grading: Traditional only.

***408. Applying Psychology to Teaching Psychology (3) F,S Danson, Nygaard, Smith**

Prerequisites: Nine units of upper division Psychology, PSY 200, consent of instructor. Introduction to the application of principles of behavior to the learning of psychology. Discussion and application of new developments in college teaching. Practice in assisting students to learn the content of basic psychology courses. (Lecture 2 hours, laboratory 2 hours.)

411./511. Statistical Design and Analysis of Experiments (3) F,S Newman, Resch

Prerequisite: PSY 310 or 412 or consent of instructor. Simple and complex designs. Statistical inference in economical experimentation and in scientific inference and prediction. (Lecture 3 hours.)

412./512. Multivariate Statistical Analysis (3) F,S Hanson, Newman

Prerequisite: PSY 310 or 411 or consent of instructor. Accuracy and cost of inference from multiple variables. Theoretical implications of inferred structures. Applications. (Lecture 3 hours.)

***415. Vocational Testing (3) F,S Faculty**

Prerequisite: PSY 314 or 315 or ED P 420. Principles and practices in the use of tests for vocational counseling and vocational selection. Students administer tests to selected subjects. Emphasis on evaluation of three tests for their applicability and limitations. (Lecture 3 hours.)

***416. Program Evaluation (3) S Dowell, Newman**

Prerequisites: PSY 310, 314. Introduction to the methods of designing, implementing, analyzing and reporting evaluations of programs in mental health, industry, criminal justice, education and community settings. (Lecture 2 hours, laboratory 3 hours.)

418./518. Computer Applications in Psychology (3) F,S Creamer

Prerequisites: C/ST 200 or equivalent; PSY 310 or equivalent or consent of instructor. Foundations of computer technology and its application to psychology. Emphasis on real-time control by digital computers in psychological research and applications. (Lecture 2 hours, laboratory 2 hours.)

433./533. Research in Cognition and Learning (3) F Hanson, Resch, Smith

Prerequisites: PSY 200, 310, and 331 or 332 or 333. Research methods in cognition, learning and perception. Laboratory includes observations and experiments on selected topics. (Lecture 2 hours, laboratory 3 hours.)

437./537. Research in Emotion and Motivation (3) S Hupka, Jung, Thayer

Prerequisites: PSY 200, 310, and 336 or 337. Research methods in emotion and motivation. (Lecture 2 hours, laboratory 3 hours.)

438./538. Psycholinguistics (3) F Smith

Prerequisites: Six units of linguistics or upper division psychology. Psychological and linguistic approaches to the study of language. Theory and research in the production and understanding of language, language acquisition, memory for language, and use of language in its social context.

439./539. Language Acquisition (3) F Smith

Prerequisites: Six units of linguistics or upper division psychology, or consent of instructor. Theory and research on the acquisition of first and second languages in children and adults. Psycholinguistic perspectives on the development of phonological, syntactic, semantic, and pragmatic aspects of language. The interacting roles of developmental stages, cognitive processes, individual differences, social influences, and the cultural context will be stressed. [Seminar] Grading: Traditional only. Same course as PSY 539 and LING 539.

441./541. Research in Physiological Psychology (3) F Green, Haralson

Prerequisites: PSY 200, 310, 341. Research methods in neuropsychology. Includes fundamentals of neuroanatomy, surgical procedures for stimulation, lesioning and recording, pharmacological procedures used in neuropsychological research. (Lecture 2 hours, laboratory 3 hours.)

445./545. Research in Psychophysiology (3) S Green, Haralson

Prerequisites: PSY 200, 310, 345. Research methods in human psychophysiology. Includes polygraph recording and analysis in human response systems such as brain, skin, cardiovascular and respiratory systems. (Lecture 2 hours, laboratory 3 hous.)

450. The Psychology of Self-Management (3) F,S Kapche

Prerequisites: PSY 314. Not open to students with credit in Ed P 357. Introduction to theory, research, and application of self-management procedures. Topics include systematic self-observation, decision-making, time management, emotion management, and habit change and maintenance. Students design and implement one self-control program. [Discussion]

451./551. Research in Social Psychology (3) F Carlson, Jorgenson, Lindner, Thayer

Prerequisites: PSY 200, 310, 351. Research methods and problems in social psychology. (Lecture 2 hours, laboratory 3 hours.)

*453./553. Principles of Group Dynamics (3) S Lindner

Prerequisite: PSY 351 or SOC 335. Behavior in groups with attention to such factors as leadership, followership, interaction and influence including organization, management, morale, and efficiency. Problems, techniques and methods of investigation.

*455. Psychology of Persuasion (3) F,S Carlson

Prerequisite: PSY 351 or consent of instructor. Psychological bases of attitude change and social influence. Consideration of the source and communication factors influencing thinking, attitudes and personality, persuasibility and resistance to persuasion.

456./556. Research in Personality (3) S Jung, Kapche, Lindner, Thayer

Prerequisites: PSY 200, 310, 356. Research methods and problems in personality. (Lecture 2 hours, laboratory 3 hours.)

*457. Psychology of Sex (3) S Faculty

Prerequisites: PSY 351 or 356 or 370, consent of instructor. Survey of topics in human sexuality with emphasis on developmental psychology of sexuality, attitudes and feelings related to sexuality, sexual variations and deviations, and sexual dysfunction and sex therapy.

458. Current Issues in Personality (3) S Thayer

Prerequisites: PSY 200, 356. Current theoretical, philosophical and methodological issues in personality. Coverage may include the person-situation interaction, the role of genetics, aggression, altruism, stress/coping, and sex differences. [Lecture/Discussion: 3 hours]

*459. Social Psychology of Homosexuality (3) S Dank

Prerequisites: PSY 100, SOC 100. Social psychological and sociological analysis of various aspects of homosexual behavior. Exploration of the causes of homosexuality, social processes involved in developing a homosexual identity and the social consequences of living a homosexual life. Critical analysis of competing theories and review of relevant empirical research. Not open to students with credit in SOC 427E. (Same course as SOC 459.)

461./561. Research in Developmental Psychology (3) F Hartley, Nummedal

Prerequisites: PSY 200; 310; 361 or 365. Research methods in life-span developmental psychology. Includes cross-sectional and sequential design and statistical models. (Lecture 2 hours, laboratory 3 hours.)

462. Cognitive Development (3) F Hartley, Nummedal

Prequisites: PSY 36l, 332, or equivalent. Phenomena of life-span cognitive development considered within the framework of major theories. Examination of research on topics including development of perception; thinking, reasoning, and intelligence; language; memory; and metacognition. Integration of developmental processes; biological and cultural constraints. [Lecture/Discussion: 3 hours]

463. Social and Personality Development (3) S MacDonald

The development of social behavior and personality in children and adults. Coverage will include theoretical approaches and processes as well as content areas, such as the development of aggression, morality, prosocial behavior, peer relations, and sex differences. Prerequisite: PSY 361. [Lecture/Discussion: 3 hours]

*471. Research in Clinical-Community Psychology (3) F,S Binder, Dowell

Prerequisites: PSY 200; 310; 314; 375 or 473. Research methods in clinical-community psychology. Designing and conducting research. Includes assessment of individual programs, social, clinical and community systems. (Lecture 2 hours, laboratory and field 3 hours.)

*473. Introduction to Clinical Psychology (3) F,S Binder, Connor, Linden

Prerequisite: PSY 370. Survey of the field of clinical psychology including an introduction to diagnostic procedures and the therapeutic process. Practical projects in observation, case practice and case conference techniques.

475./575. Interviewing and Case Study Methods (3) F,S Fiebert

Prerequisites: Permission of instructor, PSY 3l4. Study and development of the clinical techniques of observation, case history and the interview.

481./582. Research in Industrial Psychology (3) F,S Colman, Creamer

Prerequisites: PSY 200, 310, 381. Research methods and problems in industrial psychology. Includes direct observation, psychophysical, regression and experimental methodologies. (Lecture 2 hours, laboratory 3 hours.)

486./587. Personnel Psychology (3) F

Prerequisite: PSY 381 or 481. Survey of existing knowledge and description of research techniques in personnel psychology.

*490. Advanced Topics in Psychology (3) F,S Faculty

Prerequisite: One 300-level course in the subject matter of the course. Advanced study of selected topics in one basic area of psychology, e.g., cognition and learning, emotion and motivation, physiological, social, personality or developmental. May be repeated with different topics to a maximum of nine units. See Schedule of Classes for subjects being offered during a given semester.

495./595. Ethical and Legal Issues in Psychology (3) F Binder

Prerequisite: Any 300-level psychology course. Ethical principles in human and animal research and in applied areas of psychology. Emerging legal issues in the fields of forensic psychology, behavior modification, criminal justice and clinical practice will be discussed.

499. Independent Study (1-3) F,S Faculty

Prerequisite: Consent of department. Student will conduct independent laboratory or library research and write a report of the research. May be repeated for a maximum of 6 units.

Graduate Division:

501./401. History and Systems of Psychology (3) F Nygaard

Prerequisites: Six upper division units in psychology. Contributions to the development of psychology by prominent historical figures and systems from the early Greek philosophers through the early 20th century schools of structuralism, functionalism, behaviorism, gestaltism and psychoanalysis. [Lecture — Discussion] Grading: Traditional only.

502./402. Contemporary Systematic Psychology (3) S Nygaard

Prerequisites: Six upper division units in psychology. Examination of 20th century systematic formulations and general theoretical approaches. [Lecture — Discussion] Grading: Traditional only.

507./407. Introduction to Family Therapy (3) F Fiebert, Linden

Prerequisites: PSY 200, 473, or consent of the instructor. Survey of the field of family therapy including origins of differences in family structure, historical development of family therapy theory and practice. [Lecture — Discussion] Grading: Traditional only.

511./411. Statistical Design and Analysis of Experiments (3) F,S Newman, Resch

Prerequisite: PSY 310 or 412/512 or consent of instructor. Simple and complex designs. Statistical inference in economical experimentation and in scientific inference and prediction. (Lecture 3 hours.)

512./412. Multivariate Statistical Analysis (3) F,S Hanson, Newman

Prerequisite: PSY 310 or 411./511 or consent of instructor. Accuracy and cost of inference from multiple predictors. Discovering structural relationships among multiple variables. Theoretical implications of inferred structures. Applications. (Lecture 3 hours.)

515. Test Construction Theory and Practice (3) S Rhodes

Prerequisite: PSY 315. Consideration of problems in the construction of tests for personnel selection, educational screening, personality assessment, aptitude estimating, and measurement of academic achievement. Practice in the development of tests. (Lecture 2 hours, laboratory 2 hours.)

5l6./416. Program Evaluation (3) S, Dowell, Bachelor, Newman

Prerequisites: PSY 3l0, 314. Introduction to the methods of designing,implementing, analyzing, and reporting evaluations of programs in mental health, industry, criminal justice, education, and community settings. (Same course as PSY 4l6) [Lecture: 2 hours; Laboratory: 3 hours]

518./418. Computer Applications in Psychology (3) F,S Creamer

Prerequisites: C/ST 200 or equivalent; PSY 310 or equivalent or consent of instructor. Foundations of computer technology and its application to psychology. Emphasis on real-time control by digital computers in psychological research and applications. (Lecture 2 hours, laboratory 2 hours.)

527. Human Factors (3) S Creamer

Prerequisites: PSY 411 or 412, two courses from 331, 332, 333, 336, 337, 345 and one corresponding upper-division research course or PSY 481./582, or consent of instructor and consent of Graduate Coordinator. Application of personnel, testing, organizational and engineering psychology to man-machine systems. Emphasis on a systems approach to the design, development and retrofitting man-machine systems for optimal human use. Special consideration of development and use of human factors handbooks.

533./433. Research in Cognition and Learning (3) F Hanson, Resch, Smith

Prerequisites: PSY 200, 310, and 331 or 332 or 333. Research mehods in cognition, Learning and perception. Laboratory includes observations and experiments on selected topics. (Lecture 2 hours, laboratory 3 hours.)

537./437. Research in Emotion and Motivation (3) S Hupka, Jung, Thayer

Prerequisites: PSY 200, 310, and 336 or 337. Research methods in emotion and motivation. (Lecture 2 hours, laboratory 3 hours.)

538./438. Psycholinguistics (3) F Smith

Prerequisites: Six units of linguistics or upper division psychology. Psychological and linguistic approaches to study of language. Comparison of human language with communication in lower animals. Language development, disorders, symbolism and universals. (Lecture 3 hours.)

539./439. Language Acquisition (3) F Smith

Prerequisites: Six units of linguistics or upper division psychology, or consent of instructor. Theory and research on the acquisition of first and second languages in children and adults. Psycholinguistic perspectives on the development of phonological, syntactic, semantic, and pragmatic aspects of language. The interacting roles of developmental stages, cognitive processes, individual differences, social influences, and the cultural context will be stressed. [Seminar] Grading: Traditional only. Same course as PSY 539 and LING 539.

541./441. Research in Physiological Psychology (3) F Green, Haralson

Prerequisites: PSY 200, 310, 341. Research methods in neuropsychology. Includes fundamentals of neuroanatomy, surgical procedures for stimulation, lesioning and recording, pharmacological procedures used in neuropsychological research. (Lecture 2 hours, laboratory 3 hours.)

542. Techniques of Physiological Psychology (3) S Green

Prerequisites: PSY 541./441. Development of physiological methods and animal surgical procedures in the study of behavior. (Discussion 1 hour, laboratory 6 hours.)

545./445. Research in Psychophysiology (3) S Green, Haralson

Prerequisites: PSY 200, 310, 345. Research methods in human psychophysiology. Includes polygraph recording and analysis in human response systems such as brain, skin, cardiovascular and respiratory systems. (Lecture 2 hours, laboratory 3 hours.)

551./451. Research in Social Psychology (3) F Carlson, Jorgenson, Lindner, Thayer

Prerequisites: PSY 200, 310, 351. Research methods and problems in social psychology. (Lecture 2 hours, laboratory 3 hours.)

553./453. Principles of Group Dynamics (3) S Lindner

Prerequisites: PSY 351 or SOC 335. Behavior in groups with attention to such factors as leadership, fellowship, interaction and influence including organization, management, morale, and efficiency. Problems, techniques and methods of investigation. [Lecture — Discussion] Grading: Traditional only.

554. Attitude and Opinion (3) On Demand Carlson

Prerequisites: PSY 200, 210, 351. The nature and correlates of attitudes, opinions, and related psychological processes. Project experience in the development and use of measurement techniques.

566./456. Research in Personality (3) S Jung, Kapche, Lindner, Thayer

Prerequisites: PSY 200, 310, 356. Research methods and problems in personality. (Lecture 2 hours, laboratory 3 hours.)

561./461. Research in Developmental Psychology (3) F Hartley, Nummedal

Prerequisites: PSY 200; 310; 361 or 365. Research methods in life-span developmental psychology. Includes cross-sectional and sequential design and statistical models. (Lecture 2 hours, laboratory 3 hours.)

571. Behavior Disorders of Children (3) On Demand Flores de Apodaca, Lowenthal

Prerequisites: PSY 370; PSY 361 or ED P 301, consent of graduate coordinator. Investigation of the etiology, classification, diagnosis and treatment of behavior disorders in children from birth through adolescence.

572. Behavior in Communities (3) S, Danson

Prerequisite: Permission of instructor. The course addresses an understanding of social phenomena in communities in terms of a behavioral perspective and associated methodology. A variety of real world phenomena such as energy conservation, pollution, mass transportation, population control, and community education will be selected for analysis.

573. Clinical Psychology (3) F,S Binder, Kapche, Linden

Prerequisite: PSY 473, consent of instructor. Consideration and evaluation of clinical assessment, psychotherapeutic processes and current trends in clinical psychology.

574. Individual Intelligence Testing (4) F,S Lindner, Rhodes

Prerequisites: PSY 314 or 315. Practice in administration and interpretation of the Stanford-Binet and Wechsler individual tests. Students will administer practice tests to adults and children, be observed for proficiency and test clinic cases. Not open to students with credit in PSY 474. (Lecture 3 hours, laboratory 3 hours.)

575./475. Interviewing and Case Study Methods (3) F,S Fiebert

Prerequisites: Permission of instructor, PSY 314. Study and development of the clinical techniques of observation, case history and the interview.

577. Research in Community and Clinical Psychology (3) S Binder, Dowell, Kapche

Prerequisites: Graduate standing or consent of the instructor. Review of research on processes and outcomes of psychotherapy; strategies of community intervention; or other topics.

581. Organizational Psychology (3) F,S Carrie-Thomas

Prerequisites: PSY 351, 453 recommended or consent of instructor and consent of Graduate Coordinator. Analysis of organizational behavior and practices from a systems point of view. Consideration of employee motivation, power, leadership, communication, decision-making, and organizational change. Research methods for studying organizations.

582./481. Research in industrial Psychology (3) F,S Colman, Creamer

Prerequisites: PSY 200, 310, 381. Research methods and problems in industrial psychology. Includes direct observation, psychophysical, regression and experimental methodologies. (Lecture 2 hours, laboratory 3 hours.)

585. Proseminar in Personnel Psychology (3) F,S

Not open to students with credit in PSY 586. Prerequisites: PSY 315 and 381 or 486 or consent of instructor and consent of Graduate Coordinator. Advanced consideration of problems and procedures in personnel psychology. Includes both differentiation and synthesis of major areas within this field.

587./486. Personnel Psychology (3) F

Prerequisite: PSY 381 or 481. Survey of existing knowledge and description of research techniques in personnel psychology.

590. Advanced Topics in Psychology (3) F,S Faculty

Prerequisite: Consent of instructor. Topics of current interest in psychology selected for intensive development. May be repeated (with selection of a second topic) for a maximum of six units. Topics will be announced in the Schedule of Classes.

595./495. Ethical and Legal Issues in Psychology (3) F Binder

Prerequisite: Any 300-level psychology course. Ethical principles in human and animal research and in applied areas of psychology. Emerging legal issues in the fields of forensic psychology, behavior modification, criminal justice and clinical practice will be discussed.

599. Independent Study (1-3) F,S,SS Faculty

Prerequisite: Consent of department. Student will conduct independent laboratory or library research and write a report of the research. May be repeated for a maximum of 6 units.

631. Seminar in Perception and Physiological Psychology (3) On Demand Colman, Green, Haralson

Prerequisites: PSY 331 or 341 or 345 or consent of instructor, consent of graduate coordinator, advancement to candidacy. Critical examination of selected topics in perception, information processing and neurophysiological correlates of behavior. Student emphasis on either perception or physiological psychology.

632. Seminar in Learning (3) F Hanley, Nygaard, Smith

Prerequisites: PSY 333 or consent of instructor, consent of graduate coordinator, advancement to candidacy. Advanced consideration of selected topics in learning.

634. Seminar in Cognition (3) F or S Hanley Smith

Prerequisites: PSY 333 or 332 or consent of instructor, consent of graduate coordinator, advancement to candidacy. An examination of method, theory and experimental evidence in selected topics from the area of cognition.

637. Seminar in Emotion and Motivation (3) F or S Hupka, Jung

Prerequisites: PSY 336 or 337 or consent of instructor, consent of graduate coordinator, advancement to candidacy. Advanced consideration of selected topics in animal and human motivation and emotion.

651. Seminar in Social Psychology (3) S Carlson, Jorgenson, Lindner

Prerequisites: PSY 351 or consent of instructor, consent of graduate coordinator, advancement to candidacy. Critical examination of interpersonal relations, social influence, group membership and influence, and intergroup relations.

656. Seminar in Personality (3) F Fiebert, Kapche, Lindner, Thayer

Prerequisites: PSY 356 or consent of instructor, consent of graduate coordinator, advancement to candidacy. Theories of personality structure, dynamics, and development. Critical examination of research deriving from different theoretical approaches.

661. Seminar in Developmental Psychology (3) S Hartley, Nummedal

Prerequisites: PSY 361 or consent of instructor, consent of graduate coordinator, advancement to candidacy. Consideration of theoretical and methodological issues in life span developmental psychology. Critical examination of research on selected topics, including development of physiological function, intelligence, language, learning processes, sensory processes, perception, personality and social behavior.

672A-B Seminar in Community Psychology (3,3) F,S Faculty

Prerequisites: Enrollment in Community/Clinical graduate program and/or consent of instructor and graduate coordinator. Survey of topics in community/clinical psychology such as development of the discipline, changing roles of mental health professionals and the nature of indirect vs. direct helping roles.

673A-B-C. Practicum in Community Psychology (2,2,2) F,S,F

Prerequisites: Enrollment in community/clinical graduate program, concurrent enrollment in 672A-B. Three semester sequence of involvement in work representative of community psychology or community mental health. Includes faculty-directed applied project, then 300 hours on-the-job training, culminating in development of thesis or work project.

678. Clinical-Practicum (3) F,S DeHardt, Linden

Prerequisites: PSY 356, 370, 475/575, 574, consent of instructor and graduate coordinator, advancement to candidacy. Application for the Practicum should be made by October 15 or April 1 for the following semester. Clinical practice in varied clinical settings. Individual work with clients, diagnostic procedures, staff conferences, and case management. May be repeated for a maximum of six units of credit.

679. Clinical Family Therapy (3) F,S Linden

Prerequisites: PSY 407, 573, supervised experience as a therapist, and permission of instructor. Advanced theoretical and technical procedures, role playing and clinical practice under supervision.

681. Seminar in Applications of Psychology to Industry (3) F,S Carrie-Thomas, Creamer

Prerequisites: Two of the following: PSY 527, 581, 585; and corequisity PSY 515 or 696I and consent of graduate coordinator. Psychological applications to current problems of industry. Development of thesis proposal and pretest of thesis research techniques required.

688. Practicum in Industrial Psychology (3) F,S Carrie-Thomas, Creamer, Rhodes

Prerequisites: PSY 681, consent of graduate coordinator. Practice of industrial psychology or human factors in various industrial settings. Individual research and consultation with industrial or governmental organizations.

690. Seminar in Psychology (3) F,S Faculty

Prerequisites: Consent of instructor and graduate coordinator, advancement to candidacy. Seminar on topics of current interest in psychology selected for intensive development at an advanced level. May be repeated for a maximum of six units with different topics.

696C. Research Methods in Psychology (3) F,S Hanson, Newman

Prerequisites: PSY 411/511 or 412/512, consent of graduate coordinator, advancement to candidacy. The nature and function of research in the behavioral sciences. Experimental, correlational and case study methods. Research design and analysis using multiple linear regression model, general probability models and Bayesian inference. This course is offered particularly for master of arts students and includes the required comprehensive examination.

696I. Research Methods in Psychology (3) On Demand Colman, Creamer, Hanson, Newman

Prerequisites: PSY 411/511 or 412/512, 481/582, consent of graduate coordinator advancement to candidacy. Nature and function of research in the behavioral sciences. Experimental, correlational and case study methods. Research design and analysis using multiple linear regression model, general probability models and Bayesian inference. Offered particularly for master of science in industrial students and does not include the comprehensive examination required for master of arts students.

697. Directed Research (1-3) F,S Faculty

Prerequisites: Consent of graduate coordinator, department, advancement to candidacy. Theoretical and experimental problems in psychology requiring intensive analysis.

698. Thesis (1-6) F,S Faculty

(Industrial students must complete PSY 681 prior to enrolling in 698.) Prerequisites: Advancement to candidacy, consent of advisor. Planning, preparation, and completion of a thesis in psychology. Must be repeated for a total of six units of credit.

Russian — East European Studies

School of Social and Behavioral Sciences

Director: Harold Shevsky (German, Russian, and Classics)
Telephone: 498-5289

Students desiring information should contact the Political Science department office for referral to one of the faculty advisors.

Certificate in Russian and East European Studies

Russian-East European Studies has an interdisciplinary program which offers students interested in this field the opportunity to pursue courses Leading to a Certificate in Russian-East European Studies. Courses used to meet this certificate requirement may be counted also, where applicable toward the General Education requirement and the major and teaching minor requirements of the cooperating departments.

Interdisciplinary in concept, it covers the fields of anthropology, economics, geography, history, comparative literature, management, philosophy, political science and the Russian language.

The expanding opportunities for careers and public service in foreign policy administration, international organization, international business activities, education and information for intercultural understanding, make it useful to organize studies leading to a certificate in this ever important part of the world will tend to enhance the student's possibility for a career in business, education or government, and broaden the scope of understanding.

Interested students should apply to the Director, Russian- East European Studies, Dr. Harold Shevsky, Department of German, Russian, and Classics.

Requirements for the Certificate in Russian-East European Studies

1. A bachelor's degree with an approved major.
2. A minimum of two semesters of a Slavic language
3. 18 units selected from four of the disciplines listed below chosen in consultation with the student's advisor.

   No more than six units of any one discipline shall apply toward the certificate.
4. Cumulative grade point average of 2.75 in all courses in the student's approved certificate program.

Russian-East European courses:

ANTH 331, 490; C/LT 349, 428, 449; ECON 368, 490; GEOG 318; HIST 341A, 341B, 441, 490, 495; MGMT 450; PHIL 490; POSC 306, 356, 357, 484, 497; RUSS 101A-B, 201A, 201B, 312, 314, 410.

May be taken only when course work is applicable to Russian-East European Studies. Consultation with director of the center is required.

Social Work

School of Social and Behavioral Sciences

Director: Paul Abels
Department Office: Psychology Building (PSY), Room 114
Telephone: 498-4616
Faculty: Professors: Paul Abels, Raymond M. Berger, James J. Kelly, Isaiah C. Lee; Associate Professors: K. K. L. Chau, Jean M. Granger; Assistant Professors: Estela Andujo, Catherine C. Goodman, Elizabeth T. Ortiz.
Emeritus Faculty: Erma Lee Hutton
Department Secretary: Patricia Lauer

Students desiring information should contact the department office for referral to one of the faculty advisors. Admissions — telephone 498-4614; Graduate Field Education — 494-8180.

The profession of social work aims at the improvement of the quality of life for all people and the enhancement of the human potential for full and productive participation in society. As such, social work has universal application to meet human needs arising from personal-societal interactions.

Social work methodology is a change-oriented process which helps individuals and social units of all sizes, structures, and functions to discover, develop, mobilize, and use their own and outside resources to change personal and social conditions which are barriers to meeting their needs.

Professional social workers are dedicated to service for the welfare and self-fulfillment of human beings; to the development and disciplined use of scientific knowledge of human and societal behavior; to the development and improvement of resources to meet individual, group, national, and international needs and aspirations; to the development and improvement of social institutions; and to the achievement of social justice.

Social workers are employed in the major societal institutions: health and mental health care, family services, government, education, justice, recreation, labor and industry, and religion. They work in many job classifications: direct services, supervision, consultation, management, and administration.

The educational program of the Department of Social Work is directed toward helping students gain professional knowledge and values, developing an understanding of social work methodology and techniques, and achieving the skill required to undertake quality practice over the full spectrum of professional tasks. These objectives are accomplished with the student through an integration of the information and theories of the classroom with supervised practical experience in social agencies. Curriculum is designed to meet the basic preparation for State licensing and the certification of the National Association of Social Workers.

Programs

The Department of Social Work offers an undergraduate curriculum leading to the degree of Bachelor of Arts in Social Work and a graduate professional curriculum leading to a Master of Social Work degree. The purpose of the baccalaureate program is to prepare students for beginning professional social work practice. The principal objective of the Social Work Master's Degree program is to prepare students for specialized social work practice.

Bachelor of Arts Degree in Social Work (code 2-8555)

The Department of Social Work offers, in conjunction with the University's two years of general education, a two year professional program leading to a Bachelor of Arts in Social Work degree. The BASW program is accredited by the Commission on Accreditation of the Council on Social Work Education. The objectives of the baccalaureate program are to prepare students for beginning social work practice and graduate social work education. The program is designed for the student who, through evaluations and performance in the first course(s) taken in the department, demonstrates ability and promise for development as a professional social worker. All social work baccalaureate courses incorporate issues and concerns related to ethnicity, gender, aging, poverty, and sexual preferences.

Students should contact the department Chair and advisors as soon as possible for academic advising concerning the sequence in which courses should be taken and arrangements of their schedules.

Social work majors should consider taking courses as electives or for fulfillment of general education requirements in the ethnic studies and women's studies programs, in other social and behavioral sciences departments, in home economics, and in gerontology. The department can make recommendations concerning those courses which would be most useful to students interested in acquiring broader information closely allied to professional social work practice.

Requirements for the Bachelor of Arts

Lower Division:

A 3-unit (minimum) course in: Cultural Anthropology, Human Anatomy and Physiology with a laboratory, Introductory Sociology, Introductory Psychology, Elementary Statistics, Abnormal Psychology. Introductory Social Welfare (SW 220) and Introduction to Social Welfare Practicum (SW 221).

Upper Division:

1) Completing requirements for General Education and Department; 2) SW 330, 331, 340, 340A*, 350, 351, 440, 441, 442, 465, 495A/B. *If SW 442 is not taken concurrently with 495A, 340A must be taken twice.

Sequence of Required Social Work Courses:

First Level:

SW 220, 221, 330, 350.

Second Level:

SW 331,340,340A,351.

Third and Fourth Levels:

SW 440, 441, 442, 465, 495A, 495B.

Students who are planning to allow additional semesters for completion of the major may take SW 442 with a Practicum (340A) prior to entering the third level of courses. Since SW 442 may be offered only in fall semesters, students interested in this option should discuss arrangements for it with their advisor.

Master of Social Work (code 7-8555)

The Master of Social Work program was admitted to candidacy for accreditation by the Council on Social Work Education. The goal of the Master of Social Work (MSW) program is education which stresses the worth and dignity of individuals, the interdependence among peoples, and the common human bond that unites all peoples. This is essentially an international and intercultural stance which requires a respect for differences of custom, tradition, belief, and perspective and a development of capacity to practice social work in an increasingly multi-cultural environment. The cross-cultural focus has been established in response to the development of a world community, the changing population characteristics of the University and adjacent communities, and in response to the goals and objectives of the profession of social work.

The master's program emphasizes an ecological perspective which focuses on the fit and interactions of a person or system in relation to the various environments likely to be encountered. Within this perspective, knowledge, values, and skills are used in a change-oriented process with a cross-cultural context to help individuals and social units achieve toward improved quality of life and social participation, including advocacy for just institutions and equitable access to opportunities and resources.

The master's program defines its mission as the provision of an educational program which does the following:

(1) Provides knowledge of, and experience with, ethnic diversity, teaches skill in ethnic-sensitive practice, and provides motivation and skill to combat oppressive policies and discrimination. As such, the program actively offers opportunity for graduate education to students of various ethnic, racial, and socio-economic backgrounds who have life experience in bridging cultural gaps.

(2) Contributes to the quality of social services delivered in the adjacent community — Los Angeles, Ventura, San Bernardino, Riverside, and Orange Counties — by providing an opportunity for advanced education to students who are already employed in the social services. These students may concurrently maintain employment within the social services and participate in the program to develop advanced skills in their area. Quality of services is also enhanced through close collaboration between the Department of Social Work and community service agencies offering fieldwork experiences and through the labor force of MSW's educated in a program with cross-cultural emphasis and specializations which reflect the needs of our adjacent community as well as the needs of urban communities nationally.

(3) Prepares social workers for leadership and specialized practice with a specific population group. The program maintains high standards and prepares social workers for the depth and complexity of generic social work practice while being able to practice in a chosen area of concentration. Foundation knowledge, values, and skills required for intervention in a cross-cultural context are applied and developed through work within the area of specialization. Specialization consists of emphasis on a stage of the life cycle: either aging and families or children, youth, and families. Specialized education is offered concurrently with basic foundation knowledge from entry into the program. Students are expected to have experience in the social services upon which to draw after entry into the program.

(4) Teaches analytic skill necessary for reflective and autonomous practice and necessary for contribution to the advancement of knowledge. Social workers should be capable of integrating knowledge and practice, should be able to apply grounded, scientific principles to practice, should be capable of conceptualizing practice principles on the basis of their experience, and therefore should be able to contribute to the development of new knowledge.

(5) Educates students to the values and ethics of the profession. The social worker is expected to be committed to the value that people should have equal access to resources, services, and opportunities. Social workers should be advocates of humane and responsive service, have regard for the worth and dignity of the individual, and conduct themselves in accordance with the professional code of ethics.

Admission to Master's Degree Program

Students interested in full- and part-time study are admitted to the M.S.W. program for the fall semester of each year. Prospective students should apply directly to the Department of Social Work by March 1 of the year of anticipated enrollment. Ordinarily, decisions on admissions are concluded by June.

Admission Requirements

To be admitted to graduate work on a full- or part-time basis in the Master of Social Work program, applicants must meet the following criteria:

1. Hold a Bachelor's degree from a university or college of recognized standing and be eligible for admission to graduate standing at CSULB. A strong liberal arts background is desirable.
2. Have the professional and intellectual ability to perform graduate work satisfactorily. A cumulative grade point average (GPA) of 2.50 or above (on the 4.0 scale) on the last 60 units attempted is required for admission to the Program.
3. Present results of the Graduate Record Examination at the time of admission.
4. Admission interviews may be required by the Program faculty.
5. Submit a copy of all college/university transcripts (in addition to those provided the University).
6. Complete the application form, including Applicant's Personal Statement.
7. Obtain 3 letters of recommendation completed on the official forms: one from an academic source, one from a social work supervisor, and one from either of the two above.

Applicants with deficiencies in pre-professional preparation may be admitted as "Conditionally Classified" students. All students must be fully "Classified" before seeking Advancement to Candidacy for the degree. No graduate credit is granted for life experience, work, volunteer or military experience. A maximum of 30 graduate units may be transferred from an accredited graduate social work program. Only social work courses can be used to substitute for required course work.

The Department of Social Work will reject an applicant or disqualify an enrolled student whose record of academic achievement or performance in field instruction does not meet the minimum standards of the profession at the end of any semester.

Field Work

The field work sequence plays an integral role in the MSW curriculum. The experience offers an opportunity for students to integrate and apply theoretical knowledge and social work practice and intervention skills in a community agency setting under the supervision of a qualified field instructor. A variety of agencies within the surrounding counties are utilized, reflecting the diverse settings in which social workers are employed.

Each student has two field work placements during the course of study, each placement lasting one academic year. Field work placements are concurrent with coursework, beginning in mid-September and finishing in mid-May each year. Currently, students are in field work two days (16 hours) per week. The field work sequence encompasses a total of 1000 hours, for which 12 units of academic credit are given. Students enrolled in the full-time or two-year program have a field work placement each year. Students enrolled in the three or four year curriculum have placements in the second or third year. Students who are employed in social service agencies may request that their agency be evaluated as a site for the field work. The agency must be able to meet established criteria to insure the educational focus of field work.

Advancement to Candidacy

A Conditionally Classified or fully Classified student must maintain a minimum grade point average of 3.0 on all courses taken subsequent to admission. In addition, a GPA of 3.0 must be maintained in all courses required for the degree. A student will be eligible for advancement to candidacy for the degree after successful completion of 12 units of graduate level courses in Social Work.

Course Load

The California State University, Long Beach requirement for full-time status as a graduate student is 8 weighted units. For part-time students pursuing the M.S.W. degree in the Department of Social Work, the residency requirement is one year of full-time work; therefore, part-time students pursuing the M.S.W. degree must take at least 2 semesters of at least 3 courses or 9 units. Students who wish to complete the M.S.W. degree in 2 years must take an overload of 6 units for 4 semesters or 15 units a semester.

Requirements for the Master of Social Work

The Master of Social Work program requires the completion of 60 semester units, taken in one of the three following sequences.

Plan A: (four years)

Term I — SW 503, 505;
Term II — SW 550, 594;
Term III — SW 500, 596A, 597;
Term IV — SW 560 or 561, 592, 596B,
Term V — SW 660 or 661, 680A, 693;
Term VI — SW 670 or 671, 680B, 681;
Term VII — 698, 600 level elective;
Term VIII — 699, 600 level elective.

Plan B: (three years)

Term I — SW 503, 505;
Term II — SW 550, 594;
Term III — SW 500, 596A, 597;
Term IV — SW 560 or 561, 592, 596B
Term V — SW 660 or 661, 680A, 693, 698 and one 600 level elective;
Term VI — SW 670 or 671, 680B, 681, 699, and one 600 level elective.

Plan C: (two years)

Term I — SW 500, 503, 505, 596A, 597;
Term II — SW 550, 560 or 561, 592, 594, 596B;
Term III — SW 660 or 661, 680A, 693, 698, and one 600 level elective;
Term IV — SW 670 or 671, 680B, 681, 699, and one 600 level elective.

Courses (S W):

Lower Division:

220. Introduction to Social Welfare (3) F,S Lee, Ortiz

Prerequisites: None. Analysis of current functions and purposes of social welfare as an institution. Examination of historical and philosophical perspectives on social welfare in light of cultural, economics, political, psychological, and social forces. Study of the consequences of national welfare programs and policies. Analytical comparisons with other countries. Approved G.E. Category(ies): D.2

221. Introduction to Social Welfare Practicum (2) F,S

Prerequisite: Consent of instructor. Minimum of six hours weekly in an approved social service or allied setting. Social work field practice including observational, volunteer activities to aid career choices.

250. English for Social Work (3) F,S

Recommended for those needing social-work technical-writing skills. Review of English fundamentals: grammar and punctuation. Vocabulary and writing modes useful in the field of social work and human services: official letters, case histories, reports, term papers, grants.

280. The Helping Role: Communication for Problem Solving (3) F,S Ortiz

The personal qualities and skills needed for effective problem solving; an overview of public and private social and human services resources and the basics of interviewing and communications skills; recommended for students planning careers which involve communication or problem solving with the public.

290. Special Topics for Social Work (1-3) F Faculty

Topics of special interest in social work selected for intensive study. Topics will be announced in the Schedule of Classes each semester. May be repeated with different topics to a maximum of 6 units.

Upper Division:

330. Human Behavior and Social Environment: Birth through Adolescence (3) F,S Faculty

(Open to non-majors.) Examination of relationship of human behavior to the social environment. Integration of general systems and role theory and concepts of stigma. Application to life cycles from birth through adolescence.

331. Human Behavior and Social Environment: Young Adulthood through Old Age (3) F,S Faculty

(Open to non-majors.) Examination of relationship of human behavior to social environment. Integration of general systems, role and personality theory, and concepts of racism and sexism. Application to life cycles from young adulthood through old age.

340. Generic Social Work Practice (3) F,S Granger

Prerequisites: SW 220, 221, 330, consent of instructor. Concurrent enrollment in SW 340A. Social work as a helping process. Basic principles, common elements, and generic frameworks for social work practice including interview techniques. Role of social workers in resolution of social, emotional, and environmental problems and the relationship of social work intervention.

340A. Social Work Practicum (2) F Faculty

Prerequisite: Concurrent enrollment in SW 340 or 442. Minimum of six hours weekly experience in approved social service or allied setting. Social work field practice including interviewing, assessment, and intervention activities. May be repeated for a maximum of four units.

350. Social Policy: Law and Court Decisions (3) F,S Hutton

(Open to non-majors.) Social policy as defined in legislation and judicial decisions affecting rights of individuals, minorities, families and the general welfare.

351. Social Policy: Formulation and Analysis (3) F,S Ortiz

(Open to non-majors.) Policy formulation and analysis related to social welfare institutions and major social welfare policies and programs. Current values and issues in social welfare policy.

440. Social Work with Groups (3) F Chau

Prerequisites: SW 331, 340, 340A. Concurrent enrollment in SW 495A or 495B. Adaptation of generic frameworks of social work practice to generic group approaches. Analysis of dynamics, theories, and principles underlying group practice. Programs, practice techniques, and roles involved with groups. Non-majors require the consent of the instructor.

441. Social Work with Communities and Institutions (3) S Chau, Kelly

Prerequisites: SW 331, 340A. Concurrent enrollment in SW 495A or 495B. Adaptation of generic frameworks of social work practice to generic approaches to community and institutional applications. Analysis of theories and principles underlying community practice. Adaptation of theories and activities to organizational contexts. Techniques and activities applicable to communities and neighborhoods. Non-majors require consent of the instructor.

442. Social Work Practice With Individuals and Families (3) F,S Chau, Granger

Prerequisites: SW 331, 340, 340A, consent of instructor. Concurrent enrollment in SW 495A. Adaptation of generic frameworks of social work practice to generic approaches in working with individuals and families. Theories, techniques, activities, and role of social workers; differential approaches to assessment, intervention, and helping processes.

465. Research Methods in Social Work (3) F,S Lee

Prerequisites: SW 340, 340A, 442. one course in elementary statistics. Must be completed concurrently with 495A or 495B. introduction to research methods in social work and emphasis on evaluation of social work and community service programs. Non-majors require consent of the instructor.

480. Intervention with Families and Children (3) F,S Granger

Contemporary social welfare programs designed to meet the physical, psychological, and social needs of families and children. Basic principles and methods of providing services, including the role of the social worker.

481. Corrections: Probation and Parole (3) F,S Faculty

Contemporary governmental and private correctional services for offenders and the community. Includes probation, parole, institutional, and community-based programs. Historical background, principles of investigation, supervision, and treatment.

482. Medical Social Work (3) F,S Lee

Survey of medicine, modern hospitals, statutory health regulations, and medical social work. Consideration of acute and chronic disabilities and role of social workers in the delivery of service to patients, family, and community.

483. Mental Health (3) F,S Lee

Survey of psychiatric concepts, mental health laws, regulations governing psychiatric social work, and descriptions of mental health services. Consideration of acute and chronic mental and emotional dysfunctions and role of social workers in the delivery of services to patients, family, and community.

485. Aging and Mental Health (3) F,S Kelly

Intervention strategies, preventive and supportive, with the independent older adult. Social and clinical research related to gero-psychiatry.

490. Special Topics in Social Work (1-4) F,S Faculty

Topics of special interest in social work for intensive study. Topics will be announced in the Schedule of Classes each semester. May be repeated with different topics.

493. Non-major Internship (1-6) F,S, SSKelly

Prerequisite: Consent of instructor. Three to eighteen hours weekly, depending on the number of credit units in an approved agency. Field practice including observational volunteer activities to aid career choices.

495A. Field Experience in Social Work (7) F Faculty

Prerequisites: SW 331, 340, 340A, 350. Concurrent enrollment in two of the following: SW 440, and 442. Evidence of satisfactory malpractice disability insurance coverage. Open to seniors accepted for field work. Supervised practice experience in social welfare agencies and allied settings. Two hours weekly of campus seminar and 16 hours minimum (usually Tuesday and Thursday) in agency placement.

495B. Field Experience in Social Work (7) S Faculty

Prerequisites: Evidence of satisfactory malpractice disability insurance coverage; SW 351, 440, 442, 495A. Concurrent enrollment in SW 441 and 465. Must be taken immediately after 495A. Open to seniors accepted for field work. Supervised practice experience in social welfare agencies and allied settings. Two hours weekly of campus seminar and 16 hours minimum (usually Tuesday and Thursday) in agency placement.

499. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent study of special topics under supervision of a faculty member.

Graduate Division:

500. Foundations of Generic Social Work Practice (3) F Abels, Chau

The assumptions, concepts, principles, and values of generic practice examined from a cultural perspective in regard to professional relationships, social work roles, treatment processes, and service delivery models with individuals, families, groups, organizations, and communities; a conscious and systematic dual perspective used to compare simultaneously the values, attitudes and behavior of the larger social system with those of client's family and community system.

503. Behavior and Environment in Cross-Cultural Perspectives (3) S Andujo

Review of psycho-analytic concepts, ego psychology, learning theory, role theory, and socio-cultural impacts upon individual behavior. Discussion of system theory, group conflict, social deviancy, sex discrimination. and poverty affecting personal adaptive functioning and group adjustment. Clinical application of these concepts and theories to assessment, diagnosis, and treatment of individuals and families.

505. Oppressed Groups: Social Policy and Political Action (3) F Ortiz

Discussion and analysis of the barriers to resources and social-political status faced by selected oppressed groups in the U.S. Forms of dissent and political action used, including protest and compromise, the politics of accommodation, input into the party system and the legislative process. Social work appraisals of group needs, differences and strategies for overcoming barriers with special emphasis on adequacy, equity.

540. Social Work Practice in Health Care (3) F Faculty

Overview of the health care system and social work practice. Discussion of the interrelatedness of physical, psychological, social and cultural factors in health care and disease conditions ranging from congenital anomalies to terminal illness with attention to the role of social worker in the health care system: health maintenance, family planning, preventive and rehabilitative services.

541. Social Work Practice in Mental Health (3) S Faculty

Reviewing the changing roles of social work in mental health settings, the influence of new psycho-social and psychiatric theories upon the care and treatment of the mentally ill or emotionally disturbed clients. Focus on social, economic and cultural factors as they affect social work roles in mental health management and clinical practice.

542. Social Work Practice with the Aging and Their Families (3) S Faculty

Review and analysis of social work practice with the aged and their families with special emphasis on the self-help approaches and professional services. Discussion of cross-cultural variations in the interaction between the clients and their family relatives, as well as other supportive social systems.

543. Social Work Practice with Children, Youth, and Families (3) F Granger

Review and analysis of clinical practice with children, youth, adults, and families within the social-cultural context, focusing on the restoration of social functioning within the family unit or a supportive social unit. Evaluation of the effectiveness in service delivery and treatment modalities.

550. Computers and Social Services (3) S Berger

Introduction to the application of computer technology to the social services through an examination of a variety of computerized information systems currently employed in the social services and allied mental health service systems and an introduction to the use of the computer and experience in manipulation of available data files using a packaged software program.

560. Direct intervention and Planning in Health System: Focus on Children, Youth and Families (3) S Andujo

Prerequisites: None. An introduction to the conceptual and practice modalities of health care social work. Emphasis will be upon the inter-relatedness of physical, psychological, social and cultural factors in health care. Adaptation and disease conditions in children, youth, and families.

561. Direct Intervention and Planning in the Health System: Focus on Aging (3) S Chau

Prerequisites: None. An introduction to the conceptual and practice modalities of health care social work. Emphasis will be upon the inter-relatedness of physical, psychological, social and cultural factors in health care. Adaptation and disease conditions in the aging and their families.

590. Special Topics (3) F,S Faculty

Content may vary from semester to semester. May be repeated under different course topics. Approval of instructor needed. Topics will be announced in the Schedule of Classes each semester.

592A. Community Projects I (3) S Faculty

Group instruction in specialized subjects geared to the student's practice methods and professional concentration. A group project focused upon a specific population or a specific community service may be acceptable. (Lecture/ discussion/ fieldwork: 9 hours per week)

594. Research Methods for Social Work Practice (3) S Chau, Goodman, Ortiz

Prerequisites: None. An introduction to social work research methods, including research design for both quantitative and qualitative studies. Emphasis on building knowledge and skills for carrying out independent, cross culturally focused research in social work and on the ability to evaluate research findings critically.

595. Research and Social Work Practice (3) S Faculty

Focus on a broad array of research studies and methods relevant to clinical practice and social service delivery. Descriptive studies, field experiments, laboratory experiments, qualitative observational studies, professional communication, interactional studies. Emphasis on the knowledge-building dimension of professional practice.

596A. Field Instruction I (3) F Faculty

Prerequisites: None. Supervised practice experience in a community social agency based upon students' learning needs, interest and area of concentration. Focus on development of foundation of generic interventive modalities in individuals, families, groups and communities with emphasis on cross cultural practice. One and a half hours weekly Field Seminar and 16 hours in agency placement.

596B. Field Instruction II (3) S Faculty

Prerequisites: None. Continuation of supervised practice experience in a community social agency on an advanced level of practice with individuals, groups and communities with emphasis on cross cultural practice. One and a half hours weekly Field Seminar and 16 hours in agency placement.

597A. Integrative Seminar I (3) F Faculty

Integration of classroom theories and field work practice. Discussion of students' simultaneous experience in the area of social policy, programs, social and behavioral theories, practice methods, interventive modalities, and professional learning. Units on minority content for cross-cultural self-awareness and adaptation of practice principles. Must be taken concurrently with SW 596A.

660. Direct Intervention and Planning in the Mental Health System: Focus on Children, Youth, and Families (3) F Andujo, Chau

Prerequisites: None. An advanced specialist overview of social work intervention in the mental health care system for children, youth, and families. Emphasis upon the Interrelatedness of psychological, social, cultural, and environmental factors influencing the practice of social work and its intervention in the mental health system. Presentation of a knowledge base relevant for effective practice in the mental health field and an examination of a range of treatment modalities and procedures that will enable students to work with individuals, groups and families in mental health services.

661. Direct Intervention and Planning in the Mental Health System: Focus on Aging (3) F Chau

Prerequisites: None. An advanced specialist overview of social work intervention in the mental health care system for the aging and their families. Emphasis upon the interrelatedness of psychological, social, cultural, and environmental factors influencing the practice of social work and its intervention in the mental health service system. Presentation of a knowledge base relevant for effective practice in the mental health field and an examination of a range of treatment modalities and procedures that will enable students to work with aging individuals, groups and their families needing mental health services.

662. Legal Issues in Social Work Practice (3) F,S

Examination of legal aspects concerning children, the family, and the aged, considering such issues as abortion, illegitimacy, right to treatment, mental health commitment procedures, rights of the elderly, children's rights, marriage, and divorce. Legal research methodology and classification of legal resources, principles of legal reasoning, understanding of federal and state court systems. Familiarity with legal assistance programs.

663. Assessment and Treatment of Alcoholism (3) F,S

Social work practice with individual alcoholics, their family systems, and their community network of collaterals. Awareness of prevalence of alcoholism and significance for clinical social work practice. Dynamics and treatment of disease. Special relationship issues, problems of cross addictions and polydrug use, resource networks supporting substance abuse services, Fetal Alcohol Syndrome, and problems of special groups: women, minorities, youth, and elderly.

664. Occupational Social Work (3) F,S Faculty

Significance of work life factors on the biopsychosocial functioning of clients and the interface of person, family and employment. Concepts of human growth and behavior. Issues of engagement, diagnostic assessment, and intervention from the special perspective of work-site settings. Concepts related to work as a social environment and an interpersonal system. Occupational environment as a resource system and client system.

665. School Social Work (3) F,S Faculty

Social work and the public school as a process in school-community-pupil relations. Attention to the school as a social institution and its organization. Social work services in schools as a specialized field of social work practice — its conceptual framework; models of practice; social work roles; and target groups of children to be served. Examination of major socio-legal policy issues.

666. Human Sexuality and Social Work (3) F,S Faculty

Introduces social work majors to discipline of human sexual behavior. Surveys a range of sexuality related issues encountered in therapeutic relationships, as part of administrative duties, and at the social policy level. Presents knowledge base and requires student examination of own attitudes regarding various aspects of human sexuality.

667. Issues in the Treatment of Women (3) F,S Faculty

Identification and application of treatment strategies to population of women likely to become social work clients. Diagnostic and relationship issues, including developmental and role issues, identity and self-esteem, socio-cultural variation, self-awareness, counter-transference. Advanced methods course.

668. Social Work in Neighborhoods (3) F,S Faculty

Designed as an introduction to the concept of neighborhoods and prepares students to assume social work roles and functions in neighborhood settings. Emphasizes the necessity of understanding the culture, physical and social organization, and power relationships of modalities: planning and service delivery, development, and organization.

669. Comparative Approaches to Social Work Group Practice (3) F,S Faculty

Examines in depth significant models of group work and the role of the leader and strategies of intervention proposed under these models. Also focuses on the formulation of a workable framework for assessment, intervention and evaluation in social work practice with small therapeutic groups.

670. Administration for Health and Mental Health: Focus on Children, Youth, and Families (3) S Granger

Basic processes of management in human services agencies with emphasis on structures serving children, youth, and families. Foundation for effective organizational participation and leadership. Relation of theories of organizational behavior and management to problems of social welfare agencies. Alternative models of the use of power in organizational settings and implications for manager's effectiveness. Framework for planning, monitoring and information management. Management tools, including computers and fiscal management.

671. Administration for Health and Mental Health: Focus on Aging (3) S Faculty

Basic processes of management in human services agencies with emphasis on structures serving the aging. Foundation for effective organizational participation and leadership. Relation of theories of organizational behavior and management to problems of social welfare agencies. Alternative models of the use of power in organizational settings and implications for manager's effectiveness. Framework for planning, monitoring, and information management. Management tools, including computers and fiscal management.

672. Program Evaluation in Social Services (3) F,S Faculty

Introduction to prevailing types of problem evaluation and preparation for continual evaluation checks or self evaluations as conducted within service agencies. Conceptualization of service delivery system. Program planning evaluation, program monitoring, impact evaluation, and cost-benefit and cost-effectiveness analysis.

673. Supervision/Staff Development/Consultation (3) F,S Granger

Review of the philosophy, objectives, principles, and methods of social work supervision, staff development, and consultation. Consideration given to similarities and differences in the roles, knowledge, and skills required, emphasizing the teaching-learning-evaluating components. Issues arising from organizational settings, changing legislation, and program provisions and professional standards identified and examined.

674. Clinical Diagnosis and Therapeutic Communication (3) F,S

Utilization of in-depth diagnosis as an individualizing rather than labelling or stereotyping process. Use of case material illustrating varying levels of structuralization from disorganization of schizophrenic existence to conflict of neurotic character formation. Issues of therapeutic use of milieu, child abuse, racial and cultural differences, homosexuality, prostitution, unemployment, etc.

675. Dynamics of Dysfunctioning in Children and Youth (3) F,S

Emphasizes a systematic approach to the study of specific diseases in terms of etiology and typical response patterns reflected in children and youth populations. Attention placed on bio-psycho-social factors. Influence of the child or youth's culture, ethnic and gender identification considered.

676. Family Centered SW Practice: Therapy (3) F,S Andujo

Prerequisites: None. An advanced specialist overview of evolving viewpoints, perspectives, values, intervention techniques and goals of family therapy. Views the family as a unit of attention and target of intervention and will emphasize the development and enhancement of knowledge, skills, theory and values specific to family therapy and social work practice. [Seminar] Grading: Traditional only.

678. Treatment of Couples with Marital Problems (3) F,S Faculty

Clinical models and techniques for treatment of couples with marital problems. Integration of systemic and analytical theories. Presentation of strategies and techniques through simulations and video. Theories of change in treatment and identification of individual theoretical framework and capabilities. Wide range of systematology and dysfunction, variety of dyadic relationships and cultures.

680A. Field Instruction III (3) F Faculty

Prerequisites: None. Supervised social work practice in a community social agency with focus on advanced direct practice skills and administrative program development areas with emphasis on cross cultural practice. One and a half hours weekly in Field Seminar and 16 hours in agency placement.

680B. Field Instruction IV (3) S Faculty

Prerequisites: None. Continued supervised social work practice in a community agency at an advanced level in both direct practice and administration within the student's area of concentration. Preparation for entering professional employment with emphasis on cross cultural practice. One and a half hours weekly in Field Seminar and 16 hours in agency placement.

681. Integrative Seminar II (3) S Faculty

Integration of social work theories and practice. Evaluation of student's career interest in specialized area of social work practice. Must be taken concurrently with SW 680B.

693. Community Projects II (3) S Faculty

Group instruction in specialized subjects geared to the student's practice methods and professional concentration. A group project which is focused upon a specific population or a specific community service may be acceptable. (Lecture/discussion/ fieldwork: 9 hours per week)

698. Thesis (3) F Berger, Chau, Goodman, Ortiz

Prerequisites: 30 units in the MSW program completed at a minimum GPA of 3.0 and Advancement to Candidacy. A two semester tutorial class in which the student completes an individual independent research project which meets University thesis requirements. [Independent Study] Grading: Traditional only.

699. Master's Thesis II (3) S Berger, Chau, Goodman, Ortiz

Prerequisites: 33 units in the MSW program completed at a minimum of a 3.0 GPA, Advancement to Candidacy, and successful completion of SW 697. The second semester of a two semester tutorial class in which the student completes an individual independent research project which meets University thesis requirements. Final comprehensive examination not required. [Independent Study] Grading: Traditional only.

Sociology

School of Social and Behavioral Sciences

Department Chair: Marsha S. Harman
Department Office: Social Science Public Affairs (SS/PA), Room 258
Telephone: 498-4602
Faculty: Professors: Barry M. Dank, Howard E. Fradkin, Michael Halliwell, Marsha S. Harman, Harold G. Hubbard, Gordon L. Leis, Douglas A. Parker, Fernando Penalosa, Carl Slawski, Peggy J. Smith, Theresa G. Turk, Paul S. Ullman, Glenn Walker; Associate Professors: Herbert L. Aarons, Norma S. Chinchilla, Gail C. Farmer.
Emeritus Faculty: Shirley Cereseto, Audrey Fuss, William E. Hartman, George W. Korber, Alfred W. Sheets
Department Secretary: Mary Eldridge

Students desiring information should contact the department office for referral to one of the faculty advisors: Undergraduate Advisor: Harman.

The major in sociology is intended to serve as preparation for careers in teaching, delivery and administration of social and health services, urban and environmental studies, law, government service at local, state and federal levels and related occupations. The major also provides training for advanced graduate work in sociology, social work and other social sciences. Sociology is also recommended as a second major or minor for students of all other social sciences; for business; for the humanities; especially literature and theatre arts; for ethnic and area studies; for journalism and other various applied arts and sciences.

Students interested in sociology may also wish to consider the liberal studies major with a concentration in sociology, which is described below. The Liberal Studies program is discussed elsewhere in this Bulletin. Detailed information about the concentration may be obtained from the Sociology Department Office.

Sociology courses are suitable for fulfilling general education or elective requirements for students of other majors. However, courses selected to fulfill the requirements of the major may not also be used to fulfill the requirements of any General Education category.

Bachelor of Arts in Sociology

Requirements for the Bachelor of Arts In Sociology (code 2-8560)

Lower Division:

Fifteen units of lower division are required: Students must have credit for SOC 100, 142, 250 or 255, ANTH 120 and C/ST 200. Students should complete C/ST 200 prior to enrolling in SOC 255. C/ST 210 may be substituted for SOC 255.

Upper Division:

A minimum of 30 units in Sociology including:

1. SOC 335IC, 356, 455, 456, and 327 or 420.
2. Three courses from one of the following concentrations:
   a. Deviance and Social Control: SOC 345, 44l, 442, 448, 459, 463.
   b. Ethnic and Minority Issues: SOC 325, 340, 341, 347, 419, 445, 485IC.
   c. Family and Intimate Relations: SOC 320, 325, 336, 426, 444, 459, 464.
   d. Medical Sociology: SOC 461IC, 462, 463, 464, HSC 400.
   e. Research: SOC 300, 336, 454, 499 and C/ST 312.
   f. Social Change and Global Issues: SOC 347, 349, 350, 352, 370IC, 410IC, 419, 450.
3. Two electives from other sociology courses than those chosen in concentration. Total credit for SOC 490, 495, and 499 combined may not exceed 6 units.

A minor in another area of Social and Behavioral Sciences is recommended.

Minor in Sociology (code 0-8560)

A minimum of 24 units which must include:

Lower Division:

SOC 100, 142.

Upper Division:

SOC 335IC and a minimum of 15 units selected from other upper division courses in sociology. Total credit for SOC 490, 495, 499 may not exceed 6 units.

Concentration in Sociology for the Bachelor of Arts In Liberal Studies

A minimum of 24 units will be required, of which 9 are lower division and l5 must be upper division:

Required Courses:

SOC 100, 142, and 335IC; one course from SOC 135, 250, 255, or C/ST 210; one course from SOC 320, 325, 350, 420, 445, or 485IC; one course from SOC 336, 345, 347, 441, or 448; two 3-unit courses selected from any of the upper division courses in the Sociology Department.

Courses (SOC):

Lower Division:

100. Principles of Sociology (3) F,S Faculty

Introduction to basic concepts of sociology and sociological analysis, emphasis upon group, status, role, personality, socialization, social processes, institutions, social organization and sociocultural change.

135. Society and the Individual (3) F,S Faculty

Intended primarily for nonmajors. Examines the social processes influencing the individual's development and behavior from infancy through the entire life cycle. Includes childhood personality development, self-images, social roles, peer influence, reference groups and social influence by occupational, political, ethnic and religious groups. Also analyzes the development of self-control and social control and social factors affecting attitude formation and change.

142. Social Trends and Problems (3) F,S Faculty

Concepts of social change, lag, trends and disorganization; population growth and mobility; minority groups; rural-urban relationships; communication agencies and problems; public health; social stratification; and war. Especially recommended for teachers who want a general survey of social problems.

250. Elementary Statistics (4) F,S Fradkin, Halliwell, Harman, Hubbard, Smith, Walker

(Not open to students with credit in HDEV 250, SBS 250, ANTH 302, C/ST 210, SOC 210, MATH 180, PSY 210, or SOC 255.) Prerequisite: Knowledge of mathematical procedures usually covered in elementary high school algebra, as demonstrated on a screening examination the semester prior to enrollment. Introduction to descriptive and inferential statistics and their applications in social and behavioral science research; performance of statistical exercises by interactive computer. Emphasis upon knowledge of which statistical tests to use and how to interpret their results. [Discussion, Laboratory] Same course as HDEV 250 and SBS 250.

255. Elementary Statistics (4) F,S Fradkin, Halliwell, Harman, Hubbard, Smith, Walker

Not open to students with credit in C/ST 210, HDEV 250, PSY 210, SBS 250 or MATH 180. Prerequisite: Knowledge of mathematical procedures usually covered in elementary high-school algebra. Concepts and techniques of descriptive and inferential statistics. Statistical reasoning applied to social research. Focus on the understanding of statistical measures and the assumptions underlying them. Includes use of interactive computers.

275. Marriage (3) F,S Slawski

Survey of the most recent information on dating, courtship, engagement, mate selection, areas of adjustment in marriage, parenthood, financial and homemaking problems.

290. Special Topics in Sociology (1-3) F,S Faculty

Topics of special interest in sociology selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated with different topics to a maximum of six units.

Upper Division:

300. Sociological Analysis (3) F,S Penalosa, Aarons

Prerequisite: SOC 100. Intensive application and critical analysis of sociological concepts and principles in professional and popular literature. Analysis of case study, field, experimental and survey materials are included. Emphasis will be placed on writing skills in sociology. This course should be completed during the first semester of upper division coursework.

320. The Family (3) F,S Slawski, Ullman

Prerequisite: SOC 100. Family as a social institution in various cultures with stress on the American family systems. Analysis of forces producing change, organization and disorganization of family systems.

325. Sociology of Women (3) F,S Chinchilla, Turk

Socio-cultural position of women; a brief history of women's role and status; societal attitudes toward women's place in society. Open to both men and women. (Same course as W/ST 325.)

327. Social Order and Social Change (3) F,S Chinchilla, Parker

Prerequisite: SOC 100. Introduction to classical and recent analysis of social order and social change. Study of institutions and organizational structure of social systems in the past and present and their effects on human life.

332. Socio-Cultural Dimensions of Sport (3) F,S

Sociological and psychological correlations to human movement. Same course as P ED 332.

335IC. Social Psychology (3) F,S Aarons, Dank, Slawski,Smith

Prerequisite: SOC 100 or PSY 100. Examines social processes in personality development and the socialization process whereby the individual is integrated into social groups. Includes social influence of family, peers, reference groups and subcultures. Examines the impact of primary groups, social organizations and mass media on attitudes and behavior. Not available to students with credit in PSY 351.

336. Sociology of Small Groups (3) F,S Slawski, Turk, Ullman

Prerequisite: SOC 100. Designed to give theoretical and practical understanding of sociological concepts and principles found in the dynamics of small groups, research and theory, the individual in a social situation, the group as a system of social interaction, leadership, methodology, and the small group approach to a problem.

340. Sociology of the Barrio (3) F Penalosa

Analysis of social institutions in the Chicano community. Survey of educational, political, religious, economic, and social systems. Field work will be required to provide relevant experiences. (Same course as MEXA 350.)

341. Central American and Caribbean Peoples in California (3) S Penalosa

Survey of the socioeconomic conditions and cultural life of the Central American and Spanish-speaking Caribbean communities of California: Salvadorans, Guatemalans, Puerto Ricans, Cubans, etc. Not all groups will necessarily be dealt with each time the course is offered. Similarities with and differences from the Mexican-American community will be examined. (Same course as MEXA 352.)

345. Juvenile Delinquency (3) F,S Aarons, Fradkin

Juvenile delinquency as a recent social "invention;" extent and distribution; major explanatory theories ranging from classical to radical views; societal reaction; the juvenile justice system with emphasis on the contemporary trend toward diversion programs.

347. The Holocaust (3) F,S Dank

Antecedents and consequences of the Nazi persecution of the Jews during W.W. II; the social and psychological functions of mass killing; structure and functioning of the death camps; adjustments of both the survivors and Nazi personnel during and after the Holocaust; moral and psychological dilemmas faced by the survivor. Not open to students with credit in this subject under SOC 490.

349. Social Conflict and Public Policy (3) S, Even years Halliwell, Smith

Examination of policy options. Focus on factions, policy alternatives, and practical and political feasibility of proposed reforms. Topics covered include unemployment and inflation, tax reform, affirmative action, health care, abortion and birth control, crime and delinquency, and others.

350. Population Structure and Problems (3) S, Odd years Harman

Presents the basic demographic variables (fertility, mortality and migration) and methods (vital statistics and census). Historical and current trends in U.S. and world population composition, growth and movement are examined with particular attention to social processes.

352. Social Change and Technology (3) F,S Smith

This course will examine the impact of technological change on social institutions and social relationships, including the family, economic, political, educational and religious institutions. In addition, the potential impact of recent discoveries in the physical sciences, on social relationships in the future society will be considered. Concepts of future shock, culture shock and culture lag will be explored.

356. Development of Sociological Theory (3) F,S Leis, Ullman

Prerequisite: SOC 100. Social thought and historical forces leading to the emergence of sociology; and an exploration of classical sociological theories up to the early twentieth century including such thinkers as Comte, Spencer, Marx, Durkheim and Weber.

3701C. Humanity in Space (3) F,S Halliwell

The feasibility and potential impact of space colonies in orbit on the moon and planets and beyond our solar system is analyzed. Space station technology and planetary environments are presented. The social implications of human settlements away from Earth are discussed, including the potentials and impacts of contact with other intelligent life forms.

410IC. Social Ecology (3) S, Even years Harman

Prerequisite: SOC 100. Analysis of interdependencies of elements of populations, environment, technology and social organization. Examines socio-ecological relationships currently and in historical perspective, in simple and complex societies. Presentation and analysis of world and U.S. problems in social ecology. A field research project will be required.

419. Urban Life and Problems (3) F,S Faculty

Not open to students with credit in U/ST 401. Review and analysis of the changing urban scene: urban life-styles; community patterns of land use and design; population trends; conflicts in the increasingly multicultural setting of the central city, housing and community development; suburban-central city relationships; human utilization of urban life spaces, examination of the views of landmark urbanists; and future trends.

420. Social Stratification (3) F,S Chinchilla, Parker, Penalosa

Prerequisite: SOC 100. Characteristics and functions of social stratification especially in the United States. Different theoretical perspectives, how social class affects the opportunity structures, for income, upward mobility and various measures of "the good life" in America today.

423. Child Abuse and Prevention (3) F,S Smith

Prerequisites: None. This course will examine child abuse as a social problem; its history and causal factors, including social change and changing family patterns. Intervention practices, including identification and investigation, social services and court intervention will be reviewed, especially the roles of health professionals, criminal justice and corrections personnel, social workers and educators. Finally, policy implications will be examined, including the role of concerned citizens and child advocates. [Discussion — Seminar] Grading: Either

426. Sociology of Sexual Behavior (3) F,S Dank, Fradkin, Turk

The social context of human sexuality; effects of socialization, social class, occupation and religion on sexual attitudes and behavior.

441IC. Criminology (3) F,S Dank, Fradkin

Prerequisites: Junior standing and SOC 100 or 142, or PSY 100, or CRIM 101 or 404, or consent of instructor. Study of the major theoretical approaches to crime, e.g., sociological, psychological, psychiatric, biological. Emerging interdisciplinary approaches to crime. Responses to crime and criminals, e.g., prisons, jails, death penalty, self-help, psychotherapy, social reform, media. Types of criminal behavior. Victims of crime. [Lecture — Discussion] Grading: Either.

442. Sociology of Prisons (3) S Aarons

Prerequisite: SOC 100. Role of the prison in society as viewed from perspectives ranging from classical to radical; the prison as a total institution; inmate-staff interaction and subcultures; imprisonment as "assault on the self;" the meaning of riots; the future of American prisons.

444. Humanistic and Naturalistic Sociology (3) F,S Aarons

(This course is especially designed for Psychology, Business, Theatre Arts, Speech Communications, Nursing and Health Science majors.) This course is about ordinary people as they try to understand themselves and others, and survive, interact and succeed in "an existentially absurd world." The perspectives are "being on stage" and "playing games" in relationships at home, at work, at school, and in other everyday places. Not open to students with credit in this subject under SOC 490.

445. Ethnic Group Relations (3) F,S Fradkin, Penalosa

Patterns of ethnic group differentiation; world relationships between ethnic groups; accommodation and assimilation of minority groups in America.

448. Impersonality, Violence and Survival: An Analysis Through Film (3) F,S Dank

Exploration through film of the societal conditions that facilitate impersonality, and alienation and ultimately violence in modern society. The study of the individual to survive, both physically and psychologically, in modern society. Focus on attempts of individuals to transcend social barriers. Course does not include exploitation films but rather films that provide a serious commentary on the nature of modern society. Not open to students with credit in this subject under SOC 490. [Discussion]

450. Marxist Sociology (3) S Leis

Analysis of human behavior, society and social change from a Marxist perspective.

454. Qualitative Methods of Social Research (4) F,S

Prerequisites: SOC 100, SOC 250 or 255, or C/S 210, and one upper division course in Sociology. Review and critique of principles and essential features of classical and contemporary qualitative studies. Topics covered: research design, including use of unobtrusive measures; modes of participant observation; interviewing techniques; limitations of "snowball" and other convenience sampling techniques; analysis and interpretation of qualitative data. Use of qualitative methods in a natural setting and the field. An individual student research project is required. [Lecture 3 hours, laboratory 2 hours]. Same course as SOC 355.

455. Methods of Social Research (4) F,S Halliwell, Harman, Hubbard, Smith, Turk, Walker

Prerequisites: SOC 100, 255, opr 250, or C/ST 210, and one upper division course in Sociology. Topics that will be covered are: research design, including operationalization, measurement, scaling, reliability, validity and sampling; techniques of data collection and analysis; and report writing. Use of the computer and an individual student research project are required. [Lecture 3 hours, laboratory 2 hours].

456. Contemporary Sociological Theory (3) F,S Leis, Ullman

Prerequisites: SOC 100, 356 and one other upper division course in sociology. Critical analysis of the contributions of contemporary sociologists. Intended primarily for majors in this field.

459. Social Psychology of Homosexuality (3) F Dank

Prerequisite: PSY 100 or SOC 100. Social psychological and sociological analysis of various aspects of homosexual behavior. Exploration of the causes of homosexuality, social processes involved in developing a homosexual identity, and the social consequences of living a homosexual life. Critical analysis of competing theories and review of relevant empirical research. Not open to students with credit in SOC 427E. (Same course as PSY 459.)

4611C. Alcohol and Society (3) F,S Parker

No prerequisites. Epidemiological and sociological approaches to the study of alcohol use and abuse; sociocultural correlates of alcohol use as disclosed by national and regional surveys; effects of alcohol use on physical and mental health, the role of government and other organizations in the prevention and treatment of alcohol abuse.

462. Medical Sociology (3) S Farmer

Epidemiological and sociological approaches to the study of health and illness; patterns of physical and mental disease; patient and physician perspectives on the development of disease; causes of stress and coping repertoires; types of adaptation of the chronically ill; health care delivery and utilization, particularly in the United States; and interaction of physician, nurse, therapist, health administrator, social worker, patient, and family members.

463. Mental Illness and Society (3) F,S Harman, Parker, Smith

No prerequisites. Epidemiological and sociological approaches to the study of mental health and illness; prevalence and incidence of mental disorders as disclosed by community and national surveys; effects of family history, work experience and life-change events on various facets of intellectual and affective functioning; the social and legal status of the mental patient; the role of government and other organizations in the prevention and treatment of mental illness.

464. Sociology of Aging (3) F Harman

Sociological perspective on the aging process from the middle years through old age. Survey of theoretical perspectives, issues, institutions and research findings on aging. Focus on role and status changes with aging in U.S. Cross-cultural and ethnic differences will be explored. Social analysis of age-related policies and exploration of alternatives. Not open to students with credit in this subject under SOC 490.

485IC. Sociology of Language (3) S Penalosa

Structure and use of language varieties in relation to social interaction, social inequality, social change and nationalism.

490. Special Topics in Sociology (1-3) F,S Faculty

Topics of special interest in sociology selected for intensive study. Topics will be announced in the Schedule of Classes. May be repeated with different topics to a maximum of 6 units.

495. Internship (1-4) F,S Faculty

Prerequisites: SOC 100, 142, 335IC, junior or senior standing, consent of instructor. Supervised field experience in public and private agencies, relating sociological principles to community situations. Designed to provide career-related work experience in both research and applied fields. Students may enroll for 1-4 units depending on field assignment and time required. May be repeated for a maximum of six units. (Six-10 hours per week field experience.)

499. Directed Studies (1-3) F,S Faculty

Prerequisite: Consent of instructor. Independent study of special topics under supervision of a faculty member. May be repeated to a maximum of 4 units. In exceptional cases, may be repeated to a maximum of six units when approved by the department.

Women's Studies

School of Social and Behavioral Sciences

Director: Sharon Sievers (History)
Telephone: 498-4839
Faculty: Professors: Dorothy Abrahamse (History), Ruth Afflack (Mathematics), Charlotte Furth (History), Sharon Sievers (History), Vivian Sucher (Nursing), Theresa Turk (Sociology), Ora Williams (English); Associate Professors: Elyse Blankley (English and Women's Studies), Norma Chinchilla (Women's Studies and Sociology), Betty Edmondson (Physical Education), Doris Nelson (English), Consuelo Nieto (Education), Genevieve Ramirez (Mexican American Studies).
Department Secretary: Pinky Hill

Students desiring information should contact the department office for referral to one of the faculty advisors. It is the goal of the Women's Studies Program to provide for students, the University, and the community an intellectual context from which it is possible to study the experience of women. By definition, this enterprise crosses disciplinary and cultural lines; it means that we are in the University not only to fill in gaps and to facilitate the development of coherent bodies of knowledge about women in established disciplines, but that we represent a core of emerging knowledge that is growing into a new discipline.

Women's Studies seeks to equip students with the knowledge, skills, and perception necessary to their realization of the fullest range of options available to them as human beings. We want to provide and encourage contexts conducive to academic excellence and sensitive to academic freedom that will assist students in 1) the reexamination of traditional ideas about women and men in cultures characterized by patterns of sex-role stereotyping; 2) the acquisition of an understanding of the history and contributions of women of varying social, racial, and ethnic backgrounds; 3) developing the analytical tools required to understand and appreciate the implications of the last two decades of feminist theory and research; and 4) preparing for a variety of vocations which increasingly demand knowledge about women's experience.

Women's Studies, in its own Program and through courses in other departments and disciplines, offers the University the intellectual excitement inherent in the development of a new discipline, and a humanistic perspective from which to view the accumulated knowledge of other disciplines, particularly their assumptions about women, both as actors and subjects. Women's Studies encourages the development of research and curriculum related to women in other disciplines and departments throughout the University. We also provide information and advising for students and other members of the University community on the subject of women and women's studies.

The Women's Studies Program offers a minor which may be combined with many majors, and the American Studies major includes a concentration in Women in American Society. CSULB also offers a Special Major at the graduate and undergraduate level through which students may design a major combining Women's Studies with another discipline. Designated Women's Studies courses may be used to fulfill the Social Science (Category II and other) General Education requirement, as well as I.C. requirements.

Other programs and departments offering courses on women, some of which are cross-listed with Women's Studies, include Anthropology, American Indian Studies, Comparative Literature, English, History, Home Economics, Math, Mexican American Studies, Physical Education, Psychology, Radio- Television, Religious Studies, Social Welfare, Sociology and Speech Communication.

Minor in Women's Studies

Requirements for the Minor in Women's Studies (code 0-0013)

A minimum of 24 units, to be selected with approval of a Women's Studies advisor, from the following categories:

1. Women's Studies Core: lower division.: 6 units selected from W/ST 101, 102, 200; Upper Division.: 3 units selected from W/ST 485A and 485B; 6 units consisting of W/ST 415 and 495.
2. Cross-Cultural Courses: Three units selected from W/ST 370 (or AIS 370), W/ST 310 (or B/ST 310); W/ST 314, 315, 320 (or MEXA 415), W/ST 3621C, 401IC, 406 (HIST 406), 490 (or ASAM 370), ANTH 351, B/ST 475, or other selected 490 courses.
3. Electives: At least 6 additional units of upper-division Women's Studies courses. W/ST 498 or 499 units may be applied only with the prior approval of a Women's Studies advisor.

Courses (W/ST):

Lower Division:

101. Women and Their Bodies (3) F, S Faculty
An introduction to the rapidly expanding body of literature and ideas related to the biology and sexuality of women.

102. Women In Contemporary Society (S) F, S Faculty
An introduction to some of the basic questions raised by the contemporary feminist movement relating to the social, political and economic status of women.

200. Images of Women — Introduction (3) F, S Faculty
Introduction to the main topics of women's studies. Feminist themes are illustrated through documentary films. The selected topics with illustrative films vary each week (sometimes more than one will be screened in a session) and will consist of films of the history of women's movement, women and arts, social issues, women's health issues, women and work/labor history, autonomy, lesbianism, and cross-cultural perspectives.

Upper Division:

307. Women in the Economy (3) F Faculty
Examination of assumptions about the economic roles of women; analysis of sexual division of labor; domestic work and its ideology; women as wage workers; women and development; American women and the economy since 1945.

308. Women and the Law (3) S Faculty
History of women's experience under the law; constitutional law; 19th amendment and ERA; equal protection issues; discrimination in employment; marriage and family law.

310. Black Male and Female Relationships (3) S Faculty
Analysis of the effects of social, economic, racial and cultural influences of society on the black male-female relationship. Focuses on the externally projected images of the relationship and the nature of changed roles from the beginnings in Africa through the present day. Changing role cycles and the role changes' effects upon the relationship. (Same course as B/ST 310.)

314. Women's Lives (3) F Faculty
Study of the lives of well-known and little-known women based on biographical and autobiographical sources.

315. Black Women in America (3) F Faculty
Examination of the roles of American black women; taught from an interdisciplinary perspective.

320. La Chicana (3) S Nieto, Faculty
This course is designed to survey the historical and psychology of the woman in the Chicano community. Class work will include the analysis of the history, development, themes, and genres of the literature of the Chicana and by the Chicana in English- and Spanish-language texts. (Same course as MEXA 415.)

325. Sociology of Women (3) F,S Turk
Socio-cultural position of women; a brief history of women's role and status; societal attitudes toward women's place in society. (Same course as SOC 325.)

340. Women and Mental Health/Problem Solving Skills for Urban Women (3) S Faculty
Designed for students who intend to work in a helping role with urban women in a variety of community settings such as: battered women's shelters, women's centers, alcoholism centers for women, rape crisis centers, and women's crisis centers.

350. Women and Mental Illness (3) F Faculty
Introduction to the rapidly expanding body of literature related to the history, anthropology, psychology and sociology of mental illness with particular emphasis on the relationship between the occurrence of mental illness among women and sex role socialization and stereotypes.

356. The Lesbian (3) S Faculty
This course will examine the position of the lesbian in society, including attitudes portrayed in media, health, mental health, professions, sports, education, law and religion and the resulting societal stigmas. The Gay Liberation movement and the relationship between Lesbianism and Feminism will be explored.

360. Community Organizing for Women (3) F Faculty
Explores the history and methods of organizing around the following issues: women's health; violence against women; women's work in the marketplace and in the home; women and welfare; sexism in education; the special oppression of Third World women. In addition to the study of existing models, it will attempt to develop new feminist strategies of organizing.

362. Issues in Sex and Race (3) F,S Faculty
An introduction to the theoretical literature on the intersection of sexism and racism from a cross-cultural, and cross-disciplinary perspective.

365IC. Images of Women in Popular Culture (3) F,S Faculty
Explores images of women in American popular culture, including the contemporary arts. Themes illustrate the ways in which culture reinforces the societal ideology or patriarchy. We present negative images of women and then demonstrate more recent attempts by women (and men) to alter these images.

370. American Indian Women (3) S Faculty
Overview of the role of women in traditional Indian societies and in the modern world. Changes in Indian societies occasioned by contact with Europeans and how these changes have altered sexual role definitions will be examined. (Same course as AIS 370.)

382. Women and Literature (3) F,S Elyse Blankley
Prerequisites: None. Images of Women in English literature; works in various genres that present the range and complexity of women's lives; feminist critical approaches and bibliographic resources. Specific content will vary. [Lecture — Discussion] Grading: Student Option. Same course as ENGL 382.

401IC. History of Women in Cross-Cultural Perspective (3) F,S
Comparison of how different social and cultural systems have affected the changing historical roles of women. Analysis of women's work roles, social status and political participation in selected developed and undeveloped Western and Asian, capitalist and socialist societies. Area emphasis to vary from semester to semester. Independent student research projects. Open to all qualified men and women.

405. Topics in Women's Oral History (3) F,S Faculty
Using oral history, this course will focus on women's experience in different periods in the 20th century. Different topics will be emphasized each semester, including a study of women's changing history through a comparison of two generational groups; the "feminine mystique" 1920 and 1950; Rosie the Riveter, women during World War II. May be repeated with different topics for a maximum of six units.

406. Asian Women (S) S Furth, Sievers
(Same course as A/ST 406 and HIST 406.) Historical experience of women in Asia, with emphasis on Chinese and Japanese societies; links with the experience of Asian-American women.

410. Women and Religion (3) F Faculty
A study of the Judeo-Christian understanding of the nature of woman and her role in church and society from biblical times to the present. Biblical, historical, theological and practical aspects of the subject will be investigated.

415. Feminist Theory (3) F Chinchilla, Hale, Sievers
Prerequisite: W/ST 101, 102 or consent of instructor. Examination of major feminist analyses and discussion of reformist, revolutionary and psycho-social theories for bringing about female-male equality/emancipation.

420. Mothers and Daughters (3) F,S Faculty
Examination of the ways in which the existence of patriarchy determines the mother-daughter relationship, of the means by which mothers prepare their girl children for survival as women, of alternative methods for bringing up children and of the needs and concerns of single mothers.

425. Women and Power (3) S Faculty
Examination of the various means women use to achieve both public and private power, and the extent to which women have gained power in the family, the workplace, and politics. Traditional and feminist definitions of the meaning of power are explored.

428. Women's U.S. Labor History (3) S Faculty
Examination of women's experiences as workers in various settings to understand how both the nature of their participation in the labor force, and their life experiences as workers in the home have often times led to different issues, needs and forms of organization.

430. Women and Violence (3) F Faculty
Women as victims and survivors of physical, psychological, and philosophical violence. Problems of rape, woman battering, incest, pornography and sexual harassment; examination of legal, religious and philosophical issues and alternatives for change.

432. Women and the City (3) S Faculty
Examination of the creation of appropriate space and technology for women and women's culture in an urban environment; addresses problems of housing, transportation, employment, social services, and offers feminist alternatives in the form of radically new paradigms for social reproduction.

440. Issues in Women's Health (3) F Edmondson
Investigation of current issues in women's health and sexuality, including reproductive issues, health care systems, institutional health, cosmetics and the ""beauty culture"" and female sexuality. Review of research and services relating to women's health needs such as breast and uterine cancers, obstetrical and gynecological care, rape, menopause, and other issues.

485A. History of Women in the U.S. — Early Period (3) F
Prerequisites: None. Provides a survey of the roles and activities of American women from colonial period to 1850; variety of female life experiences; slavery, immigration; relationships to the family, economy and political movements. [Lecture] Grading: Student Option. Same course as AMST 490 and HIST 485A.

485B. History of Women in the U.S. — Since 1850 (3) S
Prerequisites: None. Changing roles and status of women in economic and social change; suffrage movement; women in union movement and WW II; the decade of the sixties and the "second wave" of feminism. [Lecture] Grading: Student Option. Same course as AMST 490 and HIST 485B.

490. Special Topics (1-3) F,S Faculty
Topics of current interest in women's studies, selected for intensive study. May be repeated with different topics for a maximum of six units.

495. Senior Integrative Seminar (3) S Chinchilla, Hale, Sievers
Integrates body of knowledge accumulated in multidisciplinary minor or special major. Designed as a seminar in research and methodology.

498. Field Work (1-3) F,S Sievers
Consent of instructor. Practical experience in campus or community organizations concerned with women's issues. May be repeated for a maximum of six units.

499. Directed Studies (1-3) F,S Sievers
Consent of instructor. Independent work in areas of special interest to student and instructor. May be repeated for a maximum of six units.

Faculty

(Number in parentheses indicates year of appointment)

Emeriti

Irving F. Ahlquist (1949) ..... Professor
History
B.S. Wheaton College; M.A., Ph.D., University of Illinois. Emeritus, 1983.

Charles A. Allen (1957) ..... Professor
English
B.A., DePauw University; Ph.D., University of Iowa. Emeritus, 1978.

Ralph K. Allen (1956) ..... Professor
English
B.A., William Jewell College, M.A., Ph.D., University of Washington. Emeritus, 1970.

Burton L. Anderson (1958) ..... Professor
Geography
B.S., Southern Methodist University; M.A., University of Minnesota; Ph.D., University of Washington. Emeritus, 1979.

Roy C. Anderson (1950) ..... Professor
Secondary Education
B.A., Augustana College; M.A., University of Michigan; Ed.D., Stanford University. Emeritus, 1974.

Edna M. Andrews (1967) ..... Professor
Accounting
B.S., M.B.A., California State University, Long Beach; C.P.A. Certificate, California, Kentucky. Emeritus, 1982.

Olaf P. Anfinson (1956) ..... Professor
Physical Science
B.Ed., Winona State Teachers College; M.A., Ed.D., Colorado State College of Education. Emeritus, 1974.

George L. Appleton (1953) ..... Professor
Physics
B.S., Carnegie Institute of Technology; Ph.D., University of Southern California. Emeritus, 1986.

Blair C. Archer (1950) ..... Professor
Art
B.S., Moorhead State Teachers College; M.Ed., Ph.D., University of Minnesota. Emeritus, 1983.

Alfonso L. Archuleta (1965) ..... Associate Professor
Spanish/Portuguese
B.A., M.A., University of California, Los Angeles; Ph.D., University of Southern California. Emeritus, 1983.

Cecil Armour, P.E. (1968) ..... Professor
Civil Engineering
B.A.Sc., M.A.Sc., University of Toronto, P.E. in C.E., Province of Ontario, Canada. Emeritus, 1972.

Harold Aspiz (1958) ..... Professor
English
B.A., M.A., Ph.D., University of California, Los Angeles.

Abraham A. Avni (1964) ..... Professor
English
M.A., Hebrew University, Jerusalem; Ph.D., Universtiy of Wisconsin. Emeritus, 1983.

John J. Baird (1956) ..... Professor
Biology
B.A., Iowa State Teachers College; M.S., Ph.D., State University of Iowa. Emeritus, 1984.

Dan F. Baker (1961) ..... Professor
Radio, Television and Film
B.A., M.A., Indiana University. Emeritus, 1986.

Dorothy W. Baker (1961) ..... Assistant Professor
Home Economics
B.S., University of Maryland. Emeritus, 1983.

Zelpha Bates (1953) ..... Professor
Home Economics
B.A., Washburn College; M.A., Teachers College, Columbia University; Ed.D., New York University. Emeritus, 1967.

James R. Baugh (1964) ..... Associate Professor
Mathematics
B.A., M.A., University of California, Los Angeles. Emeritus, 1983.

Charles E. Becker (1956) ..... Professor
Music
B.Mus., M.A., Ph.D., State University of Iowa. Emeritus, 1981.

Edwin N. Becker (1955) ..... Professor
Chemistry
B.S. Iowa State University; Ph.D., University of Wisconsin. Emeritus, 1983.

Virginia M. Belt (1963) ..... Professor
Finance
B.S., Southern Illinois University; M.S., Ph.D., University of Illinois. Emeritus, 1983.

George V. Betar (1963) ..... Professor
English
B.A., State University of New York, College at Albany; M.A., Ph.D., University of Southern California. Emeritus, 1981.

Evelyn L. Blackman (1961) ..... Professor
Educational Psychology
B.A., University of Washington, M.P.H., Ed.D., University of California, Berkeley. Emeritus, 1976.

Enid V. Blaylock (1966) ..... Professor
Educational Psychology and Administration
B.S., Loma Linda University; M.S., University of California; Los Angeles; Ph.D., University of Southern California. Emeritus, 1983.

James H. Bliss (1964) ..... Professor
Journalism
B.A., University of California, Los Angeles; M.A., University of Missouri. Emeritus, 1980.

Frank J. Bok (1956) ..... Professor
Physical Therapy
B.S., M.A., Ph.D., Certificate in Physical Therapy, State University of Iowa; Registered Physical Therapist, California. Emeritus, 1986.

Blaze O. Bonazza (1966) ..... Professor
English
B.A. Cornell University; M.A., California State University, Los Angeles; Ph.D., University of Southern California. Emeritus, 1983.

Warren J. Boring (1956) ..... Professor
Physical Education
B.S., Kansas State College; M.S., University of Colorado; H.S.D., Indiana University. Emeritus, 1981.

Dean O. Bowman (1973) ..... Dean
School of Business Administration
B.S., M.S., Purdue University; Ph.D., University of Michigan. Emeritus, 1977.

Robert E. Brasher (1956) ..... Senior Assistant Librarian
B.A., Oklahoma City University; M.A. in L.S., University of Denver. Emeritus, 1986.

J. Wesley Bratton (1950) ..... Professor
Education
B.A., Seattle Pacific College; M.S., Ed.D., University of Southern California. Emeritus, 1969.

Paul L. Brent (1956) ..... Professor
Instructional Media
B.S., Central State College; M.Ed., Ed.D., University of Oklahoma. Emeritus, 1986.

Robert C. Brice (1968) ..... Professor
Industrial Technology
B.A., M.A., California State University, Long Beach. Emeritus, 1980.

Ernest G. Bring (1965) ..... Associate Professor
Mechanical Engineering
B.E., M.S., Ed.D., University of Southern California. Emeritus, 1971.

Estelle R. Brisker (1967) ..... Professor
Design
B.A., Hunter College; M.A., University of California, Los Angeles. Emeritus, 1981.

Alexander L. Britton (1965) ..... Professor
Educational Psychology
B.A., University of California, Los Angeles; M.A., California State University, Long Beach; Ed.D., University of Southern California. Emeritus, 1980.

Charles B. Brooks (1957) ..... Professor
English
B.A., M.A., Ph.D., University of California, Berkeley. Emeritus, 1983.

Ruth M. Bryan (1962) ..... Assistant Fine Arts Librarian
B.A., M.A., University of California, Los Angeles; M.S. in L.S., University of Southern California. Emeritus, 1977.

David L. Bryant (1949) ..... Executive Dean
Administration
B.S., University of Southern California; M.A., Stanford University; Ed.D., University of Southern California. Emeritus, 1969.

Reinhard K. Buchner (1963) ..... Professor
Physics
Vordiplom, Butenberg University, Mainz, Germany; Diploma, Doctor, Ing., Technical Hochschule, Aachen, Germany. Emeritus, 1983.

R. Burdett Burk (1954) ..... Professor
Elementary Education
B.S., Ball State Teachers College; M.S., Ed.D., Indiana University. Emeritus, 1975.

Darrell V. Burras (1957) ..... Professor
Quantitative Systems
B.S., Central Michigan College; M.S., Ph.D., University of Michigan. Emeritus, 1980.

Earl R. Cain (1959) ..... Professor
Speech Communication
B.A., University of South Dakota; M.A., Ph.D., Northwestern University. Emeritus, 1986.

Guy H. Cain, Jr. (1960) ..... Associate Professor
Electrical Engineering
B.S. in E.E., University of Wisconsin; M.Eng., University of California, Los Angeles. Emeritus, 1980.

Maude C. Carlson (1952) . Head Social Science Reference Librarian
A.M., M.A. in L.S., University of Michigan. Emeritus, 1967.

Ottis L. Castleberry (1956) ..... Professor
Speech Communication
B.A., Pennsylvania State College; M.A., University of Southern California; Ph.D., Pennsylvania State University. Emeritus, 1983.

Shirley Cereseto (1967) ..... Professor
Sociology
B.A., California State University, Long Beach; M.A., Ph.D., University of Southern California, Emeritus, 1982.

George R. Cerveny (1952) ..... Professor
English
B.S., M.A., University of Idaho; Ph.D., New York University. Emeritus, 1967.

Teresa B. Chambers (1969) ..... Head Science Librarian
B.A., Montana State University; M.L.S., University of Southern California. Emeritus, 1978.

L. Lincoln Chao (1964) ..... Professor
Quantitative Systems
B.L., National Hunan University, China; M.A., Ph.D., University of Minnesota. Emeritus, 1983.

Richard H. Chow (1958) ..... Professor
Physics
B.A., M.A., University of British Columbia; Ph.D., University of California, Los Angeles. Emeritus, 1986.

David C. Church (1968) ..... Associate Professor
Industrial Education
B of Architecture, University of Southern California; M.A., California State University, Long Beach. Emeritus, 1986.

Robert E. Click (1962) ..... Professor
Art
B.A., University of California, Los Angeles; M.A., California State University, Long Beach. Emeritus, 1982.

Robert B. Clyde (1967) ..... Counselor
B.A., University of California, Berkeley; M.A., Claremont Graduate School, Ed.D., Indiana University. Emeritus, 1978.

James E. Cockrum (1955) ..... Professor
Instructional Media
B.Ed., Southern Illinois University; M.A., Teachers College, Columbia University; Ed.D., Indiana University. Emeritus, 1978.

Ira S. Cohen (1959) ..... Professor
Political Science
B.A., University of Arizona; M.A., Ph.D., University of Chicago. Emeritus, 1983.

James L. Comer (1971) ..... Professor
Physical Education
B.A., B.S., Kansas State College; M.S., Central Missouri State College; E.D.S., New Mexico State University; Ed.D., University of Utah. Emeritus, 1981.

Bert L. Conrey (1955) ..... Professor
Geological Sciences
B.S., M.S., University of California, Berkeley; Ph.D., University of Southern California. Emeritus, 1983.

Joseph Contreras (1961) ..... Professor
Art
B.A., Oberlin College; M.A., Teachers College, Columbia University; M.A., Ph.D., Yale University. Emeritus, 1980.

Hiden T. Cox (1963) ..... Professor
Biology
B.S., Furman University, Greenville, South Carolina; M.A., Ph.D., University of North Carolina. Emeritus, 1986.

James S. Crafts (1957) ..... Professor
Art
B.A. Oberlin College; M.A., Teachers College, Columbia University; M.A., Ph.D., Yale University. Emeritus, 1980.

Walter B. Crawford (1963) ..... Professor
English
B.A., Union College, Lincoln Nebraska; M.A., Columbia University; Ph.D., University of California, Los Angeles. Emeritus, 1985.

Corinne A. Crogen (1951) ..... Professor
Women's Physical Education
B.Ed., La Crosse State Teachers College; M.S., Wellesley College; Ed.D., University of Michigan. Emeritus, 1974.

Robert D. Crossan (1955) ..... Professor
Educational Psychology and Administration
B.A., M.A., Whittier College; Ed.D., University of Southern California. Emeritus, 1985.

Walter C. Crowe (1952) ..... Professor
Physical Education
B.A., M.A., University of California, Los Angeles; Ph.D., University of Southern California. Emeritus, 1980.

Leon Dallin (1955) ..... Professor
Music
B.Mus., M.Mus., University of Rochester; Ph.D., University of Southern California. Emeritus, 1983.

Richard H. Darbee (1954) ..... Professor
English
B.A., Alma College; M.A., University of Michigan; Ph.D., University of New Mexico. Emeritus, 1979.

Honore E. Dash (1967) ..... Associate Professor
Biology
B.A., University of Illinois; M.A., California State University. Long Beach. Emeritus, 1980.

Boyd A. Davis (1951) ..... Director of Academic Planning
Professor, Educational Psychology
B.A., John Fletcher College; M.S., Ph.D., Iowa State University. Emeritus, 1980.

James E. Day (1955) ..... Professor
English
B.A., Iowa State Teachers College; M.A., Ph.D., State University of Iowa. Emeritus, 1983.

C. Thomas Dean (1952) ..... Professor
Industrial Education
Dean, School of Applied Arts and Sciences
B.A., Peru State Teachers College; M.S., Ph.D., Iowa State University. Emeritus, 1980.

George D. Demos (1962) ..... Professor
Educational Psychology
B.S., Northern Illinois State College; M.S., University of Illinois; Ph.D., University of Southern California. Emeritus, 1983.

John G. Dennis (1962) ..... Professor
Geological Sciences
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Orval L. Dillingham (1955) ..... Professor
Art
M.A., M.F.A., University of Minnesota. Emeritus, 1982.

Grace E. Dinerstein (1967) ..... Professor
Home Economics
B.A., M.A., M.F.A., University of California, Los Angeles. Emeritus, 1981.

Marjorie B. Dole (1959) ..... Counselor
B.A., M.A., California State University, Long Beach; Ed.D., University of Southern California. Emeritus, 1973.

Francis J. Donahue (1960) ..... Professor
Spanish-Portuguese
B.A., University of Omaha; M.A., University of Wisconsin; Ph.D., University of Southern California. Emeritus, 1986.

Dale D. Drum (1956) ..... Professor
Speech Communication
B.A., M.A., Ph.D., University of Southern California. Emeritus, 1978.

Ralph W. Duckwall (1964) ..... Professor
Theatre Arts
B.A., M.A., Indiana University. Emeritus, 1986.

John H. Dudley, P.E. (1960) ..... Professor
Civil Engineering
B.S., United States Military Academy; M.S., Massachusetts Institute of Technology. Emeritus, 1975.

Elizabeth O. DuPont (1965) ..... Professor
Physical Education
B.A., Florida State University; M.A., Texas Woman's University. Emeritus, 1983.

Robert P. Durbin (1950) ..... Professor
Biology
B.A., San Diego State University; M.S., Ed.D., University of Southern California. Emeritus, 1972.

Carol F. Eckhardt (1967) ..... Assistant Professor
Anthropology
B.A., M.A., University of California, Los Angeles. Emeritus, 1980.

Dorothy L. Ericson (1953) ..... Professor
Women's Physical Education
B.S., University of Wisconsin; M.A., Ed.D., Teachers College, Columbia University. Emeritus, 1974.

Raymond R. Farrell (1966) ..... Professor
Finance, Real Estate and Law
B.A., University of California, Los Angeles; J.D., Yale University. Emeritus, 1986.

Josephine B. Fiebiger (1966) ..... Professor
Psychology
B.A., Pennsylvania State University; M.A., California State University, Los Angeles; Ph.D., University of Southern California. Emeritus, 1983.

William E. Fisher (1955) ..... Professor
Secondary Education
B.A. Baker University; Ph.D., University of Kansas. Emeritus, 1973.

Francis J. Flynn (1950) ..... Executive Dean-Development
B.A., M.S., Ed.D., University of Southern California. Emeritus, 1971.

William E. Fogg (1956) ..... Professor
Educational Psychology
B.A., University of California, Berkeley; M.S., Ed.D., University of Southern California. Emeritus, 1981.

Florence H. Forst (1964) ..... Professor
Educational Psychology and Administration
B.A., Washington State University; M.A., Illinois Institute of Technology; Ph.D., University of Pittsburgh. Emeritus, 1979.

Robert W. Frazer (1965) ..... Professor
History
B.A., M.A., Ph.D., University of California, Los Angeles. Emeritus, 1975.

John E. Fredrickson (1955) ..... Professor
Physics
B.S., University of California, Berkeley; M.S., Ph.D., University of Southern California. Emeritus, 1983.

Robert K. Froyd (1958) ..... Associate Professor
Mathematics
B.A., Occidental College; M.A., University of California, Berkeley. Emeritus, 1980.

Audrey Fuss (1966) ..... Associate Professor
Sociology
B.A., University of California, Berkeley; M.A., Ph.D., University of California, Los Angeles, Emeritus, 1977.

Stanley R. Gabrielsen (1958) ..... Professor
Recreation
B.A., Gustavus Adolphus College; M.A., Ed.D., New York University. Emeritus, 1976.

Dixon L. Gayer (1959) ..... Professor
Journalism
B.A., University of California, Berkeley; M.A., California State University, Long Beach. Emeritus, 1980.

Olga S. Gazdik (1968) ..... Assistant Librarian
B.S., Miami University; M.S., Florida State University. Emeritus, 1982.

George W. Genevro (1957) ..... Professor
Industrial Education
B.A., San Jose State University; M.S., State College of Washington; Ed.D., University of California, Los Angeles. Emeritus, 1982.

Juliana T. Gensley (1962) ..... Professor
Elementary Education
B.A., University of California, Los Angeles; M.A., California State University, Los Angeles; Ed.D., University of California, Los Angeles. Emeritus, 1977.

Patricia Gerlach (1972) ..... Counselor
B.S., Lawrence University; M.A., California State University, Long Beach; Ph.D., U.S. International University. Emeritus, 1985.

Albert C. Germann (1957) ..... Professor
Criminal Justice
B.S., Loyola University, Los Angeles; M.S., D.P.A., University of Southern California. Emeritus, 1983.

Nadyne C. Gibson (1955) ..... Professor
Music
B.S., B.Mus., Fort Hays Kansas State College; M.A., Northwestern University. Emeritus, 1977.

Alan J. Glasser (1959) ..... Professor
Educational Psychology
B.A., Stanford University; M.A., Ph.D., Boston University. Emeritus, 1980.

Kenneth Glenn (1956) ..... Professor
Art
B.A., M.A., University of Washington. Emeritus, 1980.

John H. Good (1967) ..... Associate Professor
Criminal Justice
B.S., California State University, Long Beach; M.S., University of Southern California. Emeritus, 1983.

Frank F. Gorow (1953) ..... Professor
Secondary Education
B.S., University of Washington; Ed.D., University of California, Los Angeles. Emeritus, 1974.

Herman H. Graff (1964) ..... Professor
Art
B.A.E., DePaul University, Chicago, Illinois; M.A.E., Northwestern University. Emeritus, 1986.

Harold V. Graham (1969) ..... Professor
Teacher Education
B.A., University of Southern California; M.A., California State University, Los Angeles; Ed.D., University of Florida. Emeritus, 1983.

Floyd M. Grainge (1953) ..... Professor
Industrial Education
Associate Dean, School of Applied Arts and Sciences
B.S., M.S., Iowa State University; Ed.D., University of California, Los Angeles. Emeritus, 1980.

Jay J. Gramlich (1956) ..... Professor
Instructional Media
B.S. Southwestern State College, Oklahoma; M.Ed., Southern Methodist University; Ed.D., University of Oklahoma. Emeritus, 1980.

David E. Gray (1954) ..... Professor
Recreation
Vice President for Administration and Staff Coordination
B.A., California State University, Los Angeles; M.S., University of California, Los Angeles; D.P.A., University of Southern California. Emeritus, 1983.

John H. Green (1955) ..... Professor
Theatre Arts
B.A., Central State College, Edmond, Oklahoma; M.A., Northwestern University; Ph.D., University of Denver. Emeritus, 1980.

Beatrice M. Greer (1968) ..... Assistant Professor
Art
B.A., M.A., University of California, Los Angeles. Emeritus, 1985.

Carl E. Gregory (1951) ..... Professor
Management/Human Resources Management
B.A., University of Washington; M.A., Ed.D., Teachers College.Emeritus, 1980.

Serafina Q. Gunter (1964) ..... Professor
Accounting
B.S., M.A., California State University, Long Beach; C.P.A. Certificate, California. Emeritus, 1980.

C. Robert Guthrie (1963) ..... Professor
Criminal Justice
B.A., California State University, Fresno; M.S., D.P.A., University of Southern California. Emeritus, 1980.

Hubert V. Hall (1959) ..... Professor
Marketing
B.A., M.A., University of Oregon. Emeritus, 1981.

Arlene D. Hamilton (1966) ..... Associate Professor
Home Economics
B.S., Farmington State Teachers College, Farmington, Maine; M.Ed., Pennsylvania State University. Emeritus, 1983.

Raphael M. Hanson (1961) ..... Professor
Psychology
B.A., M.A., Ph.D., University of California, Berkeley. Emeritus, 1986.

Nicholas P. Hardeman (1955) ..... Professor
History
B.A., M.A., Ph.D., University of California, Berkeley. Emeritus, 1986.

Leroy C. Hardy (1953) ..... Professor
Political Science
B.A., University of California, Santa Barbara; Ph.D., University of California, Los Angeles. Emeritus, 1986.

Ross Hardy (1949) ..... Professor
Zoology
B.S., M.S., University of Utah; Ph.D., University of Michigan. Emeritus, 1973.

William E. Hartman (1951) ..... Professor
Sociology
B.A., M.A., Ph.D., University of Southern California. Emeritus, 1980.

John L. Healy (1956) ..... Associate Professor
Speech Communication
B.A., University of California, Berkeley; M.A., University of Nebraska; Ph.D., University of Southern California. Emeritus, 1983.

Roy K. Heintz (1956) ..... Professor
Psychology
B.A., University of Missouri; M.A., Washington University; Ph.D., Princeton University. Emeritus, 1983.

Stanford M. Helm (1954) ..... Professor
Music
B.A., Transylvania College; B.Mus., M.Mus., Ph.D., University of Michigan. Emeritus, 1977.

Braxton C. Henderson (1964) ..... Professor
Quantitative Systems
B.S., M.Ed., University of California, Los Angeles, Ed.D., Stanford University. Emeritus, 1975.

Don A. Hennessee (1952) . Assistant Humanities Librarian
B.A., University of Redlands; B.S. in L.S., University of Illinois; M.A., Mexico City College. Emeritus, 1976.

John A. Hermann (1955) ..... Professor
English
B.A., Carroll College; M.A., University of Wisconsin; Ph.D., State University of Iowa. Emeritus, 1982.

John E. Higgins (1964) ..... Professor
History
B.A., Tufts University; M.A., Ph.D., Harvard University. Emeritus, 1980.

Mabel J. Hoffman (1961) ..... Professor
Nursing
B.S., University of California, San Francisco; M.A., Teachers College, Columbia University. Emeritus, 1980.

Robert T. Holmes (1961) ..... Professor
Marketing
B.S., Purdue University; M.B.A., Northwestern University; Ph.D., State University of Iowa. Emeritus, 1986.

Leonard S. Hommel (1961) ..... Professor
Psychology
B.A., Wayne State University; M.A., State University of Iowa; Ph.D., Stanford University. Emeritus, 1983.

Adelore L. Houde (1965) ..... Professor
Electrical Engineering
B.A., University of Toronto; M.A., University of Houston; Ph.D. University of Notre Dame. Emeritus, 1985.

Jack H. Howe (1967) ..... Professor
Speech Communication
B.A., Morningside College; M.A., L.L.B., University of South Dakota; Ph.D., University of Nebraska. Emeritus, 1986.

Carol A. Hunter (1969) ..... Professor
Educational Psychology and Administration
B.A., University of California, Los Angeles; M.A., California State University, Long Beach; Ph.D., University of Southern California. Emeritus, 1983.

Talma B. Hupfield (1959) ..... Associate Professor
Home Economics
A.B., Hardin-Simmons University; M.A., Teachers College, Columbia University. Emeritus, 1984.

John V. Hutcherson (1956) ..... Professor
Physics
B.A., University of California; M.S., University of Colorado. Emeritus, 1984.

Erma L. Hutton (1986) ..... Professor
Social Welfare
B.A., California State University, Long Beach; M.S.W., University of Southern California. Emeritus, 1980.

Raul A. Inostroza (1966) ..... Professor
Spanish-Portuguese
Licenciado en Filosofia, University of Concepcion, Chile; M.A., University of California, Berkeley; Ph.D., Stanford University Emeritus, 1986.

Cathern M. Irwin (1961) ..... Associate Professor
Health Science
B.S., M.S., University of California, Los Angeles. Emeritus, 1983.

Taylor T. Jackman (1963) ..... Professor
Educational Administration
B.A., John Brown University; M.A., Oklahoma State University; Ed.D., University of Southern California. Emeritus, 1980.

Wilfred P. James (1952) ..... Professor English
B.A., University of Dubuque; M.A., Ph.D., Northwestern University. Emeritus, 1978.

Hilton F. Jarrett (1966) ..... Professor
Psychology
B.E., M.S., Ph.D., University of Southern California. Emeritus, 1983.

Alan W. Johnson (1968) ..... Associate Director
International Education Center
A.B., Ed.E., University of California, Los Angeles; M.Ed., University of Cincinnati. Emeritus, 1980.

Marion R. Johnston (1955) ..... Professor
Elementary Education
B.A., Northwestern University; M.A., Stanford University; Ed.D., University of California, Los Angeles. Emeritus, 1973.

Oliver P. Johnstone (1951) ..... Professor
Elementary Education
B.S., Miami University, Ohio; M.A., Stanford University; Ed.D., University of Southern California. Emeritus, 1972.

George V. Kacewicz (1966) ..... Professor
Political Science
B.A., University of Minnesota; M.A., University of Missouri; Ph.D., Indiana University. Emeritus, 1986.

Irene Kanasi (1959) ..... Humanities Catalog Librarian
B.A., University of Science, Budapest; M.A., in L.S., University of Southern California. Emeritus, 1977.

Elizabeth Kazan (1955) ..... Professor
Microbiology
B.S., University of Utah; M.S., Ph.D., University of Southern California. Emeritus, 1983.

Maxine K. Keenan (1971) ..... Associate Professor
Home Economics
B.S., Ohio State University; M.A., California State University, Long Beach. Emeritus, 1981.

L. Boyde Kendall, P.E. (1969) ..... Professor
Electrical Engineering
B.S. United States Coast Guard Academy; Naval Engineer, Massachusetts Institute of Technology. Emeritus, 1979.

John P. Kenney (1966) ..... Professor
Criminal Justice
B.A., University of California, Berkeley; M.S., University of Southern California; Ph.D., University of California, Los Angeles. Emeritus, 1983.

Gretha Kershaw (1966) ..... Professor
Anthropology
M.A., Ph.D., University of Chicago. Emeritus, 1983.

Eugene E. Kessler (1969) ..... Associate Professor
French-Italian
B.A., City College of New York; M.A., University of California, Berkeley; Ph.D., University of California, Irvine. Emeritus, 1986.

Harold H. Key (1965) ..... Professor
Anthropology
B.A., M.A., Ph.D., University of Texas. Emeritus, 1980.

Earl C. Kidd (1952) ..... Professor
Men's Physical Education
B.S., Oregon College of Education; M.S., University of Oregon. Emeritus, 1973.

Julie Van N. Kierbow (1957) ..... Professor
Chemistry
B.S., Ohio State University; M.S., University of Hawaii; Ph.D., University of Colorado. Emeritus, 1978.

Howard E. Kimball (1951) ..... Professor
History
B.A., M.A., Ph.D., University of California, Los Angeles. Emeritus, 1978.

James J. Kirkpatrick (1967) ..... Professor
Management/Human Resources Management
B.A., M.A., University of Tennessee, Ph.D., Syracuse University. Emeritus, 1986.

Paul L. Kleintjes (1954) ..... Professor
Industrial Technology
B.S., New York State Teachers College, Oswego; M.A., Ohio State University; Ed.D., Pennsylvania State University. Emeritus, 1979.

Kephas A. Kinsman (1949) ..... Professor
Secondary Education
B.A., University of California, Los Angeles; M.A., Ed.D., University of Southern California. Emeritus, 1972.

Carl E. Klafs (1956) ..... Professor
Men's Physical Education
B.S., Indiana University; M.A., Montana State University; Ph.D., University of Southern California. Emeritus, 1976.

I. Aileen Poole Koehler (1959) ..... Professor
Educational Psychology
B.A., University of Michigan; M.A., Ohio University; Ph.D., University of California, Berkeley. Emeritus, 1974.

George W. Korber (1952) ..... Professor
Sociology
B.A., M.A., University of Pacific; Ph.D., Stanford University. Emeritus, 1978.

Lloyd A. Kramer (1973) ..... Associate Director
Library
B.A., B.L.S., University of California, Berkeley; M.P.A., California State University, Long Beach. Emeritus, 1986.

Stephen Kulik (1959) ..... Professor
Mathematics
Koktor Mathematichnikh Nauk, Institute of Mathematics; University of Kiev. Emeritus, 1972.

Chester R. Kyle (1959) ..... Professor
Mechanical Engineering
B.S., University of Arizona; M.S., in Engineering, Ph.D., University of California, Los Angeles. Emeritus, 1984.

Phyllis L. Lackey (1964) ..... Professor
Nursing
B.S., University of California, Los Angeles, M.S., University of California, San Francisco. Emeritus, 1979.

Hans Lampl (1965) ..... Professor
Music
B.M., M.M., D.M.A., University of Southern California. Emeritus, 1983.

Arthur C. Laufer (1957) ..... Professor
Management/Human Resources Management
B.S., M.B.A., Ph.D., University of California, Los Angeles. Emeritus, 1983.

Richard E. Lee (1955) ..... Professor
English
B.A., M.A., Ph.D., New York University. Emeritus, 1983.

Mary Jane Leland (1959) ..... Professor
Art
B.S., Iowa State University; M.F.A., Cranbrook Academy of Art. Emeritus, 1986.

John M. Lenoir (1974) ..... Professor
Chemical Engineering
B.S., University of Illinois; M.S., University of Iowa; Ph.D., University of Illinois. Emeritus, 1984.

Richard W. Leutwiler, Jr., P.E. (1959) ..... Professor
Mechanical Engineering
B.S. in M.E. University of Illinois; M.S. in M.E., State University of Iowa. Emeritus, 1978.

Aren A. Lewis (1967) ..... Professor
Accounting
B.S. Northwestern University; M.B.A., California State University, Long Beach. Emeritus, 1982.

Rodney C. Lewis, P.E. (1958) ..... Professor
Electrical Engineering
Associate Dean, School of Engineering
B.S., University of Southern California; M.S., Iowa State University. Emeritus, 1973.

James C. Lien (1954) ..... Professor
Political Science
B.A., St. Ambrose College; M.A., Ph.D., State University of Iowa. Emeritus, 1983.

Richard G. Lincoln (1956) ..... Professor
Biology
B.S., Oregon State University; Ph.D., University of California, Los Angeles. Emeritus, 1986.

Raymond E. Lindgren (1961) ..... Professor
History
B.A., M.S., Ph.D., University of California, Los Angeles. Emeritus, 1980.

Alexander Lipski (1958) ..... Professor
History, Religious Studies
B.A., M.A., Ph.D., University of California, Berkeley. Emeritus, 1984.

Lucille Logan (1964) ..... Assistant Professor
Microbiology
B.S., University of Montana; M.A., University of Utah. Emeritus, 1975.

Eileen E. Lothamer (1966) ..... Professor
English
B.A., M.A., Ph.D., University of California, Los Angeles. Emeritus, 1986.

Louise C. Lubbe (1956) ..... Professor
English
B.A., M.A., Ph.D., University of California, Los Angeles. Emeritus, 1979.

W. William Lumsden, Jr. (1958) ..... Professor
Geological Sciences
B.A., Ph.D., University of California, Los Angeles. Emeritus, 1983.

Walter J. Lyche (1957) ..... Associate Professor
Mathematics
B.A., St. Olaf College; M.A., University of Minnesota. Emeritus, 1974.

Michael C. Lyman (1965) ..... Professor
Theatre Arts
B.S., Rockhurst College, Kansas City, Missouri; M.A., University of Denver; Ph.D., University of Wisconsin. Emeritus, 1983.

Richard E. Lyon (1958) ..... Professor
English
B.A., M.A., Ph.D., University of Chicago. Emeritus, 1983.

David E. MacArthur (1964) ..... Professor
Theatre Arts
B.A., M.A., Case Western Reserve University; Ph.D., Ohio State University. Emeritus, 1986.

B. David Macon (1957) ..... Associate Professor
Industrial Education
B.A., M.A., California State University, Long Beach. Emeritus, 1986.

R. Monteen Manning (1959) .. Head Education-Curriculum Librarian
B.A., Lander College; A.B. in L.S., Emory University. Emeritus, 1973.

John M. Martin (1955) ..... Professor
Art
B.S., Massachusetts School of Art; M.A.T., Harvard University. Emeritus, 1982.

George E. Massey (1959) ..... Professor
Philosophy
B.A., Columbia University; M.A., Harvard University. Emeritus, 1983.

Charles F. Mason (1964) ..... Professor
Psychology
B.A., State University of Iowa; M.S., Ph.D., Purdue University. Emeritus, 1979.

James B. Maue (1961) ..... Professor
Philosophy
B.S., Trinity College, Hartford, Connecticut; M.A., Stanford University; Ph.D., University of Southern California. Emeritus, 1983.

Kenneth E. Maxwell (1963) ..... Professor
Biology
B.S., University of California; Ph.D., Cornell University. Emeritus, 1973.

James N. McClelland (1959) ..... Professor Psychology
B.A., M.A., Drake University; Ph.D., University of California, Berkeley. Emeritus, 1980.

R. Clyde McCone (1961) ..... Professor
Anthropology
A.B., Wessington Springs College; M.S., South Dakota State College; Ph.D., Michigan State University. Emeritus, 1980.

John J. McConnell (1953) ..... Professor
Physical Education
Associate Dean, School of Applied Arts and Sciences
B.A., Cornell College, Iowa; M.A., Purdue University; Ph.D., State University of Iowa. Emeritus, 1986.

H. Thomas McCorkle, Jr. (1966) ..... Professor
Anthropology
B.A., Ph.D., University of California, Berkeley. Emeritus, 1980.

Edward B. McLeod, Jr. (1965) ..... Professor
Mathematics and Computer Science
B.A., Occidental College; M.S., Ph.D., Stanford University. Emeritus, 1986.

William D. McIvaine, P.E. (1964) ..... Professor
Civil Engineering
B.E.E., M.S.E.E., University of Minnesota. Emeritus, 1974.

Halvor G. Melom (1950) ..... Professor
History
B.A., California State University, Fresno; M.A., University of California; Ph.D., University of Missouri. Emeritus, 1974.

Maxine O. Merlino (1952) ..... Professor
Art
B.A., M.A., California State University, Long Beach; Ed.D., University of Southern California. Emeritus, 1975.

Vernon A. Metzger (1949) ..... Professor
Management/Human Resources Management
B.S., M.B.A., University of California, Berkeley. Emeritus, 1982.

Harole T. Miller, P.E. (1958) ..... Associate Professor
Civil Engineering
B.S., U.S. Military Academy; M.S., Pennsylvania State University; M.A., University of Chicago. Emeritus, 1971.

Beth Moore (1970) ..... Professor
Nursing
B.S., University of Cincinnati; M.S., University of Maryland. Emeritus, 1986.

Mabel S. Moore (1967) ..... Associate Professor
Home Economics
B.S., Pennsylvania State University; M.A., California State University, Long Beach. Emeritus, 1983.

Wallace H. Moore (1950) ..... Professor
Education
B.A., Davidson College; M.A., Harvard University; M.Ed., Ph.D., Stanford University. Emeritus, 1969.

Hubert P. Morehead (1955) ..... Professor
Radio-TV
B.S., M.A., Ph.D., Ohio State University. Emeritus, 1981.

Julien Musafia (1959) ..... Professor
Music
B.A., M.A., University of California, Los Angeles. Emeritus, 1983.

Charles L. Myers (1956) ..... Professor
Teacher Education
B.A., M.A., Occidental College; Ph.D., University of California, Berkeley. Emeritus, 1986.

Dean W. Myers (1969) ..... Professor
Design
B.A., Art Center College of Design; M.A., California State University, Fullerton. Emeritus, 1985.

Walter A. Nagle (1951) ..... Professor
Elementary Education
B.A., San Diego State University; M.A., Ed.D., Stanford University. Emeritus, 1980.

Carl A. Neidengard, P.E., Arch't. (1957) ..... Professor
Civil Engineering
B.S. in C.E., Virginia Military Institute; B.S. in A.E., M.S. in A.E., Virginia Polytechnic Institute. Emeritus, 1981.

Dale E. Nelson (1956) ..... Professor
Quantitative Systems
B.A., University of California, Los Angeles; M.A., California State University, Long Beach. Emeritus, 1986.

John A. Nelson, Jr. (1971) ..... Professor
Educational Psychology and Administration
Dean, School of Education
B.A., M.A., Ed.D., University of California, Berkeley. Emeritus, 1983.

Theodore E. Nichols (1956) ..... Professor
History
B.A., M.A., Ph.D., University of California, Berkeley. Emeritus, 1984.

Robert L. Nicholson (1957) ..... Professor
Industrial Education
B.S., State Teachers College, Oswego, New York; M.S. Oregon State Univesity. Emeritus, 1983.

Herluf P. Nielsen, P.E. (1958) ..... Professor
Mechanical Engineering
B.S., University of Nebraska; M.M.E., Rensselaer Polytechnic Institute; Ph.D., University of Minnesota. Emeritus, 1971.

Frank Noffke (1964) ..... Counselor
B.A., Indiana University; M.Ed., Washington State University. Marriage, Family Certificate. Emeritus, 1981.

James H. Noguer (1954) ..... Professor
Spanish/Portuguese
B.A., Pepperdine University; M.A., University of Southern California; Faculted de Filosofia y Letras, Universidad de Madrid; Diploma de Doctor en Filologia Romanica. Emeritus, 1975.

Hazel A. Oliver (1960) ..... Senior Assistant Librarian
B.Th., Northwestern Christian College, Eugene, Oregon; M.A., Butler University, Indianapolis, Indiana; M.S., in L.S. University of Southern California. Emeritus, 1980.

Paul E. Opstad (1958) ..... Counselor
B.A., Ph.D., State University of Iowa. Licensed Psychologist. Emeritus, 1983.

Douglas H. Orgill (1951) ..... Professor
English
B.A., M.A., Brigham Young University; Ph.D., University of Southern California. Emeritus, 1983.

Clyde E. Osborne (1975) ..... Assistant Professor
Chemistry
B.A., M.A., University of New Mexico; Ph.D., University of California, Berkeley. Emeritus, 1977.

Douglas Osborne (1964) ..... Professor
Anthropology
B.A., M.A., University of New Mexico; Ph.D., University of California, Berkeley. Emeritus, 1977.

Carolyn M. Owen (1970) ..... Professor
Educational Psychology and Administration
B.S., M.A., Western Michigan University; Ed.D., University of Southern California. Emeritus, 1986.

Peter F. Palmer (1953) ..... Professor
Economics
B.A., University of British Columbia; M.A., Ph.D., Stanford University. Emeritus, 1972.

Lyman M. Partridge (1964) ..... Professor
Communicative Disorders
B.A., Brigham Young University; M.A., Teachers College, Columbia University; Ph.D., University of Michigan. Emeritus, 1978.

William Patterson (1957) ..... Professor
Physical Education
B.A., San Diego State University; M.Ed., Springfield College, Massachusetts; Ed.D., University of California, Los Angeles. Emeritus, 1983.

Francisco L. Peccorini (1966) ..... Professor
Philosophy
B.A., St. Francis Xavier College, Spain; Doctor in Philosophia, University of Comillas, Spain. Emeritus, 1986.

Roderick B. Peck (1957) ..... Professor
Educational Psychology
Dean, Extended Education
B.A., Nebraska State Teachers College; M.S., Ph.D., Iowa State University. Emeritus, 1980.

Louis E. Perlgut (1965) ..... Professor
Chemistry
B.S., M.S., Ph.D., Rutgers University. Emeritus, 1982.

Robert A. Pestolesi (1955) ..... Professor
Physical Education
M.A., California State University, Long Beach; B.A., Ph.D., University of Southern California. Emeritus, 1986.

Donald W. Peters (1953) ..... Professor
History
B.A., Occidental College; M.A., Claremont Graduate School; Ph.D., University of Southern California. Emeritus, 1981.

Paul G. Petersen (1962) ..... Professor
Psychology
B.A., Ph.D., University of California, Berkeley. Emeritus, 1985.

Audrey Buckland Peterson (1966) ..... Professor
English
B.A., University of California, Los Angeles; M.A., California State University, Long Beach; Ph.D., University of Southern California. Emeritus, 1983.

Milton A. Petty (1969) ..... Associate Professor
Microbiology
B.S., University of Southwestern Louisiana; M.S., Louisiana State University; Ph.D., University of Minnesota. Emeritus, 1977.

Leo T. Phearman (1950) ..... Professor
Elementary Education
B.A., Cornell College, Iowa; M.A., Ph.D., State University of Iowa. Emeritus, 1972.

Marion B. Pollock (1964) ..... Professor
Health Science
B.A., Miami University; M.S., Ed.D. University of California, Los Angeles. Emeritus, 1981.

Warren Ponsar (1961) ..... Professor
Social Work
A.B., Long Beach State College; M.S., University of Missouri. Emeritus, 1979.

Donald F. Popham (1956) ..... Professor
Teacher Education
B.A., M.A., University of Denver; Ed.D., University of Colorado. Emeritus, 1986.

Richard C. Potter (1967) ..... Professor
Mechanical Engineering
B.S, M.S., Ph.D., Purdue University. Emeritus, 1983.

Paul E. Powell (1955) ..... Professor
Industrial Education
B.S., Bowling Green State University; M.S., Stout Institute; Ed.D., Wayne University. Emeritus, 1981.

J. Richard Powell (1954) ..... Professor
Economics
B.A., University of California, Santa Barbara; M.A., Ph.D., University of California, Los Angeles. Emeritus, 1984.

Alan R. Probst (1968) ..... Associate Professor
Health Science
B.A. University of California, Los Angeles; M.A., California State College, Los Angeles. Emeritus, 1980.

Jane F. Purcell (1964) ..... Associate Professor
Art
B.A., California State University, Fresno; M.A., Columbia University. Emeritus, 1980.

Elisabeth M. Quillen (1964) ..... Professor
French-Italian
License-es-Lettres, Doctorat, University of Paris, La Sorbonne. Emeritus, 1985.

James F. Ragland (1955) ..... Professor
History
B.A., University of Missouri; M.A., University of Southern California; Ph.D., Stanford University. Emeritus, 1984.

Walter J. Raine (1968) ..... Professor
Psychology
M.A., Ph.D., University of Chicago. Emeritus, 1983.

Gilman W. Rankin (1969) ..... Associate Professor
Theatre Arts
B.A., M.A., California State University, Northridge. Emeritus, 1979.

Clare G. Rayner (1957) ..... Professor
Music
B.M., University of Toronto; M.M., Ph.D., Indiana University. Emeritus, 1986.

Don F. Reed (1957) ..... Associate Professor
Physical Education
B.S., M.S., University of Southern California. Emeritus, 1980.

Willard H. Reed (1962) ..... Professor
Civil Engineering
B.S., California State University, Long Beach; M.S., in C.E., University of Southern California. Emeritus, 1983.

C. Patricia Reid (1951) ..... Professor
Women's Physical Education
B.Ed., M.S., Ed.D., University of California, Los Angeles. Emeritus, 1974.

Charles A. Roberts, Jr. (1956) ..... Professor
Physics
B.S., University of California, Los Angeles; M.S., University of Southern California; Ph.D., University of Maryland. Emeritus, 1986.

Herbert B. Robinson, P.E. (1962) ..... Professor
Industrial Technology
B.S., Michigan State University; M.A., California State University, Long Beach; Ed.D., University of California, Los Angeles. Emeritus, 1978.

Delmer J. Rodabaugh (1955) ..... Professor
English
B.A., Park College; M.A., State University of Iowa; Ph.D., University of Minnesota. Emeritus, 1978.

Clara G. Rodney (1968) ..... Professor
Teacher Education
B.B.A., New York City College; M.A., New York University; Ed.D., University of California, Los Angeles. Emeritus, 1983.

Howard C. Rolfe (1960) ..... Professor
Elementary Education
B.A., M.A., University of New Mexico; Ed.D., University of California, Berkeley. Emeritus, 1980.

Harry G. Romig (1966) ..... Professor
Operations Research and Statistics
B.A., Pacific University, Forest Grove, Oregon; M.A., University of California; Ph.D., Columbia University. Emeritus, 1972.

Ailee W. Rose (1951) ..... Professor
English
A.B., Hendrix College; M.A., George Peabody College for Teachers. Emeritus, 1974.

Robert D. Routh (1967) ..... Professor
Industrial Education
B.A., Whittier College; M.A., California State University, Long Beach, Emeritus. 1983.

James E. Ryan (1954) ..... Professor
Industrial Education
B.S., Kansas State Teachers College, Pittsburg; M.A., California State University, Long Beach; Ed.D., University of California, Los Angeles. Emeritus, 1983.

Eva Sakamoto (1967) ..... Assistant Professor
Nursing
B.S., University of Colorado; M.A., Columbia University. Emeritus, 1982.

Merna A. Samples (1967) ..... Professor
Home Economics
B.S., Syracuse University; M.A., Ed.D., New York University. Emeritus, 1981.

Janet B. Sawyer (1957) ..... Professor
English
B.A., University of Minnesota; M.A., Ph.D., University of Texas. Emeritus, 1986.

Frederick H. Scantling (1966) ..... Associate Professor
Geography
B.A., M.A., University of Arizona; Ph.D., University of California, Los Angeles. Emeritus, 1980.

Milton E. Schmidt (1959) ..... Professor
Industrial Education
B.E., Wisconsin State Teachers College; M.A., University of Minnesota. Emeritus, 1979.

James W. Schultz (1963) ..... Associate Professor
Physical Education
B.S., M.A., University of Southern California. Emeritus, 1980.

Josephine B. Schultz (1951) ..... Professor
Art
B.A., Eastern Washington College of Education; M.A., Ed.D., Teachers College, Columbia University. Emeritus, 1977.

Arnold T. Schwab (1961) ..... Professor
English
B.A., University of California, Los Angeles; M.A., Ph.D., Harvard University. Emeritus, 1980.

Herman Schwartzkopf (1950) ..... Professor
Physical Education
B.S., Kansas State Teachers College, Fort Hays; M.S. University of Oregon; Ed.D., University of Southern California. Emeritus, 1979.

Henry R. Sehmann (1951) ..... Professor
Educational Administration
B.Ed., Illinois State Normal University; M.A., Ph.D., University of Chicago. Emeritus, 1973.

Thomas M. Serrett (1963) ..... Assistant Librarian
B.S., Tulane University; M.S., Louisiana State University. Emeritus, 1980.

Jess C. Shaver (1959) ..... Professor
Educational Psychology
B.S., Northeastern State College, Tahlequah, Oklahoma; M.Ed., Ed.E., University of Oklahoma. Emeritus, 1980.

Alfred W. Sheets (1959) ..... Professor
Sociology
B.A., M.S., Ph.D., University of Southern California, Emeritus, 1975.

Donald D. Shipley (1953) ..... Professor
Biology
B.S., University of Connecticut; M.S., Virginia Polytechnic Institute; Ph.D., Cornell University. Emeritus, 1977.

Robert M. Simmons (1959) ..... Professor
Management/Human Resources Management
B.S., M.B.A., D.B.A., University of Southern California. Emeritus, 1983.

Donald H. Simonsen (1956) ..... Professor
Chemistry
B.A., Reed College; M.A., Oregon State University; Ph.D., Indiana University. Emeritus, 1980.

A. Keith Skarsten (1956) ..... Professor
English
B.A., M.A., University of Washington; Ph.D., University of Illinois. Emeritus, 1982.

Donald H. Smith (1960) ..... Professor
Industrial Education
B.A., M.A., California State University, Long Beach; Ed.D., University of California, Los Angeles. Emeritus, 1986.

Doris S. Specht (1985) ..... Head, Humanities Librarian
B.A., University of Minnesota; M.S. in L.S., University of Southern California. Emeritus, 1973.

Graham K. Spring (1966) ..... Associate Professor
German, Russian and Classics
B.A., Harvard University; M.A., Ph.D., University of Southern California. Emeritus, 1976.

Russel N. Squire (1958) ..... Professor
Music
B.A., Oberlin College; M.A., Western Reserve University; Ph.D., New York University. Emeritus, 1971.

Robert A. Steffes (1959) ..... Professor
Journalism
B.S. South Dakota State College; M.S., Syracuse University. Emeritus, 1972.

George D. Stephens (1951) ..... Professor
English
B.A., Trinity University; M.A., University of Texas; Ph.D., University of Southern California. Emeritus, 1974.

Lee B. Stephens, Jr. (1962) ..... Professor
Biology
B.S., Morehouse College; M.S., Atlanta University; Ph.D., State University of Iowa. Emeritus, 1983.

Harry E. Stiver, Jr. (1964) ..... Professor
Theatre Arts
B.A., Hastings College, Hastings, Nebraska; M.A., University of Nebraska; Ph.D., University of Illinois. Emeritus, 1983.

Lavonne L. Stock (1959) ..... Professor
Physical Education
B.A., State University of Iowa; M.S., Ed.D., University of California, Los Angeles. Emeritus, 1980.

Robert E. Strain (1956) ..... Professor
Economics
A.B., University of Wichita; M.Ph., Ph.D., University of Wisconsin. Emeritus, 1978.

Gerald B. Strickler (1958) ..... Professor
Philosophy
B.A., Gettysburg College; B.D., Gettysburg Lutheran Theological Seminary; M.A., New York University; S.T.D., Temple University. Emeritus, 1986.

Paul W. Stroud (1957) ..... Professor
Music
B.S., B.M., State University of Missouri; M.Mus., University of Illinois; D.M.A., University of Southern California. Emeritus, 1980.

Vivian M. Sucher (1962) ..... Professor
Nursing
B.S., University of New Hampshire; M.S., University of California, Los Angeles; M.N., Yale University. Emeritus, 1986.

Neil V. Sullivan (1972) ..... Professor
Educational Psychology and Administration
B.A., Fitchburg Teachers College; M.A., Columbia University; Ed.D., Harvard University. Emeritus, 1986.

Sabri Sungu (1961) ..... Professor
Mechanical Engineering
B.S., University of London; M.S., University of Michigan. Emeritus, 1983.

Clyde T. Suttle (1961) ..... Professor
Accounting
B.S., M.B.A., University of California, Los Angeles; D.B.A., University of Southern California. Emeritus, 1981.

Robert J. Swan (1964) ..... Professor
Educational Psychology and Administration
B.A., University of Michigan; M.A., Ph.D., University of Minnesota. Emeritus, 1986.

Lois J. Swanson (1951) ..... Associate Dean
Student Affairs
B.A., Morningside College; M.A., Ph.D., State University of Iowa. Emeritus, 1969.

Richard H. Swift (1958) ..... Professor
Art
B.A., California State University, Los Angeles; M.F.A., Claremont College. Emeritus, 1980.

Henri Temianka (1964) ..... Professor
Music
Diploma, Curtis Institute of Music, Philadelphia. Emeritus, 1974.

Charles M. Thompson (1956) ..... Professor
Art
B.S., Lehigh University; B.A., M.A., Art Institute of Chicago; Ed.D., Teachers College, Columbia University. Emeritus, 1983.

Jesse J. Thompson (1956) ..... Professor
Communicative Disorders
B.A., University of California, Santa Barbara; M.S., Ph.D., University of Southern California. Emeritus, 1979.

Olive L. Thompson (1951) ..... Professor
Elementary Education
B.A., Iowa State University; M.A., State University of Iowa; Ed.D., University of Southern California. Emeritus, 1972.

Charles H. Tilden (1952) ..... Professor
Educational Foundations; Counselor
B.A., University of Redlands; M.A., Ed.D., Stanford University. Emeritus, 1976.

F. Alan Timmons (1954) ..... Professor
Instructional Media
B.A., San Francisco State University; M.A., Ed.D., University of Southern California. Emeritus, 1980.

John A. Torney, III (1957) ..... Professor
Health Science
B.A., University of Washington; M.A., Ed.D., Teachers College, Columbia University. Emeritus, 1986.

Leonard W. Towner, Jr. (1955) ..... Professor
Psychology
B.A., M.A., Ph.D., University of California, Berkeley. Emeritus, 1986.

John Trevennen, Jr. (1952) ..... Information Desk Librarian
B.A., M.S., in L.S., University of Southern California. Emeritus, 1978.

Francisco Trinidad (1962) ..... Professor
Spanish/Portuguese
Bachiller, Instituto Nacional Cisneros, Madrid; A.B., M.A., Ph.D., University of California, Los Angeles. Emeritus, 1986.

Ching H. Tsao (1965) ..... Professor
Mechanical Engineering
B.S., Chiao-Tung University, China; M.S., Michigan State University; Ph.D., Illinois Institute of Technology. Emeritus, 1986.

Robert E. Tyndall (1955) ..... Professor
Music
B.A., M.A., M.F.A., Ph.D., University of Iowa. Emeritus, 1983.

Alexander D. Urquhart (1953) ..... Professor
Political Science
B.A., M.A., University of Washington; Ph.D., University of California, Los Angeles. Emeritus, 1982.

Hans H. Vander Meyden (1961) ..... Associate Professor
Mechanical Engineering
Diploma Werktuigkundig Ingenieur, University of Technology, Delft, Netherlands. Emeritus, 1983.

Marilyn Vanderwarf (1957) ..... Associate Professor
Home Economics
B.S., University of Illinois; M.S., Cornell University. Emeritus, 1983.

Georgie B. Vaughn (1960) ..... Senior Associate Librarian
B.A., M.S., in L.S., University of Southern California. Emeritus, 1981.

James S. Vaughn (1959) ..... Professor
Instructional Media
B.S., West Texas State Teachers College; M.Ed., Ed.D., University of Texas. Emeritus, 1980.

Joseph A. Wagner (1952) ..... Professor
Speech Communication
B.A., M.A., University of Washington; Ph.D., Stanford University. Emeritus, 1978.

William J. Wallace (1963) ..... Professor
Anthropology
B.A., Ph.D., University of California. Emeritus, 1970.

Dorothy L. Walsh (1956) ..... Professor
Nursing
B.S., M.A., Teachers College, Columbia University. Emeritus, 1970.

Barbara A. Ward (1968) ..... Associate Professor
Instructional Media
B.A., M.S., University of Washington; Ed.D., University of Southern California. Emeritus, 1980.

Harold W. Washburn (1965) ..... Professor
Electrical Engineering
B.S., University of California; M.S., Massachusetts Institute of Technology; Ph.D., University of California. Emeritus, 1972.

Kenneth C. Weisbrod (1964) ..... Associate Dean
Counseling and Testing
B.A., University of Redlands; M.A., Stanford University; Ed.D., Univesity of Maryland. Emeritus. 1980.

William T. Wellhouse (1955) ..... Professor
Biology
B.S., Iowa State University, M.A., University of Kansas; Ph.D., Iowa State University. Emeritus, 1983.

Robert G. Wells (1963) ..... Professor
Journalism
B.A., University of Southern California. Emeritus, 1985.

Chien Wenjen (1959) ..... Professor
Mathematics
B.A., National Central University, Nanking, China; Ph.D., University of California, Los Angeles. Emeritus, 1978.

Marion A. Wharton (1965) ..... Professor
Home Economics
B.A., University of Toronto; M.S., University of Western Ontario; Ph.D., Michigan State University. Emeritus, 1978.

Richard H. Wilde (1951) ..... Professor
History
B.S., Milwaukee State Teachers College; M.S., Ph.D., University of Wisconsin. Emeritus, 1983.

Harry S. Wilder (1953) ..... Professor
English
B.S., M.A., Ph.D., Ohio State University. Emeritus, 1968.

David A. Williams (1965) ..... Professor
History
B.A., M.A., University of California, Los Angeles; Ph.D., University of Southern California. Emeritus, 1980.

Luster J. Williams (1956) ..... Professor
English
B.A., M.A., University of Oregon; Ph.D., Indiana University. Emeritus, 1983.

Stanley W. Williams (1952) ..... Professor
Educational Psychology and Administration
B.A., Bates College; M.S., Ed.D., University of Southern California. Emeritus, 1983.

John W. Wills (1957) ..... Professor
Speech Communication
B.A., Mississippi College; M.A., University of North Carolina; Ph.D., University of Southern California. Emeritus, 1983.

James N. Wilson (1950) ..... Professor
Geography
B.S., Edinboro State Teachers College; M.A., Ed.D., Teachers College, Columbia University. Emeritus, 1979.

Suzanne M. Wilson (1958) ..... Professor
English
B.A., Stanford University; M.A., San Francisco College for Women; Ph.D., University of Southern California. Emeritus, 1980.

Robert W. Winchell (1961) ..... Professor
Electrical Engineering
B.A., M.S., California Institute of Technology. Emeritus, 1980.

Robert W. Winslow (1952) ..... Professor
Music
B.Mus., Eastman School of Music; M.Ed., University of Rochester; M.S., Ed.D., Teachers College, Columbia University. Emeritus, 1980.

Charles E. Wolff (1957) ..... Professor
Marketing
B.A., Lewis Institute, Chicago; M.B.A., Northwestern University. Emeritus, 1980.

Edward A. Wright (1966) ..... Professor
Theatre Arts
B.A., M.A., University of Iowa. Emeritus, 1973.

Robert C. Wylder (1953) ..... Professor
English
B.A., M.A., Montana State University; Ph.D., University of Wisconsin. Emeritus, 1979.

Jo Ann R. Yates (1968) ..... Professor
Communicative Disorders
B.A., University of Illinois; M.A., Hunter College; Ph.D., University of Southern California. Emeritus, 1986.

Dale Yoder (1966) ..... Professor
Management
B.A., James Millikan University, Illinois; M.A., Ph.D., State University of Iowa. Emeritus, 1975.

James L. Young (1963) ..... Assistant Professor
Industrial Technology
B.A., University of Washington; M.A., College of Idaho. Emeritus, 1974.

L. Ward Youry (1952) ..... Professor
Art
B.S., Central Michigan College of Education; M.F.A., Claremont Graduate School; Ph.D., Ohio State University. Emeritus, 1980.

Faculty

Aall, Ingrid (1969) ..... Professor
Art
B.A., University of Oslo, Norway; B. Litt., St. Anne's College, Oxford; Ph.D., University of Chicago.

Aarons, Herbert L. (1965) ..... Associate Professor
Sociology
B.A., M.A., Pennsylvania State University.

Abbott, William P. (1968) . Program and Evaluation Analyst
Student Services
B.A., Seattle Pacific College; M.A., Ed.D., University of Southern California.

Abels, Paul (1986) ..... Professor Social Work
B.A., Rutgers University; Ph.D., University of Chicago.

Abou-El-Haj, Rifaat Ali (1964) ..... Professor
History
B.A., Washington and Lee University; M.A., Ph.D., Princeton University.

Abramis, David J. (1985) ..... Assistant Professor
Management/Human Resources Management
B.A., University of California, Santa Cruz; M.A., Ph.D. University of Michigan.

Abrahamse, Dorothy Z. (1967) ..... Professor
History
Associate Dean, School of Social and Behavioral Sciences
B.A., Mount Holyoke College; M.A., Ph.D., University of Michigan.

Acey, Roger A. (1983) ..... Associate Professor
Chemistry
B.S., Ph.D., Wayne State University.

Afflack, Ruth H. (1966) ..... Professor
Mathematics and Computer Science
B.A., M.A., University of California, Santa Barbara.

Agopian, Michael W. (1986) ..... Associate Professor
Criminal Justice
B.A., M.A., California State University, Los Angeles; Ph.D., University of Southern California.

Ahlquist, Irving F. (1949) ..... Professor History
B.S., Wheaton College; M.A., Ph.D., University of Illinois. Emeritus, 1983.

Ahouse, John B. (1977) ..... Associate Librarian
B.A., Columbia University; M.A., University of Texas at El Paso; M.S.L.S., University of Southern California.

Albert, Eugene (1967) ..... Associate Professor
Mathematics and Computer Science
B.A., M.A., Brooklyn College; Ph.D., University of Virginia.

Albright, Leonard O. (1984) ..... Associate Professor
Vocational Education
B.A., Findlay College, Ohio; M.Ed., Bowling Green State University, Ohio; Ph.D., University of Illinois, Champaign.

Al-Chalabi, Kamal T., (1966) ..... Professor
Civil Engineering
B.S. Baghdad University, Iraq; M.S., Ph.D., University of Michigan.

Alexander, Robert L., (1964) ..... Professor
Civil Engineering
B.Arch., Rensselaer Polytechnic Institute; M.S., Harvard University; D. Engr., University of California, Berkeley.

Alexanderson-Lee, Helen C. (1986) ..... Lecturer
Home Economics
B.S., Ewha Woman's University, Korea; M.S., Washington State University, Pullman; Ph.D., University of Illinois, Urbana.

Alfieri, Frank J. (1967) ..... Professor
Biology
B.S., M.Ed., University of California, Davis; Ph.D., University of Wisconsin.

Ali, M. Shafqat (1967) ..... Professor
Mathematics and Computer Science
B.S., Agra University, India; M.S. Muslim University, India; M.A., Ph.D., University of California, Santa Barbara.

Amenta, Allan (1975) ..... Coordinator
Instructional Development Services
B.A., M.A., Wesleyan University.

Ames, Kenneth J. (1968) ..... Professor English
B.A., University of London; A.L.A. (London); M.A., Ph.D., University of Southern California.

Amirkhan, James H. (1986) ..... Lecturer
Psychology
B.A., Reed College; M.A., California State University, Northridge; Ph.D., University of California, Los Angeles.

Anand, Rajen S. (1970) ..... Professor
Anatomy and Physiology
B.Sc., Meerut College, India; B.V.Sc A.H (D.V.M.), M.P. Veterinary College Research Institute, India; Ph.D., University of California, Davis.

Anatol, Karl (1969) ..... Professor
Speech Communication
Dean, School of Humanities
B.A., Andrews University, Michigan; M.A., Purdue University, Ph.D., University of Southern California.

Andersen, Rhoda M. (1974) ..... Associate Professor
Recreation
B.A., San Jose State University; M.A., Lindenwood College.

Anderson, Robert E. (1964) ..... Professor
Music
B.A. Oberlin College of Arts and Sciences; B.M.E., Oberlin Conservatory of Music; M.A., Ph.D., Ohio State University.

Anderson, Roy C. (1965) ..... Associate Professor
Economics
B.S., Lehigh University; M.A., Ph.D., Tulane University.

Andre, Shane (1967) ..... Professor
Philosophy
B.S., Johns Hopkins University; M.A., Ph.D., Claremont Graduate School.

Andrus, Donald G. (1968) ..... Associate Professor
Music
B.A., Western Washington State College; M.A., University of Washington; D.M.A. University of Illinois.

Andujo, Estela (1985) ..... Assistant Professor
Social Work
B.A., California State University, Fullerton; M.S.W., University of California, Los Angeles; Ph.D., University of Southern California.

Anjo, Dennis M. (1984) ..... Assistant Professor
Chemistry
B.A., M.S., San Francisco State University; Ph.D., Arizona State University, Tempe.

Anselmo, Carl R. (1964) ..... Professor
Microbiology
B.A., M.S., Ph.D., University of Utah.

Anwar, Mohammad Z. (1965) ..... Professor
Physics
B.S., M.S., Dacca University, Pakistan; Ph.D., University of British Columbia.

Appleton, George L. (1953) ..... Professor
Physics
B.S., Carnegie Institute of Technology; Ph.D., University of Southern California. Emeritus,1986.

Archer, Blair C. (1950) ..... Professor
Art
B.S., Moorhead State Teachers College; M.Ed., Ph.D., University of Minnesota. Emeritus, 1983.

Archuleta, Alfonso L. (1965) ..... Associate Professor
Spanish-Portuguese
B.A., M.A., University of California, Los Angeles; Ph.D., University of Southern California. Emeritus, 1983.

Arnheim, Daniel D. (1959) ..... Professor
Physical Education
B.A., George Pepperdine College; M.A., California State University, Los Angeles; P.E.D., Springfield College.

Ary, James P. (1983) ..... Associate Professor
Electrical Engineering
B.S., St. Mary's College, California; Ph.D., Ohio State University.

Ash, William D. (1957) ..... Professor
Marketing
B.A., Idaho State College; M.B.A., Stanford University; D.B.A., University of Southern California.

Asher, Eugene L. (1959) ..... Professor
History
Executive Assistant to the President
B.A., M.A., Ph.D., University of California, Los Angeles.

Asmar, Nakhle H. (1986) ..... Lecturer
Mathematics and Computer Science
B.S., Ph.D., University of Washington.

Aspiz, Harold (1958) ..... Professor
English
B.A., M.A., Ph.D., University of California, Los Angeles.

Austin, Charles W. (1966) ..... Professor
Mathematics and Computer Science
B.S., M.S., Ph.D., University of Washington.

Avni, Abraham A. (1964) ..... Professor
English
M.A., Hebrew University, Jerusalem; Ph.D., University of Wisconsin. Emeritus, 1983.

Axelrad, Arthur M. (1964) ..... Professor
English
B.A., Brooklyn College; M.A., Ph.D., New York University.

Ayers, R. Dean (1967) ..... Professor
Physics
B.S., M.S., Ph.D., California Institute of Technology.

Babbush, H. Edward (1958) ..... Director
Office of Career Planning and Placement
B.S., Michigan State University; M.A., California State University, Long Beach.

Bachar, John M., Jr. (1969) ..... Professor
Mathematics and Computer Sciences
B.S., M.S., Northwestern University; Ph.D., University of California, Los Angeles.

Bachelor, Patricia A. (1985) ..... Assistant Professor
Educational Psychology and Administration/Psychology
B.A., M.A., California State University, Long Beach; Ph.D., University of Southern California.

Bailor, Jerry (1968) ..... Associate Professor
Theatre Arts
B.A., M.A., University of Washington; Ph.D., University of Southern California.

Baine, Peter (1968) ..... Associate Professor
Chemistry
GRIC, Salford University, England; M.S., California Institute of Technology; Ph.D., University of California, Santa Barbara.

Baird, John J. (1956) ..... Professor
Biology
B.A., Iowa State Teachers College; M.S., Ph.D., State University of Iowa. Emeritus, 1984.

Baker, Dan F. (1961) ..... Professor
Radio-Television and Film
B.A., M.A., Indiana University. Emeritus, 1986.

Baker, Philip C. (1969) ..... Associate Professor
Biology
B.A., Earlham College, Indiana; Ph.D., University of North Carolina.

Barber, Daniel M. (1975) ..... Associate Professor
The Graduate Center for Public Policy and Administration
B.E., M.A., University of Miami; Ed.D., Florida Atlantic University.

Barcellona, John (1986) ..... Lecturer
Music
B.M., Hartt School of Music, University of Hartford; M.A., California State University, Long Beach.

Barrett, R. Conrad (1986) ..... Lecturer
German, Russian and Classics
B.A., Stanford University; M.S., University of California, Los Angeles; Ph.D., University of Southern California.

Bartenbach, Irmgard F. (1964) ..... Professor
German, Russian and Classics
M.A., Ph.D., University of Southern California.

Bartlett, Kenneth T. (1959) ..... Professor
Physical Education
B.S., University of Minnesota; M.A., California State University, Los Angeles.

Bates, Donald L. (1974) ..... Professor
Management/Human Resources Management
Associate Dean, School of Business Administration
B.S., M.B.A., Indiana State University; Ph.D., University of Arkansas.

Bates, Eleanor H. (1970) ..... Professor
Anthropology
B.A., California State University, Long Beach; M.A., University of Southern California; Ph.D., University of California, Los Angeles.

Battaglia, Anthony (1974) ..... Associate Professor
Religious Studies
B.A., M.A., La Salle College; Ph.D., Princeton University.

Bauer, Roger D. (1959) ..... Professor
Chemistry
Dean, School of Natural Sciences
B.S., Beloit College; M.S., Ph.D., Kansas State University.

Beattie, Randall C. (1972) ..... Professor
Communicative Disorders
B.S., Northern Illinois University; M.S., University of Illinois; Ph.D., University of Southern California.

Beaumont, Marion S. (1967) ..... Professor
Economics
B.S., Ohio State University; M.A., Duke University; Ph.D., Claremont Graduate School.

Beck, Louis L. (1970) ..... Associate Professor
Teacher Education
B.A., M.A., University of Redlands; Ph.D., U.S., International University.

Becker, Harold K. (1963) ..... Professor
Criminal Justice
B.A., M.S., University of Southern California; D. Crim., University of California, Berkeley.

Beckman, Alexander L. (1986) ..... Professor
Psychology
B.A., University of California, Los Angeles; Ph.D., University of Pennsylvania.

Beckwith, Howard B. (1969) ..... Professor
Mathematics and Computer Science
B.A., University of California, Berkeley; Ph.D., University of California, San Diego.

Beecher, Earl S. (1961) ..... Professor
Finance, Real Estate Law
B.A., University of Utah; M.B.A., Ph.D., University of California, Los Angeles.

Beegle, Donald A. (1963) ..... Professor
Health Science
B.S., M.S., University of Oregon; M.P.H., University of California, Berkeley.

Beekman, Bruce E. (1958) ..... Professor
Anatomy and Physiology
B.A., San Diego State University; M.A., Ph.D., Indiana University.

Beljan, John R. (1986) ..... Professor
Anatomy Physiology
Vice President, Academic Affairs B.S., M.D., University of Michigan

Bell, A. Robert (1969) ..... Professor
English
B.A., M.A., University of Miami, Ph.D., University of Maryland.

Belsley, Michael S. (1986) ..... Assistant Professor
Physics/Astronomy
B.A., University of California, San Diego; Ph.D., University of Colorado.

Belt, Virginia M. (1963) ..... Professor
Finance
B.S., Southern Illinois University; M.S., Ph.D., University of Illnois. Emeritus, 1983.

Benson-Talley, Lois I. (1982) .... Senior Assistant Librarian
B.A., Adelphi University; M.L.S., Queens College.

Berdan, Robert H. (1985) ..... Professor
Educational Psychology and Administration/English
B.A., Northwestern College; Ph.D., University of Texas, Austin.

Berger, Raymond M. (1986) ..... Professor
Social Work
B.A., State University of New York, Stony Brook; M.S.S.W., Ph.D., University of Wisconsin, Madison.

Bergin, Marilyn J. (1971) ..... Senior Assistant Librarian
BA., California State University, Long Beach; M.L.S., University of California, Los Angeles.

Berk, Stephen E. (1970) ..... Associate Professor
History
B.A., Lehigh University; M.A., University of Massachusetts; Ph.D., University of Iowa.

Berkshire, Stewart (1974) ..... Associate Professor
Accountancy
B.S., United States Naval Academy; M.B.A., San Jose State University; Ph.D., University of Santa Clara.

Bernstein, David A. (1967) ..... Professor
History
B.A., Muhlenberg College, Allentown, Pennsylvania; M.A., Ph.D., Rutgers University.

Berry, Arnold J. (1973) ..... Professor
Chemistry
B.S , Pennsylvania State University; M.S., Michigan State University; Ph.D., Ohio State University.

Berryhill, Stuart R. (1979) ..... Associate Professor
Chemistry
B.A., Williams College, Massachusetts; Ph.D., University of California, Berkeley.

Biedebach, Mark C. (1967) ..... Associate Professor
Anatomy and Physiology
B.E., M.S. University of Southern California; Ph.D., University of California, Los Angeles.

Binder, Virginia L. (1967) ..... Professor
Psychology
B.A., William Jewell College, Liberty, Missouri; Ph.D., Indiana University.

Birkemeier, Richard P. (1985) ..... Associate Professor
Music
B.M.E., University of Wisconsin, Madison; M.M., Memphis State University; D.M., Northwestern University.

Birmele, Jutta (1986) ..... Lecturer
German, Russian Classics
Law Degree (Staatsexamen), Freie Universitat, Berlin; M.A., California State University, San Francisco.

Black, Albert G. (1962) ..... Associate Professor
English
B.A., M.A., University of Michigan.

Black, Lee Roy (1986) ..... Associate Professor
Vocational Education/Criminal Justice
B.A., Roosevelt University; Ph.D., Union Graduate School.

Black, Paul V. (1969) ..... Professor
History
B.S., M.S. University of Southern Mississippi; Ph.D., University of Wisconsin.

Black, Stuart E. (1962) ..... Associate Professor
Mathematics and Computer Science
B.S., Harvey Mudd College, Claremont; M.A. University of California, Los Angeles

Blankley, Elyse M. (1986) ..... Assistant Professor
Women's Studies/English
B.A., Rutgers University; M.A., Ph.D., University of California, Davis.

Blaylock, Enid V. (1966) ..... Professor
Educational Psychology and Administration
B.S., Loma Linda University; M.S., University of California, Los Angeles; Ph.D., University of Southern California. Emeritus, 1983.

Blumberg, Stephen (1975) ..... Professor
The Graduate Center for Public Policy and Administration
B.A., Ohio State University; M.A., Roosevelt University; M.P.A., Ph.D., University of Southern California.

Boice, Robert (1985) ..... Professor
Psychology
Director, Center for Faculty Development
B.A., M.A., Ph.D., Michigan State University.

Bok, Frank J. (1956) ..... Professor
Physical Therapy
B.S., M.A., Ph.D., Certificate in Physical Therapy, State University of Iowa; Registered Physical Therapist, California. Emeritus, 1986.

Bonis, William D. (1963) ..... Professor
Philosophy
B.D., Theological Academy, Sarospatak, Hungary; M.Th. Presbyterian Theological Seminary, Pittsburgh; Ph.D., University of Texas.

Bonazza, Blaze O. (1966) ..... Professor
English
B.A., Cornell University; M.A., California State University, Los Angeles; Ph.D., University of Southern California. Emeritus, 1983.

Borders, David C. (1962) ..... Professor
Art
B.F.A., Ohio State University; M.F.A., University of Washington.

Borowiec, Edward J. (1969) ..... Associate Professor
English
Ph.B., University of Detroit; M.A., Ph.D., University of Southern California.

Boston, Archie (1977) ..... Professor
Design
B.F.A., Chouinard Art Institute; M.A., University of Southern California.

Bott, Paul A. (1976) ..... Professor
Vocational Education
B.A., California State University, Los Angeles; M.A., Ed.D., University of California, Los Angeles.

Bourret, James A. (1968) ..... Professor
Biology
B.S., M.S., University of Wyoming; Ph.D., University of California, Berkeley.

Boutelle, Donna L. (1967) ..... Professor
History
B.A., M.A., Ph.D., University of California, Berkeley.

Bowman, Frank (1959) ..... Assistant Vice President/
Staff Coordinator Housing Office
B.S., Morris Harvey College; M.A., California State University, Long Beach.

Brady, Margaret A. (1976) ..... Associate Professor
Nursing
B.S.N., Marquette University; M.S. University of Colorado.

Bramble, Karna J. (1986) ..... Lecturer
Nursing
B.S., University of California, San Francisco; M.S., California State University, Long Beach.

Brandstatt, Gerald J. (1966) ..... Associate Professor
Industrial Education
B.A., M.A., California State University, Chico; Ed.D., University of California, Los Angeles.

Branson, Marvin W. (1984) ..... Associate Professor
Music
B.M., University of Southern California; M.A., California State University, Long Beach.

Bray, Richard N. (1979) ..... Associate Professor
Biology
B.S., San Diego State University; M.A., Ph.D., University of California, Santa Barbara.

Brekke, Alice M. (1970) ..... Professor
English
B.S., Maryville State College; M.S., North Dakota State University; Ph.D., University of Minnesota.

Brennan, Cathy F. (1986) ..... Lecturer
Physical Education
B.A., California State University, Long Beach; M.A., Montana State University, Bozeman.

Brett, James R. (1977) .. Assistant to the Vice President for Academic Affairs
B.A., University of Virginia; M.A., California State University, Long Beach; Ph.D., University of California, Los Angeles.

Briggs, Nancy E. (1970) ..... Professor
Speech Communication
B.A., Augustana College, South Dakota; M.A., Ph.D., University of Southern California.

Britton, Helen H. (1981) ..... Librarian
Associate Director, Library
B.A., Leland College; M.A., University of Iowa, Iowa City; M.A.L.S., University of Michigan, Ann Arbor.

Brophy, Robert J. (1968) ..... Professor
English
B.A., Gonzaga University; M.A., Loyola University; Ph.D., University of North Carolina.

Broughton, Jeffrey L. (1976) ..... Associate Professor
Religious Studies
B.A., M.A., Ph.D., Columbia University.

Brunkhorst, Herbert K. (1986) ..... Associate Professor
Science Education/Teacher Education
B.A., Coe College; M.A., Ph.D., University of Iowa.

Buchanan, John G. (1968) ..... Professor
History
B.A., M.A., Roosevelt University; Ph.D., Duke University.

Buck, Steven M. (1961) ..... Professor
Speech Communication
B.A., M.A., Washington State University; Ph.D., Purdue University.

Buckner, William E. (1970) ..... Professor
Home Economics
B.S., J.D., University of California, Los Angeles.

Burhans-Stipanov, Linda K. (1973) ... Associate Professor
Health Science
B.A., California State University, Long Beach; M.S.P.H., Dr. P.H., University of California, Los Angeles.

Burke, Albie D. (1967) ..... Professor
History
B.M., American Conservatory of Music; B.A., M.A., Ph.D., University of Chicago.

Bush, Roland E. (1969) ..... Associate Professor
Comparative Literature
B.A., California State University, Long Beach; M.A., Ph.D., University of Southern California.

Butcher, Benjamin C. (1969) ..... Professor
Marketing
B.A., M.A., University of Denver; Ph.D., University of Illinois.

Byun, Hyeja (1984) ..... Assistant Professor
Mathematics and Computer Science
B.A., University of Hawaii; M.A., Ph.D., University of Wisconsin, Madison.

Caine, Randy M. (1983) ..... Assistant Professor
Nursing
B.S., University of Miami, Coral Gables; M.S., Hunter College.

Callison, George L. (1969) ..... Professor
Biology
B.S., Kansas State University; M.A., Ph.D., University of Kansas.

Camburn, Herbert L. (1960) ..... Professor
Theatre Arts
B.A., M.A., Michigan State University.

Campbell, Carole A. (1986) ..... Lecturer
Sociology
B.A., University of Albuquerque; M.A., Ph.D., University of Colorado.

Campbell, Charles E. (1966) ..... Associate Professor
Health Science
B.A., M.A., California State University, Los Angeles; Ed.D., University of California, Los Angeles.

Campbell, Daniel A. (1962) ..... Associate Professor
Physical Education
B.A., University of California, Santa Barbara; M.A., California State University, Long Beach.

Campbell, Janet (1965) ..... Senior Assistant Librarian
B.A., California State University, Long Beach; M.S. in L.S., University of California, Los Angeles.

Campo-Flores, Filemon C. (1972) ..... Professor
Management/Human Resources Management
B.S., University of the Philippines; M.B.A., Ph.D., University of California, Los Angeles.

Cannon, Harold L. (1968) ..... Professor
Spanish/Portuguese
B.A., B.S., M.A., Ph.D., University of Minnesota.

Cantey, Richard E. (1972) ..... Counselor
B.S., Louisiana State University; M.A., California State University, Los Angeles; Ph.D., University of Southern California. Marriage, Family Certificate.

Cardenas, Daniel N. (1970) ..... Professor
Spanish/Portuguese
B.A., Park College Missouri, M.A. Ph.D., Columbia University.

Carissimo, Joel W. (1969) ..... Associate Professor
Computer Science and Engineering
B.S., Case Institute of Technology; M.S., E.E., University of Southern California.

Carlberg, David (1966) ..... Professor
Microbiology
B.A., Ph.D., University of California, Los Angeles.

Carlson, Earl R. (1961) ..... Professor
Psychology
B.S., University of Washington, Ph.D., University of Michigan.

Carney, Michael R. (1981) ..... Associate Professor
Music
B.M. East Carolina University; M.M., Eastman School of Music.

Carr, Ashley B. (1984) ..... Associate Professor
Theatre Arts
B.A., Hendrix College, Arkansas; M.F.A., Yale School of Drama, Connecticut.

Carson, Michael R. (1985) ..... Associate Professor
Music
B.M., Peabody Conservatory of Music, Baltimore; M.M., University of Texas, Austin.

Carter, Charles L. (1985) ..... Associate Professor
Physical Therapy
B.A., Cornell College; M.A., University of Northern Iowa; Ph.D., University of Iowa.

Cash, Robert W. (1970) ..... Professor
Educational Psychology and Administration
B.A., Denison University; M.A., Iowa State University; Ed.D., University of Arizona.

Castleberry, Ottis L. (1956) ..... Professor
Speech Communication
B.A., Pennsylvania State College; M.A., University of Southern California; Ph.D., Pennsylvania State University.
Emeritus, 1983.

Cebeci, Tuncer (1977) ..... Professor
Mechanical Engineering
B.S., Robert College; M.S., Duke University; Ph.D., North Carolina State University.

Cerillo, Augustus, Jr. (1967) ..... Professor
History
B.S., Evangel College, Springfield, Missouri, M.A. University of Omaha; Ph.D., Northwestern University.

Cerny, Kay (1982) ..... Associate Professor
Physical Therapy
B.S., Miami University, Ohio; M.S., University of Southern California.

Chan, Kwan M. (1969) ..... Professor
Geological Sciences
B.Sc., University of Hong Kong; Ph.D., University of Liverpool, England.

Chase, Michael D. (1983) ..... Associate Professor
Accountancy
B.A., Roanoke College; M.A., San Diego State University; Ph.D., University of Southern California.

Chau, Kenneth K. (1984) ..... Associate Professor
Social Work
B.A., Hwa Kiu College, Hong Kong; M.S.W., McGill University, Canada; D.S.W., University of Southern California.

Chao, L. Lincoln (1964) ..... Professor
Quantitative Systems
B.L., National Hunan University, China; M.A., Ph.D., University of Minnesota. Emeritus, 1983.

Chavez, Marcela G. (1972) ..... Project Director
Student Special Services
B.A., California State University, Los Angeles.

Chawla, Sudershan (1962) ..... Professor
Political Science
B.S., Delhi University, India; M.A., Ph.D., Ohio State University.

Chelapati, Chunduri V., (1965) ..... Professor
Civil Engineering
B.S., College of Engineering, Kakinada, India; M.S., Ph.D., University of Illinois.

Chen, Chia-Hwa (1964) ..... Professor
Physics
B.S., National Taiwan University; M.S., National Tsing Hua University; Ph.D., State University of New York, Buffalo, New York.

Chen, Hsin-Piao (1986) ..... Assistant Professor
Mechanical Engineering
B.S., National Cheng Kung University, Taiwan; M.S., National Tsing Hua University, Taiwan; Ph.D., Georgia Institute of Technology.

Chen, Hsun Hu (1985) ..... Assistant Professor
Mechanical Engineering
B.S., National Cheng Kung University, Taiwan; M.S., National Tsing Hua University, Taiwan; Ph.D., Georgia Institute of Technology.

Chen, Kuang-Ho (1981) ..... Professor
Mathematics and Computer Science
B.S., National Tawian University, Taipei, M.S., Ph.D., Northwestern University, Illinois.

Chinchilla, Norma S. (1983) ..... Associate Professor
Women's Studies/Sociology
B.A., University of Pacific; M.A., Ph.D., University of Wisconsin, Madison.

Chong, Philip S. (1986) ..... Associate Professor
Management/Human Resources Management
B.E., University of Singapore; M.S., Ph.D., University of Massachusetts, Amherst.

Chow, Richard H. (1958) ..... Professor
Physics
B.A., M.A. University of British Columbia; Ph.D., University of California, Los Angeles. Emeritus, 1986.

Christ, Francis L. (1972) ..... Counselor
B.A., Lady Cliffe College, New York; M.A., Loyola University.

Christopher, Susan L. (1986) ..... Lecturer
Home Economics
B.S., University of Washington; M.S., California State University, Los Angeles.

Chu, Hsiao-Ling, (1972) ..... Professor
Civil Engineering
B.S.C.E., M.S., National Cheng-Kung University, Taiwan; Ph.D., North Carolina State University.

Church, David C. (1968) ..... Associate Professor
Industrial Education
B. of Architecture, University of Southern California; M.A., California State University, Long Beach. Emeritus, 1986.

Clark, Carter B. (1979) ..... Professor
American Indian Studies
B.A., M.S., Ph.D., University of Oklahoma, Norman.

Clark, Cheryl (1969) ..... Associate Professor
Philosophy
B.A., M.A., Universtiy of California, Los Angeles.

Click, Robert E. (1962) ..... Professor
Art
B.A., University of California, Los Angeles; M.A., California State University, Long Beach. Emeritus, 1982.

Clifton, Marguerite A. (1978) ..... Professor
Physical Education
B.A., University of Redlands; M.S., University of Southern California; Ed.D., Stanford University.

Clover, Robert C. (1975) ..... Associate Professor
Biology
B.A., University of California, Berkeley; M.A., California State University, Chico; Ph.D., Oregon State University.

Cobin, Joan (1973) ..... Professor
Nursing
B.S., California State University, Los Angeles; M.S., University of California, Los Angeles; Ph.D., University of Southern California.

Cohen, Floyd A. (1965) ..... Professor
Mathematics and Computer Science
B.A., M.A., Ph.D., University of California, Los Angeles.

Cohlberg, Jeffrey A. (1975) ..... Associate Professor
Chemistry
B.A., Cornell University, Ph.D., University of California, Berkeley.

Cole, Charles L. (1967) ..... Professor
Economics
B.A., University of Southern California; M.B.A., Stanford University; Ph.D., University of Southern California.

Collins, Charles T. (1968) ..... Professor
Biology
B.A., Amherst College; M.S., University of Michigan; Ph.D., University of Florida.

Collins, Keith E. (1969) ..... Associate Professor
History
B.A., M.S., Indiana University; Ph.D., University of California, San Diego.

Colman, Keith R. (1970) ..... Associate Professor
Psychology
B.A., California State University, Long Beach; M.A., Ph.D., University of California, Los Angeles.

Connor, Michael E. (1971) ..... Associate Professor
Psychology
B.A., California Western University; M.A., California State University, Long Beach; Ph.D., University of Hawaii.

Conrey, Bert L. (1955) ..... Professor
Geological Sciences
B.S., M.S., University of California, Berkeley; Ph.D., University of Southern California. Emeritus, 1983.

Conroy, Jean L. (1961) ..... Associate Professor
Mathematics and Computer Science
B.A., M.A., University of Maine.

Cook, Raymond (1966) ..... Professor
Recreation
B.S., Southwest Missouri State College, M.A., University of Illinois; Ed.D., University of California, Los Angeles.

Cooper, Gene R. (1969) ..... Professor
Art
B.A., M.A., University of Hawaii.

Cooper, June M. (1966) ..... Professor
Communicative Disorders
Vice President, Faculty and Staff Relations
B.A., Queens College, Flushing, New York; M.A., Brooklyn College; Ph.D., New York University.

Cortese, Peter A. (1973) ..... Professor
Health Science
Dean, School of Applied Arts and Sciences
B.S., University of Minnesota; M.P.A., Dr. P.H., University of California, Los Angeles.

Cotta, Edmund A. (1958) ..... Professor
Marketing
B.B.A., University of Toledo; M.B.A., University of Pennsylvania.

Councilman, Samuel G. (1968) ..... Associate Professor
Mathematics and Computer Science
B.A., M.A., Ph.D., University of California, Los Angeles.

Cowan, Peter A. (1981) ..... Associate Professor
Civil Engineering
A.B., University of California, Berkeley; M.S., Ph.D., Utah State University, Logan.

Craven, Duane C. (1967) ..... Associate Professor
Communicative Disorders
B.A., M.A., Pepperdine College; Ph.D., University of Southern California.

Crawford, Walter B. (1963) ..... Professor
English
B.A., Union College, Lincoln Nebraska; M.A., Columbia University; Ph.D., University of California, Los Angeles.
Emeritus 1985.

Crayton, CeEtta F. (1972) ..... Assistant Professor
Recreation
B.A., Lewis and Clark College; M.S., California State University, Los Angeles.

Creamer, Lyle R. (1962) ..... Professor
Psychology
B.S., M.S., Kansas State University; Ph.D., University of Illinois.

Crego, Clyde A. (1983) ..... Director
Counseling and Human Development Services
B.A., University of Montana, Missoula; Ph.D., Michigan State University, East Lansing.

Cressy, David A. (1984) ..... Professor
History
B.A., M.S., Ph.D., University of Cambridge, England.

Cretara, Domenic (1986) ..... Associate Professor
Art
B.F.A., M.F.A., Boston University.

Crowther, Simeon J. (1968) ..... Professor
Economics
B.S., University of Oregon; Ph.D., University of Pennsylvania.

Culotta, Wendy A. (1973) ..... Associate Librarian
B.A., University of California, San Diego; M.L.S., University of California, Los Angeles.

Cunningham, Benjamin H. (1968) ..... Professor
Journalism
B.A., M.A., University of Southern California.

Curtis, Larry G. (1969) ..... Professor
Music
B.M., East Texas State University; M.A., Adams State College, Alamosa, Colorado.

Cynar, Sandra J. (1986) ..... Associate Professor
Computer Science and Engineering
B.S., M.S., California State University, Long Beach; Ph.D., University of California, Irvine.

Dailey, Murray D. (1966) ..... Professor
Biology
Director, Southern California Ocean Studies Consortium
B.S., University of Nevada; M.S., American University of Beirut, Lebanon, Ph.D., Colorado State University.

Dame, Donald L. (1965) ..... Professor
Art
B.A., M.A., California State University, Long Beach.

Daniels, Deanna (1986) ..... Assistant Professor
Accountancy
B.S., M.A., University of Denver; Ph.D., University of Southern California.

Dank, Barry M. (1968) ..... Professor
Sociology
B.A., Holfstra University; M.A., Ph.D., University of Wisconsin.

Danson, Carl M. (1965) ..... Professor
Psychology
B.A., M.A., Ph.D., Ohio State University.

Das, Mihir K. (1981) ..... Professor
Mechanical Engineering
B.S., Bihar Institute of Technology, India; Ph.D., University of Birmingham, England.

Das, Radhe (1982) ..... Professor
Electrical Engineering
B.S., University of Ranchi, India; M.S. University of Calcutta, India; Ph.D., University of Washington, Seattle.

Davidson, David B. (1983) ..... Associate Professor
Accountancy
B.S., California State University, Los Angeles; M.A., Ph.D., University of Northern Colorado.

Davis, James A. (1985) ..... Professor
Physical Education
B.A., M.A., San Diego State University; Ph.D., University of California, Davis.

Day, James E. (1955) ..... Professor
English
B.A., Iowa State Teachers College; M.A., Ph.D., State University of Iowa. Emeritus, 1983.

Deatherage, Dorothy (1955) ..... Professor
Physical Education
B.A., M.A., Stanford University; Ed.D., University of Southern California.

DeBoer, Kee K. (1977) ..... Associate Librarian
B.A., Augustana College; M.A., M.S.L.S., University of Colorado.

Debysingh, Molly (1972) ..... Professor
Geography
M.A., St. Andrew's College, Scotland; Ph.D., Syracuse University.

DeHardt, Doris C. (1961) ..... Professor
Psychology
B.A., M.A., University of Missouri; Ph.D., Michigan State University.

de Heras, John (1967) ..... Professor
Art
B.A., M.A., University of California, Los Angeles.

DeLong-Tonelli, Beverly J. (1966) ..... Professor
Spanish/Portuguese
Associate Dean, School of Humanities
B.J., University of Missouri; M.A., Ph.D., University of Iowa.

Delorme, Robert L. (1966) ..... Professor
Political Science
B.A., St. John's University, Collegeville, Minnesota; M.A., Ph.D., University of Minnesota.

Demirdjian, Zohrab (1979) ..... Professor
Marketing
B.S., M.B.A., Arizona State University; Ph.D., Louisiana State University.

Demos, George D. (1962) ..... Professor
Educational Psychology
B.S., Northern Illinois State College; M.S., University of Illinois; Ph.D., University of Southern California. Emeritus, 1983.

Denham, Carolyn H. (1971) ..... Professor
Educational Psychology and Administration
Acting Associate Dean, School of Education
B.A., University of Texas; M.ED., Ph.D., Boston College.

Dennis, Christopher D. (1985) ..... Assistant Professor
Political Science
B.A., M.A., California State University, Long Beach; Ph.D. University of Georgia.

Dennis, John G. (1962) ..... Professor
Geological Sciences
B.Sc., Imperial College, London, England; M.A., Ph.D., Columbia University, New York. Emeritus, 1983.

DeSoto, Simon (1969) ..... Professor
Mechanical Engineering
B.M.E., City College of New York; M.M.E., Syracuse University, Ph.D., University of California, Los Angeles.

DeVoe, Robert J. (1968) ..... Professor
Management/Human Resources Management
B.E., M.E., University of Southern California; M.B.A., University of California, Los Angeles.

Devore, Jerald A. (1969) ..... Professor
Chemistry
B.A., California State University, Chico; M.S., San Diego State University; Ph.D., University of California, San Diego.

Dick, Wayne E. (1981) ..... Associate Professor
Mathematics and Computer Science
B.A., M.A., Ph.D., University of California, San Diego.

Dilbeck, Harold R. (1969) ..... Professor
Finance, Real Estate and Law
B.S., California State University, Fresno; M.B.A., Ph.D., University of California, Los Angeles.

Dinerstein, Grace E. (1967) ..... Professor
Home Economics
B.A., M.A., M.F.A., University of California, Los Angeles. Emeritus, 1981.

Dinielli, Gene L. (1968) ..... Associate Professor
English
B.A., M.A., University of Connecticut.

Dixon, Keith A. (1958) ..... Professor
Anthropology
B.A., M.A., University of Arizona; Ph.D., University of California, Los Angeles.

Donlan, Robert E. (1975) ..... Associate Athletic Director
B.A., M.Ed., University of Nevada; Ph.D., University of Utah.

Dorn, Carl H. (1968) ..... Professor
Mathematics and Computer Science
B.A., University of California, Berkeley; Ph.D., University of California, Los Angeles.

Dorsey, John F. (1961) ..... Associate Librarian
B.A., Colorado State College of Education; M.A.L.S., Denver University.

Doud, William R. (1971) ..... Professor
Quantitative Systems
B.A., University of Northern Iowa; M.A., California State University, Long Beach; Ph.D., University of Southern California.

Dowell, David A. (1977) ..... Professor
Psychology
B.S., Middle Tennessee State University; M.A., Ph.D., University of Tennessee.

Druzgalski, Christopher (1970) ..... Professor
Electrical Engineering
B.S., M.S., Technical University, Poland; M.S.,Ph.D., Ohio State University, Columbus.

DuBois, Henry J., Jr. (1967) ..... Librarian
B.A., California State University, Long Beach; M.L.S. University of California, Berkeley.

Duffy, Thomas H. (1986) ..... Lecturer
Chemistry
B.A., Whittier College; Ph.D., University of Notre Dame.

Dukes, Stacy E. (1964) ..... Associate Professor
Art
B.A., University of Washington; M.A., University of California, Los Angeles.

Dvorak, Eldon J. (1961) ..... Professor
Economics
B.S., South Dakota State University; Ph.D., University of Washington.

Edelman, Walter E., Jr., (1967) ..... Professor
Mechanical Engineering
B.M.E., M.S. in M.E., University of Minnesota; Ph.D., Oregon State University.

Edmondson, Betty V. (1964) ..... Associate Professor
Physical Education
B.S. University of Nevada; M.A., San Jose State University.

Edwards, Alejandra C. (1986) ..... Assistant Professor
Economics
Licenciado En Economia, Ingeniero Comercial, Universidad Catolica de Chile; M.A., Ph.D., University of Chicago.

Edwards, Betty A. (1978) ..... Professor
Art
B.A., University of California, Los Angeles; M.A., California State University, Northridge; Ed.D., University of California, Los Angeles.

Eggers, Robert F. (1964) ..... Professor
Art
B.A, Linfield College, McMinnville, Oregon; M.A., University of Oregon.

Ehrreich, Albert L. (1957) ..... Professor
Geological Sciences
B.A., M.A., Ph.D., University of California, Los Angeles.

Eisenman, Robert H. (1973) ..... Professor
Religious Studies
B.A., Cornell University; M.A., New York University Ph.D., Columbia University.

Eliason, Lowell J. (1965) ..... Professor
Physics
B.S., Stanford University; Ph.D., University of Utah.

Emmons, Timothy D. (1980) ..... Counselor
B.S., Lewis and Clark College; M.A. Ph.D., Vanderbilt University.

Endo, Akira (1986) ..... Professor
Music
B.M.E., M.M., University of Southern California.

Eshett, Ali, (1966) ..... Professor
Civil Engineering
B.S. Technion, I.I.T., Haifa, Israel; M.S., Ph.D., Colorado State University.

Evans, Edward N. (1970) ..... Professor
Computer Science and Engineering
B.S., University of California, Berkeley; M.S., E.E., California Institute of Technology; Ph.D., University of California, Irvine.

Eveland, Vern K. (1984) ..... Professor
Microbiology
B.S., State University of Iowa, Iowa City; M.S., Ph.D., University of Iowa, Iowa City.

Eylar, Harry D. (1963) ..... Associate Professor
Mathematics and Computer Science
B.A., Montana State University; M.S., University of Washington.

Farber, Stuart L. (1960) ..... Assistant Vice President
Student Services
B.A., University of California, Los Angeles; M.S., California State University, Long Beach; Ed.D., University of California, Los Angeles.

Farmer, Gail (1985) ..... Assistant Professor
Health Science/Sociology
B.A., M.A., California State University, Long Beach; D.P.H. University of California, Los Angeles.

Farrell, Michael J. (1969) ..... Associate Professor
Economics
B.A., Pomona College; M.A., Ph.D., Stanford University.

Fata, Frank J. (1986) ..... Associate Professor
Comparative Literature
A.B., Columbia College, New York; Ph.D., The Johns Hopkins University.

Fatt, Milton J. (1963) ..... Professor
Mathematics and Computer Science
B.A., M.A., University of California, Los Angeles; Doktor der Mathematik, Swiss Federal Institute of Technology.

Fenenga, Franklin (1965) ..... Professor
Anthropology
B.A., University of California, Berkeley.

Fernandez, Vivian H. (1985) ..... Counselor
Student Services
B.A., University of California, Los Angeles; M.A., Ph.D., University of Southern California.

Ferreira, Armando T. (1957) ..... Professor
Art
Associate Dean, School of Fine Arts
B.A., M.A., University of California, Los Angeles.

Fiebert, Martin S. (1965) ..... Professor
Psychology
B.S., Queens College, Flushing, New York; Ph.D., University of Rochester.

Fiebiger, Josephine B. (1966) ..... Professor
Psychology
B.A., Pennsylvania State University; M.A., California State University, Los Angeles; Ph.D., University of Southern California. Emeritus, 1983.

Fine, David M. (1968) ..... Professor
English
B.A., M.A., University of California, Los Angeles; M.A., California State University Los Angeles; Ph.D., University of California, Los Angeles.

Finney, Robert G. (1977) ..... Professor
Radio Television and Film
B.A., Marietta College; M.A., Ph.D., Ohio State University.

Finney, Stanley C. (1986) ..... Professor
Geology
B.S., M.S., University of California, Riverside; Ph.D., Ohio State University.

Finot, Patricia (1977) ..... Professor
Dance
B.A., Occidental College; M.A., University of Southern California.

Fischer, David W. (1986) ..... Professor
Graduate Center for Public Policy Administration
B.S., Trinity University; M.S., Michigan State University; Ph.D. Colorado State University.

Flores de Apodaca, Roberto (1978) .. Associate Professor
Psychology
B.A., Sarah Lawrence College; Ph.D., University of Rochester.

Ford, Gerald L. (1969) ..... Associate Professor
Management/Human Resources Management
B.A., San Jose State University; M.B.A., D.B.A., University of Southern California.

Forney, Kristine K. (1978) ..... Associate Professor
Music
B.M., Southern Illinois University; M.A., Ph.D., University of Kentucky, Lexington.

Fornia, Dorothy L. (1956) ..... Professor
Physical Education
B.Ed., M.A., Ohio State University; Ed.D., University of Southern California.

Foster, L. Sheila (1967) ..... Professor
Mathematics and Computer Science
B.A., Ohio Wesleyan University; M.A., Ph.D., University of Southern California.

Foster, William D. (1986) ..... Lecturer
Mathematics and Computer Science
B.A., M.A., California State University, Long Beach.

Fradkin, Howard E. (1967) ..... Associate Professor
Sociology
B.A., University of California, Berkeley; M.S., University of Wisconsin; Ph.D., Ohio State University.

Franklin, Barbara J. (1967) ..... Associate Professor
Physical Education
B.S., Memphis State University; M.S., University of Washington.

Fredrickson, John E., (1955) ..... Professor
Physics
B.S., University of California, Berkeley; M.S., Ph.D., University of Southern California. Emeritus, 1983.

Fried, Elliot (1970) ..... Professor
English
B.A., M.A., California State University, Long Beach; M.F.A., University of California, Irvine.

Fritts, Paul J. (1965) ..... Professor
Geological Sciences
Geological Engineer, Colorado School of Mines; Ph.D., University of Colorado.

Froyd, Robert K. (1958) ..... Associate Professor
Mathematics
B.A., Occidental College; M.A., University of California, Berkeley. Emeritus, 1980.

Fung, Henry C., Jr. (1966) ..... Professor
Microbiology
B.A., University of California, Berkeley; M.T., University of California, Medical School at San Francisco; M.A., San Francisco State University; Ph.D., Washington State University.

Furth, Charlotte D. (1966) ..... Professor
History
B.A., University of North Carolina; A.B., University of Aix-Marseille, France; Ph.D., Stanford University.

Gabrielson, Alice A. (1961) ..... Senior Assistant Librarian
B.A., California State University, Long Beach; M.S., in L.S., University of Southern California.

Gallagher, Phillip J. (1968) ..... Counselor
Student Services
B.A., M.A., San Diego State University; Ph.D., University of Denver, Licensed Psychologist.

Gallmeier, Charles P. (1986) ..... Lecturer
Sociology
B.A., Indiana-Purdue University; M.A., Ph.D., University of California, San Diego.

Galt, Charles P. (1973) ..... Professor
Biology
B.A., University of California, Santa Barbara; M.S., Ph.D., University of Washington.

Garhammer, John J. (1985) ..... Associate Professor
Physical Education
B.S., Pennsylvania State University; M.S., Lehigh University, Pennsylvania; M.S., Ph.D., University of California, Los Angeles.

Garrott, Roy C. (1969) ..... Assistant Professor
English
B.A., M.A., Western Kentucky University.

Garvey, Daniel E. (1976) ..... Professor
Journalism
B.A., Harvard College; M.A., Ph.D., Stanford University.

Geesey, Gill G. (1978) ..... Associate Professor
Microbiology
B.A., University of California, San Diego; M.S., Ph.D., Oregon State University, Corvallis.

George, Barbara C. (1961) ..... Professor
Finance, Real Estate and Law
B.A., Bennett College, Greensboro, North Carolina; J.D., State University of Iowa, Member, Iowa State Bar, California State Bar, U.S. Supreme Court Bar.

George, Donna A. (1980) ..... Dean, Extended Education
B.A., M.A., California State University, Long Beach; Ed.D., University of Southern California.

George, Simon (1961) ..... Professor
Physics
B.Sc., University of Travancore, India; M.Sc., University of Saugar, India; Ph.D., University of British Columbia.

Germann, Albert C. (1957) ..... Professor
Criminal Justice
B.S., Loyola University, Los Angeles; M.S., D.P.A., University of Southern California. Emeritus, 1983.

Gibbs, Norma B. (1966) ..... Associate Professor
Educational Psychology and Administration
Ph.B., Northwestern Univerrsity; M.Ed., University of Illinois.

Gilde, Helen C. (1959) ..... Professor
English
B.A., M.A., Univerrsity of Colorado; Ph.D., University of Chicago.

Gilon, Paul R. (1969) ..... Professor
Management Information Systems
B.S., New York City College; M.A., Ph.D., University of Southern California.

Gilpin, C. Barclay, (1966) ..... Professor
Mechanical Engineering
B.S., University of Wisconsin; M.S., Ph.D., Carnegie Institute of Technology.

Gist, Jan (1986) ..... Assistant Professor
Theatre Arts
B.F.A., Carnegie-Mellon University; M.F.A., Wayne State University.

Gittleman, Arthur P. (1966) ..... Professor
Mathematics and Computer Science
B.A., M.A., Ph.D., University of California, Los Angeles.

Glazer-Danay, Richard (1985) ..... Associate Professor
American Indian Studies/Art
B.A., California State University, Northridge; M.A., California State University, Chico; M.F.A., University of California, Davis.

Glenn, Constance W. (1973) ..... Professor
Art
B.A., University of Kansas; M.A., California State University, Long Beach.

Glenn, Kenneth (1956) ..... Professor
Art
B.A., M.A., University of Washington. Emeritus, 1980.

Glezakos, Constantine (1968) ..... Professor
Economics
B.A., Athens School of Economics; M.A., Ph.D., University of Southern California.

Goddard, Kathryn E. (1969) Dean, School Based Programs
Student Services
B.A., University of California, Berkeley; M.S., Indiana University; Ed.D., University of Southern California.

Goitom, Tesfai (1983) ..... Associate Professor
Engineering and Industrial Technology
B.S., National University, Ethiopia; B.S., University of Wisconsin, Platteville; M.S., Ph.D., Michigan State University.

Gold V. Yvonne (1972) ..... Professor
Teacher Education
B.A., M.A., California State University, Long Beach; Ed.D., University of Southern California.

Goldish, Dorothy M. (1958) ..... Professor
Chemistry
B.S., Stanford University; Ph.D., University of California, Berkeley.

Gonsalves, John, Jr. (1969) ..... Associate Professor
Physical Education
B.A., M.A., California State University, Long Beach.

Good, John H. (1967) ..... Associate Professor
Criminal Justice
B.S., California State University, Long Beach; M.S., University of Southern California. Emeritus, 1983.

Goodman, Catherine C. (1985) ..... Associate Professor
Social Work
B.A., University of California, Berkeley; M.S.W., D.S.W., University of California, Los Angeles.

Gosselin, Edward A. (1969) ..... Professor
History
B.A., Yale University; M.A., Ph.D., Columbia University.

Goyne, Thomas E. (1986) ..... Lecturer
Chemistry
B.S., Union College; Ph.D., University of California, Los Angeles.

Graff, Herman H. (1964) ..... Professor
Art
B.A.E., DePaul University, Chicago, Illinois; M.A.E., Northwestern University. Emeritus, 1986.

Graham, Harold V. (1969) ..... Professor
Teacher Education
B.A., University of Southern California; M.A., California State University, Los Angeles; Ed.D., University of Florida. Emeritus, 1983.

Graham, John A. (1975) ..... Assistant Professor
Educational Psychology and Administration
B.S., Central State University, Ohio; M.A., Western Reserve University; Ph.D., United States International University.

Granger, Jean M. (1972) ..... Associate Professor
Social Work
B.A., Fisk University; M.S.W., Fordham University; Ph.D., University of California, Irvine.

Grannell, Roswitha B. (1967) ..... Professor
Geological Sciences
B.A., Pomona College; Ph.D., University of California, Riverside.

Green, Jack (1970) ..... Professor
Geological Sciences
B.S., Virginia Polytechnic Institute; Ph.D., Columbia University.

Green, Kenneth F. (1968) ..... Professor
Psychology
B.A., Brown University; M.S., Ph.D., University of Massachusetts.

Gregory, James R. (1970) ..... Professor
Anthropology
B.A., University of Southern California; Ph.D., University of Pittsburgh.

Gregory, Kenneth M. (1973) ..... Professor
Anatomy and Physiology
B.A., Ph.D., University of California, Berkeley.

Grey, Jennifer Jen (1975) ..... Professor
Art
B.F.A. Bradley University; M.F.A., Hoffberger School of Painting of the Maryland Institute.

Griffith, Betty Rose (1968) ..... Professor
Physical Education
B.A., M.A., East Carolina University; Ph.D., University of Southern California.

Grimmett, Dixie Ann (1965) ..... Associate Professor
Physical Education
B.S. Brigham Young University; M.A., Washington State University.

Gross, Calvin D. (1962) ..... Professor
Art
B.A., Iowa University; M.F.A. Ph.D., University of Iowa.

Grossman, Arthur W. (1968) ..... Professor
Engineering and Industrial Technology
B.S., California State University, Long Beach; M.S. Bradley University; Ph.D., University of Missouri.

Guerriere, Daniel (1969) ..... Professor
Philosophy
B.A., M.A., Ph.D., Duquesne University.

Gunderson, Emma J. (1971) ..... Professor
Quantitative Systems
B.A., University of Arizona; M.S., Ed.D., University of Southern California.

Gunns, Albert F., (1967) ..... Professor
History
B.A., University of Puget Sound; M.A., Ph.D., University of Washington.

Hadlock, David A. (1985) ..... Assistant Professor
Art
B.F.A., California State University, Long Beach; M.F.A., California Institute of the Arts.

Haglund, Elaine J. (1972) ..... Professor
Educational Psychology and Administration
B.A., University of California, Los Angeles; M.A., Ph.D., Michigan State University.

Hall, Darwin C. (1986) ..... Associate Professor
Economics
B.A., University of California, Santa Barbara; M.S., M.A., Ph.D., University of California, Berkeley.

Hall, Hubert V. (1959) ..... Professor
Marketing
B.A., M.A., University of Oregon. Emeritus, 1981.

Hall, Thomas E. (1981) ..... Professor
Design
B.F.A. Kansas City Art Institute; M.F.A. Drake University.

Halliwell, Michael J. (1968) ..... Professor
Sociology
B.A., M.A., Ph.D., University of California, Los Angeles.

Hamburger, Charles D. (1965) ..... Professor
Management/Human Resources Management
B.A., M.A., University of California, Los Angeles; Ph.D., University of Southern California.

Hamel, Albert (1956) ..... Professor
Educational Psychology and Administration
B.A., University of California, Los Angeles; M.A., Emory University; Ed.D., University of California, Los Angeles.

Hanley, Gerard L. (1984) ..... Assistant Professor
Psychology
B.A., M.A., Ph.D., State University of New York, Stony Brook.

Hanson, Raphael M. (1961) ..... Professor
Psychology
B.A., M.A., Ph.D., University of California, Berkeley. Emeritus, 1986.

Haralson, Sally A. (1966) ..... Professor
Psychology
B.A., Milwaukee-Downer College, Milwaukee, Wisconsin; M.A., Indiana University; Ph.D., University of California, Los Angeles.

Harari, Maurice (1983) ..... Dean
Center for International Education
B.A., Columbia College; Ph.D., Columbia University.

Harbinger, Holly (1986) ..... Assistant Professor
Theatre Arts
B.A., University of California, Santa Cruz; M.F.A., New York University.

Harding, Forrest E. (1971) ..... Professor
Marketing
B.S., Southern Illinois University; M.S., Northern Illinois University; Ph.D., Arizona State University.

Hardy, Leroy C. (1953) ..... Professor
Political Science
B.A., University of California, Santa Barbara; Ph.D., University of California, Los Angeles. Emeritus, 1986.

Harlow, Charles V. (1968) ..... Professor
Finance, Real Estate, and Law
B.A., Stanford University, M.B.A., D.B.A., University of Southern California.

Harman, Marsha S. (1966) ..... Professor
Sociology
B.A., M.A., Ph.D., University of California, Los Angeles.

Harman, Robert C. (1969) ..... Professor
Anthropology
B.A., University of California, Santa Barbara; M.A., Ph.D., University of Arizona.

Harris, Alice M. (1969) ..... Professor
Educational Psychology and Administration
B.A., Idaho State University; M.S., Ph.D., University of Oregon.

Harris, Edwin R. (1959) ..... Professor
Chemistry
B.S., M.S., University of Oklahoma; Ph.D., University of California, Berkeley.

Harris, Nap (1968) ..... Director
Special Projects
B.A., M.S., California State University, Long Beach.

Hartley, Joellen T. (1981) ..... Associate Professor
Psychology
B.S., M.S., University of California, Davis; Ph.D., University of California, Irvine.

Hartsfield, Arnett L., Jr. (1974) ..... Associate Professor
Black Studies
B.A., LL.B., University of Southern California.

Harvey, Bernard N. (1967) ..... Professor
Mathematics and Computer Science
B.S., University of Ottawa; M.A., University of Minnesota; Ph.D., University of California, Irvine.

Hassul, Michael (1981) ..... Professor
Electrical Engineering
B.A., Polytechnic Institute of Brooklyn, New York; M.S., Ph.D., University of California, Berkeley.

Hauth, Luster E. (1964) ..... Professor
Speech Communication
B.A., M.A., University of Redlands, Ph.D., State University of Iowa.

Hayes, Ellis R. (1968) ..... Professor
Speech Communication
B.S., Manchester College, M.A., University of Denver; Ph.D., Purdue University.

Hayes, Glenn E. (1967) ..... Professor
Engineering and Industrial Technology
B.S., M.A., University of Minnesota; Ph.D., University of Colorado.

Hayes, Robert E. (1961) ..... Professor
Political Science
B.A., M.A., University of Minnesota; Ph.D, University of Colorado.

Hefazi-Torghabeh, Hamid (1985) ..... Assistant Professor
Mechanical Engineering
B.S., University of Tehran, Iran; M.S., California State University, Long Beach; Ph.D., University of Southern California.

Heineman, Stephen S. (1969) ..... Professor
Industrial Education
B.A., San Jose State University; M.A., California State University, Los Angeles; Ed.D., University of Southern California.

Heise, Reinald C. (1958) ..... Professor
Management/Human Resources Management
B.B.A., M.A., University of Minnesota.

Henderson, Alan C. (1987) ..... Professor
Health Science
B.A., University of California, Santa Barbara; M.S., Dr. P.H., University of California, Los Angeles.

Henderson, Linda S. (1985) ..... Assistant Professor
Management/Human Resources Management
B.S., University of Nevada, Reno; M.S., Texas Christian University; Ph.D., Florida State University.

Herrmann, John F. (1980) ..... Professor
Management/Human Resources Management
B.A., M.B.A., University of Arizona, Tucson; M.S., D.B.A., University of Southern California.

Hertz, Robert M. (1969) ..... Professor
English
B.A., Rutgers University; M.A., Syracuse University; Ph.D., University of Southern California.

Hickerson, Truman O., Jr. (1965) ..... Professor
Accountancy
B.S., M.B.A., University of California, Los Angeles; C.P.A. Certificate, California.

Hickman, Roger C. (1986) ..... Lecturer
Music
B.A., University of California, Irvine; M.A., Ph.D., University of California, Berkeley.

Hidalgo, Jesus F. (1972) ..... Professor
Teacher Education
Mexican American Studies
B.A., Loyola University; M.S., Ph.D., University of Southern California.

Higgins, John E. (1964) ..... Professor
History
B.A., Tufts University; M.A., Ph.D., Harvard University. Emeritus, 1980.

Hile, Lloyd R. (1968) ..... Professor
Chemical Engineering
B.S., University of California, Berkeley; M.A., Ph.D., Princeton University.

Hill, Cliff W. (1967) ..... Associate Professor
Biology
B.S., Wisconsin State College; B.S., M.S., Montana State College; Ph.D., Michigan State University.

Hinds, John E. (1981) ..... Associate Professor
Accountancy
B.S., M.B.A., California State University, Long Beach; D.B.A., University of Southern California.

Hipkiss, Robert A. (1966) ..... Professor
English
B.A., San Jose State University, M.A., Ph.D., University of California, Los Angeles.

Hitchcock, Howard G. (1958) ..... Professor
Art
B.A., College of Puget Sound; M.F.A., University of Washington; Ed.D., Teachers College, Columbia University.

Ho, Ju-Shey (1970) ..... Professor
Biology
B.S., National Taiwan University; M.A., Ph.D., Boston University.

Hoff, Joan C. (1957) ..... Professor
Home Economics
B.S., George Pepperdine College; M.S., University of Southern California.

Holmes, Robert T. (1961) ..... Professor
Marketing
B.S., Purdue University; M.B.A., Northwestern University; Ph.D., State University of Iowa. Emeritus, 1986.

Hood, David C. (1968) ..... Professor
History
B.A., University of California, Santa Barbara; Ph.D., University of Southern California.

Horn, Stephen (1970) ..... President
Professor, Political Science
B.A., Stanford University; M.P.A., Harvard University; Ph.D., Stanford University.

Hosman, Paul F. (1986) ..... Senior Assistant Librarian
B.S.E., University of Michigan; M.L.S., University of Maryland.

Howe, Jack H. (1967) ..... Professor
Speech Communication
B.A., Morningside College; M.A., University of South Dakota; L.L.B., University of South Dakota; Ph.D., University of Nebraska. Emeritus, 1986.

Hrubant, H. Everett (1957) ..... Professor
Biology
B.S., University of Illinois; M.S., Ph.D., Ohio State University.

Hu, Chi-yu Yang (1953) ..... Professor
Physics
B.S., National Taiwan University, Taipei, Taiwan; Ph.D., Massachusetts Institute of Technology.

Hubbard, Harold G. (1970) ..... Professor
Sociology
B.A., University of California, Los Angeles, M.A., Southern Methodist University; Ph.D., University of Southern California.

Huckabay, Loucine (1984) ..... Professor
Nursing
B.S., M.S., Ph.D., University of California, Los Angeles.

Huckaby, David G. (1973) ..... Associate Professor
Biology
B.S., M.S., Louisiana State University; Ph.D., University of Michigan.

Hupka, Ralph B. (1969) ..... Professor
Psychology
B.A., M.A., San Francisco State University; Ph.D., University of Massachusetts.

Husak, William S. (1980) ..... Associate Professor
Physical Education
B.S., State University of New York, Cortland; M.S., Ph.D., Texas AM University.

Inui, Loyd T. (1965) ..... Professor
Asian Studies
B.A., M.A., University of Michigan.

Ishimine, Tomotaka (1967) ..... Professor
Economics
B.A., Kobe University, Japan; M.A., M.S., Ph.D., University of Wisconsin.

Itatani, Carol A. (1975) ..... Assistant Professor
Microbiology
B.A., University of California, Los Angeles; M.S., California State University, Long Beach; Ph.D., University of Southern California.

Jacob, Mary (1980) ..... Associate Professor
Home Economics
B.S., M.S., Women's Christian College, India; M.S., University of London; Ph.D., University of Illinois, Urbana.

Jahn, Min-ten (1986) ..... Associate Professor
Mechanical Engineering
B.S., Taiwan Normal University; M.A., Ph.D., State University of New York, Stony Brook.

James, Kenneth (1982) ..... Associate Professor
Electrical Engineering
B.S., Case Institute of Technology; M.S., California State University, Fullerton; Ph.D., University of California, Irvine.

James, Willard D. (1967) ..... Professor Mathematics and Computer Science
B.S., Northern Illinois University; M.S., Ph.D., University of Illinois.

Jamgochian, George R. (1967) ..... Professor
Teacher Education
B.A., Pomona College; M.A., California State University, Los Angeles; Ph.D., Claremont Graduate School.

Jang, Long-Kuan (1984) ..... Assistant Professor
Chemical Engineering
B.S., M.S., National Taiwan University; Ph.D., University of Southern California.

Janos, Ludvik (1986) ..... Lecturer
Mathematics and Computer Science
B.A., Chem. Ind. School; M.S., Ph.D., Charles University, Prague.

Jarasunas, Emanuel (1976) ..... Associate Professor
Engineering and Industrial Technology
B.S., California State University, Long Beach; M.A. Iro Technology Institute Germany; Ed.D., Nova University.

Jarrett, Hilton F. (1966) ..... Professor
Psychology
B.E., M.S., Ph.D., University of Southern California. Emeritus, 1983.

Jenkins, Kenneth D. (1970) ..... Professor
Biology
B.A., California State University, Northridge; Ph.D., University of California, Los Angeles.

Jensen, James L. (1968) ..... Professor
Chemistry
Associate Dean, School of Natural Sciences
B.A., Westmont College; M.A., University of California, Santa Barbara; Ph.D., University of Washington.

Jensen, Marilyn A. (1965) ..... Professor
Recreation
B.A., San Jose State University; M.A., Ph.D., University of Southern California.

Jenson, Owen O. (1966) ..... Professor
Speech Communication
B.S., Brigham Young University; M.S., Ph.D., Purdue University.

Jernigan, John C. (1970) ..... Professor
Comparative Literature
B.A., Southwestern University; M.A., Purdue University; Ph.D., Indiana University.

Jersin, Patricia D. (1965) ..... Professor
Teacher Education
B.A., University of Denver; M.A., Ed.D., University of California, Los Angeles.

Johnson, Gretchen A. (1969) ..... Associate Librarian
B.A., St. Olaf College; M.A., University of Denver.

Johnson, Henry S. (1966) ..... Professor
Asian American Studies
B.A., University of Hawaii; M.Ed., Ph.D., University of Southern California.

Johnson, Richard J. (1959) ..... Professor
Instructional Media
B.S., Michigan State University; M.S., Ed.D., Indiana University.

Johnson, William M. (1965) ..... Associate Professor
Philosophy
B.A., University of California, Berkeley.

Jones, Ira (1969) ..... Professor
Biology
B.S., Benedict College, Columbia, South Carolina; M.S., Atlanta University; Ph.D., Wayne State University.

Jones, Kristi S. (1968) ..... Associate Professor
Art
B.A., Lindenwood College; M.A., Case Western Reserve University.

Jones, Rita H. (1964) ..... Professor
Teacher Education
B.S., Northern Michigan University; M.A., University of Michigan; Ed.D., University of California, Berkeley.

Jordanides, Thimios J. (1964) ..... Professor
Electrical Engineering
B.S., Wayne State University; M.S., San Jose State University; Ph.D., University of California, Irvine.

Jorgenson, Dale O. (1972) ..... Professor
Psychology
B.A., Ph.D., University of Minnesota.

Jung, John R. (1968) ..... Professor
Psychology
B.A., University of California, Berkeley; M.S., Ph.D., Northwestern University.

Kacewicz, George V. (1966) ..... Professor
Political Science
B.A., University of Minnesota; M.A., University of Missouri; Ph.D., Indiana University. Emeritus, 1986.

Kaci, Judith A. (1972) ..... Associate Professor
Criminal Justice
B.S., Loma Linda University; M.S., California State University, Long Beach; J.D., Southwestern University.

Kahan, Stanley (1961) ..... Professor
Theatre Arts
B.A., City College of New York; M.A., Ph.D., University of Wisconsin.

Kalbus, Gene E. (1957) ..... Professor
Chemistry
B.S., Ph.D., University of Wisconsin.

Kaminsky, Arnold P. (1986) ..... Associate Professor
Asian Studies/History
B.A., M.A., Ph.D., University of California, Los Angeles.

Kammermeyer, Michael J. (1968) ..... Professor
Design
B.S., University of Southern California; M.A., California State University, Long Beach.

Kampwirth, Thomas J. (1971) ..... Professor
Educational Psychology and Administration
B.S., University of Illinois; M.A., DePaul University; Ph.D., University of Illinois.

Kapche, Robert W. (1966) ..... Associate Professor
Psychology
B.S., Loyola University; M.S., Ph.D., Northwestern University.

Karabenick, Edward (1959) ..... Professor
Geography
B.A., M.A., Wayne State University; Ph.D., University of Michigan.

Katz, Steve M. (1973) ..... Assistant for Judicial Affairs
B.A., M.S., California State University, Long Beach; J.D., Western State University, College of Law, Fullerton.

Kaufman, Elizabeth S. (1963) ..... Professor
Nursing
B.A., Stanford University; M.S., University of California, Los Angeles.

Kavianian, Hamid R. (1984) ..... Associate Professor
Chemical Engineering
B.S., Shirza University, Iran; M.S., Ph.D., Colorado School of Mines.

Kazan, Elizabeth (1955) ..... Professor
Microbiology
B.S., University of Utah; M.S., Ph.D., University of Southern California. Emeritus, 1983.

Kearney, Michael L. (1960) ..... Professor
Finance, Real Estate and Law
B.S., University of California, Los Angeles; J.D., Loyola School of Law.

Kefgen, Mary F. (1958) ..... Professor
Home Economics
B.S., Iowa State University; M.A., New York University.

Keller, Kathleen L. (1983) ..... Assistant Professor
Nursing
B.S., California State University, Long Beach; M.N., University of California, Los Angeles; Ph.D., University of Southern California.

Kelly James J. (1980) ..... Professor
Social Work
B.S., Edinboro College; M.S.S.W., University of Tennessee; Ph.D., Brandeis University.

Kelly, Wayne F. (1976) ..... Associate Professor
Journalism
B.A., Butler University; M.S., University of California, Los Angeles.

Kendall, Harvey L. (1966) ..... Professor
German, Russian and Classics
B.A., M.A., Ph.D., Indiana University.

Kennedy, Celeste K. (1970) ..... Associate Professor
Dance
B.A., Washington University; M.A., Humboldt State University.

Kenney, John P. (1966) ..... Professor
Criminal Justice
B.A., University of California, Berkeley; M.S., University of Southern California; Ph.D., University of California, Los Angeles. Emeritus, 1983.

Kershaw, Gretha (1966) ..... Professor
Anthropology
M.A., Ph.D., University of Chicago. Emeritus, 1983.

Kessler, Eugene E. (1969) ..... Associate Professor
French/Italian
B.A., City College of New York; M.A., University of California, Berkeley; Ph.D., University of California, Irvine. Emeritus, 1986.

Khan, Mohammed B. (1984) ..... Associate Professor
Management Information Systems
B.S., Bangladesh University of Engineering and Technology; M.E., Ph.D., Texas AM University.

Kievit, Karenann (1985) ..... Assistant Professor
Management Information Systems
B.S., Butler University, Indiana; M.S., Indiana University, Bloomington; M.B.A., Ph.D., Florida State University.

Kim, Juhee(1966) ..... Professor
Microbiology
B.S., Seoul National University; M.S., Ph.D., Cornell University.

Kimura, John C. (1967) ..... Professor
Geography
B.A., California State University, Los Angeles; M.A., University of Wisconsin; Sc.D., Tokyo Toritsu University, Japan.

King, David L. (1986) ..... Lecturer
Art
B.A., M.A., University of Colorado; M.A., Colorado State University, Ph.D., Arizona State University.

King, Ronald L. (1964) ..... Professor
Quantitative Systems
B.S., M.S., California State University, Long Beach.

Kingsford, Laura (1980) ..... Associate Professor
Microbiology
B.S., Boise State University; Ph.D., University of Utah.

Klink, Eileen S. (1986) ..... Lecturer
English
B.A., University of California, Los Angeles; M.A., California State University, Long Beach.

Kluss, Byron C. (1959) ..... Professor
Anatomy and Physiology
B.A., M.A., Ph.D., State University of Iowa.

Knafel, Stephen R. (1962) ..... Professor
English
B.A., Union College Schenectady, New York; M.A., Columbia University; Ph.D., Brown University; M.A., California State University, Long Beach.

Kochan, Roman B. (1969) .... Librarian/Associate Director
Library
B.A., M.A., University of Manitoba; M.L.S., University of British Columbia.

Koehler, Margaret L. (1970) ..... Professor
Nursing
B.S., University of Pittsburg; M.A., University of Kentucky; Ph.D., Indiana University.

Kokaska, Charles J. (1969) ..... Professor
Educational Psychology and Administration
B.A., Valparaiso University; M.A., Northwestern University; Ed.D., Boston University.

Koppenhaver, Albert H. (1969) ..... Professor
Teacher Education
B.S., State Teachers College, Pennsylvania; M.S., California State University, Los Angeles; Ed.D., University of Southern California.

Koval, James E. (1985) ..... Associate Professor
Home Economics
B.S., Creighton University, Nebraska; M.S., Texas Technological University; Ph.D., Oregon State University.

Kovalenko, Barbara A. (1970) ..... Professor
Music
B.A., M.A., Brigham Young University; D.M.A. University of Illinois.

Krause, Joseph H. (1955) ..... Professor
Art
B.A., M.S., Ed.D., University of Southern California.

Krause, Marina C. (1968) ..... Professor
Teacher Education
B.A., University of Arizona; M.A., Ed.D., Arizona State University.

Krauser, Henry (1970) ..... Associate Professor
Engineering and Industrial Technology
B.S., Bloomsburg State College; M.Ed., Pennsylvania State University.

Kroman, Ronald A. (1959) ..... Professor
Biology
B.A., M.A., Ph.D., University of Minnesota.

Krumpak, Thomas J. (1986) ..... Assistant Professor
Art
B.F.A., San Francisco Art Institute; M.F.A., California State University, Long Beach.

Kumar, Rajendra (1983) ..... Associate Professor
Electrical Engineering
B. Tech., M. Tech., Indian Institute of Technology; Ph.D., University of Newcastle, Australia.

Kunst, Robert J. (1969) ..... Professor
Industrial Education
B.S., Northern Illinois University; M.S., Kansas State College of Pittsburg; Ed.D., Arizona State University.

Kural, Orhan (1986) ..... Visiting Lecturer
Mechanical Engineering
B.S., M.S., Robert College School of Engineering, Turkey; M.S., Ph.D., Purdue University.

Kvapil, James A. (1986) ..... Lecturer
Art
B.A., University of The Pacific; M.A., M.F.A., California State University, San Jose.

Lam, Shui F. (1985) ..... Professor
Mathematics and Computer Science
B.S., Chinese University of Hong Kong; M.S., Ph.D., Pennsylvania State University.

Lane, H. John (1963) ..... Professor
Computer Science and Engineering
B.S., Gonzaga University; M.S., University of Washington; Ph.D., University of California, Los Angeles.

LaPage, Peter P. (1957) ..... Associate Professor
Accountancy
B.S., University of California, Los Angeles; M.B.A., University of Southern California; C.P.A., Certificate, California.

Lare, Joan H. (1964) ..... Professor
Home Economics
B.S., University of Maryland; M.S., Ph.D., Cornell University.

Lasko, Peggy M. (1986) ..... Assistant Professor
Physical Education
B.S., University of California, Los Angeles; M.A., California State University, Northridge; Ph.D., University of Southern California.

Lass, Mary J. (1966) ..... Professor
Teacher Education
B.A., Pepperdine College; M.A., California State University, Long Beach; Ed.D., University of Southern California.

Lathrop, Irvin T. (1959) ..... Professor
Industrial Education
B.S., Stout Institute; M.S. Ph.D., Iowa State University.

Lauda, Donald P. (1983) ..... Professor
Industrial Education
Dean, School of Applied Arts and Sciences
B.A., M.S., Wayne State College; Ph.D., Iowa State University.

Lawson, Alvin H. (1962) ..... Professor
English
B.A., University of California, Berkeley; M.A., Ph.D., Stanford University.

Lax, Melvin (1977) ..... Professor
Mathematics and Computer Science
B.S., M.S., Ph.D., Rensselaer Polytechnic Institute.

Lazar, Alfred L. (1967) ..... Professor
Educational Psychology and Administration
B.S., Indiana State University; M.Ed., University of Illinois.

Le, Son V. (1986) ..... Associate Professor
Finance, Real Estate and Law
B.S., M.S., Ph.D., Iowa State University.

Lea, Joseph A. (1968) ..... Associate Professor
Instructional Media
B.A., University of California, Los Angeles; M.S., University of Southern California.

Leach, Dorothy (1968) ..... Counselor
B.A., University of Texas; M.Ed., Ed.D., University of Florida. Licensed Psychologist.

Leach, Mary Ellen (1968) ..... Assistant Professor
Physical Education
B.S., Florida State University; M.A., University of California, Santa Barbara.

Leamy, Larry J. (1967) ..... Professor
Biology
B.S., Eastern Illinois University, Ph.D., University of Illinois.

Lee, Chae-Jin (1986) ..... Professor
Political Science/Asian Studies
Dean, School of Social Behavioral Sciences
B.A., Seoul National University; M.A., Ph.D., University of California, Los Angeles.

Lee, Isaiah C. (1972) ..... Professor
Social Work
B.A., Taiwan Chung-Hsing University; M.S.W. University of Nebraska; M.P.H., Dr. P.H. University of California, Los Angeles.

Lee, Richard E. (1955) ..... Professor
English
B.A., M.A., Ph.D., New York University. Emeritus, 1983.

Lee, Ronald A. (1970) ..... Associate Vice President
Information Management and Analysis
B.A., University of Houston; M.S., Ph.D., University of Oklahoma.

Leis, Gordon L. (1966) ..... Professor
Sociology
B.S., Florida Southern College; M.Sc Economics, London School of Economics; Ph.D., State University of New York.

Leiter, William M. (1966) ..... Professor
Political Science
B.A., University of Massachusetts; M.A., Ph.D., University of Chicago.

Leland, Mary Jane (1959) ..... Professor
Art
B.S., Iowa State University; M.F.A., Cranbrook Academy of Art. Emeritus, 1986.

Lerner, Lawrence S. (1969) ..... Professor
Physics
B.A., M.S., Ph.D., University of Chicago.

Levine, Arthur M. (1974) ..... Professor
Finance, Real Estate and Law
B.A., Princeton University; L.L.B., Yale University.

Lewis, Merrill T. (1985) ..... Assistant Professor
Accountancy
B.S., California State Polytechnic University, Pomona; M.B.A., Ph.D., University of Southern California.

Lewis, Ralph J. (1972) ..... Associate Professor
Management/Human Resources Management
B.S., Northwestern University; M.S., University of California, Irvine; Ph.D., University of California, Los Angeles.

Li, San Pao (1976) ..... Professor
Asian American Studies
B.A., Tunghai University, Taiwan; M.A., Harvard University; Ph.D., University of California, Davis.

Libby, Dorothy (1967) ..... Associate Professor
Anthropology
B.A., Ph.D., University of California, Berkeley.

Lieberman, Neil (1975) ..... Professor
Art
B.F.A., Philadelphia College of Art; M.A., Pennsylvania State University.

Lieu, Van T. (1967) ..... Professor
Chemistry
B.S., University of California, Berkeley; M.S., Ph.D., University of Hawaii.

Lim, Paulino M., Jr. (1967) ..... Professor
English
B.S., M.A., University of Santo Tomas, Philippines; Ph.D., University of California, Los Angeles.

Lincoln, John R. (1968) ..... Professor
Art
B.A., M.A., California State University, Long Beach.

Lincoln, Richard G. (1956) ..... Professor
Biology
B.S., Oregon State University; Ph.D., University of California, Los Angeles. Emeritus, 1986.

Linden, James I. (1968) ..... Professor
Psychology
B.A., University of Michigan; M.A., Ph.D., Michigan State University.

Lindner, Rhoda (1969) ..... Professor
Psychology
B.A., Brooklyn College; Ph.D., Indiana University.

Linquist, John R. (1966) ..... Career Counselor
B.S., M.A., University of Minnesota; Ph.D., University of Southern California.

Lindsey, Ruth D. (1976) ..... Professor
Physical Education
B.S., Oklahoma State University; M.S., University of Wisconsin; P.E.D., Indiana University.

Little, Gary (1966) Associate Director of Housing, Programs
B.A., M.A., California State University, Long Beach.

Littlejohn, Alice C. (1986) ..... Senior Assistant Librarian
B.A., American International College; M.B.A., Syracuse University; M.S., Drexel University.

Littrell, Robert T. (1957) ..... Institutional Studies
B.S., M.A., Ed.D., University of Nebraska.

Liu, Dar-Biau (1986) ..... Professor
Computer Science and Engineering
B.S., Taiwan Normal University; M.A., Wayne State University; Ph.D., University of Wisconsin, Madison.

Lobodzinski, Slawomir M. (1983) ..... Associate Professor
Electrical Engineering
B.S., M.S., Technical University of Warsaw, Poland; Ph.D., Technical University of Vienna, Austria.

Locklin, Gerald I. (1965) ..... Professor
English
B.A., St. John Fisher College, Rochester, New York; M.A., Ph.D., University of Arizona.

Loeschen, Robert L. (1969) ..... Professor
Chemistry
B.S., University of Illinois; Ph.D., University of Chicago.

Loganbill, G. Bruce (1968) ..... Professor
Speech Communication
B.A., Bethel College; M.A., University of Kansas; Ph.D., Michigan State University.

Longstreet, Donna M. (1968) .... Senior Assistant Librarian
B.S., University of Cincinnati; M.A.L.S. University of Denver; M.B.A., California State College, Dominguez Hills.

Lopez, Jose (1970) ..... Assistant Professor
Mexican-American Studies
B.A., California State University, Fullerton; M.A., California State University, Long Beach; Ph.D., Claremont Graduate School.

Lothamer, Eileen E. (1966) ..... Professor
English
B.A., M.A., Ph.D., University of California, Los Angeles. Emeritus, 1986.

Lowenthal, Alan S. (1969) ..... Associate Professor
Psychology
B.A., Hobart College, Geneva, New York; M.A., Ph.D., Ohio State University.

Lowentrout, Peter M. (1984) ..... Assistant Professor
Religious Studies
A.B., University of California, Riverside; Ph.D., University of Southern California.

Lu, Kau-Un (1968) ..... Professor
Mathematics and Computer Science
B.S , National Taiwan University; Ph.D., California Insititute of Technology.

Luke. Keung P. (1966) ..... Professor
Physics
B.S., M.S., Ph.D., Massachusetts Institute of Technology.

Lussier, Richard R. (1969) ..... Associate Professor
Health Science
B.A., California State University, Long Beach; M.S.P.H., Dr.P.H., University of California, Los Angeles.

Lyman, Michael C. (1965) ..... Professor
Theatre Arts
B.S., Rockhurst College, Kansas City, Missouri; M.A., University of Denver; Ph.D., University of Wisconsin. Emeritus, 1983.

Lyon, M. Joan (1958) ..... Professor
Physical Education
B.A., M.A., Stanford University; Ph.D., University of Southern California.

Lyon, Richard E. (1958) ..... Professor
English
B.A., M.A., Ph.D., University of Chicago. Emeritus, 1983.

MacArthur, David E. (1964) ..... Professor
Theatre Arts
B.A., M.A., Case Western Reserve University; Ph.D., Ohio State University. Emeritus, 1986.

MacDonald, Kevin B. (1985) ..... Assistant Professor
Psychology
B.A., University of Wisconsin, Madison; M.S., Ph.D., University of Connecticut.

Madison, Dan L. (1983) ..... Associate Professor
Management/Human Resources Management
B.A., M.B.A., California State University, Long Beach; Ph.D., University of California, Irvine.

Magaddino, Joseph P. (1973) ..... Professor
Economics
B.A., Canisius College, New York, M.A., University of Connecticut; Ph.D., Virginia Polytechnic Institute and State University.

Magrill, Samuel M. (1986) ..... Lecturer
Music
A.B., M. Music, Oberlin College; M.M., D.M.A., University of Illinois, Urbana.

Mahapatra, Sitikantha (1983) ..... Professor
Accountancy
B.S., Regional Engineering College, India; M.B.A., Indian Institute of Management, India; Ph.D., Case Western Reserve University.

Mahler, Heike Irmgard Marie (1986) ..... Lecturer
Psychology
B.A., M.A., California State University, Long Beach; M.A., Ph.D., University of California, San Diego.

Mahoney, Michael K. (1980) ..... Assistant Professor
Mathematics and Computer Science
B.A., M.A., Ph.D., University of California, Santa Barbara.

Maltz, Carl (1986) ..... Associate Professor
Mathematics and Computer Science
B.S., California Institute of Technology; M.S., in E.E., Ph.D., University of California, Los Angeles.

Manese, Jeanne E. (1986) ..... Counselor
Student Services
B.A., University of California, Irvine; M.Ed., Harvard University.

Manheim, Jerome H. (1971) ..... Professor
Mathematics and Computer Science
B.S. M.S., University of Illinois; Ph.D., Columbia University.

Mansfield-Jones, Greayer (1962) ..... Professor
Biology
B.A., Pomona College; M.A., Claremont University College; Ph.D., Duke University.

Mardellis, Anthony (1956) ..... Professor
Mathematics and Computer Science
B.A., M.A., University of California, Berkeley.

Margulies, William G. (1969) ..... Professor
Mathematics and Computer Science
B.S., State University College, Long Island; M.A., Ph.D., Brandeis University.

Maricich, Tom J. (1975) ..... Professor
Chemistry
B.S., University of Washington; M.S., Ph.D., Yale University.

Markman, Roberta H. (1968) ..... Professor
Comparative Literature
B.A., Hunter College; M.A., Columbia University; Ph.D., Occidental College.

Marrs, Richard F. (1968) ..... Associate Professor
Teacher Education
B.A., M.A., California State University, Long Beach; Ed.D., University of California, Los Angeles.

Marsh, Clifton E. (1986) ..... Lecturer
Black Studies
B.A., M.A., California State University, Long Beach; Ph.D. Syracuse University.

Marshak, Seymour (1977) ..... Professor
Marketing
B.S., Temple University; M.B.A., University of Michigan; Ph.D., New York University.

Marsi, Kenneth L. (1961) ..... Professor
Chemistry
B.A., San Jose State University; Ph.D., University of Kansas.

Marsot, Alain-Gerard (1968) ..... Professor
Political Science
Licence en Droit, Certificat d'Aptitude a la Profession d'Avocat; Diplone d'Etudes Superieures de Science Politique; Doctorat d'Etat en Science Politique, Faculty of Law and Economics, Paris, France; B Litt., St. Anthony's College, Oxford, England.

Martel, Diane L. (1968) ..... Professor
Art
B.A., College of New Rochelle; M.A., Boston University.

Martin, Howard S. (1965) ..... Professor
Radio, Television and Film
B.A., Olivet Nazarene College, Kankakee, Illinois; M.A., Ph.D., University of Wisconsin.

Martin, Merle P. (1986) ..... Associate Professor
Management Information Systems
B.S., University of California, Berkeley; M.S., Stanford University; Ph.D., Texas AM University.

Martin Ross D. (1970) ..... Associate Professor
Industrial Education
B.S., Northern Illinois University; M.A., Ball State University.

Martinelli, John T. (1965) ..... Professor
Accountancy
B.B.A., M.Ed., Canisus College, Buffalo, New York; M.B.A., University of Chicago.

Martinez, Dan G. (1964) ..... Professor
Mathematics and Computer Science
B.A., M.A., University of California, Riverside; Ph.D., University of California, Los Angeles.

Masback, Frederic J. (1964) ..... Professor
English
B.A., Cornell University; M.A., University of Wisconsin; Ph.D., Syracuse University.

Maslow, Phyllis F. (1977) ..... Professor
Educational Psychology and Administration
Ph.B., M.A., University of Chicago; Ph.D., University of Southern California,

Masoud, Salah M. (1986) ..... Assistant Professor
Management/Human Resources Management
B.S., M.B.A., The American University, Cairo; Ph.D., Universityof Arizona.

Mastropaolo, Joseph A. (1968) ..... Professor
Physical Education
B.S., Brooklyn College; M.S., University of Illinois; Maitre d' Escrime, Institut Nationaledes Sports, Paris; Ph.D., State University of Iowa.

Matthews, Justus F. (1971) ..... Professor
Music
B.A., M.A., California State University, Northridge; Ph.D., State University of New York, Buffalo.

Maue, James B. (1961) ..... Professor
Philosophy
B.S., Trinity College, Hartford Connecticut; M.A., Stanford University; Ph.D., University of Southern California. Emeritus, 1983.

Maurer, Donald L. (1981) ..... Professor
Biology
B.S., University of Illinois, Champaign; M.S., University of Washington, Seattle; Ph.D., University of Chicago.

May, Charles E. (1967) ..... Professor
English
A.B., Morehead State College; M.A., Ph.D., Ohio University.

Mayberry, M. Adrienne (1975) ..... Professor
Nursing
B.S., Tuskegee Institute; M.A., New York University; Dr. P.A., University of Southern California.

Mayfield, Darwin L. (1956) ..... Professor
Chemistry
B.A., Bowling Green State University; M.S., University of Chicago; Ph.D., University of Wisconsin.

McCauley, Joan E. (1969) ..... Librarian
B.A., University of California, Los Angeles; M.S., in L.S., University of Southern California.

McCulloch, Wendell H., Jr. (1974) ..... Professor
Finance, Real Estate and Law
B.A., George Washington University; J.D., Yale University.

McCullough, Gloria G. (1969) ..... Associate Professor
English
B.A., California State University, Long Beach; M.A., University of Southern California; Ed.D., University of Southern California.

McCullough, Thomas A. (1969) ..... Professor
Mathematics and Computer Science
B.A., M.A., Ph.D., University of California, Los Angeles.

McDowell, M. Steven (1985) ..... Assistant Professor
Chemistry
B.S., Miami University, Ohio; Ph.D., Iowa State University.

McFaul, John M. (1963) ..... Professor
History
B.A., University of California, Santa Barbara; M.A., Ph.D., University of California, Berkeley.

McGowan, William H. (1967) ..... Professor
Philosophy
B.A., Kenyon College; Ph.D., Johns Hopkins University.

McLeod, Edward B., Jr. (1965) ..... Professor
Mathematics and Computer Science
B.A., Occidental College; M.S., Ph.D., Stanford University. Emeritus, 1986.

McMillan, Sandra (1972) ..... Associate Professor
Radio, Television and Film
B.A., University of Missouri; M.A., California State University, Los Angeles; Ph.D., University of Southern California.

Medoff, Marshall H. (1979) ..... Professor
Economics
B.S., Illinois Institute of Technology; M.S., University of Illinois, Champaign; Ph.D., University of California, Berkeley.

Medora, Nilufer P. (1987) ..... Lecturer
Home Economics
B.A., St. Xavier's College, India; M.Sc., Maharaja Sayajirao University, India; M.S., University of Arkansas; Ph.D., University of Nebraska, Lincoln.

Meisenheimer, Flora A. (1973) ..... Associate Professor
Nursing
B.S., Marycrest College, Iowa; M.A., Columbia University; Ed.M., University of Hawaii.

Mendez, Peter J. (1976) ..... Assistant Professor
Art
B.A., M.A., California State University, Long Beach; M.F.A., University of California, Los Angeles.

Merryfield, Margaret L. (1984) ..... Assistant Professor
Chemistry
B.A., Rice University, Texas; Ph.D., University of Wisconsin, Madison.

Metzger, Vernon A. (1949) ..... Professor
Management/Human Resources Management
B.S., M.B.A., University of California, Berkeley. Emeritus, 1982.

Meyer, Larry L. (1978) ..... Professor
Journalism
B.A., M.A., University of California, Los Angeles.

Mijares, Ernest R. (1965) ..... Professor
Mechanical Engineering
B.S., New York University; M.S., University of Southern California.

Miller, Alan C. (1974) ..... Associate Professor
Biology
B.A., Stanford University; M.A., Ph.D., University of Oregon.

Miller, Edward (1968) ..... Professor
Mechanical Engineering
B.Ch.E., City College of New York; M.S., D. Engr. Sci., New York University.

Miller, Julia I. (1986) ..... Lecturer
Art
B.A., Barnard College; M.A., University of Virginia; Ph.D., Columbia University.

Miller, Margaret E. (1966) ..... Professor
Physical Education
B.A., University of California, Santa Barbara; M.A., California State University, Long Beach; Ed.D., University of Southern California.

Millers, David T. (1986) ..... Lecturer
Physics/Astronomy
A.B., University of California, Berkeley; Ph.D., University of California, Davis.

Minar, John (1968) ..... Associate Professor
Recreation and Leisure Studies
B.A., Whittier College; M.A., University of Southern California.

Mittleman, Leslie B. (1957) ..... Professor
English
B.A., M.A., University of California, Los Angeles; Ph.D., University of Chicago.

Miyazaki, Akira (1969) ..... Associate Professor
Asian American Studies
B.A., Knox College; M.A., University of Hawaii.

Monat, Jonathan S. (1978) ..... Associate Professor
Management/Human Resources Management
B.S., University of California, Los Angeles; M.S., San Diego State University; Ph.D., University of Minnesota, Minneapolis.

Moore, Beth (1970) ..... Professor
Nursing
B.S., University of Cincinnati; M.S. University of Maryland. Emeritus, 1986.

Moore, Mabel S. (1967) ..... Associate Professor
Home Economics
B.S., Pennsylvania State University; M.A., California State University, Long Beach. Emeritus, 1983.

Moore, Perry C. (1974) ..... Coordinator, Evening Services
Student Services
B.S., University of Maryland.

Moore, Walter B. (1979) ..... Professor
Communicative Disorders
B.A., M.S., University of Southern Florida; Ph.D., Kent State University.

Morgan, Tom D. (1967) ..... Professor
Physical Education
B.A., M.A., California State University, Los Angeles; Ed.D., University of Southern California.

Morris, Frank S. (1969) ..... Associate Professor
Teacher Education
B.S., East Texas Baptist College; M.A., Stephen F. Austin College; Ed.D., University of California, Los Angeles.

Morris, Gene P. (1967) ..... Associate Professor
Finance, Real Estate and Law
B.A., California Western University; M.A., University of California, Los Angeles.

Morris, Raymond J. (1969) ..... Associate Professor
Physical Therapy
B.A., M.A., California State University, Long Beach,; Certificate in Physical Therapy, University of Southern California; Registered Physical Therapist, California.

Morse, C. Wesley (1974) ..... Professor
Management/Human Resources Management
B.S., University of California, Berkeley; Ph.D., University of California, Los Angeles.

Moryl, C. Douglas (1963) ..... Professor
Art
B.A., M.A., University of California, Los Angeles.

Mosher, Elton L. (1965) ..... Assistant Librarian
B.A., Oberlin College; M.S., in L.S., University of Southern California.

Mostafa, M. Gamal (1968) ..... Professor
Civil Engineering
B.S., Cairo University, Egypt; M.S., University of Washington; Ph.D., University of Minnesota.

Moustafa, Mohamed E. (1969) ..... Professor
Accountancy
Dean, School of Business Administration
B. Comm., University of Cairo, Egypt; M.S., Ph.D., University of Illinois.

Muller-Stach, Dieter K. (1968) ..... Professor
Art
Diploma, Academy of Fine Arts, Munich, Germany.

Mulligan, William A. (1986) ..... Associate Professor
Journalism
B.S., Brescia College; M.S., Murray State University; Ph.D., University of Missouri.

Mullins, Ruth G. (1973) ..... Professor
Nursing
B.S.N., California State University, Long Beach; M.S.N., University of California, Los Angeles.

Munsee, Jack H. (1968) ..... Professor
Physics
B.A., College of Wooster; M.S., Case Institute of Technology; Ph.D., Case Western Reserve University.

Muraoka, Dennis D. (1982) ..... Associate Professor
Economics
B.A., M.A., Ph.D., University of California, Santa Barbara.

Musafia, Julien (1959) ..... Professor
Music
B.A., M.A., University of California, Los Angeles. Emeritus, 1983.

Nahas, Edith H. (1984) ..... Associate Professor
Music
B.M., M.M., Temple University, Pennsylvania.

Naidus, Beverly E. (1986) ..... Lecturer
Art
B.A., Carleton College; M.F.A., Nova Scotia College of Art and Design.

Naimpally, Ashok V. (1978) ..... Associate Professor
Chemical Engineering
B.S., Indiana Institute of Technology; M.S., Ph.D., Syracuse University.

Nelms, Barbara J. (1974) ..... Professor
Nursing
B.S.N., University of Iowa; M.N., Ph.D., University of California, Los Angeles.

Nelson, Dale E. (1956) ..... Professor
Quantitative Systems
B.A., University of California, Los Angeles; M.A., California State University, Long Beach. Emeritus, 1986.

Nelson, Donald R. (1965) ..... Professor
Biology
B.A., Rutgers University; M.S., Ph.D., University of Miami.

Nelson, Doris (1967) ..... Professor
English
B.A., Iowa State Teachers College; M.A., University of California, Los Angeles; Ph.D., University of Southern California.

Nelson, John A. (1971) ..... Professor
Educational Psychology and Administration
B.A., M.A., Ed.D., University of California, Berkeley. Emeritus 1983.

Nesbitt, Renee D. (1986) ..... Senior Assistant Librarian
B.S., M.L.S., University of South Carolina.

Newcastle, Helen P. (1969) ..... Associate Professor
Teacher Education
B.S., M.A., University of Detroit; Ph.D., University of Arizona.

Newman, J. Robert (1967) ..... Professor
Psychology
B.A., M.S., University of Massachusetts; Ph.D., University of Illinois.

Ngo, N.P. Viet (1986) ..... Lecturer
Mathematics and Computer Science
B.S., University of Minnesota; Ph.D., University of California, Berkeley.

Nguyen, Richard P. (1984) ..... Associate Professor
Civil Engineering
B.S., National Institute of Technology, Taiwan; M.S., Ph.D., University of Missouri-Rolla.

Nguyen, Long V. (1984) ..... Associate Professor
Computer Science and Engineering
B.S., North Carolina State University, Raleigh; M.S., University of Virginia, Charlottesville; Ph.D., Iowa State University, Ames.

Nguyen, Thinh V. (1986) ..... Associate Professor
Computer Science and Engineering
B.S., Ph.D., University of California, Irvine; M.S., University of Southern California.

Nichols, Theodore E. (1956) ..... Professor
History
B.A., M.A., Ph.D., University of California, Berkeley. Emeritus, 1984.

Nicholson, Robert L. (1957) ..... Professor
Industrial Education
B.S., State Teachers College, Oswego, New York; M.S., Oregon State University. Emeritus 1983.

Nielsen, A. Jerome (1968) ..... Associate Professor
Physical Therapy
B.A., Iowa State Teachers College; Certificate in Physical Therapy, State University of Iowa; M.A., University of Southern California; Registered Physical Therapist, California.

Nieto, Consuelo (1975) ..... Associate Professor
Teacher Education
B.A., Immaculate Heart College; M.A., Ph.D., Claremont Graduate School.

Nishio, Alan T. (1972) ..... Director
Student Development Programs
B.A., University of California, Berkeley; M.P.A., University of Southern California.

Noble, Vicente N. (1974) ..... Professor
Educational Psychology and Administration
B.A., M.A., California State University, Los Angeles; Ph.D., Claremont Graduate School.

Nummedal, Susan G. (1972) ..... Professor
Psychology
B.A., University of California, Berkeley; Ph.D., University of Minnesota.

Nygaard, John E. (1963) ..... Professor
Psychology
B.A., College of Wooster, Ohio; Ph.D., University of Illinois.

Oden, Richard S. (1961) ..... Professor
Art
B.F.A., Carnegie Institute of Technology; M.F.A., Cranbrook Academy of Art.

O'Donnell, Robert J. (1978) ..... Associate Professor
Management/Human Resources Management
B.A., University of Pennsylvania; M.A., University of Southern California; Ph.D., University of Pittsburgh.

Ohara, Takeshi (1983) ..... Associate Professor
Management Information Systems
B.A., Kyoto University of Foreign Studies, Japan; M.A., Ph.D., Southern Illinois University.

Ohtmer, Ortwin A. (1986) ..... Associate Professor
Mechanical Engineering
Doctorate of Engenieurs, Technical University of Braunschweig, West Germany.

Olguin, Leonard (1974) ..... Associate Professor
Teacher Education
B.A., M.A., California State University, Los Angeles; Ph.D., University of Southern California.

Oliva, Joseph (1986) ..... Lecturer
Physics/Astronomy
B.A., University of California, Irvine; Ph.D., University of California, San Diego.

Olsen, R. Warner (1960) ..... Senior Assistant Librarian
B. Mus. Ed., University of Colorado; M.S. in L.S., University of Denver.

Orgill, Douglas H. (1951) ..... Professor
English
B.A., M.A., Brigham Young University; Ph.D., University of Southern California. Emeritus, 1983.

Orpet, Russel E. (1959) ..... Professor
Educational Psychology and Administration
B.A., M.S., M.Ed., Ed.D., University of Southern California.

Ortiz, Elizabeth T. (1983) ..... Assistant Professor
Social Work
B.A., Barnard College; M.S., D.S.W., Columbia University.

Osborne, Cynthia A. (1975) ..... Professor
Art
B.A., Connecticut College; M.F.A., University of Wisconsin.

Osuna, Alex (1970) ..... Associate Professor
Mexican-American Studies
B.A., M.A., University of California, Los Angeles.

Outwater, Richard A. (1969) ..... Professor
Geography
B.A., California State University, Chico; M.A., University of Oklahoma; Ph.D., University of Minnesota.

Owen, Carolyn M. (1970) ..... Professor
Educational Psychology and Administration
B.S., M.A., Western Michigan University; Ed.D., University of Southern California. Emeritus, 1986.

Paal, Frank F. (1968) ..... Professor
Electrial Engineering
B.S., McGill University; M.A., Stanford University; M.S., Ph.D., University of California, Los Angeles.

Palubinskas, Feliksas (1965) ..... Professor
Marketing
B.S.C., M.B.A., DePaul University, Chicago, Illinois; Ph.D., University of Illinois.

Panagiotacopulos, Nick D. (1980) ..... Professor
Electrical Engineering
B.S., University of Athens, Greece; M.S., California Institute of Technology; Ph.D., Free University of Brussels, Belgium.

Parker, Douglas A. (1968) ..... Professor
Sociology
B.A., San Francisco State University; M.A., Ph.D., University of California, Berkeley.

Parker, Joan M. (1986) ..... Senior Assistant Librarian
B.A., Texas Lutheran College; M.S., California State University, Northridge; M.L.S., University of California, Los Angeles.

Parker, John K. (1986) ..... Distinguished Visiting Lecturer
Center for Public Policy and Administration
A.B., George Washington University; M.P.A., University of Pennsylvania.

Parmley, Anna M. (1969) ..... Associate Professor
Anatomy and Physiology
B.S., Central Missouri State College; M.A., Teachers College, Columbia University.

Pastrana, David E. (1973) ..... Professor
Finance, Real Estate and Law
B.A., California State University, Los Angeles; J.D., University of California Berkeley.

Patcha, John C. (1963) ..... Professor
Industrial Education
B.A., University of California Santa Barbara; M.S., California State University, Long Beach; Ed.D., University of California, Los Angeles.

Patterson, William (1957) ..... Professor
Physical Education
B.A., San Diego State University; M.Ed., Springfield College, Massachusetts; Ed.D., University of California, Los Angeles. Emeritus, 1983.

Payne, Carl (1968) ..... Professor
Management Information Systems
B.S., Case Institute of Technology; M.B.A., California State University, Long Beach; Ph.D., University of California, Irvine.

Peck, David R. (1967) ..... Professor
English
B.A., Colgate University; Ph.D., Temple University.

Pelters, Wilm (1970) ..... Professor
German, Russian and Classics
M.A., Ph.D., Syracuse University.

Penalosa, Fernando (1970) ..... Professor
Sociology
B.A., A.M., University of Denver; Ph.D., University of Chicago, University of Southern California.

Pencek, Bruce E. (1986) ..... Lecturer
Political Science
A.B., Dickinson College; M.A., Cornell University.

Pentecost, Wanda L. (1963) ..... Professor
Nursing
B.S., Mount Union College, Alliance, Ohio; M.S. University of California, Los Angeles.

Perez y Perez, Leonardo (1980) ..... Professor
Mechanical Engineering
B.S., M.S., Ph.D., University of California, Berkeley.

Perry, Leland M.(1956) ..... Professor
Teacher Education
B.A., Duke University; M.Ed., Ed.D., University of Missouri.

Peters, Gary L. (1971) ..... Professor
Geography
B.A., California State University, Chico; M.S., Ph.D., Pennsylvania State University.

Peterson, Audrey Buckland (1966) ..... Professor
English
B.A., University of California, Los Angeles; M.A., California State University, Long Beach; Ph.D., University of Southern California. Emeritus, 1983.

Pickard, Kenneth L. (1971) ..... Associate Professor
Quantitative Systems
B.S., Indiana State University; M.A., Ball State University; Ed.D., Northern Illinois University.

Pine, Alvin A. (1962) ..... Professor
Art
B.S., City College of New York; M.F.A., Cranbrook Academy of Art.

Plecnik, Joseph M. (1985) ..... Professor
Civil Engineering
B.E., Youngstown State University; M.S., Ph.D., Ohio State University.

Plourde, Ferdinand J., Jr. (1966) ... Associate Professor
English
B.A., M.A., Ph.D., University of Minnesota.

Po, Henry N. (1968) ..... Professor
Chemistry
B.S., Mapua Institute of Technology, Manila, Philippines; M.S., University of Wisconsin; Ph.D., University of California, Davis.

Polakoff, Keith I. (1969) ..... Professor
History
Associate Dean, School of Social and Behavioral Sciences
B.A., Clark University; M.A., Ph.D., Northwestern University.

Polk, Dora Beale (1968) ..... Professor
English
B.A., University of Wales, Cardiff; M.A., M.F.A., Ph.D., University of California, Irvine; M.A., University of Colorado.

Pomeroy, Charles W. (1970) ..... Associate Professor
English
B.A., Occidental College; A.M., Ph.D., University of Southern California.

Pooler, Frank M. (1959) ..... Professor
Music
B. Mus., St. Olaf College; M.A., M.F.A., University of Iowa.

Potter, Richard C. (1967) ..... Professor
Mechanical Engineering
B.S., M.S., Ph.D., Purdue University. Emeritus, 1983.

Popham, Donald F. (1956) ..... Professor
Teacher Education
B.A., M.A., University of Denver; Ed.D., University of Colorado.

Porter, Richard E. (1970) ..... Professor
Speech Communication
B.A., California State University, Long Beach; M.A., San Diego State University; Ph.D., University of Southern California.

Powell, James G. (1961) ..... Professor
Speech Communication
B.A., University of Minnesota; M.A., Pennsylvania State University; Ph.D., University of Wisconsin.

Powell, Melchior D. (1973) ..... Professor
Public Policy and Administration
Dean, The Graduate Center for Public Policy and Administration
B.S., Jersey City State College; M.A., George Washington University; LL.B., University of Baltimore; Ph.D., University of Maryland.

Preston, Louis A. (1970) ..... Counselor
B. Mus. Ed., M. Ed., Texas Southern University.

Prince, John H. (1974) ..... Professor
Music
B.M., University of Redlands; M.A., California State University, Los Angeles.

Puglisi, Sylvia A. (1974) ..... Associate Professor
Nursing
.B.S., M.S., California State University, Los Angeles.

Purcell, Mary-Joe (1959) ..... Professor
English
B.S., University of Arkansas; M.A., Ph.D., University of Missouri.

Pusavat, Yoko S. (1972) ..... Assistant Professor
Asian American Studies
B.A., Osaka Women's University, Japan; M.A., California State University, Fresno.

Quest, Charles E. (1966) ..... Professor
Philosophy
B.A., Duke University; Ph.D., Claremont Graduate School.

Quillen, Elisabeth M. (1964) ..... Professor
French/Italian
License-es-Lettres, Doctorat, University of Paris, La Sorbonne. Emeritus, 1985.

Quinn, Michael T. (1970) ..... Professor
Management/Human Resources Management
B.A., M.B.A., Cornell University; Ph.D., Ohio State University.

Quinones, Louis E. (1965) ..... Associate Professor
Industrial Education
B.S., M.S., State University of New York Teachers College, Oswego, New York; Ed.D., University of California, Los Angeles.

Rader, Bonnie J. (1970) ..... Professor
Home Economics
B.S., Nebraska State College; M.S., University of Nebraska; Ed.D., Oklahoma State University.

Rahh, Amen (1970) ..... Assistant Professor
Black Studies
B.A., California State University, Long Beach; M.A., Azusa Pacific College.

Rainey, Dennis G. (1956) ..... Professor
Biology
B.A., Westminster College, Missouri; M.S., University of Arkansas; Ph.D., University of Kansas.

Raj, Harkisan D. (1962) ..... Professor
Microbiology
B.S., University of Bombay, India; M.S., Ph.D., University of Poona, India.

Ramirez, Genevieve M. (1974) ..... Professor
Mexican American Studies
B.A., M.A., Rosary College, Illinois; Ph.D., University of California, Los Angeles.

Ramsey, Robert W. (1957) ..... Professor
Art
B.F.A., University of Southern California; M.F.A., Alfred University, New York; Ph.D., Ohio State University.

Rao, Sridhar Jawalker K. (1976) ..... Professor
Civil Engineering
B.E., University College of Engineering, India; M.S., Ph.D., University of Minnesota.

Raun, Toivo U. (1969) ..... Professor
History
B.A., Swarthmore College; M.A., Ph.D., Princeton University.

Rayner, Clare G. (1957) ..... Professor
Music
B.M., University of Toronto; M.M., Ph.D., Indiana University. Emeritus, 1986.

Redmon, Jo A. (1964) ..... Associate Professor
Physical Education
B.S., M.S., University of California, Los Angeles.

Reed, Walter L. (1974) ..... Counselor
B.A., Iowa State University; M.A., Ph.D., University of Iowa.

Reed, Williard H. (1962) ..... Professor
Civil Engineering
B.S., California State University, Long Beach; M.S., in C.E., University of Southern California. Emeritus, 1983.

Reish, Donald J. (1958) ..... Professor
Biology
B.S., University of Oregon; M.A., Oregon State University; Ph.D., University of Southern California.

Resch, William M. (1964) ..... Professor
Psychology
B.A., San Jose State University; Ph.D., University of Oregon.

Resurreccion, Richard L. (1978) ..... Professor
Vocational Education
B.A., M.A., California State University, Los Angeles; Ed.D., University of Maryland.

Reyna, Henry (1970) ..... Counselor
B.S., M.A., Northern Arizona University.

Reynolds, Candyce (1986) ..... Counselor
Student Services
B.A., University of California, Berkeley; M.S., Ph.D., University of Oregon, Eugene.

Rheinish, Robert K. (1973) ..... Director
Learning Resources
B.A., University of South Florida; M.S., Ed.D., Indiana University.

Rhoads, Thomas J. (1976) ..... Associate Professor
Finance, Real Estate and Law
B.S., M.B.A., University of Southern California; J.D., Western State University.

Rhodes, Fen (1967) ..... Professor
Psychology
B.S., Georgia Institute of Technology; M.S., George Washington University; Ph.D., Ohio State University.

Ridder, Hans P. (1964) ..... Associate Professor
Political Science
Diploma, University of Cologne; Ph.D., Claremont Graduate School.

Ringer, Virginia H. (1961) ..... Professor
Philosophy
B.A., University of California, Los Angeles; Ph.D., University of Southern California.

Ritz, William C. (1977) ..... Professor
Science Education
B.A., Ed.M., University of Buffalo; Ed.D., State University of New York at Buffalo.

Roberson, Marsha L. (1986) ..... Lecturer
Nursing
B.S., M.N., University of California, Los Angeles.

Roberts, Charles A., Jr. (1956) ..... Professor
Physics
B.S., University of California, Los Angeles; M.S., University of Southern California; Ph.D., University of Maryland. Emeritus, 1986.

Roberts, Judith A. (1986) ..... Assistant Professor
Economics
B.A., Cornell University; Ph.D., University of Michigan.

Roberts, Sharon L. (1974) ..... Professor
Nursing
B.S., M.S., University of California, San Francisco; Ph.D., University of Southern California.

Robinson, James C. (1972) ..... Associate Professor
Black Studies
B.A., M.A., California State University, Long Beach; M.A., Ph.D., Stanford University.

Roden, Johanna W. (1962) ..... Professor
German, Russian and Classics
B.A., M.A., California State University, Long Beach; M.A., Ph.D., University of Southern California.

Roderick, Roger D. (1986) ..... Professor
Management/Human Resources Management
B.S., Eastern Illinois University; M.S., Ph.D., University of Illinois.

Rodney, Clara G. (1968) ..... Professor
Teacher Education
B.B.A., New York City College; M.A., New York University; Ed.D, University of California, Los Angeles. Emeritus, 1983.

Rodriguez, Mildred S. (1974) ..... Professor
Home Economics
B.S., Oklahoma State University; M.S., Ph.D., University of Arizona.

Rogers, Fred (1959) ..... Associate Professor
Speech Communication
B.S., Kansas State University; M.A., State University of Iowa.

Rooney, Robert F. (1970) ..... Professor
Economics
B.A., M.A., University of California, Los Angeles; Ph.D., Stanford University.

Rose, Jack W. (1956) ..... Professor
Physical Education
B.S., M.A., University of Michigan; Ph.D., University of Southern California.

Roskam, Kay L. (1974) ..... Professor
Music
B.M.E., Southern Methodist University; M.M., Wichita State University; Registered Music Therapist; Ph.D., University of Kansas.

Ross, Ruth A. (1980) ..... Associate Professor
The Graduate Center for Public Policy and Administration
B.S., M.A., Ph.D., University of Southern California.

Ross, Stephen B. (1968) ..... Professor
English
B.A., George Fox College, Newberg, Oregon, M.A., Ph.D., University of Southern California.

Roth, Robert A. (1987) ..... Professor
Teacher Education
B.A., Hiram College; M.Ed., Pennsylvania State University; Ph.D. Kent State University.

Roussos, Van (1960) ..... Testing Psychologist
B.A., M.A., California State University, Long Beach; Ed.D., University of Southern California.

Rugg, Kenneth W. (1964) ..... Professor
Theatre Arts
B.A., San Jose State University; M.A., California State University, Long Beach.

Runyon, Lowell R. (1968) ..... Professor
Finance, Real Estate and Law
B.S., University of Colorado; M.B.A., D.B.A., University of Southern California.

Rush, George E. (1973) ..... Associate Professor
Criminal Justice
B.S., M.S., California State University, Long Beach; Ph.D., Claremont Graduate School.

Russell, Ruth L. (1963) ..... Professor
Microbiology
B.A., Ph.D., University of California, Los Angeles.

Ruyle, Eugene E. (1976) ..... Professor
Anthropology
B.A., University of California, Berkeley; M.A., Yale University; Ph.D., Columbia University.

Ryan, Bruce (1978) ..... Professor
Communicative Disorders
B.S., Southern Oregon College; M.S., Western Michigan University; Ph.D., University of Pittsburgh.

Sachdeva, Darshan (1973) ..... Professor
Quantitative Systems
B.A., Panjab University; M.S., Florida State University; Ph.D., University of California.

Salem, Sema'an I. (1961) ..... Professor
Physics
B. Sc., American University, Cairo, Egypt; Ph.D., University of Texas.

Samuelson, David N. (1966) ..... Professor
English
B.A., Drew University; Ph.D., University of Southern California.

Sanchez, Federico A. (1969) ..... Associate Professor
Mexican-American Studies
B.A., California State University, Los Angeles; M.A., University of Southern California.

Sandefur, Charles R. (1964) ..... Professor
Physical Education
B.A., M.A., California State University, Long Beach.

Sanders, Brenda M. (1986) ..... Associate Professor
Anatomy/Physiology
B.A., Wesleyan University; Ph.D., University of Delaware.

Sater, William F. (1967) ..... Professor
History
B.A., Stanford University; M.A., Ph.D., University of California, Los Angeles.

Sawyer, Janet B. (1957) ..... Professor
English
B.A., University of Minnesota; M.A., Ph.D., University of Texas. Emeritus, 1986.

Scalettar, Richard (1968) ..... Professor
Physics
B.S., City College of New York; M.A., University of Wisconsin; Ph.D., Cornell University.

Scepanski, Jordan M. (1984) ..... Librarian
Director, Library and Learning Resources
B.S., Manhattan College, New York; Master of Librarianship, Emory University, Georgia; M.B.A., University of Tennessee, Nashville.

Schwab, Arnold T. (1961) ..... Professor
English
B.A., University of California, Los Angeles; M.A., Ph.D., Harvard University. Emeritus, 1980.

Schatzlein, Frank C. (1959) ..... Professor
Anatomy and Physiology
B.A., Colgate University; Ph.D., Indiana University.

Schechter, Daniel (1969) ..... Professor
Physics
B.A., University of California, Los Angeles; M.S., Ph.D., Carnegie Institute of Technology.

Schefski, Harold K. (1986) ..... Associate Professor
German, Russian and Classics
B.A., University of California, Davis; M.A., Ph.D., Stanford University.

Schlaich, Joan M. (1965) ..... Professor
Dance
B.S., Boston University; M.A., Columbia University; Ph.D., U.S. International University.

Schmidt, Alfred I. (1967) ..... Associate Professor
Educational Psychology and Administration
B.A., M.A., New York University.

Schmidt, Paul C. (1968) ..... Associate Professor
Political Science
B.A., Hamline University, St. Paul, Minnesota; M.A., University of California, Berkeley; Ph.D., University of Washington.

Schmidt, Ronald J. (1972) ..... Professor
Political Science
B.A., M.A., University of California, Berkeley; Ph.D., University of California, Riverside.

Schmitt, John H. (1974) ..... Professor
Spanish/Portuguese
B.A., University of Minnesota; M.A., Ph.D., University of Wisconsin.

Schultz, Cramer W. (1964) ..... Professor
Physics
B.S., University of California, Berkeley; Ph.D., University of Southern California.

Schwartz, Howard J. (1969) ..... Professor
Mathematics and Computer Science
B.S., M.S., Ph.D., University of Toledo.

Schwartz, Morton D. (1970) ..... Professor
Computer Science and Engineering
B.S., M.S., Ph.D., University of California, Los Angeles.

Scoggins, John F. (1985) ..... Assistant Professor
Economics
B.B.A., Armstrong College; M.A., Ph.D., University of Florida.

Scott, Bruce L. (1965) ..... Professor
Physics
B.S., California Institute of Technology; M.A., University of Illinois; Ph.D., University of California, Los Angeles.

Scott, Johanna V. (1974) ..... Associate Professor
Political Science
B.A., Barnard College; M.A., Columbia University; Ph.D., University of Strathclyde, Scotland.

Seewerker, Joseph F. (1967) ..... Professor
Mathematics and Computer Science
B.A., Pomona College; Ph.D., University of California, Los Angeles.

Segelhorst, Elbert W. (1964) ..... Professor
Economics
B.A., Harris Teachers' College, St. Louis, Missouri; M.A., Washington University; Ph.D., Columbia University.

Senozan, Nail M. (1968) ..... Professor
Chemistry
B.S., Brown University; Ph.D., University of California, Berkeley.

Sepehri, Mehran (1984) ..... Associate Professor
Quantitative Systems
B.S., Arya-Hehir University of Technology, Iran; M.S., Ph.D., Stanford University, California.

Sexauer, Norman E. (1967) ..... Professor
Mathematics and Computer Science
B.S., Northwestern University; M.S., Ph.D., University of Illinois.

Shaak, John J. (1962) ..... Professor
Art
B.S., Pennsylvania State University; M.A., Columbia University.

Shahian, Bahram (1983) ..... Associate Professor
Electrical Engineering
B.S., University of Texas, Austin; M.S., Stanford University, Ph.D., University of California, Los Angeles.

Shahzadi, Bahman (1983) ..... Associate Professor
Electrical Engineering
B.S., Tehran University; M.S., Ph.D., University of Wisconsin; Madison.

Shainline, John W. (1966) ..... Vice President
Student Services
B.S., Pennsylvania State University; M.A., Columbia University.

Shanks, Kenneth H. (1960) ..... Professor
Speech Communication
B.A., Wittenberg College; M.A., Ph.D., University of Southern California.

Shapli, Tryntje (1983) ..... Associate Professor
Dance
B.A., Bennington College.

Shaw, Peter L. (1974) ..... Professor
The Graduate Center for Public Policy and Administration
B.A., Occidental College; M.P.A., Ph.D., New York University.

Shaw, Thomas W. (1984) ..... Director
Educational Placement Center
B.S., Bradley University; M.A., California State University, Long Beach; Ph.D., United States International University.

Sheley, Wayne M. (1985) ..... Professor
Music
Dean, School of Fine Arts
B.S., Hartwick College; B.Mus., M.Mus., Yale University; D.Mus.A., Eastman School of Music.

Shen, Kwang Y. (1961) ..... Professor
Physics
B.S., Ph.D., University of Maryland.

Shermis, Stewart (1970) ..... Professor
Anthropology
B.A., University of California, Los Angeles; M.A., Ph.D., University of Kansas.

Shim, Jae K. (1981) ..... Professor
Accountancy
B.S., Seoul National University, Korea; M.B.A., Ph.D., University of California, Berkeley.

Shoup, Gail (1969) ..... Professor
Theatre Arts
B.A., University of Michigan; M.A., Ph.D., University of California, Los Angeles.

Siegel, Martha A. (1975) ..... Professor
Nursing
B.S., University of Minnesota; M.S., University of California, Los Angeles.

Sievers, Sharon L. (1968) ..... Professor
History
B.A., Augustana College; M.A., University of Nebraska; Ph.D., Stanford University.

Sikula, John P. (1984) ..... Professor
Educational Psychology and Administration
Dean, School of Education
B.A., Hiram College, Ohio; M.A., Ph.D., Case Western Reserve University, Ohio.

Simonson, Gene R. (1958) ..... Professor
Economics
B.S., University of Wisconsin; M.A., Mexico City College; Ph.D., University of Washington.

Sims, Sidney B., Jr. (1960) ..... Senior Assistant Librarian
B.A., Baylor University; M.A., University of Denver.

Sinclair, Lorelei P. (1966) ..... Assistant Librarian
B.A., Moorhead State College; M.A., University of Minnesota.

Sinclair, William A. (1970) ..... Professor
Physical Education
Associate Dean, School of Applied Arts Sciences
B.S., M.A., Ph.D., University of New Mexico.

Sindelar, Ronald C. (1966) ..... Professor
Music
B.M., Lawrence University; M.A., Cornell University; D.M.A., Stanford University.

Singh, Davinder (1983) ..... Associate Professor
Economics
B.S., Benedict College; M.A., Duke University; Ph.D., University of South Carolina.

Singhal, Bhupendra K. (1980) ..... Professor
Design
B.A., School of Planning and Architecture, New Delhi, India; M.A., University of Oregon, Eugene.

Skalka, Bernard J. (1967) ..... Professor
Theatre Arts
B.S., M.A., University of Nebraska.

Skov, Iva L. (1972) ..... Associate Professor
Economics
B.S., M.A., South Dakota State College; Ph.D., University of Southern California.

Skriletz, Dorothy J. (1959) ..... Professor
Speech Communication
B.S., M.A., Bowling Green State University; Ph.D., Michigan State University.

Slawski, Carl J. (1970) ..... Professor
Sociology
B.A., University of Southern California; M.A., University of California, Santa Barbara; Ph.D., University of Illinois.

Slayton, Jeffrey C. (1986) ..... Assistant Professor
Dance
Merce Cunningham Dance Studio, New York; Viola Farber Dance Studio, New York.

Sleeper, Elbert L. (1957) ..... Professor
Biology
B.S., M.S., Ph.D., Ohio State University.

Smith, Alton H. (1957) ..... Professor
Mathematics and Computer Science
B.A., George Pepperdine College; M.A., Ph.D., University of Southern California.

Smith, Donald H. (1960) ..... Professor
Industrial Education
B.A., M.A., California State University, Long Beach; Ed.D., University of California, Los Angeles. Emeritus, 1986.

Smith, Earl M. (1968) ..... Professor
Industrial Education
B.A., M.A., California State University, Long Beach; Ed.D., University of California, Los Angeles.

Smith, Jerry (1986) ..... Professor
Music
B.M., M.M., University of Texas, Austin; Ph.D., University of Rochester, Eastman School of Music.

Smith, Judy E. (1980) ..... Associate Professor
Nursing
B.A., M.A., University of California, Los Angeles.

Smith-Omari, Mikelle (1985) ..... Associate Professor
Black Studies/Art
B.A., California State University, Hayward; M.F.A., Washington State University, Pullman; M.A., University of California, Los Angeles.

Smith, Peggy J. (1968) ..... Professor
Sociology
B.A., Washington State University; Ph.D., University of California, Irvine.

Smith, Robert J. (1966) ..... Professor
Management/Human Resources Management
B.S., California State University, Los Angeles; M.S., California State University, Long Beach; Ph.D., University of California, Irvine.

Smith, Sara W. (1969) ..... Professor
Psychology
B.A., Wheaton College; Ph.D., University of Illinois.

Smith, T. William (1969) ..... Professor
Theatre Arts
B.A., M.A., University of North Carolina.

Smoke, Mary E. (1965) ..... Associate Professor
Mathematics and Computer Science
B.S., American University, Washington, D.C.; M.S., Ph.D., Stanford University.

Snidecor, John C. (1969) ..... Professor
Art
B.A., M.A., California State University, Long Beach.

Snider, Larry (1970) ..... Associate Librarian
B.A., M.S.L.S., University of Southern California.

Soe, Christian (1967) ..... Professor
Political Science
B.A., University of British Columbia; Doktor der Philosophie, Free University of Berlin.

Sondhi, Lydia E. (1985) ..... Associate Professor
Home Economics
B.S., University of Missouri, Columbia; M.S., Oklahoma State University; Ph.D., University of Missouri, Columbia.

Souter, Edward B. (1965) ..... Professor
Physical Education
B.A., M.A., California State University, Long Beach.

Spangler, George A. (1971) ..... Professor
Philosophy
B.A., Pennsylvania State University; M.A., University of Nebraska; Ph.D., University of Alberta.

Sparks, Colleen (1978) ..... Professor
Nursing
B.S., University of Washington, Seattle; M.S., University of California, San Francisco; Ph.D., University of California, Los Angeles.

Spence, Sarah C. (1983) ..... Assistant Professor
Comparative Literature
B.A., Brown University; M.A., Ph.D., Columbia University.

Spiese, Richard D. (1967) ..... Associate Professor
English
B.A., M.A., Pennsylvania State University; Ph.D., University of New Mexico.

Spiller, Richard (1969) ..... Professor
Marketing
B.S., Syracuse University; M.B.A., Ph.D., University of California, Los Angeles.

Splansky, Joel B. (1969) ..... Professor
Geography
B.A., M.A., Ph.D., University of California, Los Angeles.

Springer, Arnold R. (1968) ..... Professor
History
B.A., Ph.D., University of California, Los Angeles.

Ssensalo, Bede (1977) ..... Associate Professor
Black Studies
B.A., Makerere University, Uganda; M.A., Ph.D., University of California, Los Angeles.

Stanley, M. Sue (1986) ..... Assistant Professor
Home Economics
B.A., California State University, Chico; M.S., University of Arizona; Ph.D., Oklahoma State University.

Stanton, Roger R. (1966) ..... Professor
Management/Human Resources Management
B.A., San Jose State University; M.B.A., California State University, Long Beach; D.B.A., University of Southern California.

Stark, Margaret J. (1971) ..... Professor
Urban Studies
B.S., University of Oklahoma; M.A., University of Minnesota; Ph.D., Indiana University.

Stefani, Raymond T. (1971) ..... Professor
Electrical Engineering
B.S., Notre Dame University; M.S., Ph.D., University of Arizona.

Stein, Meyer L. (1974) ..... Professor
Journalism
B.J., University of Missouri; M.A., Stanford University.

Steiner, Barry H. (1968) ..... Professor
Political Science
B.A., University of Southern California; Ph.D., Columbia University.

Steiner, W. Rodney (1956) ..... Professor
Geography
B.A., M.A., University of California, Los Angeles; Ph.D., University of Washington.

Stephens, Lee B. Jr. (1962) ..... Professor
Biology
B.S., Morehouse College; M.S., Atlanta University; Ph.D., State University of Iowa. Emeritus, 1983.

Stern, Andrew (1967) ..... Professor
Economics
B.A., M.A., New York University; Ph.D., Columbia University.

Stern, John H. (1958) ..... Professor
Chemistry
B.S., University of California, Berkeley; M.S., Ph.D., University of Washington.

Stetler, Charles E. (1967) ..... Professor
English
B.A., M.A., Duquesne University; Ph.D., Tulane University.

Stevens, A. Jay (1968) ..... Professor
Political Science
B.S., Brigham Young University; M.A., Ph.D., University of Maryland.

Stevens, Thomas G. (1973) ..... Counselor
B.A., University of Oklahoma; M.Th., Claremont School of Theg; M.A., California State University, Fullerton; Ph.D., University of Hawaii. Licensed Psychologist.

Stinson, Perri J. (1969) ..... Professor
Quantitative Systems
B.A., University of California, Santa Barbara; M.S., Ph.D., Oklahoma State University.

Stiver, Harry E. Jr. (1964) ..... Professor
Theatre Arts
B.A., Hastings College, Nebraska; M.A., University of Nebraska; Ph.D., University of Illinois. Emeritus, 1983.

Stone, Herbert L. (1958) ..... Professor
Management/Human Resources Management
B.S., University of California, Los Angeles; M.S., Arizona State University; C.P.A. Certificate, California-Arizona; D.B.A., University of Southern California.

Strahl, Ronald J. (1986) ..... Associate Professor
English
B.A., DePauw University; M.A., Ph.D., Indiana University, Bloomington.

Strickler, Gerald B. (1958) ..... Professor
Philosophy
B.A., Gettysburg College; B.D., Gettysburg Lutheran Theological Seminary; M.A., New York University; S.T.D., Temple University. Emeritus, 1986.

Stroud, Paul W. (1957) ..... Professor
Music
B.S., B.M., State University of Missouri; M.Mus., University of Illinois; D.M.A., University of Southern California. Emeritus, 1980.

Stuart, Jack M. (1967) ..... Professor
History
B.A., Brooklyn College; Ph.D., Columbia University.

Stuteville, John R. (1964) ..... Professor
Marketing
B.S., M.A., Ph.D., University of California, Los Angeles.

Sucher, Vivian M. (1962) ..... Professor
Nursing
B.S., University of New Hampshire; M.S., University of California, Los Angeles; M.N., Yale University. Emeritus, 1986.

Sugimoto, Roy A. (1969) ..... Associate Professor
Teacher Education
B.A., University of California, Berkeley; M.A., M.S., Ph.D., University of Southern California.

Sullivan, Gerald L. (1968) ..... Professor
English
B.S., General Beadle State College, Madison, South Dakota; M.A., South Dakota University; Ed.D., Colorado State College.

Svec, William R. (1964) ..... Professor
History
B.S., Loyola University, Chicago, Illinois; M.A., Northwestern University; Ph.D., University of Texas.

Swan, Robert J. (1964) ..... Professor
Educational Psychology and Administration
B.A., University of Michigan; M.A., Ph.D., University of Minnesota. Emeritus, 1986.

Swatek, Frank E. (1956) ..... Professor
Microbiology
B.S., San Diego State University; M.A., Ph.D., University of California, Los Angeles.

Swensen, Frederick M. (1961) ..... Professor
French/Italian
B.A., M.A., University of Southern California; Docteur en Philosophie et Lettres, State University of Liege, Belgium.

Swift, Richard H. (1958) ..... Professor
Art
B.A., California State University, Los Angeles; M.F.A., Claremont College. Emeritus, 1980.

Swigart, Leslie K. (1971) ..... Associate Librarian
B.A., University of Southern California; M.L.S., University of California, Los Angeles.

Tabor, Doris D. (1967) ..... Professor
Teacher Education
B.S., Northwest Missouri State College; M.S., Ed.D., University of Nebraska, Omaha.

Tang, Paul C. L. (1986) ..... Assistant Professor
Philosophy
B.S., University of British Columbia; M.A., Simon Fraser University, Canada; M.A., Ph.D., Washington University, Missouri.

Tarrow, Norma Bernstein (1968) ..... Professor
Teacher Education
B.A., Brooklyn College; M.S., Queens College; Ph.D., New York University.

Tartre, Lindsay A. (1985) ..... Assistant Professor
Mathematics and Computer Science
B.A., M.A., San Diego State University; Ph.D., University of Wisconsin, Madison.

Taylor, Cahrles T. (1960) ..... Associate Librarian
B.A., University of California, Los Angeles; M.S. in L.S., University of Southern California.

Teel, Kenneth S. (1969) ..... Professor
Management/Human Resources Management
B.A., Ph.D., Washington University.

Teweles, Richard J. (1967) ..... Professor
Finance, Real Estate and Law
B.S., M.S., Ph.D., University of Illinois.

Tharp, A.G. (1959) ..... Professor
Chemistry
B.S., University of Kentucky; M.S., Ph.D., Purdue University.

Thayer, Robert E. (1963) ..... Professor
Psychology
B.A., University of Redlands; Ph.D., University of Rochester.

Thomas, Cher (1982) ..... Associate Professor
Psychology
M.A., Ph.D., University of California, Davis.

Thomas, Joy E. (1981) ..... Senior Assistant Librarian
B.A., California State University, Fullerton; M.S., University of Southern California; M.A., California State University, Long Beach.

Thomas, Lindsay, Jr. (1961) ..... Professor
French/Italian
B.A., Le Seminaire Adventiste, Savoie, France; B.A., M.A., Boston University; Ph.D., University of California, Los Angeles.

Thompson, Charles M. (1956) ..... Professor
Art
B.S., Lehigh University; B.A., M.A., Art Institute of Chicago; Ed.D., Teachers College, Columbia University. Emeritus, 1983.

Tillman, Talmadge C., Jr. (1968) ..... Professor
Accountancy
B.S., Indiana University; M.B.A., Syracuse University; D.B.A., University of Southern California; C.P.A., California.

Timpke, Jane L. (1975) ..... Assistant Professor
Nursing
B.S., Lock Haven College, Pennsylvania; M.A., California State University, Long Beach.

Tjioe, Djoe T. (1970) ..... Associate Professor
Anatomy and Physiology
B.S., Sioux Falls College; M.S., Ph.D., University of Wisconsin.

Toma, Ramses B. (1984) ..... Professor
Home Economics
B.S., M.S., Ain Shams University, Egypt; M.P.H., University of Minnesota, Minneapolis; Ph.D., Louisiana State University, Baton Rouge.

Toohey, Dale P. (1972) ..... Professor
Physical Education
B.S., Washington State University; M.Ed., Ed.,D., University of Massachusetts.

Toohey-Costa, D. Margaret (1974) ..... Professor
Physical Education
B.S., M.Ed., University of Massachusetts; Ph.D., Ohio State University.

Torabzadeh, Jalal (1986) ..... Assistant Professor
Mechanical Engineering
B.S., Abadan Institute of Technology, Iran; M.S., Ph.D., University of Southern California.

Torby, Bruce J. (1961) ..... Professor
Mechanical Engineering
B.M.E., City College of New York; M.S., University of California, Los Angeles; Ph.D., University of Southern California.

Torres, Leonard (1956) ..... Professor
Industrial Education
B.A., University of California, Santa Barbara; M.Ed., Oregon State University; Ed.D., Colorado State University.

Towner, Leonard W., Jr. (1955) ..... Professor
Psychology
B.A., M.A., Ph.D., University of California, Berkeley. Emeritus, 1986.

Traynor, William J. (1973) ..... Professor
Management/Human Resources Management
B.S., United States Naval Academy; M.S., George Washington University; Ed.D., Brigham Young University.

Trinidad, Francisco (1962) ..... Professor
Spanish/Portuguese
Bachiller, Instituto Nacional Cisneros, Madrid; A.B., M.A., Ph.D., University of California, Los Angeles. Emeritus, 1986.

Trombetas, Thomas P. (1961) ..... Professor
Political Science
Law Degree, University of Athens, Greece; M.P.A., Ph.D., University of Washington.

Tsai, Chan-Feng (1982) ..... Professor
Civil Engineering
B.S., Cheng Kung University, Taiwan; M.S., University of Rhode Island, Kingston; Ph.D., University of California, Berkeley.

Tsai, Shirley C. (1983) ..... Professor
Chemical Engineering
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Tsao, Ching H. (1965) ..... Professor
Mechanical Engineering
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Tumelty, Robert E. (1974) ..... Professor
Health Care Administration
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Turk, Theresa G. (1970) ..... Professor
Sociology
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Turner, Barbara (1966) ..... Professor
Mathematics and Computer Science
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Tuveson, Richard V. (1983) ..... Assistant Professor
Home Economics
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Tyner, Judith A. (1970) ..... Professor
Geography
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Tyrnauer, Herbert H. (1961) ..... Professor
Design
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Uku-Wertimer, Skyne R. (1970) ..... Professor
Black Studies
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Ullman, Paul S. (1958) ..... Professor
Sociology
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Unt, Hillar, (1960) ..... Professor
Mechanical Engineering
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Vander Meyden, Hans H. (1961) ..... Associate Professor
Mechanical Engineering
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Mathematics and Computer Science
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Walker, Charles T. (1964) ..... Professor
Geological Sciences
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Walker, (Milton) Glenn (1964) ..... Professor
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Wallin, Eugene C. (1956) ..... Professor
Art
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Walzer, John F. (1963) ..... Professor
History
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Wang, Cheng T. (1985) ..... Associate Professor
Electrical Engineering
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Wang, Derming (1983) ..... Assistant Professor
Mathematics and Computer Science
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Wang, Rei-Tung (1985) ..... Associate Professor
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Ward, Barbara A. (1968) ..... Associate Professor
Instructional Media
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Wardrip-Fruin, Carolyn A. (1981) ..... Associate Professor
Communicative Disorders
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Wareing, Carol (1986) ..... Associate Professor
Educational Psychology Administration
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Warner, Kenneth K. (1968) ..... Professor
Mathematics and Computer Science
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Warren, Virginia G. (1973) ..... Professor
Communicative Disorders
Associate Dean, School of Humanities
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Warter, Stuart L. (1965) ..... Professor
Biology
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Watson, Saleem (1986) ..... Associate Professor
Mathematics and Computer Science
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Wayman, Arthur K. (1976) ..... Associate Professor
Mathematics and Computer Science
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Weber, Devra (1986) ..... Lecturer
History
B.A., M.A., Ph.D., University of California, Los Angeles.

Weber, William A. (1968) ..... Professor
History
B.A., Harvard College; M.A., Ph.D., University of Chicago.

Webster, Jay L. (1967) ..... Professor
Engineering and Industrial Technology
B.A., M.A., California State University, Long Beach; Ed.D., University of California, Los Angeles.

Weinstock, Donald J. (1969) ..... Professor
English
B.A., M.A., Ph.D., University of California, Los Angeles.

Wells, Robert G. (1963) ..... Professor
Journalism
B.A., University of Southern California. Emeritus, 1985.

Welch, William H. (1983) ..... Assistant Professor
Engineering and Industrial Technology
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Werlick, Stephen G. (1964) ..... Professor
Art
M.F.A., Tulane University.

Wheeler, Jean D. (1966) ..... Associate Professor
Geography
B.S., M.S., Illinois State University; Ph.D., University of California, Los Angeles.

Whisenand, Paul M. (1965) ..... Professor
Criminal Justice
B.S., M.S., Ph.D., University of Southern California.

White, Elaine E. (1974) ..... Associate Professor
Nursing
B.S.N., California State University, Long Beach; M.N., University of California, Los Angeles; Ed.D., University of Southern California.

Wilcox, Richard P. (1967) ..... Assistant Librarian
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Wilde, Richard H. (1951) ..... Professor
History
B.S., Milwaukee State Teachers College; M.S., Ph.D., University of Wisconsin. Emeritus, 1983.

Willer, Lynda R. (1985) ..... Assistant Professor
Speech Communication
B.S., M.A., Bradley University, Illinois.

Williams, David D. (1967) ..... Professor
Physical Therapy
B.A., Hastings College; B.S.M., University of North Dakota; M.S., University of Nebraska; Ph.D., University of Illinois.

Williams, Luster J. (1956) ..... Professor
English
B.A., M.A., University of Oregon; Ph.D., Indiana University. Emeritus, 1983.

Williams, J. Richard (1983) ..... Professor
Mechanical Engineering
Dean, School of Engineering
B.S., M.S., Ph.D., Georgia Institute of Technology.

Williams, John B. (1966) ..... Professor
English
B.A., University of Southern California; M.A., University of California, Los Angeles; Ph.D., University of Southern California.

Williams, Raymond E. (1986) ..... Lecturer
Criminal Justice
B.S., California State University, Los Angeles; M.P.A., University of Southern California.

Williams, R. Ora (1968) ..... Professor
English
B.A., Virginia Union University; M.A., Howard University; Ph.D., University of California, Irvine.

Williams, Stanley W. (1952) ..... Professor
Educational Psychology and Administration
B.A., Bates College; M.S., Ed.D., University of Southern California. Emeritus, 1983.

Williamson, Norman L. (1986) ..... Associate Professor
Engineering and Industrial Technology
B.S., Penn State University; M.S., Ph.D., West Virginia University.

Wilson, Robert R. (1966) ..... Associate Professor
Mathematics and Computer Science
B.A., M.A., Ph.D., University of California, Los Angeles.

Wilson, Suzanne M. (1958) ..... Professor
English
B.A., Stanford University; M.A., San Francisco College for Women; Ph.D., University of Southern California. Emeritus, 1980.

Winchell, Robert E. (1966) ..... Professor
Geological Sciences
B.S., Stanford University; M.S., Michigan Technological University; Ph.D., Ohio State University.

Winter, Herbert A. (1959) ..... Associate Professor
French/Italian
Diplome pour l'Ennseignement du Francais a l'Etranger, University of Toulouse; M.A., University of Washington.

Witkowski, Terrence H. (1982) ..... Associate Professor
Marketing
B.A., Northwestern University, Illinois; M.S., University of California, Los Angeles; Ph.D., University of California, Berkeley.

Wittich, William V. (1967) ..... Professor
Industrial Education
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Wolf, Sharon V. (1986) ..... Lecturer
Psychology
B.A., Bryn Mawr College, Pennsylvania; Ph.D., Duke University, North Carolina.

Wolf, Stanley (1979) ..... Associate Professor
Electrical Engineering
B.S., M.S., Polytechnic Institute of Brooklyn; Ph.D., University of California, Santa Barbara.

Wollmer, Richard D. (1970) ..... Professor
Quantitative Systems
B.A., Pomona College; M.A., Columbia University; Ph.D., University of California, Berkeley.

Wood, Eunice M. (1968) ..... Professor
Biology
Assistant to the Vice President for Academic Affairs
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Woods, Marianne R. (1981) ..... Director of Research
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Wool, Steven H. (1986) ..... Associate Professor
Microbiology
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Woollett, Edwin L. (1966) ..... Professor
Physics
B.S., University of Missouri; Ph.D., Kansas State University.

Wuesthoff, Robert W. (1959) ..... Professor
Physical Education
B.A., San Jose State University; M.A., Stanford University.

Wurzer, David J. (1972) ..... Associate Professor
Physical Education
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Wynston, Leslie K. (1965) ..... Professor
Chemistry
B.S., San Diego State University; M.S., Ph.D., University of California, Los Angeles.

Yano, Alva F. (1963) ..... Professor
Physics
B.S., California Institute of Technology; M.A., University of Southern California; Ph.D., University of Rochester.

Yates, Jerry W. (1974) ..... Professor
Design
B.A., California Polytechnic State University, San Luis Obispo; M.A., Indiana State University.

Yates, Jo Ann R. (1968) ..... Professor
Communicative Disorders
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Yeh, Hen-Geul (1983) ..... Associate Professor
Electrical Engineering
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Yen, Bing Cheng (1964) ..... Professor
Civil Engineering
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Ying, William H. (1964) ..... Professor
Civil Engineering
B.S., Taiwan Provincial Chenkung University; M.S., University of Missouri School of Mines and Metallurgy; Ph.D., Oklahoma State University.

Yousef, Fathi S. (1972) ..... Professor
Speech Communication
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Yperman, Pierre (1963) ..... Associate Professor
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B.A., M.A., University of Southern California; Ph.D., Claremont Graduate School.

Zagustin, Elena (1967) ..... Professor
Civil Engineering
Civil Engineer, Central University, Venezuela; M.S., Ph.D., Stanford University.

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The California State University

The individual California State Colleges were brought together as a system by the Donahoe Higher Education Act of 1960. In 1972 the system became The California State University and Colleges and in 1982 the system became The California State University. Today, 18 of the 19 campuses have the title "university."

The oldest campus — San Jose State University — was founded as a Normal School in 1857 and became the first institution of public higher education in California. The newest campus — California State College, Bakersfield — began instruction in 1970.

Responsibility for The California State University is vested in the Board of Trustees, most of whose members are appointed by the Governor. The Trustees appoint the Chancellor, who is the chief executive officer of the system, and the Presidents, who are the chief executive officers on the respective campuses.

The Trustees, the Chancellor, and the Presidents develop systemwide policy, with actual implementation at the campus level taking place through broadly based consultative procedures. The Academic Senate of The California State University, made up of elected representatives of the faculty from each campus, recommends academic policy to the Board of Trustees through the Chancellor.

Academic excellence has been achieved by The California State University through a distinguished faculty, whose primary responsibility is creating a learning environment where a student might grow with effective teaching. While each campus in the system has its own unique geographic and curricular character, all campuses, as multipurpose institutions, offer undergraduate and graduate instruction for professional and occupational goals as well as broad liberal education. All of the campuses require for graduation a basic program of "General Education-Breadth Requirements" regardless of the type of bachelor's degree or major field selected by the student.

The CSU offers more than 1,500 bachelor's and master's degree programs in some 200 subject areas. Nearly 500 of these programs are offered so that students can complete all upper-division and graduate requirements by part-time late afternoon and evening study. In addition, a variety of teaching and School service credential programs are available. Many faculty members are involved in instructionally-related research projects. A limited number of doctoral degrees are offered jointly with the University of California and with private institutions in California.

System enrollments total approximately 325,000 students, who are taught by a faculty of 19,100. Last year the system awarded over 50 percent of the bachelor's degrees and 30 percent of the master's degrees granted in California. More than 900,000 persons have been graduated from the 19 campuses since 1960.

Presidents and addresses of the constituent campuses:

California State College, Bakersfield
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Bakersfield, California 93311-1099
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(805) 833-2011

California State University, Chico
1st & Normal Streets
Chico, California 95929
Dr. Robin S. Wilson, President
(916) 895-6116

California State University, Dominguez Hills
Carson, California 90747
Dr. Jack Brownell, Acting President
(213) 516-3300

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Shaw and Cedar Avenues
Fresno, California 93740
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California State University, Fullerton
Fullerton, California 92634
Dr. Jewel Plummer Cobb, President
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California State University, Hayward
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Humboldt State University
Arcata, California 95521
Dr. Alistair W. McCrone, President
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Long Beach, California 90840
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Northridge, California 91330
Dr. James W. Cleary, President
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San Jose State University
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California Polytechnic State University, San Luis Obispo
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Dr. Warren J. Baker, President
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Rohnert Park, California 94928
Dr. David W. Benson, President
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California State University, Stanislaus
801 West Monte Vista Avenue
Turlock, California 95380
Dr. John W. Moore, President
(209) 667-3122

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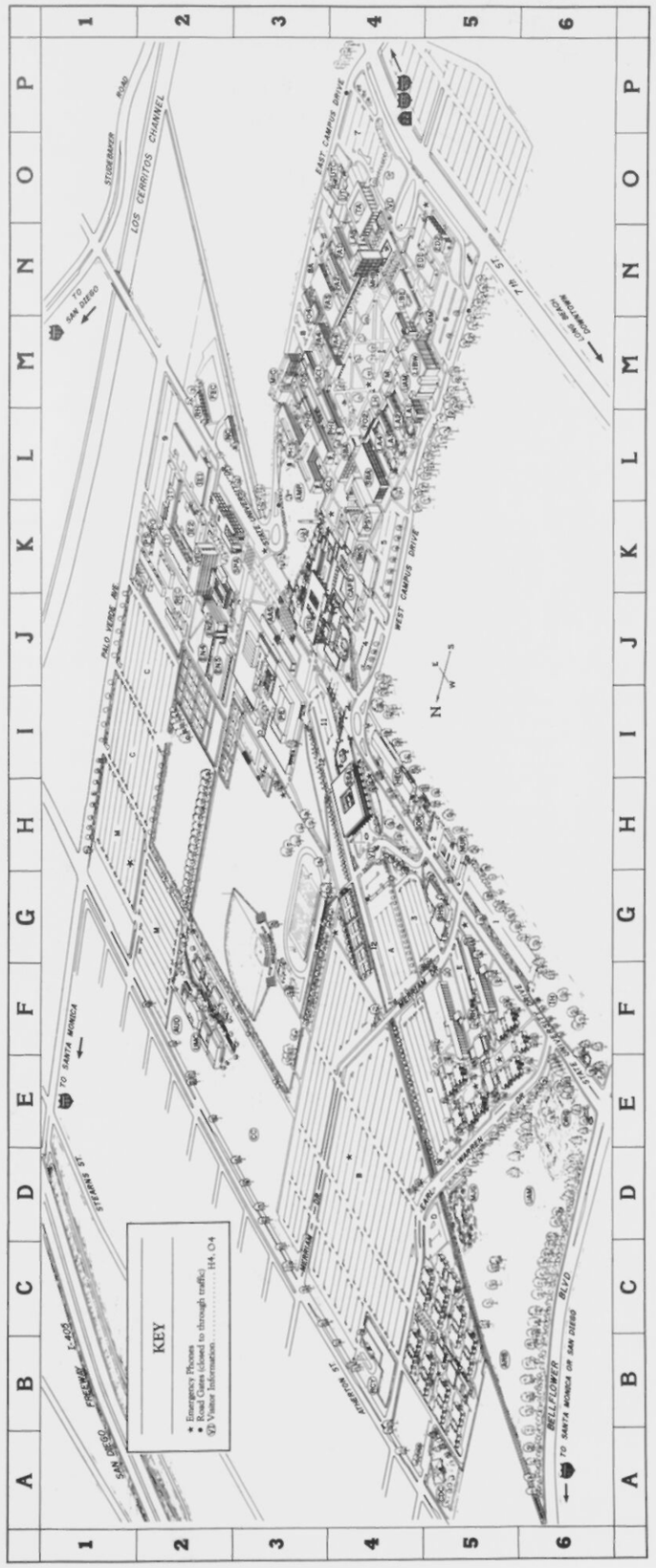

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Long Beach, California 90840
Address correction requested

3 000019 36

Article. V.

The Congress, whenever two thirds of both Houses shall deem it necessary, shall propose Amendments to this Constitution, or, on the Application of the Legislatures of two thirds of the several States, shall call a Convention for proposing Amendments, which, in either Case, shall be valid to all Intents and Purposes, as Part of this Constitution, when ratified by the Legislatures of three fourths of the several States, or by Conventions in three fourths thereof, as the one or the other Mode of Ratification may be proposed by the Congress; Provided that no Amendment which may be made prior to the Year One thousand eight hundred and eight shall in any Manner affect the first and fourth Clauses in the Ninth Section of the first Article; and that no State, without its Consent, shall be deprived of its equal Suffrage in the Senate.

Article. VI.

All Debts contracted and Engagements entered into, before the Adoption of this Constitution, shall be as valid against the United States under this Constitution, as under the Confederation.

This Constitution, and the Laws of the United States which shall be made in Pursuance thereof, and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.

The Senators and Representatives before mentioned, and the Members of the several State Legislatures, and all executive and judicial Officers, both of the United States and of the several States, shall be bound by Oath or Affirmation, to support this Constitution; but no religious Test shall ever be required as a Qualification to any Office or public Trust under the United States.

Article. VII.

The Ratification of the Conventions of nine States, shall be sufficient for the Establishment of this Constitution between the States so ratifying the Same.

The Word, "the," being interlined between the seventh and eighth Lines of the first Page, the Word "Thirty" being partly written on an Erasure in the fifteenth Line of the first Page, the Word "is" between the fifth and sixth Lines of the second Page, and the Word "and" being interlined between the thirty third and thirty fourth Lines of the second Page.

Done in Convention by the Unanimous Consent of the States present the Seventeenth Day of September in the Year of our Lord one thousand seven hundred and Eighty seven and of the Independance of the United States of America the Twelfth. In Witness whereof We have hereunto subscribed our Names,

Attest William Jackson Secretary

Go. Washington
Presidt and deputy from Virginia

$5.50 plus tax