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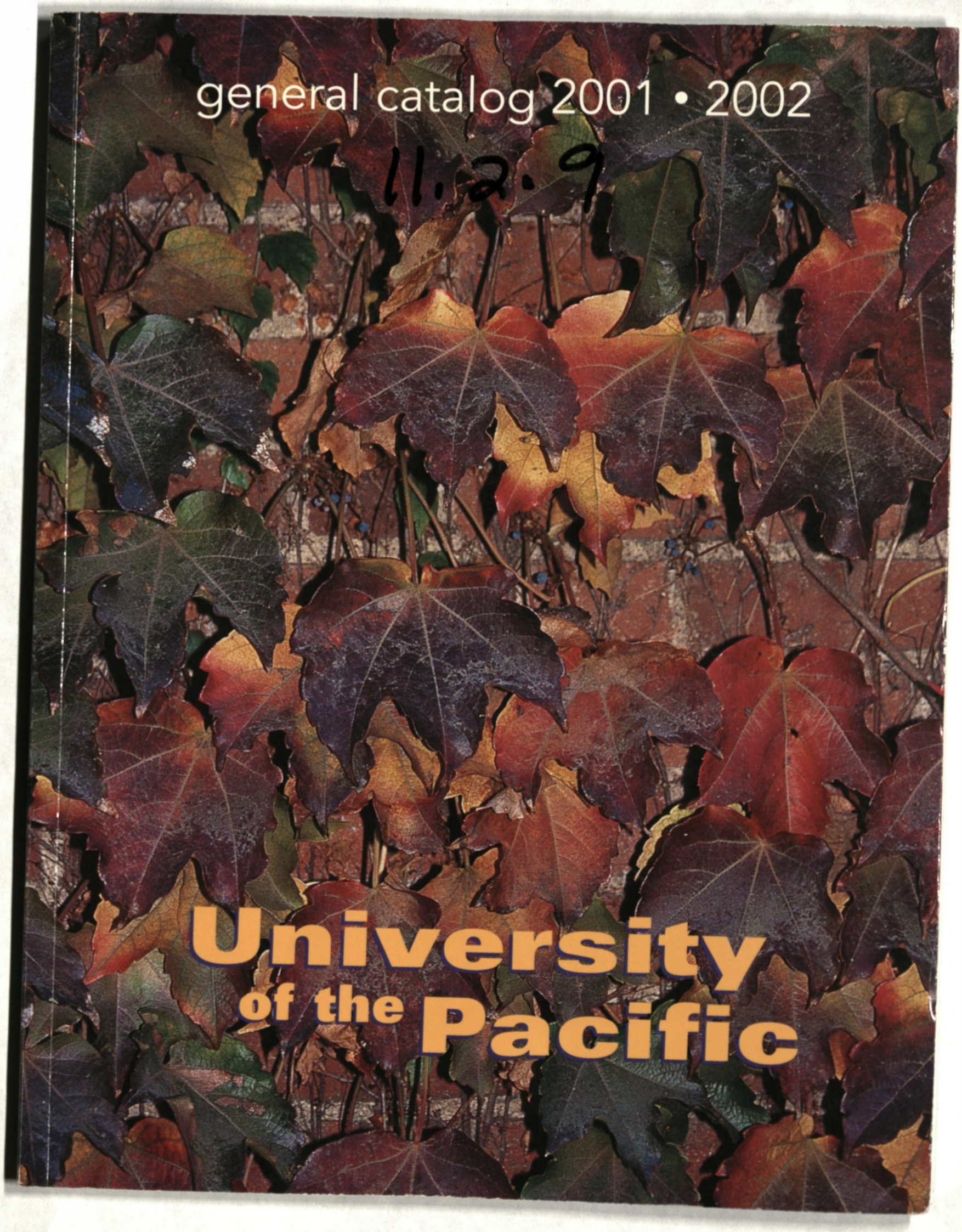

University of the Pacific

general catalog 2001 • 2002

Academic Divisions of the University

College of the Pacific *(Arts & Sciences)*

Conservatory of Music

Eberhardt School of Business

Gladys L. Bernerd School of Education

School of Engineering

School of International Studies

Thomas J. Long School of Pharmacy and Health Sciences

The Graduate School

School of Dentistry, San Francisco

McGeorge School of Law, Sacramento

Center for Professional and Continuing Education

university of the pacific
general catalog 2001-2002

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3601 Pacific Avenue
Stockton, California 95211

Accreditation

The University of the Pacific is accredited by the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges.

Stockton Campus

Procedures, rules, regulations, services, tuition, etc., vary on the three campuses of University of the Pacific. This catalog states those for the schools and colleges of the University located on the Stockton campus. The University reserves the right to change fees, modify its services or change its programs at any time and without prior notice being given. General information pertaining to the School of Dentistry in San Francisco and McGeorge School of Law in Sacramento is included here. Specific provisions for these two schools are stated in their catalogs.

Statement of Non-discrimination

The University of the Pacific does not discriminate in the administration of any of its educational programs, admissions, scholarships, loans, athletics or other University activities or programs on the basis of race, color, national and ethnic origin, handicap, sexual orientation or preference, sex or age. This notice is given pursuant to the requirements of Title IX of the Educational Amendments of 1972, Title VII of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973 and amendments and other laws, orders and regulations governing discrimination. The University of the Pacific has designated the Director of Human Resources to coordinate the University's efforts to comply with laws, orders and regulations governing discrimination. Any person having a complaint should contact in writing: The Director of Human Resources, University of the Pacific, 3601 Pacific Avenue, Stockton, CA 95211.

a history of innovation

The University of the Pacific's mission is to provide a superior, student-centered learning environment integrating liberal arts and professional education and preparing individuals for lasting achievement and responsible leadership in their careers and communities.

The University of the Pacific was established by pioneer Methodist ministers in 1851 as the first chartered institution of higher learning in California. Originally founded in Santa Clara, the institution moved to College Park near San Jose in 1871 and to its present location in Stockton in 1924.

University President Donald V. DeRosa began his service in 1995 and is only the fifth president since the move to Stockton in 1924. Tully C. Knoles presided during the move from San Jose and served until he was succeeded by Dr. Robert E. Burns in 1946. Dr. Burns served as president until his death in 1971. Dr. Stanley E. McCaffrey was named president in 1971. When he retired in 1987, he was succeeded by Dr. Bill L. Atchley, who served until 1995.

Throughout its history Pacific has been recognized as a leader in educational innovation. It provided the West Coast with the first medical school in 1858 (it later became part of Stanford and today is California Pacific Medical Center), the first coeducational campus in 1871, the first conservatory of music in 1878, the first "cluster colleges," and the first and only four-year private institution in the Central Valley. Pacific was first in the nation to offer an undergraduate teacher corps program, the first to send an entire class to an overseas campus and the first to establish a Spanish-speaking inter-American college.

The School of Education was established shortly after the move to Stockton in 1924. It was renamed the Gladys L. Benerd School of Education in 1992 in honor of the alumna's endowed gift. The University experienced its greatest growth and a broadening of its base under the administration of Dr. Burns. In 1955 it opened its School of Pharmacy and in 1956 its Graduate School. The School of Engineering was established in 1957. In 1962 the College of Physicians and Surgeons, a school of dentistry founded in San Francisco in 1896, merged with University of the Pacific and became the University's San Francisco campus.

In recognition of this growth, the name of the institution was changed in 1961 from "College" of the Pacific to "University" of the Pacific. The name "College of the Pacific" was retained for the University's central liberal arts college. It is dedicated to the preparation of citizen leaders who take responsibility for their communities as well as their careers.

In keeping with the University's role as an educational innovator, a new concept in higher education in the United States found expression in the establishment of the first "cluster college," Raymond College, in 1962. Elbert Covell College (1963), became the first bilingual-bicultural college in the country. McGeorge College of Law, an independent law school founded in Sacramento amalgamated with the University in 1966 as McGeorge School of Law. A third cluster college, Callison College (1967), focused on non-western studies and featured a year of study in an Asian culture.These concentrations in global study became Pacific's School of International Studies, the first university-based undergraduate school of international studies in California. The cluster college concept was discontinued in 1982.

In the fall of 1977, the Department of Business Administration of College of the Pacific was reorganized to become the School of Business and Public Administration. In 1995 it was renamed Eberhardt School of Business in honor of the Eberhardt family's endowed gifts. The Center for Professional and Continuing Education, reorganized recently, is designed to help both traditional and non-traditional students develop and improve their professional skills and abilities.

In 1995, Pacific issued the first four-year guarantee whereby students are assured completion of the Bachelor of Arts degree in four years. Accelerated programs announced by President DeRosa enable students to complete undergraduate studies in combination with a law degree in "3+3" years. The School of Dentistry and School of Pharmacy and Health Sciences offer similar accelerated programs. In this spirit of innovation, Pacific is currently shaping bold new plans for the years ahead.

The vision statement of the University states, "University of the Pacific will be among the best national universities, known for linking liberal arts and professional education at both undergraduate and graduate levels through distinctive, innovative curricular and co-curricular programs of exceptional quality and high value. Pacific will become a national leader in the creative use of experiential learning and leadership development."

university of the pacific

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Introduction

The University of the Pacific is committed to educating students by offering baccalaureate and post-baccalaureate degrees in the liberal arts and sciences and in professional education. Through studies devoted to comprehensive learning, specialized study, scholarly and creative activity and lifelong educational development, the University strives to provide a total educational environment for students – one that encourages maximum academic, personal and social development in an intellectual community of students, faculty and staff.

A student's formal education at Pacific consists of three parts:

1) the major program or area of specialization,

2) the Liberal Learning Program and other facets of a structured general education, and

3) elective courses through which a student may pursue a variety of individual interests.

The departmental majors and professional degree programs are designed to give students either extended experience in an academic discipline or preparation for specific careers. The Liberal Learning Program is designed to provide students with a breadth of knowledge and understanding regardless of their areas of specialization and defines a common core of the education of all Pacific graduates. The University assumes that its graduates will move into a changing world that will require of them the capacity to add to and to adapt their existing knowledge and professional skills; the general education program will be a major factor in providing Pacific's students with the basis for lifelong learning. The diversity of educational programs and the organizational structure of the University allow students a broad choice in the selection of elective courses beyond those required for their major programs and for general education.

The University's main campus in Stockton combines many of the advantages of a larger university with those of a small liberal arts college. A variety of programs in the arts and sciences plus a number of professional schools provide students with a wide range of choices in selecting their majors and in pursuing other educational interests. Active graduate programs in a number of areas contribute an additional dimension of academic richness for the undergraduate student. Although about two-thirds of Pacific's students are from California, the Stockton campus student body of approximately 4,150 is large enough to include a cosmopolitan mixture of students from throughout the United States and from many foreign countries. At the same time, the relatively small size of the student body and the fact that almost half of the students live on, or within a block or so of the campus, creates the atmosphere of a small residential campus in which most students quickly begin to feel at home. Relatively small classes, a faculty deeply committed to undergraduate teaching, and a wide variety of extracurricular organizations and activities further aid students in attaining the feeling that they are an integral part of the University community both academically and socially.

Academic Divisions of the University

The University's schools and colleges give an indication of the richness and diversity of educational programs available to students at Pacific. The details on each of these school's programs and curriculum can be found later in this catalog.

College of the Pacific (liberal arts and sciences)

At the center of the broad range of educational opportunities open to students on the Stockton campus is the College of the Pacific, the core division of arts and sciences. Some 1,400 students are pursuing at least one of the more than 50 major programs offered by the College, and most students in the professional schools also take varying amounts of work within the college of arts and sciences. College of the Pacific offers majors in most of the traditional areas of the physical and life sciences, the humanities and the social and behavioral sciences, as well as a number of interdisciplinary programs which cut across traditional fields of knowledge.

Conservatory of Music

Students in the Conservatory of Music may choose among majors in composition, performance, music education, music history, music therapy and music management. In addition to these programs currently pursued by 200 students, the Conservatory provides the opportunity for students throughout the University to develop or refine musical skills through courses in applied music.

Eberhardt School of Business

Students in the Eberhardt School of Business are educated for management positions in business, government and not-for-profit organizations. Approximately 525 students are enrolled in the School, where they may specialize in business administration.

Gladys L. Benerd School of Education

The Gladys L. Benerd School of Education prepares students for careers in teaching, counseling and administration at the elementary and secondary school levels. Some 400 students, two-thirds of them at the graduate level, are enrolled in the School of Education and a number of other students take work in the School in preparation for a teaching credential while pursuing a major in one of the other schools or colleges on campus.

School of Engineering

The School of Engineering, with some 375 students, offers programs in electrical, civil, computer and mechanical engineering as well as in engineering management and engineering physics. An integral part of the engineering curriculum is the program of cooperative education in which students spend a year in supervised, on-the-job engineering work in industry.

School of International Studies

The School of International Studies, the newest school on campus, has 100 students enrolled. All students in the School must spend at least one semester abroad and may pursue one of five majors: international and regional studies, international relations, global economic relations, international environmental policy, or a self-designed major.

Thomas J. Long School of Pharmacy and Health Sciences

The School of Pharmacy and Health Sciences offers the Doctor of Pharmacy degree. Some 1,025 students are enrolled in the School, including about 150 undergraduates pursuing pre-pharmacy studies in preparation for beginning the professional program. The Department of Speech-Language Pathology is housed in the School as well as the graduate program in Physical Therapy.

Graduate School

The University's post-baccalaureate division, the Graduate School, offers study in teacher credential programs, master's degrees in 14 disciplines, and doctorates in education and pharmaceutical sciences. Students who hold a baccalaureate degree from an accredited college or university with a qualifying grade point average and appropriate graduate-level entrance examination results, may pursue Graduate School programs. These include California teaching credentials, the degrees of Master of Artsor Science, Master of Business Administration, Master of Music, Master of Education, Doctor of Education, or the Doctor of Philosophy. Dual professional-graduate degree programs exist for the M.B.A./J.D. and Pharm.D./M.S. Pharm.D./Ph.D. and chemistry graduate programs are included in the Pharmaceutical Sciences Graduate Program.

McGeorge School of Law and School of Dentistry

In addition to these schools and colleges on the Stockton campus, the University includes the McGeorge School of Law, located in Sacramento, and the School of Dentistry in San Francisco. Some 1,075 students are enrolled at McGeorge in both day and evening programs while the Dental School has an enrollment of about 450 students.

General Education

The general education program is designed to provide all students with a common educational experience and to foster a sense of the interdependence of human knowledge, action and values. The program has two main components: Breadth Requirements and Foundation Skills. Refer to the General Education section for additional information.

Breadth Requirement

Freshmen are required to take Mentor Seminars I, II and III. They may also be required to meet other requirements mandated by changes in the general education program. Students should check with their school or college dean's office for specific general education requirements. In addition, students are to undertake a "PATH" of six or nine courses in length. Students with the assistance of their adviser select courses within three categories, each of which has subdivisions.

The Individual and Society
- Individual and Interpersonal Behavior
- Society and Culture in the United States
- Society and Cultures Outside the United States

Human Heritage
- Literature, Letters and Language
- Fundamental Human Concerns
- Practice and Perspective in the Visual and Performing Arts

Natural World and Formal Systems of Thought
- Life and Physical Laboratory Sciences
- Formal Systems of Thought
- Science, Technology and Society

By taking classes in all of these areas the student will acquire capacities and habits of thought which are necessary in any endeavor. These include familiarity with a broad spectrum of information and knowledge, qualities of judgment which will aid in the effective use of knowledge, an intellectual curiosity that can be a sustaining influence throughout life, and an appreciation of the different approaches and styles characteristic of the various academic disciplines.

All bachelor's and first professional degree students on the Stockton campus must complete a minimum of two courses in each category. College of the Pacific students must complete three in each category and one in each subdivision.

Foundation Skills

The University evaluates students to identify those with deficiencies in reading, written expression and quantitative skills. These students are required to take courses designed to improve their understanding and performance in these areas. The reading, writing and quantitative skills requirements are part of the University-wide general education program that must be met before a student graduates with a bachelor's degree or a first professional degree.

Elective Courses

Students in most academic programs at the University find that in addition to the courses required for their major and for general education they have space in their schedules for a number of elective courses. The diversity of academic fields and specialties represented on the Stockton campus provides the student with a wide choice in the selection of electives. The University's policy is to allow students in any program to take courses in any other school or college on campus, Some students use this freedom primarily to explore unfamiliar academic areas, some to pursue a variety of secondary intellectual interests, and some to develop another area of emphasis as an academic minor or even a formal second major.

Accelerated Programs

The University offers joint-degree programs between liberal studies and professional programs which result in accelerated learning. Requirements include varying degrees of demands on the student to take certain courses and maintain grade point averages. This educational linking is offered through the Eberhardt School of Business with the Five-Year Bachelor's/M.B.A., the School of Engineering offers an Accelerated Engineering Program (AEP) in four years and offers an Engineering Management/MBA program, the School of Pharmacy and Health Sciences offers a Pre-Pharmacy Advantage Program, the School of Dentistry offers a Pre-Dental/ D.D.S. accelerated program, and the McGeorge School of Law offers a 3+3 Bachelor's/J.D. or a Four-Year J.D./M.B.A. Details on these programs can be found in each school's section later in this publication.

Admission Requirements

Introduction and Deadlines

The University of the Pacific seeks applications from students who have shown by past achievement that they have attained a high level of scholarship, initiative and maturity, who possess good character, and have a serious interest in learning. Admission is selective and each applicant will be considered on the basis of a variety of factors which are evaluated through a very personalized review. The University is interested in a student body characterized by a diverse ethnic, economic and geographical background.

It is strongly recommended that freshman and transfer applications for the fall semester be submitted by February 15, and for the spring semester by December 15. Also, ALL students seeking financial assistance are advised to complete all application procedures by February 15. Applications can be considered after these dates but space may be limited. Because of certain special procedures in the handling of applications for international students, these applications should be completed earlier than U.S. applications. Candidates for the Doctor of Pharmacy program should refer to the section on requirements for Pharmacy applicants for deadline information.

Applications are reviewed on a rolling basis once they are complete. Most students will receive notification about their application between mid-January and mid-March. The University of the Pacific adheres to the May 1 national candidates reply date. It is on or before this date that the University expects a reply to its offer of admission for the fall semester.

Interviews

Formal interviews are not usually required for freshman or transfer applicants (except Pharm.D.) although prospective students are encouraged to visit the campus. However, the University does reserve the right to ask prospective students to appear for an interview as part of the admissions procedure, when such an interview appears appropriate and would assist in determining the applicant's qualifications for admission.

Campus Visits

Prospective students are invited to visit the campus as guests of the University. It is recommended that prospective students visit the campus when classes are in session, avoiding weekends or University vacation periods. (See Academic Calendar) The Office of Admissions will arrange a schedule for a prospective student's visit which may include appointments with faculty members, an admissions counselor, a financial aid counselor, a tour and/or the opportunity to spend the night in a residence hall.

For individuals or small groups, student-led tours are available Monday through Friday at 11:00 a.m. and 2:00 p.m. Tours for larger groups are also available, but must be planned in advance with the Office of Admissions. The Office of Admissions is open Monday through Friday from 8:30 a.m. to 5:00 p.m. and on selected Saturdays from 9:00 a.m. to noon. Saturday visits and tours are by appointment only. Please call the Office of Admissions to schedule a visit to campus.

Appointments, Information and Forms

For information on an area of specific interest, for application forms, or for an admissions appointment, write or call: Office of Admissions, University of the Pacific, Stockton, CA 95211. Telephone: (209) 946-2211 or (800) 959-2867; Fax: (209) 946-2413; Web site: www.uop.edu; e-mail: admissions@uop.edu.

Admission of Freshman Students

Regular Admission

Freshman applicants are those who are either applying while seniors in high school or those who have not taken any college courses since earning their high school diploma or its equivalent. Verification of graduation from an accredited secondary school is required prior to the beginning of the first term of attendance. Exceptions may be made for those who have passed either the General Education Development (GED) Test or the High School Proficiency Exam, or who have graduated from a secondary school which is a formal candidate for accreditation.

Special emphasis is placed on the coursework selected, the grades achieved in those courses, and the cumulative grade point average. Supporting recommendation from a school counselor or teacher is also important. In addition, the Admissions Committee reviews the results of either the SAT-I: Reasoning Test, or the ACT.

The essay submitted with the University of the Pacific Application is also carefully read, and the committee looks at co-curricular activities. Applicants are selected for admission after a careful review of the entire application file.

A completed Application Includes:

1) **Application Form and Fee:** The form must be completed, dated and signed by the applicant. The non-refundable fee is $50, payable to University of the Pacific. Please write the student's name and Social Security Number on the check. Fee waiver requests must come from a school administrator.

2) **Essay:** A one- to two-page essay is required. Please type or print your name and Social Security Number on each page.

3) **Recommendation:** One academic recommendation on official letterhead is required. It should be from a teacher, counselor or adviser.

4) **Transcripts:** An official, sealed copy of transcripts for all high school and/or college coursework including courses offered by extension or correspondence, is required. Failure to acknowledge and submit all records is grounds to deny or revoke admission, or for dismissal from the University or revocation of degrees earned. Pre-Pharmacy applicants must also submit transcripts for any college work taken while still in high school. Transfers with more than 30 transferable semester units do not need to have high school transcripts sent, unless requested. Final official transcripts must be submitted prior to the first day of classes, and must show satisfactory work or the office has the right to revoke the offer of admission.

5) **Test Scores:** All freshman applicants (and transfers with fewer than 30 transferable units) are required to submit scores from either the ACT or the SAT-I: Reasoning Test. We use the highest individual scores achieved in considering your application.

Special Requirements for Music Applicants

In addition to academic requirements, those applying for admission to the Conservatory of Music must present evidence of music talent and achievement by performing an audition on the principal performing medium. Those planning to major in composition must also submit an original composition. Auditions are held at the Conservatory at regular intervals throughout the academic year. Students unable to appear in person may substitute a recorded audition. Audition information and arrangements should be requested from the Conservatory of Music at (209) 946-2418.

Special Requirements for Professional Pharmacy (Pharm.D.) Applicants

Students seeking admission to the Doctor of Pharmacy degree program must have completed a minimum of 64 transferable units prior to matriculation. These units must be in specific courses which meet the University of the Pacific School of Pharmacy and Health Sciences requirements. Therefore, no application to the Doctor of Pharmacy program will be accepted unless the applicant has taken, is taking, or plans to take, all of these pre-pharmacy courses prior to enrollment. (See specifics in School of Pharmacy section.)

Admission to the Doctor of Pharmacy degree program is competitive. Factors considered in the application review include overall grades, math/science grades, difficulty of course loads, academic performance trends, curriculum selection, recommendations, involvement in clubs, organizations and community service, work experience, and a mandatory interview.

Candidates are required to postmark completed applications no later than December 15. It is critical that candidates submit all required information in a timely manner. Applications are not reviewed until they are complete. Students completing their files after December 15 will be considered on a space available basis only. A completed application includes: application form and fee, two recommendations, and official transcripts from all colleges and universities attended. Students with international coursework may be asked for supplemental information such as course descriptions. Students whose native language is not English may be requested to submit scores from the Test of English as a Foreign Language (TOEFL).

Please refer to School of Pharmacy section for application requirements. Direct any questions about the School of Pharmacy and Health Sciences to the Coordinator for Pharmacy Admission at (209) 946-2211.

Recommended High School Preparation

Although the University of the Pacific does not require a fixed pattern of secondary school courses, applicants are expected to complete a solid college preparatory program. Generally speaking, preparatory courses are those in the fields of English, social sciences, foreign languages, laboratory sciences and mathematics.

It is strongly recommended that the following be included in the secondary school program: four years of English; three years of mathematics including geometry and intermediate algebra; at least two years of laboratory science taken in the 10th year or later (biology, chemistry or physics); at least two years of the same foreign language; one year of U.S. history or government; one year of fine or performing arts; and additional academic courses – all aimed at improving analytical abilities, promoting artistic development and strengthening written and oral skills.

Students interested in economics or business administration should take advanced mathematics in high school. Students interested in mathematics, science, engineering or pharmacy should include biology, chemistry and physics as well as advanced mathematics in their secondary school program. (See chart for recommended course of study.)

Recommended Courses

Course	Science & Technical Majors	All Others
English	4 units	4 units
Fine Arts/Performing Arts	1 unit	1 unit
Foreign Language (one)	2 units	2 units
U.S. History or Government	1 unit	1 unit
Mathematics*	4 units	3 units
Laboratory Science**	3 units	2 units
Academic Electives***	1 unit	3 units
	16 units	16 units

**Suggested math sequence for science and technical majors: algebra, geometry, algebra II, trigonometry or calculus. Suggested math sequence for all other majors: algebra, geometry, algebra II.*

***Biology, chemistry and physics are recommended for all students pursuing science and technical disciplines.*

****Academic elective courses should be in advanced foreign languages, mathematics, laboratory sciences or other solid preparatory courses.*

Since the senior year in high school is perhaps the most important in preparing for college, a minimum program of four academic courses per semester is particularly recommended for that year.

Students are also encouraged to take honors and advanced placement courses whenever possible. In reviewing applications, the Office of Admissions gives favorable consideration, not only to the overall strength of the academic program, but to the fact that honors and advanced placement courses have been taken.

Advanced Placement, International Baccalaureate and College Credits Earned While In High School

College credit (six units per examination) may be granted to students who achieve scores of three, four or five on Advanced Placement Examinations and/or scores of four through seven on International Baccalaureate exams taken at the higher level. In addition, students who have taken college courses prior to high school graduation will receive credit toward University of the Pacific graduation, as long as the credit is transferable, is earned at an accredited college and appears on a transcript generated by that college. The purpose is to recognize advanced work of quality already accomplished by certain students, to preclude duplication of courses, and to provide increased opportunity for exceptional students to take elective work in their undergraduate programs. (See also the CLEP information below.)

College-Level Examination Program (CLEP)

College credit may be granted, within certain limitations, for the General and Subject Examinations offered through the College-Level Examination Program (CLEP) of the College Board when satisfactory scores have been earned. This program may be utilized by entering freshmen who take the tests prior to matriculation for the purpose of earning advanced standing credit, by regularly enrolled students for accelerating their programs or demonstrating competency in certain subjects, or by candidates for transfer who desire advanced credit or present the tests in support of applications for admission. Further details can be obtained from the Office of Admissions.

Maximum Units by Examination

A maximum of 20 semester units will be accepted from any or all of the following: courses taken in regionally accredited correspondence schools, extension courses, or credit by examination. This limit does not apply to credit earned through Advanced Placement (A.P.) Examinations or the International Baccalaureate (I.B.) Program.

Honors at Entrance

This special form of recognition is given to members of the freshman class who have maintained an outstanding academic record in secondary school. Special application is not necessary, since all who file for admission by February 15 will be considered.

Early Action Admission Option

The University of the Pacific offers a non-binding Early Action plan for high school students with exceptionally strong high school records, test scores and recommendations. Applicants wishing to be considered for Early Action must have a completed application on file with the Office of Admissions postmarked by December 15. Early Action applicants will be notified in January. Those admitted under this plan have the same national candidates reply date of May 1 as all other admitted students.

Early Admission Plan

The University may occasionally admit a student during their junior year in high school if they have exceptionally strong academic records, test scores and are recommended by their high school principal as having the maturity to adjust satisfactorily to the college environment. Admission under this plan is strictly contingent on the student earning their diploma (highly preferred), or passing the GED Test or High School Proficiency Exam, prior to the beginning of the first term of attendance.

Admission of Undergraduate Transfers

Regular Admission

Transfer students receive consideration for admission to Pacific under two options.

Option 1 – (Eligible for admission from high school): If a student would have qualified for admission to Pacific as a high school senior, and is in good academic standing at the college in which they are currently enrolled, then he/she is generally eligible for admission. For students who would have qualified as freshmen, there is no minimum number of units required for transfer.

Option 2 – (Not eligible for admission from high school): If a student would not have qualified for admission to Pacific as a high school senior, he or she may apply for transfer to Pacific after completing at least one year of full-time study (30 or more transferable semester units) at another two- or four-year college or university. The recommended minimum grade point average is 2.50.

Generally, transfer students will not be considered for admission if they are not in good standing at the last college attended, are on academic or disciplinary probation, or have been suspended or disqualified. Special consideration may be given in unusual circumstances.

A Completed Application

Please refer to the information under this heading in the Freshman Admission section above.

Transferable Courses and Unit Limitations

In interpreting transfer credit, the University of the Pacific generally accepts those courses which are of the same quality and equivalency as courses offered on this campus. The maximum number of units that will be accepted from a community college is 70 and no community college credit will be accepted after a student has completed 70 units from all institutions attended. (See Limitations on Credit under Academic Regulations).

Special Admission

Certain transfer applicants, such as veterans, or adult re-entry students and others with special circumstances, will be given special consideration for admission when it is determined that they have the potential for satisfactory college work.

Admission of International Students

The University of the Pacific welcomes applications from international students and provides complete support services for them through International Programs and Services. The University is authorized to issue the I-20 and IAP-66 forms to international students for immigration purposes and provides immigration services to enrolled students.

International applicants whose native language is not English are required to provide scores from the Test of English as a Foreign Language (TOEFL). The minimum score accepted for admission is 475. SAT-I: Reasoning Test results are not routinely required of international students applying from outside the U.S. unless they have graduated from an American-style high school, or if they are interested in consideration for the Accelerated Dental or Pre-Pharmacy Advantage Programs.

In order to comply with regulations of the United States Immigration and Naturalization Service, the University of the Pacific requires international applicants who are not citizens or permanent residents of the United States to submit a detailed Certification of Finances showing sufficient financial resources for study at the University. Other special information and instructions regarding the admission of international students will be provided upon request.

Special Requirements for Non-Native Speakers of English

Applicants who are not native speakers of English will be expected to provide evidence of proficiency in the English language. Such proficiency may be demonstrated through the academic record itself, or by means of the Test of English as a Foreign Language (TOEFL). The University reserves the right to administer its own English language test to new students and to adjust a student's academic program on the basis of test results.

Admission of Veterans

The University of the Pacific encourages veterans to apply for admission and is approved under Federal and State laws for the training of veterans. Satisfactory completion of a period of military service will be taken into consideration in the evaluation for admission.

Accelerated/Combined Programs

Pre-Pharmacy Advantage Programs

Pacific offers three options which provide for guaranteed admission into our Professional Pharmacy (Pharm.D.) Program, if all pre-pharmacy advantage requirements, including courses taken in sequence at Pacific and minimum GPAs, are met and the formal pharmacy interview (which includes a writing sample) is passed. The current university minimum GPA requirement needed as one part of advancing from any of these Pre-Pharmacy Advantage Programs into our Professional Pharmacy Program is 2.70 overall and 2.70 in selected math/science courses.

The implementation of specific admission criteria for the Pre-Pharmacy Advantage Program are meant to ensure that students have the appropriate time to successfully prepare for advancement into the Professional Pharmacy Program.

The following minimum criteria are valid for students entering in the Fall semester 2001. University of the Pacific reserves the right to change criteria for freshmen entering in subsequent years.

Five-Year (2+3)
Pre-Pharmacy/Pharm.D. Option
Freshmen are admitted directly into the Pre-Pharmacy Program in the School of Pharmacy and Health Sciences. After two years, they advance into the Pharm.D. Program if they have fulfilled all pre-pharmacy advantage requirements. Minimum Criteria: High school GPA of 3.4 (on a 4.0 scale) and either a combined SAT-I score of 1100 (with at least a 500 in both Verbal and Math), or an ACT composite of 25.

Six-Year (3+3)
Pre-Pharmacy/Pharm.D. Option
Freshmen are admitted directly into the Pre-Pharmacy Program in the School of Pharmacy and Health Sciences. After three years, they advance into the Pharm.D. Program if they have fulfilled all pre-pharmacy advantage requirements. Minimum Criteria: High school GPA of 3.0 (on a 4.0 scale) and either a combined SAT-I score of 1000 (with at least a 480 in both Verbal and Math), or an ACT composite of 22.

Seven-Year (4+3)
Bachelor's/Pharm.D. Option
This option is designed for entering freshmen specifically interested in pharmacy who are otherwise admissible to the University, but do not meet the six-year option criteria listed above. These pre-pharmacy applicants will be admitted instead into Pacific's arts and sciences division, College of the Pacific, and pursue a Bachelor of Science degree with a major from either the Department of Biological Sciences or the Department of Chemistry. If they complete their bachelor's degree in four years (but no more than five years) they will be eligible to advance into the Pharm.D. Program if they have fulfilled all of the same pre-pharmacy advantage requirements. This option will ensure that these students are on track from the beginning of their college careers to earn, at least, a Bachelor's degree.

** Please note: There is no formal Pre-Pharmacy Advantage available to a student who attends another institution for a semester or a year or two and then transfers as a science major into Pacific's arts and sciences division. We have excellent undergraduate programs to which transfers are welcome to apply, but once here, these students will compete with those applying from other institutions for space in the Pharm.D. Program.*

Accelerated Dental Programs

Pacific offers three accelerated dental programs to first-time freshmen which combine undergraduate preparation with the only three-year D.D.S. program in the country. Students admitted to any of these programs will be admitted to Pacific's School of Dentistry if they meet the requirements outlined in their pre-dental program acceptance letter. A guaranteed interview option for in-school or transfer students also exists. Students will complete their pre-dental courses at Pacific's main campus in Stockton and their professional courses at Pacific's School of Dentistry in San Francisco.

Any freshman applicant who checks the "Pre-Dental/D.D.S." box on their application for undergraduate admission will automatically be considered for all three programs. Please note that students admitted to the 2+3 program are also automatically admitted into the 3+3 and the 4+3 programs, and those students admitted to the 3+3 program are also admitted to the 4+3 program. It is also important to note that the 2+3 and 3+3 programs do not "accelerate" four years worth of undergraduate study into two or three years. Students in these two programs are taking the same courseload as most students on campus, they are simply taking only those specific courses which will meet the requirements to advance to the School of Dentistry after two or three years.

The following minimum criteria are valid for students entering in the Fall semester 2001. Pacific reserves the right to change criteria for students entering in subsequent years.

Five-Year (2+3)
Pre-Dental/Doctor of Dental Surgery (D.D.S.)
Program allows completion of two years (four regular semesters) of specific pre-dental and general education courses on Pacific's Stockton campus. This is then followed by three years (eight semesters in 36 months) at the School of Dentistry in San Francisco. Upon successful completion of the five-year program, the student will earn a D.D.S. degree. Minimum Criteria: High school GPA of 3.7 (on 4.0 scale) and either an ACT composite score of 31 or a combined SAT-I score of 1350 (with a minimum verbal score of 630). Only students who are coming to Pacific as first-time freshmen are eligible for this program at the time of admission. Others may be considered for it upon completion of one academic year of work at Pacific, (see 3+3 Option I, below).

Six-Year (3+3) Bachelor's/D.D.S.
Program allows for completion of all pre-dental and general education requirements, and the courses for a major in either Biological Sciences or Chemistry in three years (six regular semesters). The credit from the first year of dental school can then be used to earn a bachelor's degree, and the D.D.S. degree is earned upon completion of the third year of dental school. *Option I Criteria:* Students admitted to this program will be reviewed for the 2+3 program after their second semester at Pacific. Students admitted into the 3+3 Program with a minimum high school GPA of 3.6 (on a 4.0 scale) and either

an ACT composite score of 31 or a combined SAT-I score of 1350 (with a minimum verbal score of 630) will be reviewed by faculty and pre-dental advisers by the beginning of the fall term of their second year for possible entry into the 2+3 Program. *Option II Criteria:* The minimum GPA and test score requirements for admission into the 3+3 Program are a high school GPA of 3.6 (on a 4.0 scale) and either an ACT composite score of 29 or a combined SAT-I score of 1270 (with a minimum verbal score of 600). Only students who are coming to Pacific as first-time freshmen are eligible for either of these options at the time of admission.

Seven-Year (4+3) Bachelor's/D.D.S. Program allows students to major in almost any discipline, while completing all pre-dental and general education requirements, prior to entering the D.D.S. program. Minimum Criteria: High school GPA of 3.5 (on 4.0 scale) and either an ACT composite score of 26 or a combined SAT-I score of 1150 (with a minimum verbal score of 600). Only students who are coming to Pacific as first-time freshmen are eligible for this program at the time of admission.

Guaranteed D.D.S. Interview Option for In-School or Transfer Students: In addition to the above programs, any current full-time student (12 units minimum per semester) who completes at least 48 units at Pacific, including significant coursework in the sciences which count toward a science major, will be guaranteed an interview at the University of the Pacific School of Dentistry, if they meet the standards (including college GPA and DAT scores) required of someone in the 4+3 program.

Please note: The Office of Admissions does not admit students to this program. Any student interested in this option should begin working directly with a pre-dental faculty adviser as soon as they enroll or as soon as they know they are interested in pursuing this option.

Five-Year Bachelor's/MBA

Students who successfully complete the appropriate prerequisite and core business courses may earn a Master of Business Administration (MBA) degree in just one additional year. Business students automatically take the appropriate courses, but students majoring in many other subjects may also meet these requirements with careful planning.

Six-Year (3+3) Bachelor's/Juris Doctorate (J.D.)

This program permits qualified undergraduates to enroll at University of the Pacific's McGeorge School of Law in Sacramento during the fourth year and complete a bachelor's degree at the end of the first year of law school. Applicants should indicate their interest in this program by checking the "3+3 Bachelor's/Juris Doctorate" box on the application form. Students must maintain a 3.4 grade point average in their major and a 3.2 cumulative undergraduate GPA. In addition, students must complete the following requirements prior to enrollment at McGeorge: 43 units of general education; a total of 92 units of credit, of which 60 must be completed at University of the Pacific's Stockton campus; completion of all major courses; a minimum LSAT score within the 50th percentile; a recommendation from the dean of the University of the Pacific undergraduate school/college from which the degree will be received; and completion of the McGeorge School of Law application.

Orientation and New Student Advising Program

Orientation for Freshmen

Orientation is designed to introduce students to the intellectual nature of the University. This experience aids each student in understanding their responsibilities and the challenges of contributing to the intellectual life of the University.

Freshman Orientations are two-and-one-half day sessions that take place during the summer and prior to the fall semester. incoming freshmen are assigned to a student and faculty advising team to assist them in planning and registering for a program of study for the first semester. During orientation freshmen become acquainted with their new environment and receive important information on academic disciplines, adjustment to college life, academic programs and other resources.

Orientation for Transfer Students

Transfer students attend a two-day orientation session just prior to the beginning of the fall and spring semesters. During this time, the student will meet with an adviser to determine a program of study that meets his/her needs and that takes advantage of the college-level work already completed.

Orientation for Family Members

Simultaneous with, but completely separate from the student orientation, are sessions for family members of incoming freshmen and transfers. This orientation is designed to acquaint participants with academic offerings, student services and cultural facilities available to students.

Student Advising Program

Students entering college are faced with many adjustments. They will need someone interested in them as individuals to turn to as they begin their academic experience. The Student Advising Program provides each student with two advisers: a faculty member and a trained peer.

In recognition of the fact that many students naturally feel comfortable talking with a peer who has gone through similar situations, the student advisers provide assistance in such areas as time management, taking lecture notes and homework difficulties. In addition, student advisers work with faculty advisers in helping students with program planning and personal adjustment and in referring students to the full range of campus services. For more information call the Student Advising Center at (209) 946-2177.

Office of Retention Services

The Office of Retention Services is a "one-stop" referral center for support services to aid students in their academic success. Any enrolled student may use Retention Services to receive tutoring, study skills sessions, peer counseling, financial aid counseling, academic counseling, or personal counseling. Faculty, staff and students may refer a student who needs academic support. Once a student is referred, peer Retention Student Advisers contact the student to help him or her receive the needed services. The Office of Retention Services also produces the Program of Academic Support (PASS), an individualized plan of access to University resources. Based on an assessment of the student's academic needs, each PASS student helps design his or her own action plan for the semester. PASS is required for some students, but is available to any enrolled student who can benefit from a system of contact and academic resources. The office works in cooperation with the various schools and colleges of the University, as well as the Division of Student Life. For more information, call the Office of Retention Services at (209) 946-2080.

Tuition and Fees

The University of the Pacific is an independent institution. On the Stockton campus each student is charged a tuition fee which covers about three-fourths of the cost of services furnished by the University. The balance of these costs is met by income from endowment and by gifts from regents, parents, alumni and other friends who are interested in the type of education this institution provides.

Overall Costs for the School Year

The annual expenses of a student at the University of the Pacific will depend on a variety of factors. Basic expenses are as follows:

	Resident	Non-Resident
Tuition* per school year, 2001-2002 permitting enrollment for 12 to 18 units in each semester	$21,150	$21,150
Health Fee	230	230
Room and Board (including house fee)	6,730	–
Student Activity Fee	105	105
McCaffrey Center Fee	40	40
Total, per school year	**28,255**	**21,525**
School of Pharmacy and Health Sciences Annual Tuition (Eleven-month program, three terms)	31,725	

**School of Dentistry and McGeorge School of Law tuition and fee schedules are available by contacting those campuses.*

To these amounts should be added certain special fees such as application fee, matriculation fee, and special testing fees which are payable only once. A complete schedule of fees is available upon request at the Office of Admissions or the Business Office.

Expenses for books and supplies, special fees, and personal expenses will usually vary between $2,800 and $2,900 per year.

The University reserves the right to change fees, modify its services or change its programs at any time and without prior notice.

Tuition – Undergraduate Students (per semester)

All schools except Pharmacy and Health Sciences

Full-time (12 to 18 units)	$10,575
Part-time (9 to 11 units) per unit	920
Part-time ($^1/_2$ to $8^1/_2$ units) per unit	725
Excess units above 18 units, per unit	725
Engineering Co-op (full-time) tuition rate	5,287

Tuition – School of Pharmacy and Health Sciences

Full-time (12 to 19 units)	10,575
Part-time (9 to 11 units) per unit	920
Part-time ($^1/_2$ to $8^1/_2$ units) per unit	725
Excess units above 19 units, per unit	725
Pharmacy Clerkship Rotation (full-time)	10,575
Pharmacy Professional Fee*	325

**Required of all undergraduate participants in the professional program with 12 units or more.*

Tuition – Graduate Students (per semester)

16 to 18 units	$10,575
$^1/_2$ to $15^1/_2$ units, per unit	661
Excess units above 18 units, per unit	661

General Fees (per semester)

Fee for Auditors, *per class*	$50

subject to the instructor's permission. Auditing is not available in participation courses such as applied music, physical education, art courses of an applied nature, etc. The student must indicate a desire to audit the course at the time of registration on the registration forms.

Health Services Fee	$115

(income tax deductible as health insurance) Required of all students who room or board on campus. Also required of all others, both graduate and undergraduate, taking 9 units or more, and optional for students taking $^1/_2$ to $8^1/_2$ units.

Student Activity Fee	$52

Required of all students who live in University residence halls and all undergraduates taking 9 units or more; optional for students with $^1/_2$ to $8^1/_2$ units.

McCaffrey Center Fee	$20

Required of all students taking 9 units or more.

Applied Music Fees (per semester)

Private lessons in piano, organ, harpsichord, voice, violin, viola, cello, string bass, guitar, flute, clarinet, oboe, bassoon, trumpet/cornet, tuba, trombone, French horn, percussion, saxophone:*

One $^1/_2$-hour lesson per week	$125
Two $^1/_2$-hour lessons per week	250
Three $^1/_2$-hour lessons per week	375
Harp:	
One $^1/_2$-hour lesson per week	125
Two $^1/_2$-hour lessons per week	250
Three or more lessons per week	375
Applied class lessons in piano, harpsichord, harp, voice, guitar:*	
One unit applied music class lessons	70

Applied music lessons must be arranged through the Conservatory Office. No refunds will be given for occasional absences due to sickness or other causes. Any appropriate refund of applied music fees will be considered from the date the student notifies the Conservatory Office that he/she is dropping. Such refunds will be granted on the prorated basis as determined by the Dean of the Conservatory to students who have withdrawn from such classes before the deadline as established in the current schedule of classes. Practice room fees may be considered for a refund at the discretion of the Dean of the Conservatory.

Charges for Practice Rooms and Instrument Rental:

Practice room rental (required of all students taking applied music)	$10
Organ practice in auditorium, one hour per week (for advanced students only)	7
Organ practice room rental	15
Harpsichord practice room rental	15
Bass, string, and woodwind rental, each	15

**Private lessons and applied class lessons for non-music majors are available only if faculty loads will permit and must be arranged through the Conservatory Office.*

Special Fees

(Partial List)

Matriculation Fee	$100
Transcript Fee	4
Thesis Binding Fee, per volume	10
Petition Fee	25
Late Registration Fee	
1st & 2nd calendar day	No charge
3rd & 4th calendar day	15
5th through 10th calendar day	25
11th through 15th calendar day	50
After 15th calendar day	100

Undergraduate Confirmation Deposit

A deposit of $200 should be sent with student's confirming letter after having been notified of acceptance by the University. The deposit will be applied toward the student's tuition and is nonrefundable after May 1.

Payment of Bills

Tuition and fees are due prior to the first day of each semester. A worksheet reflecting the rates and due dates will be provided by the Student Accounts Office. Students may, if approved by the Student Accounts Office, pay tuition in monthly installments. If a student withdraws or is dismissed during the semester, all outstanding obligations become due and payable on the termination date. International students do not have the privilege of using the monthly payment plan during their first semester at school.

Registration, when accepted by the University of the Pacific, constitutes a financial agreement between the student and the school. Tuition fees and other charges the student incurs including, but not limited to, housing, meal plans, and bookstore charges shall be added to the student account and are considered a loan for an educational benefit.

Students failing to make payments as required will be unable to attend classes or use dining or dormitory facilities. The student understands that all of the above mentioned charges, which may be applied to their account, are due and payable upon receipt of their monthly statement. Any charges not paid as agreed may be subject to interest charges and late payment fees. It is the student's responsibility to insure that all financial aid is properly credited to his/her account. Failure to make any of the scheduled payments under the monthly payment plan may result in the student's ineligibility to register for future semesters and any remaining unpaid balance

will be transferred to the Student Loan Department for servicing.

Upon transfer to the Student Loan Department, the Student Account Note or balance is subject, but not limited, to principal, interest, late charges, collection fees and any legal fees associated with the collection of the debt. Collection costs shall not exceed 30% of the principal, interest, and late charges at the time of acceleration. No diploma or official transcript of credit will be issued until the University bills and student loans/notes have been paid in full. In addition, all institutional loans or other loans guaranteed by the Federal Government must be in good (current) standing prior to the release of diploma or transcripts of credit.

Refunds

The following refund schedule pertains only to tuition and fee charges incurred while attending the University. Housing and meal plan charges are refunded on a prorated basis.

Refunds are based upon a percentage of calendar days.

Withdrawals before classes begin – No charge.

On first day of class – $100 (or 5%, whichever is less).

Within next six calendar days of a semester – $200 (or 10%, whichever is less).

10% of calendar days 90% refund, 10% penalty.

18% of calendar days 80% refund, 20% penalty.

25% of calendar days 60% refund, 40% penalty.

38% of calendar days 40% refund, 60% penalty.

50% of calendar days 25% refund, 75% penalty.

After 50% of calendar days no refund, 100% penalty.

Calendar days of a semester may vary from semester to semester. For exact dates please contact the Student Accounts Office.

Students who intend to withdraw must notify the University by contacting the Office of Student Life. When a financial aid recipient withdraws during a semester, the student's financial aid award is adjusted according to federal and state regulations and University policy.

Refer to School of Dentistry and Law School for appropriate information.

Financial Aid

The University maintains a substantial financial assistance program for students which includes scholarships, grants, loans and job opportunities.

Students who wish to be considered for academic merit-based scholarships are advised to complete the admission application process by February 15. Students seeking other University scholarships, grants, work-study, or loans or whose parents wish to apply for a Federal PLUS Loan must also file a Free Application for Federal Student Aid (FAFSA) and complete other application procedures as instructed by the Financial Aid Office. In addition, financial aid applicants who are legal residents of California and do not already have a bachelor's degree are expected to apply for a Cal Grant. High schools and colleges have information about the Cal Grant programs and application procedures.

FAFSA forms and instructions, including instructions for filing over the Internet, may be secured at a high school or college or from the University. The priority FAFSA filing date is February 15. Pacific awards financial aid to students who apply after the priority date; however late awards may be less favorable.

A student must be approved for admission as a regular student to an eligible degree or certificate program before financial aid can be awarded and must enroll on at least a half-time basis to qualify for most financial aid funds. Awards are usually made for the entire school year, and the amount is divided equally among the number of terms of enrollment. *Please note that financial aid eligibility is re-evaluated when a student completes pre-professional work and enters a professional program.*

Financial aid at the University is available only to U.S. citizens, permanent residents and other eligible non-citizens. Assistance to students in some post-graduate programs is limited to private loans. Students in some undergraduate programs are not eligible for University funds. Additional financial aid information is available from the Office of Financial Aid.

Academic Requirements

Federal regulations require the Financial Aid Office to ensure that financial aid recipients maintain acceptable academic standing and make satisfactory progress in their programs of study.

Students placed on academic probation are placed on Financial Aid Probation, and students who are academically disqualified are placed on Financial Aid Disqualification. Financial aid recipients are also expected to complete satisfactorily a minimum unit requirement for every 12-month period of attendance and to obtain their degrees within a specified maximum period of full-time study.

For further information, please refer to the Academic Probation and Disqualification Policy Statement in this catalog, and the Satisfactory Academic Progress Policy Statement available from the Financial Aid Office.

Community Involvement Program (CIP)

History

CIP was established in 1969 with the aid of concerned students, community members, University faculty and administrators. The program recognizes the importance of undergraduate education, the unique challenges of under-represented groups and the economically disadvantaged.

CIP remains an integral part of the academic processes and planning under the sponsorship of the Vice President of Student Life and the Office of Admissions, as the University demonstrates its commitment to serve the needs of local students who need a variety of special criteria. A CIP Advisory Board comprised of faculty, students and community members actively supports the program.

Purpose

CIP provides access and opportunity for low income and other under-represented students, giving qualified local residents an opportunity to attend Pacific by providing tuition scholarships and the needed academic support. The program also offers students leadership training and opportunities, preparing them to return to the community as leaders and productive citizens. CIP maintains relationships with the ethnic communities in Stockton, supporting their educational concerns, as the University continues to be a visible and inclusive part of the community. CIP facilitates individual and group projects throughout the community through an active volunteer service program.

Qualifications

Students selected for CIP must meet University academic requirements for admissions. They must demonstrate a history of volunteerism and concern for social issues in the community. Additionally, they must be first-generation college students, come from low-income historically disadvantaged families, and be under-represented in higher education. They must reside in the Stockton area and be U.S. citizens or legal residents.

For information contact: CIP, Knoles Hall, Office of Student Life, University of the Pacific, Stockton, CA 95211; or phone (209) 946-2436.

Scholarships and Grants

University of the Pacific offers a number of scholarships and grants from income provided by gifts, endowments and its own general funds. Qualifications vary according to conditions stipulated by donors, but attention is usually given to some or all of the following: academic record, special talents, leadership abilities, vocational objectives and financial need. Academic scholarships may be renewed for full-time enrollment in a bachelor's degree or pre-professional program. Detailed information about scholarship renewal is available from the Financial Aid Office.

Academic Merit-Based Scholarships

Entering students who complete the admission application process by February 15 are automatically considered for these merit-based scholarships:

Freshmen entering the University directly from high school may be considered for Regents' Scholarships valued at $10,000 per academic year, and President's Scholarships, for $6,500 per academic year. Recipients are selected on the basis of grade point average, test scores, and other criteria.

Tri-County Transfer Scholarships for $15,000 per academic year, are awarded to the top two applicants from each of the five community colleges in San Joaquin, Sacramento, and Stanislaus counties. A minimum college GPA of 3.60 is required.

Distinguished Transfer Scholarships valued at $10,000 per year are awarded annually to five entering transfer students with college GPAs of 3.50 or above.

Students transferring to Pacific with college GPAs of 3.35 or above may be considered for Commended Transfer Scholarships of $6,500.

General Academic Endowed Scholarships

The scholarships listed below are granted without regard to the student's major. It is NOT necessary to submit a separate application form for these scholarships unless specifically noted. Students will be considered an eligible candidate via his/her application for financial aid and maintaining a 3.0 GPA.

Alumni Board Endowed Scholarship. Established by the Alumni Board in honor of Kara Brewer, past Alumni Director. Awarded to students who are children of alumni and/or have other family members who attended Pacific.

Anne and Ray Arnold Endowed Memorial Scholarship. Established by Mrs. Anne Brady Arnold of Stockton in memory of her husband, a former Tracy banker. Augmented by gifts in memory of Mrs. Arnold. Awarded to needy and deserving students.

Laura Tull, Walter Pike Austin, and Henrietta T. Austin Endowed Scholarship. Awarded to needy and deserving students.

John N. and Jessie L. Ballantyne Endowed Memorial Scholarships. Established during their lifetimes by these Lodi friends of Pacific. Awarded to needy and deserving students who are either orphans or from a one-parent family.

Gertrude Moore Beans and William Know Beans Endowed Memorial Scholarship. Established by a bequest from an alumna of the Class of 1920. Awarded to needy and deserving female students.

Gladys L. Benerd Endowed Scholarship. Established by Gladys Benerd. Awarded to needy and deserving students.

William and Dorothy Biddick Endowed Scholarship. Established by William and Dorothy Biddick. Awarded to needy and deserving students.

William M. Black Endowed Scholarship. Established by the bequest of a faculty member's father. Awarded to needy and deserving students.

Constance Bowen Endowed Scholarship. Awarded to needy and deserving students.

Anton Brawthen Endowed Memorial Scholarship. Established by his daughter Clara Brawthen. Awarded to needy and deserving Caucasian students.

Seba M. Bronson Endowed Scholarship. Awarded to needy and deserving students.

Dahl Burnham Endowed Scholarship. Awarded to needy and deserving students with preference given to Business students.

Robert E. Burns Endowed Scholarship. Established in memory of Robert E. Burns, 20th president of the University, by his widow Grace Weeks Burns Baun. Awarded to needy and deserving students.

Norman J. Cain Endowed Memorial Scholarship. Established by Dr. Harvey D. Cain in memory of his son. Awarded to needy and deserving students.

Merle and Robert Carter Endowed Scholarship. Awarded to needy and deserving students.

Central United Methodist Church Endowed Scholarship. Awarded to needy and deserving students.

Class of 1927 Endowed Scholarship. Established and supplemented by members of the class of 1927. Awarded to needy and deserving students.

Classes of '49, '50, and '51 Endowed Scholarship. Established by the members of these three classes. Awarded to needy and deserving students.

Herman A. and Margaret P. Clover Endowed Memorial Scholarship. Established by Dr. Haworth A. Clover and his wife Carol in memory of his parents. Awarded to needy and deserving students.

Elmer C. and Lena E. Courtney Endowed Memorial Scholarship. Established by Lena C. Courtney. Awarded to needy and deserving students who are bona fide residents of the Greenfield Union High School District, located in the County of Monterey, California.

Grace Covell Endowed Scholarship. Awarded to needy and deserving students.

Paul L. Davies, Sr. Endowed Memorial Scholarship. Funded by a gift from a special friend. Awarded to needy and deserving freshmen students from Los Banos High School or other high schools on the west side of San Joaquin Valley.

Robert C. and Olive V. d'Erlach Endowed Memorial Scholarship. Funded by their bequest. Awarded to needy and deserving students.

Clifford L. Dochterman Endowed Scholarship. Established to honor him upon his retirement. Awarded at Commencement to a junior student who has made the finest contribution to the life of the University. To be used during his/her senior year at Pacific.

Christopher A. and Cora S. Elliott Endowed Scholarship. Awarded to needy and deserving students.

Charles Sumner Esrey Endowed Scholarship. Awarded to needy and deserving students.

Fiftieth Reunion Class Endowed Scholarship. Established in 1991 and supplemented annually by each 50th reunion class. Awarded to needy and deserving students.

Elliott L. Fisher Endowed Memorial Scholarship. Established by his family and friends. Awarded to needy and deserving students.

Emery and Susie Freeman Endowed Scholarship. Established by a bequest from the Susie Freeman estate. Awarded to needy and deserving students.

Friedberger Endowed Educational Scholarship. Established by the bequest of Dr. William Friedberger, in memory of his parents, Arnold and Lotta Friedberger. Awarded to needy and deserving students from San Joaquin County.

A. P. Giannini Endowed Scholarship. Established by a bequest. Awarded to needy and deserving students.

Irving and Fay Goleman Endowed Educational Opportunity Scholarship. Established by Gordon Zuckerman in honor of two Pacific professors emeriti. Awarded to adult female re-entry students.

Virginia Graves Endowed Middle Income Scholarship. Awarded to middle income, male, Caucasian students.

Sarah Elizabeth Riley Harris Endowed Memorial Scholarship. Established by the will of Grace Dell Stuart in memory of her mother. Awarded to needy and deserving students.

Hearst Foundation Endowed Scholarship. Established by The Hearst Foundation. Awarded to needy and deserving students.

Ruth M. Heath Scholarship. Established through her bequest. Awarded to needy and deserving students.

Francis W. and Mary V. Hellman Endowed Scholarship. Established through their bequest. Awarded to needy and deserving students.

Ruth Templeton Henney Endowed Memorial Scholarship. Established through her bequest. Awarded to needy and deserving students.

Hoefer Prize. Awarded annually and split evenly between the faculty and student research team.

Claude H. Hogan Endowed Memorial Scholarship. Established through his bequest. Awarded to needy and deserving students.

Cecil and Alberta Humphreys Endowed Scholarship. Established by a distinguished alumnus and long-time member of Pacific's Board of Regents and his wife, an alumna. Awarded to needy and deserving students.

Ruth and Francis H. Jackson Endowed Memorial Scholarship. Established in his memory by his wife Ruth M. Jackson. Awarded to needy and deserving students.

Harriot West Jackson Endowed Memorial Scholarship. Established by the late Mrs. Winifred Cumming of Washington, D.C., and Frank West of Pebble Beach, in memory of their aunt. Awarded to needy and deserving students.

Clarence and Martha Jones Endowed Scholarship. Established by Clarence and Martha Jones. Awarded to highly qualified middle income students who otherwise would have no opportunity to attend Pacific.

Fletcher Jones Endowed Scholarship. Awarded to needy and deserving students.

Fay Wallace Kiser Endowed Memorial Scholarship. Established by his wife, Beulah Lee Watson Kiser, who served the University as Dean of Women from 1940 to 1948. Awarded to needy and deserving students.

Emily Knoles Centennial Endowed Scholarship. Created on her 100th birthday by family and friends, and augmented by gifts in memory of the wife of former Pacific President Tully C. Knoles. Awarded to needy and deserving students.

Samuel Kress Endowed Scholarship. Awarded to needy and deserving students.

Dr. Harry W. Lange and William H. Pfund Endowed Scholarship. Awarded to needy and deserving students. A new student is chosen each year.

La Quinta Inns, Inc., Endowed Scholarship. Originally established by La Quinta Inns, Inc., and augmented by a portion of the rooms rented by Pacific visitors. Awarded to needy and deserving students.

Elizabeth Laskin Endowed Memorial Scholarship. Established and supplemented by her parents, Mr. and Mrs. Myron Laskin of Milwaukee, WI, and many friends in memory of this 1956 graduate. Awarded to needy and deserving students.

Bessie Lenvig Endowed Scholarship. Awarded to needy and deserving students.

William and Carol Linee Endowed Scholarship. Established through the bequest of these long-time Stockton residents. Awarded to needy and deserving students.

Garth Rodrick Lipsky Endowed Memorial Scholarship. Established by his mother, Edna Lipsky. Awarded to needy and deserving students.

Los Angeles Pacific Club Pantheon of the Arts Endowed Scholarship. Established by a gift from the Los Angeles Pacific Club. Awarded to needy and deserving students, who are involved in the performing and visual arts.

Lenora M. Magee Endowed Memorial Scholarship. Awarded to needy and deserving students.

George H. Mayr Endowed Scholarship. Established by the George H. Mayr Foundation in honor of their founder. Awarded to students from California. Their major must not include medicine.

Erford and Dorothy Knoles McAllister Endowed Scholarship. Awarded to needy and deserving students.

Stanley E. McCaffrey Endowed Scholarship. Established by family, friends and colleagues in honor of the 21st president of Pacific (1971-1987). Awarded to needy and deserving students.

John A. McCarthy Foundation Endowed Scholarship. Awarded to needy and deserving students.

Wert E. and Viola Moore Endowed Scholarship. Established by a bequest of long-time Stockton resident, Viola Moore. Awarded to needy and deserving students.

Timothy Patrick Murphy Endowed Memorial Scholarship. Established by the parents and many friends of Tim Murphy, class of 1978, whose life at Pacific left an indelible impression. Awarded to needy and deserving male students who are hard working, bright, responsible and have a good sense of humor.

Blanch Pope Neal Endowed Scholarship. Awarded to needy and deserving students.

Marshall O. Nelson Endowed Scholarship. Awarded to needy and deserving students.

Orange Aid Endowed Scholarship. Established by community members and friends of the University who volunteered their services. Funded by the sale of student "survival kits" and membership dues. Awarded to needy and deserving students.

Alexandra and Peter Ottesen Scholarship. Awarded to needy and deserving students.

Pacific Co-Op House Endowed Scholarship. Established by former students who resided in Pacific's Co-Op House during the 1930s and '40s. Awarded to needy and deserving students.

Irma E. Pennycook Endowed Scholarship. Established by a bequest from this University friend. Awarded to needy and deserving students.

Marion Pope Endowed Scholarship. Established by a bequest. Awarded to needy and deserving students.

Nina Reid Prather Endowed Scholarship. Awarded to needy and deserving students.

Chalmers Price Endowed Scholarship. Established with gifts from his estate. Awarded to needy and deserving students.

Sandy Price Endowed Memorial Scholarship. Established by the Caldor Lumber Company and the Mildred Kellogg estate. Awarded annually to an incoming male student from El Dorado Union High School in Placerville.

Rhizomia Endowed Scholarship. Established by a group of Rhizomia members to provide funds for needy and deserving students who practice good citizenship and demonstrate concern and responsibility toward their fellow students. Participation in extracurricular activities should be considered in the selection process.

Tony and Dorothy Rodina Endowed Scholarship. Awarded to immigrants or first generation Americans.

Lincoln and Stella Ruggles Endowed Memorial Scholarship. Established by Lottie Ruggles in memory of her parents and later supplemented through her will. Awarded to needy and deserving students.

Joseph Robert Rupley Endowed Memorial Scholarship. Established by his parents. He was accidentally shot to death in 1965 by Venezuelan police while serving in the Peace Corps. Awarded to deserving students with international interests.

Rupert and Philamena Russell Endowed Scholarship. Established by the bequests of Mr. and Mrs. Russell. Awarded to needy and deserving students.

Walter B. Sampson Endowed Scholarship. Established by a bequest. Awarded to needy and deserving students.

George and Georgia Sanderson Endowed Scholarship. Awarded to needy and deserving students.

William and Jeanne Sanford Endowed Scholarship. Established by friends and members of the Paradise United Methodist Church in honor of their minister and his wife. Awarded to needy and deserving students.

Audrey and Henry Schwerin Endowed Scholarship. Established by a bequest. Awarded to needy and deserving students.

Dorothy J. and Daniel H. Singleton Endowed Scholarship. Established by a bequest. Awarded to deserving students.

J. W. and Florence E. Smith Endowed Memorial Scholarship. Awarded to needy and deserving students on the basis of scholastic superiority, outstanding character and citizenship.

Mary Leach Smith Endowed Memorial Scholarship. Established by Onnie Smith in memory of her mother. Awarded to needy and deserving African-American female students.

Southeast Asian Endowed Scholarship. Established by memorial gifts and proceeds from benefit performances. Awarded as scholarships to Southeast Asian needy and deserving students in memory of the five children killed at Cleveland Elementary School in 1989.

Mary Lou Spiess Scholarship. Funded by her son, this scholarship is awarded to students with disabilities.

R. & R. Stuart Endowed Scholarship. Awarded to needy and deserving students.

Esther J. Tarr Endowed Scholarship. Established by Curtis W. Tarr, in honor of his mother and augmented by gifts in her memory. Awarded to needy and deserving students.

Elliott J. Taylor and Burta M. Taylor Endowed Scholarship. Established with gifts from their estate. Awarded to Latin American or other foreign students.

Charles A. and Harriette E. Thomas Endowed Scholarship. Established by bequest and given in loving memory of their parents. Awarded to needy and deserving Protestant students.

Thomas S. and Margaret A. Thompson Endowed Scholarship. Established by Mr. and Mrs. Thompson. Mr. Thompson served as Vice President for Development from 1963-1969. Awarded to needy and deserving students.

Guy P. and Grace Tucker Endowed Scholarship. Established by a bequest from these University friends. Awarded to needy and deserving students.

Twenty-fifth Class Reunion Endowed Scholarship. Established by the Class of 1965 and supplemented annually by the 25th reunion class. Awarded to needy and deserving students.

Alex and Jeri Vereschagin Endowed Scholarship. Established by Mr. and Mrs. Vereschagin, both loyal Pacific alumni and parents. Awarded to needy and deserving students.

Zana Taylor Weaver Endowed Scholarship. Established by her will. Awarded to needy and deserving students.

Wendy Webb Endowed Memorial Scholarship. Established by her parents, Mr. and Mrs. J. S. Webb of Calabasas, and many friends in memory of a former student. Awarded to needy and deserving female students.

Dr. Gustav A. and Ellen M. Werner Endowed Memorial Scholarship. Established by family and friends in memory of a popular history professor and his wife. Awarded to needy and deserving students.

Ed and Joan Westgate Endowed Scholarship. Awarded to middle income students.

Wickert Memorial Endowed Scholarship. Established by the Carol Wickert Raab Trust. Awarded to deserving students.

Wightman Memorial Endowed Scholarship. Established in her brother's memory by Mrs. Bessie Jasmann. Awarded to needy and deserving students from Brentwood, Antioch or Oakley area.

Norma H. Williams Endowed Scholarship. Awarded to deserving students.

Theresa Woo Scholarship. This scholarship was established by her estate. Awarded to needy and deserving students.

Carlos and Madeline Wood Endowed Scholarship. Awarded to deserving students.

Zeta Phi Scholarship. Established by Zeta Phi alumnae. Awarded to female students with a minimum 3.25 GPA.

Annually Funded Academic Scholarships

Barnum-Everett Scholarships. Established by a bequest from Lena Barnum-Everett. Awarded to students through an application process. Award is for $1,000 and students may reapply.

Erma Boyce Scholarship. Awarded to needy and deserving male students enrolled in College of the Pacific.

Muriel I. Brown Memorial Scholarship. Established and funded by gifts from her children and friends. Awarded to needy and deserving art students. Preference given to students from the Stockton area.

Robert L. and Lucy S. Colthart Scholarship. Established by the estates of a 1929 Pacific graduate and his wife. Awarded to needy and deserving students through the Patron program.

Corporate Patrons of Pacific. Annually funded by gifts from companies and corporations. Supports awards to needy and deserving students.

Disabled American Veterans Charities Board of San Joaquin County Scholarship. Awarded annually to needy and deserving students who are legal relatives of veterans.

George H. Mayr Educational Foundation Scholarship. Awarded to needy and deserving students who are residents of California.

Robinson A. McWayne Memorial Scholarship. Established in memory of a Pacific student from Hawaii. Awarded to needy and deserving students from Hawaii.

Catherine Austin Mueller Trust. Established by an alumna of the class of 1937. Supports awards to needy and deserving students through the Patron program.

Patrons of Pacific. Annual gifts from alumni, parents and friends of Pacific. Awarded to needy and deserving students.

Presser Foundation Award. Awarded to an outstanding junior majoring in music. The student is selected by the music faculty.

Mabel Wilson Richards Scholarship. Awarded to female students from Los Angeles County through an application process.

Wal*Mart Scholarship. Awarded to professional pharmacy students.

School and Departmental Scholarships

The scholarships listed below are granted to students who meet major requirements and/or other criteria as well as a minimum GPA of 3.0. Most scholarships will require a recommendation from the student's dean or department chair. It is NOT necessary to submit a separate application form for these scholarships unless specifically noted.

College of the Pacific

Arthur and Helen Alexander Foundation. Awarded to religious studies majors.

A. S. H. Graduate Research Award. Established by Dr. Alice S. Hunter, a respected faculty emeritus. Awarded to graduate students in the Department of Biological Sciences. The award is for a summer research stipend.

Art Award Endowed Scholarship. Established by sale of University art holdings and friends of the Art Department. Awarded to art students in recognition of talent, achievement and service.

Jesse A. Berger Endowed Memorial Scholarship. Established by Dr. Evelyn Berger Brown in honor and memory of her husband. Awarded to needy and deserving religious studies students.

Gertrude Sibley Billard Endowed Memorial Scholarship. Established in memory of a former professor of English at Pacific. Awarded to needy and deserving Spanish major students.

Frank Black Endowed Memorial Scholarship. Established in memory of a former student. Awarded to needy and deserving pre-med chemistry major students.

Maynard A. Bostwick Endowed Scholarship. Established by an alumnus. Awarded to needy and deserving students with a major in music or religious studies.

Harold S. Jacoby Citizen Leader Award. Awarded by College of Pacific's Dean.

Barker-Knoles Endowed Scholarship. Awarded to a female graduate student majoring in education, psychology, music or communications.

F. Melvin and Verna Kopka Lawson Endowed Scholarship. Awarded to history or education majors.

Ocea McMurray Brooksbank Endowed Scholarship. Awarded to needy and deserving students majoring in communicative disorders.

DeMarcus Brown Endowed Drama Scholarship. Established by Elinor Sizelove Canedy, class of 1944, in honor of the emeritus drama chairman. Awarded to needy and deserving drama major students.

Leslie M. Burwell Endowed Memorial Scholarship. Established by Mrs. Leslie M. Burwell. Awarded to needy and deserving students who are children of Methodist ministers or religious studies majors.

William P. Christiansen Endowed Award. Awarded to a graduating senior in the field of geology.

Howard and Emma Churchill Endowed Scholarship. Established by a bequest. Awarded to needy and deserving pre-ministry students.

Emerson and Edith Cobb Endowed Scholarship. Established by faculty, alumni and friends in honor of long-time chairman (1948-78) of the Chemistry Department and his wife. Awarded to needy and deserving chemistry major students.

Iva B. Colliver Endowed Scholarship. Established by her bequest. Awarded to needy and deserving students studying for Christian ministry. Preference given to an ethnic student.

Roselyn J. Cook Endowed Scholarship. Awarded to needy and deserving art or literature major students.

Ray and Ruby Dami Endowed Scholarship. Awarded to needy and deserving pre-medical or pre-dental major students.

Ellen Deering Endowed Senior Award. Awarded to a graduating senior from College of the Pacific with the highest four-year GPA. This award is given at Commencement.

Ellen Deering Endowed Senior Art Award. Awarded to a graduating senior art student. This award is given at Commencement.

Helen B. Dooley Endowed Scholarship. Awarded to needy and deserving graphic arts or sculpture major students.

Max and Victoria Dreyfus Foundation Endowed Award. Awarded to an undergraduate science major student to be used as a summer stipend for a research project.

Helene and Jack Drown Endowed Scholarship. Awarded to art major students.

Fred J. Early, Jr. and Marguerite C. Early Science Research Endowed Award. Awarded to junior or senior students who have demonstrated outstanding research production in chemistry, biology, physics or mathematics.

Marie Easterbrook Endowed Scholarship. Awarded to needy and deserving students with an art major.

Fred L. Farley Endowed Scholarship. Established by Erwin and Tom Farley. Awarded to needy and deserving Ancient Greek language and culture major students. If no qualified student, can be awarded to humanities major student.

David Friedrich Memorial Endowed Scholarship. Awarded to needy and deserving students who are involved in athletics and active in student organizations. The student shall have a major in pre-dental, biology or sports medicine.

Fresno Methodist Foundation Endowed Scholarship. Established in 1970 from a transfer of the Foundation's assets to the University. Awarded to needy and deserving religious studies major.

Martin T. Gipson Endowed Memorial Scholarship. Established by friends wishing to memorialize a former Psychology Department Professor. Awarded as a partial research assistantship to students pursuing graduate degrees in psychology.

Jan Good Endowed Award. Established by Janice E. Good for outstanding students majoring or minoring in French or Spanish. Awards determined through an essay competition.

Ralph Guild Endowed Communication Scholarship. Established by Ralph Guild, radio major, class of 1951 and president of INTEREP National Radio Representatives in appreciation to the University and Professor John Crabbe. Awarded to needy and deserving communications major students demonstrating an interest in a radio career.

Clifford J. Hand Endowed Scholarship. Awarded to a needy and deserving humanities major student. Preference given to English majors.

Kathryn Gehlken Howe Endowed Memorial Scholarship. Established by Edna Gehlken, former chair of the Home Economics Department, in memory of her sister. Awarded to undergraduate or graduate art students based on demonstrated ability.

Sharon Brookhart Krakora Endowed Scholarship. Established by a gift from her husband as a loving tribute to her lifetime achievements. Awarded to needy and deserving female students who are U.S. citizens, partially self-supporting and not engaged in health science or other professional studies. Preference given to math majors.

Geraldine Scott Krause Endowed Scholarship. Established by this alumna of the class of 1936. Awarded to needy and deserving students in College of the Pacific.

Allen and Helen Laursen Scholarship. Established by a stock gift. Awarded to deserving students who are majoring in the humanities.

Charles B. Norman Endowed Economics Scholarship. Established in memory of Dr. Charles B. Norman, who taught economics at Pacific for 32 years. Awarded to needy and deserving economic major students. If no qualified economic major student, it may be given to a sociology major student.

Doris E. Osborn Endowed Scholarship. Awarded to needy and deserving math or related science major female student.

Irving Pasternak Endowed Memorial Scholarship. Awarded to needy and deserving geology or geography major students.

Ida R. Patton Endowed Memorial Scholarship. Established through the Ida Patton Trust Fund. Awarded to needy and deserving students who intend to enter a field of full-time Christian service.

Glen Ainslee Payne Endowed Memorial Scholarship. Established by the Walter A. Payne family. Awarded to a junior or senior bilingual education major female Hispanic student.

Walter Arville Payne Endowed Memorial Scholarship. Established by family, colleagues, friends and former students in memory of a long-time member of the history department faculty. Awarded to junior or senior history major students.

Karma Cundell Schad Endowed Scholarship. Established in memory of a former art student by her husband. Awarded to needy and deserving art major students based on both achievement and extracurricular activities. Preference is given to students from Louisiana.

Dr. Benjamin Smith Endowed Memorial Scholarship. Established by relatives and friends in recognition of this former Lodi-Stockton minister who was the recipient of an honorary degree from Pacific in 1937. Awarded to needy and deserving liberal arts major students.

Doenda Hammond Smith Endowed Scholarship. Awarded to needy and deserving art students with an emphasis in interior design.

Bud Stefan Endowed Memorial Scholarship. Established by his friends, relatives and wife in his memory. Awarded to needy and deserving students involved in drama. Must be at least a sophomore.

Derek Forbes Stewart Endowed Memorial Scholarship. Established by his family and friends in commemoration of his life, for the encouragement of needy and deserving drama major students who show promise as a performer, writer, technician, producer, director or composer of original music in support of drama.

Dr. John Hadman Sticht Endowed Memorial Award. Awarded to an outstanding graduating geology major student.

Doris Reyburn Lathy, Margaret Reyburn Collis and Adda Reyburn Thompson Endowed Scholarship. Awarded to needy and deserving liberal arts major students.

Esther Myers Umhalt Class of 1918 Endowed Scholarship. Established by a bequest. Awarded to needy and deserving students in College of the Pacific.

Stanley Volbrecht Endowed Scholarship. Awarded to needy and deserving geology major students based on both academic achievement and service to the department.

G. Warren and Ruby Zahn White Endowed Memorial Scholarship. Established in memory of Professor White, who taught mathematics and business courses at Pacific for 44 years. He retired in 1966. Awarded to needy and deserving art and math major students.

Margorie Webster Williams Endowed Art Scholarship. Awarded to art major students.

Paul Winters Endowed Forensics Scholarship. Established to honor Paul Winters on the occassion of his retirement in the Spring of 1989. Awarded to students who are members of Pacific's forensic team.

Conservatory of Music

Marietta Atherton Endowed Scholarship. Established by a bequest from a University friend and Stockton patroness of the arts. Awarded to needy and deserving music major students.

Allan Bacon Endowed Memorial Scholarship. Established by Mrs. Allan Bacon and friends and former students of Professor Bacon. He was a professor of organ from 1922 until he retired in 1956. Awarded to a

needy and deserving music or performance major student.

Dr. J. Russell Bodley Endowed Scholarship. Established by former students and friends and augmented by memorial gifts. Dr. Bodley was associated with Pacific for over 60 years as a student, faculty, Dean of the Conservatory and Emeritus Dean. In 1986, the American Cinema Awards Foundation made a special gift to this fund in honor of actress Janet Leigh, one of his former students. Awarded to needy and deserving students who are members of the Pacific Singers.

Maynard A. Bostwick Endowed Scholarship. Established by an alumnus. Awarded to needy and deserving music or religious studies students.

Alix E. and Horace I. Brown Endowed Scholarship. Established in memory of these music professors. Awarded to needy and deserving cello, violin or viola performance major students.

Buck Family Young Musicians Endowed Scholarship. Established by a gift from Mrs. Eva Buck. Awarded to needy and deserving young musicians who are music performance majors with outstanding talent.

Roberta Burland Endowed Scholarship. Awarded to needy and deserving Conservatory students.

Ruth J. Camp Scholarship. Funded annually from an outside endowment. Awarded to needy and deserving students in the Conservatory.

Elford-Roy Endowed Scholarship. Established by Mr. and Mrs. Robert Elford in honor of their parents. Awarded to needy and deserving Conservatory students with preference to organ performance majors.

Excellence in Performance Scholarship. Awarded to talented performers of outstanding ability.

Calla Guild Music Endowed Scholarship. Established by Ralph Guild to honor his wife, Calla. Awarded to needy and deserving music performance major students.

Wilhelmina Harbert Music Therapy Endowed Scholarship. Awarded to needy and deserving music therapy major students.

Evelyn Ashmore Heath Endowed Scholarship. Awarded to needy and deserving music major students.

P. Maddux Hogin Endowed Memorial Scholarship. Established by a bequest from Gwen Hogin in memory of her husband, a 1937 alumnus. Awarded to needy and deserving Conservatory students.

Gladys Thelma Ryan King Endowed Scholarship. Established by her bequest. Awarded to needy and deserving Conservatory students.

Barker-Knoles Endowed Scholarship. Awarded to a female graduate student majoring in education, psychology, music or communications.

Virginia Short McLaughlin Endowed Scholarship. Awarded to needy and deserving students who excel in performance of string instruments.

Dr. Lawrence H. McQuerrey Endowed Memorial Scholarship. Established in memory of this former music education professor and chair of the department, with gifts from his family, friends, colleagues and students. Awarded to upper-division music education major students.

Edna B. Meyerholz Endowed Scholarship. Established by the bequest of Mrs. Meyerholz, class of 1911. Awarded to needy and deserving music major students.

Jules F. Moullet Endowed Memorial Scholarship. Established by an estate gift from Louis F. Moullet. Awarded to needy and deserving Conservatory students.

The Naylor Family Endowed Scholarship. Established by Victor and Polly Naylor. Awarded to needy and deserving Conservatory students.

Pooled Endowed Scholarship. Established and augmented by alumni, parents and friends of the Conservatory. Awarded to needy and deserving Conservatory students.

William H. and Pauline Crawford Ramsey Endowed Scholarship. To provide fees for private instruction in piano and/or voice by an undergraduate in music education.

Elizabeth E. Rice Endowed Scholarship. Established by Mrs. Marion V. Neufeld in memory of her mother. Awarded to needy and deserving music major students.

Rosalie C. Rohr Scholarship. Established and funded annually by a distribution from her estate. Awarded to needy and deserving music major students from Santa Rosa, California.

Bernice L. Rose Endowed Scholarship. Established by a 1925 Conservatory alumna. Awarded to needy and deserving Mu Phi Epsilon piano students.

Margaret Michael Saladana Endowed Scholarship. Awarded to needy and deserving female voice major students.

Mildred Murphy Scott Endowed Scholarship. Established by Oliver D. Scott in honor of his wife. Awarded to needy and deserving music major students.

Lawrence and Marilyn Short Endowed Scholarship. Awarded to string principal instrument students.

John W. Sloss Endowed Conservatory Scholarship. Established by William and Joseph Sloss in memory of their father. Awarded to a student enrolled in the Conservatory.

Faye Spanos Endowed Scholarship. Established by her children and proceeds from the Faye Spanos Concert Hall dedication benefit, in honor of the wife of Alex G. Spanos, Pacific alumnus and business leader. Awarded to deserving music major students.

Dr. Lucas and Kathe Underwood Endowed Scholarship. Awarded to needy and deserving Conservatory students on the basis of meritorious musical talent and dedication.

Richard Van Alstyne Endowed Scholarship. Awarded to needy and deserving music major students.

Eva Varnum Endowed Scholarship. Awarded to needy and deserving music major students.

Jack and Eleanor Vogel Endowed Scholarship. Awarded to needy and deserving students enrolled in either the School of Business or the Conservatory.

C. A. Webster Foundation Endowed Stringed Instrument Scholarship. Awarded to outstanding violin, viola, or cello performance students.

Judith and Walter Willmette Endowed Scholarship. Established by Judith and Walter Willmette. Awarded to needy and deserving music major students who demonstrate meritorious musical talent.

Eberhardt School of Business

Bank of America Foundation Endowed Scholarship. Awarded to needy and deserving School of Business students.

Charles and Carolyn Bloom Endowed Scholarship. Awarded to deserving students enrolled in either School of Business or the School of Engineering.

Credit Bureau of San Joaquin County Endowed Scholarship. Awarded to MBA students from San Joaquin County.

Robert E. Ferguson Endowed Scholarship. Established in memory of alumnus and Regent Bob Ferguson. Awarded to Pacific graduates enrolled in the MBA program from California. Preference to be given for interest in agribusiness.

Joseph Kaeslin Endowed Memorial Scholarship. Awarded to MBA students.

George B. Lagorio Endowed Scholarship. Awarded to needy and deserving business students.

Pricewaterhouse Coopers. Awarded to business majors.

Jack and Eleanor Vogel Endowed Scholarships. Awarded to needy and deserving School of Business or Conservatory students.

Robert R. Winterberg Outstanding Senior Award. Given to the School of Business graduating senior whose overall performance in academics, service and leadership are recognized by the faculty as best in the school.

Thomas W. Witter Endowed Scholarship. Awarded to needy and deserving School of Business students.

Gladys L. Benerd School of Education

William P. Bacon Endowed Scholarship. Awarded to a first year graduate student.

Benerd School of Education Pooled Endowed Scholarships. Established and augmented by alumni, parents and friends of the School of Education. Awarded to students enrolled in the School of Education as graduate students.

Esther Berchtold Endowed Scholarship. Established by this alumna, class of 1926. Awarded to needy and deserving female students planning careers in teaching with priority given to those choosing elementary education.

Melvin and Jayne Bernasconi Endowed Scholarship. Established by Mr. and Mrs. Bernasconi. Awarded to graduate students in the field of education.

Clare Ann Christian Memorial Endowed Scholarship. Established in the memory of this 1967 alumna by her husband, family and friends. Awarded to undergraduate needy and deserving students who plan to specialize in special education.

J. Marc and Ruth P. Jantzen Endowed Scholarship. Established in honor of the retired dean of the School of Education. Awarded to graduate students in the field of education.

Barker-Knoles Endowed Scholarship. Awarded to a female graduate student majoring in education, psychology, music or communications.

F. Melvin and Verna Kopka Lawson Endowed Scholarship. Awarded to history or education majors.

Hilga G. Lister Endowed Scholarship. Established by Dr. and Mrs. Cy Coleman in memory of her mother. Awarded to graduate students in the field of education administration.

Pedro and Edna Osuna Endowed Scholarship. Established by Professor and Mrs. Osuna. Awarded to graduate students in the field of education.

Marion Pease Endowed Scholarship. Established by several local groups in honor of Pacific emerita professor of education. Awarded to a minority education major student.

Phi Delta Kappa Endowed Scholarship. Awarded to part-time graduate students in the field of education.

Willis N. and Viola Potter Endowed Scholarship. Awarded to graduate students in the field of education.

Janet Rose Baker Robinson Endowed Scholarship. Established by bequest from a 1936 School of Education graduate. Awarded to needy and deserving education major students.

Victor Russell Robinson Endowed Scholarship. Awarded to graduate students in the field of education.

Barbara Ratto Rosemond Endowed Memorial Scholarship. Established from memorial gifts. Awarded to graduate students in the field of education.

J. A. and Mary Thomason Endowed Scholarship. Established by Mr. and Mrs. Thomason. Awarded to graduate students in the field of education.

Bonnie Jean Thompson Endowed Scholarship. Established by Mary Middleton Cunningham, class of 1957. Awarded to graduate students in the field of education.

Rebecca L. Troutner Memorial Endowed Scholarship. Established by family, friends and faculty in memory of a 1985 School of Education graduate, an elementary school teacher who died in an automobile accident. Awarded to needy and deserving graduate students who plan a career working with gifted children.

Milton M. Tyler Endowed Scholarship. Established in memory of the former special education professor by his family and friends. Awarded to graduate students in the field of education with emphasis in special education.

Chuck Verduzco Endowed Memorial Scholarship. Awarded to male graduate students in the field of education who have earned varsity letters during their undergraduate years at Pacific.

Phyllis L. Vince Endowed Memorial Scholarship. Established by her husband, Mr. Robert Vince. Awarded to female students who plan a career in education.

School of Engineering

Charles and Carolyn Bloom Endowed Scholarship. Awarded to deserving students enrolled in either School of Business or the School of Engineering.

Gladys and John de Arrieta Endowed Scholarship. Established by an engineering graduate and his wife, both alumni, class of 1940. Awarded to needy and worthy students who intend to enter the engineering profession.

Robert L. Heyborne Endowed Scholarship. Awarded to a student in the School of Engineering that has at least a 3.0 GPA and has completed at least two years of enrollment in the School of Engineering.

Robert and Emily Lovell Endowed Scholarship. Awarded to an entering freshman with a GPA of at least 3.5 and a minimum of 1,200 on the SAT-I or awarded to a transfer student with a 3.5 minimum GPA. Students must be in the electrical or computer engineering program.

Henderson E. McGee Endowed Fund. Awarded to meritorious engineering students.

Herman G. and Myrtle E. Nelson Endowed Scholarship. Established through their estate. Awarded to needy and deserving mechanical, chemical, civil or electrical engineering major students.

Teichart Foundation Endowed Scholarship. Awarded to engineering students who are in at least their third year, have need as verified by financial aid and plan a career in the engineering field. Majoring in either engineering management or civil engineering.

Elsa and David Wheeler Endowed Scholarship. Awarded to engineering majors.

School of International Studies

Arthur J. Cullen Endowed Scholarship. Awarded to students from Latin America or Spain for transportation costs, or may be awarded to a Pacific student whose major shows a concentration in Latin America or Spain.

Rom Landau Endowed Scholarship. Established by Professor Landau through life-time gifts and by his will. Awarded to students in the School of International Studies who plan to or have taken courses with a Middle Eastern concentration.

George and Isabelle Wilson Endowed Scholarship. Established by a gift from Mrs. Isabelle Wilson. Awarded to middle income School of International Studies students.

Thomas J. Long School of Pharmacy and Health Sciences

Gregory Bard, M.D., Endowed Scholarship. Established in his honor by his wife. Awarded to students enrolled in the Physical Therapy program.

Donald Y. Barker Endowed Scholarship. Established in honor of a 32-year member of the School of Pharmacy's faculty on his retirement by faculty, friends, family and former students. Awarded to students of alumni or students from a small town.

Charles T. Countryman Endowed Memorial Scholarship. Established by his family and friends in memory of this distinguished pharmacy graduate. Awarded to needy and deserving pharmacy students. (not pre-pharmacy)

Ray and Ruby Dami Endowed Scholarship. Established through the bequest of Mrs. Ruby Dami. Awarded to needy and deserving pharmacy students.

Mabel and Charles P. Dezzani Endowed Scholarship. Awarded to pharmacy students.

Joseph S. Gee Endowed Scholarship. Award to third year professional pharmacy students whose GPA is 3.0 or higher. Written essay is required.

Jay Patrick Gould Endowed Memorial Scholarship. Established by friends and family. Awarded to needy and deserving pharmacy students.

James C. King Endowed Scholarship. Awarded to second-year professional pharmacy students with a minimum 2.5 GPA and documented involvement in student organizations.

J. M. Long Foundation Endowed Scholarship. Awarded to second-year professional pharmacy students. Must submit a paper on community pharmacy practice.

Thomas J. and Muriel T. Long Endowed Scholarship. Established by gifts from the co-founder of Long's Drug Stores and emeritus Regent of the University. Awarded to professional pharmacy students.

Thomas J. Long Endowed Scholarship. Awarded to second- and third-year professional pharmacy students.

Charles Magnasco Endowed Memorial Scholarship. Established by Andrew Magnasco in memory of his brother. Awarded to a member of the Phi Delta Chi Fraternity.

Marvin Malone Scholarship. Established with memorial gifts in memory of Marvin Malone. Awarded to graduate and pharmacy students selected by the School of Pharmacy and Health Sciences.

Virginia Puich Endowed Scholarship for Academic and Clinical Excellence. Awarded to seniors majoring in communicative disorders with a GPA of 3.50 or higher and who are enrolled in beginning or intermediate clinical assignment and are recommended by their current clinical instructor.

Rexall Pharmacy Endowed Scholarship. Awarded to professional pharmacy students.

Carl C. Riedesel Endowed Scholarship. Awarded to professional pharmacy students who excel in research.

Emmons E. Roscoe Endowed Memorial Scholarship. Established with memorial gifts from family and friends. Awarded to needy and deserving pharmacy students.

Ivan W. and Helen T. Rowland Endowed Scholarship. Established in their honor. Awarded to professional pharmacy students.

Warren J. Schneider Endowed Memorial Scholarship. Awarded to professional pharmacy students.

Masao and Ayako Shinkai Scholarship. Established by Mr. John H. Shinkai in memory of his parents. Awarded to pharmacy students of Japanese or Japanese-American ancestry. One award to a third semester student and one award to a sixth semester student.

Florence Scott Van Gilder "The Tolley Award" Endowed Award. Awarded to students selected by the Communicative Disorders Department Committee on the basis of academic and technical promise.

Richard C. Vessey Endowed Memorial Scholarship. Established by his family and augmented by gifts from his friends in memory of this 1975 School of Pharmacy graduate. Awarded to needy and deserving pharmacy students,

Walgreen Company Endowed Pharmacy Scholarship. Awarded to needy and deserving pharmacy students to assist in finishing their professional studies or participating in vital research within the School.

Bryant Kerry Wong Endowed Memorial Scholarship. Established in memory of Mr. and Mrs. Wong's 4-year-old son who was killed in an auto accident in 1965. Both parents are pharmacists. Awarded to professional pharmacy students.

Center for Professional and Continuing Education

Donald F. Duns. Awarded to full or part-time students enrolled in the Center for Professional and Continuing Education.

University Library

Gladys L. Benerd Student Employee Endowed Scholarship. Awarded to needy and deserving students who are employed by the University Library. Students are selected by the Dean of the Library.

Intercollegiate Athletics

Athletic Grants. Awarded to qualified student athletes according to the regulations of the National Collegiate Athletic Association (NCAA).

Amerigo and Teresa Cortopassi Endowed Athletic Scholarship. Established by their family in honor of their January 1991 birthday celebration, with gratitude for their gifts of life and love which now live on through new generations of family in this community. Two scholarships are given each year: one to a female volleyball player and one to a male basketball player. Students should have scholastic competency and high moral character.

Ellen L. Deering Endowed Athletic Scholarship. Established by bequest. Awarded to needy and deserving students who participate in a major sport.

Jessie Murphy Grogan Endowed Memorial Softball Scholarship. Established in her memory by her family and friends. Awarded to needy and deserving female softball players.

Larry E. Heller Endowed Scholarship. Awarded to a needy and deserving student athlete from San Joaquin Valley who shows promise as a varsity player in basketball.

Chris Kjeldsen Endowed Memorial Scholarship. Established in honor of an alumnus and long-time member of the University faculty. Awarded to a needy and deserving upper-division male who participates in either basketball, swimming or tennis.

Justin and Shirley Marshall Endowed Scholarship. Awarded to Intercollegiate swimming, diving or water polo participants

Tunney McClendon Endowed Memorial Tennis Scholarship. Established by her husband, Dwayne McClendon and her many friends in loving memory of her life and love for the game of tennis. Awarded to the number one seeded women's tennis player who meets the requirements of the Pacific tennis team. Award is for room and board expenses.

Warren T. McNeil Endowed Memorial Scholarship. Awarded to needy and deserving students who participate in any sport.

Jean Rule Sanders Endowed Women's Tennis Scholarship. Established by her daughters. Awarded to a female member of the team who has excelled in scholastic endeavors and has a high moral character.

Student Loans

Information concerning loans may be obtained in the Office of Financial Aid. Loan funds may be used to pay tuition, fees, room, board and other related educational expenses.

Robert and Merle Carter Loan Fund. Established by two long-time friends of the University whose belief in Pacific and its students motivated them to provide this opportunity for worthy and needy young men and women.

General Mills Endowed Revolving Loan Fund. Established to provide loans for junior through graduate-level engineering students.

Lloyd Ivan Gerry Memorial Loan Fund. Established from the estate of Isa Spencer Gerry in memory of her husband. Available for needy and deserving students who are enrolled full-time.

Claude H. Hogan Revolving Loan Fund. Established to provide emergency loans, supplemental loans and summer study loans for University College students.

Ralph M. Parsons Revolving Loan Fund. Established by the Ralph M. Parsons Foundation to assist sophomores, juniors, and seniors who meet GPA and other eligibility requirements. Preference is given to engineering and science majors.

Federal Perkins Loan. This federally sponsored program provides five percent loans for students who demonstrate high financial need. Maximum loan amounts vary depending upon available funds.

Robert C. Powell Revolving Loan Program. Established to assist students from middle income families.

Edna Ormsby Proctor Endowed Memorial Loan Fund. Established by a gift from her estate to assist the University in training students for full-time Christian service in the area of religious education, preparing for directorships, conference executive work, and other related professions.

Health Professions Student Loan. The HPSL program provides loans at five percent interest for University students enrolled full-time in the professional pharmacy program. Maximum loan amounts vary depending upon available funds.

Federal Direct Stafford/Ford Loans and Federal Direct PLUS Loans. Under this program the U.S. Department of Education makes loans, through the University, directly to students and parents. Students may be eligible for Stafford/Ford Loan funds, and parents of dependent students may apply for the PLUS Loan. The University of the Pacific Financial Aid Office determines eligibility and provides application forms.

Methodist Student Loan Fund. A limited number of students who are active members of the United Methodist Church may obtain loans from the Student Loan Fund administered by the Board of Education of that church. Information may be obtained from the University of the Pacific Financial Aid Office.

Emergency Loans. Loan monies provided through the generosity of United California Bank, The Jones Foundation of Los Angeles, and other interested benefactors and friends of the University are available through the University Loan Fund to help Pacific students meet pressing obligations. Loans from this source are limited to $150. Repayment in full is expected within 90 days, or the end of the semester, whichever comes first.

Emergency Loan Funds for students from the Long School of Pharmacy and Health Sciences have been provided by the California Pharmacy Foundation Trust Fund, Inc., the John W. Dargavel Foundation, the Synergex Loan Fund, the Pacific Pharmacy Associates Perpetuating Loan Fund and the Long School of Pharmacy and Health Sciences Memorial Loan Fund. Frank Bollig, Claude L. Busick, Charles Fox, Edna E. Gleason, Fred C. Mahler, and Harold McAnaw are individuals who have contributed to this Memorial Loan Fund.

Academic Regulations

(Stockton Campus)

General Academic Procedures

Every student, in order to receive credit for coursework taken during a particular term, must be properly registered during that term. It is the student's responsibility to comply with this regulation. The registration procedures are indicated in the Schedule of Classes which is available from the Office of the Registrar prior to the beginning of each term.

University of the Pacific's Four-Year Guarantee

Pacific guarantees that students will graduate in four years, or five for Engineering and Pharmacy majors, if the following requirements are met:

- Students select a major by the beginning of their sophomore year;

- Students regularly consult with faculty advisers to assess graduation requirements in their major;
- Students pass general education and major courses with a C grade or better;
- Students satisfactorily complete 32 units per year;
- Students meet special requirements in specific Pharmacy and Bachelor of Fine Arts majors.

If a student is unable to enroll in a required class or is otherwise unable to graduate after four years due to reasons beyond his or her control, no additional tuition will be charged for courses to complete the degree.

Student Programs of Study

Study Loads

Twelve units constitute a minimum full-time program of studies during a semester for the regular undergraduate and first professional level student and is the minimum required for participation in intercollegiate activities. If a student registers for less than 12 units or drops below 12 units, financial aid may be reduced. (Students who are less than half-time are not eligible for financial aid.)

The maximum study load during a semester for undergraduates without special permission is 18 units and 19 units for first professional level students. Students who wish to enroll for units in excess of the maximum study load must petition their school or college for approval in advance. Approval is based to a great extent upon the student's past academic record and will result in additional tuition charges.

Minimum and maximum study loads for graduate students are defined in the Graduate School Catalog.

Limitations on Credits

The maximum number of units accepted from a community college is 70. However, no community college credit will be accepted after a student has completed 70 units from all institutions attended.

A total of no more than eight units in dance, physical education and theatre activity courses, club sports and intercollegiate athletic courses may be applied toward a degree.

A total of no more than 20 units may be applied toward a degree from any or all of the following: courses taken in accredited correspondence schools, extension correspondence schools, extension courses, and/or courses taken by examination. None of these credits, except extension courses taken at the University, will be accepted during the session in which the student is completing requirements for graduation in this University.

A total of no more than 30 units of coursework in business administration may be applied toward a degree, except in the case of students majoring in business administration who may apply up to 64 units of business courses toward the degree.

Bachelor's Degrees

To be eligible for graduation, candidates must have:

1. completed the major requirements specified by the school/college/department with a minimum grade point average of 2.0. At least 16 units of the major requirements must be completed at Pacific with a minimum grade point average of 2.0;
2. completed a minimum of 30 units in general education including Mentor Seminars I, II and III and a path of six or nine courses as specified by the school or college (transfer students should refer to the General Education section for GE requirements);
3. met entrance skills requirements;
4. achieved a grade point average of at least 2.0 on all letter-graded work completed at the University of the Pacific. On non-letter-graded work, the faculty will determine the equivalency;
5. fulfilled the minimum residence requirement of 32 out of the last 40 semester units of registration with Pacific just prior to receiving the degree; and
6. accumulated the appropriate number of units specified by the particular school or college.

Any candidate for a bachelor's degree who has not completed work within seven years must reapply and be subject to any new requirements in effect at that time.

Second Degrees

A student may earn concurrent baccalaureate degrees from different schools or in different specialties within a school or college by simultaneously completing all requirements for the specific degrees. When two different specialties fall under the same degree (such as a B.A.) the two specialties will be considered as two majors. If a student holds a baccalaureate degree from University of the Pacific and wishes to pursue a second bachelor's degree in a different specialty, a minimum of thirty-two (32) semester units of work must be completed between receipt of the first and second degree.

Acquisition of Graduate Credit as an Undergraduate

Undergraduate students seeking to open a graduate transcript (i.e., earn graduate credit) may do so if they apply and are accepted to the Graduate School and meet all conditions of the Petition to Receive Graduate Credit as an Undergraduate. The application and petition must be approved before the last day to add classes of the last semester as an undergraduate. Units cannot be retroactively transferred from an undergraduate to a graduate program. Petitions may be picked up in the Research and Graduate Studies Office.

Withdrawals

An official withdrawal is normally granted to students who complete the withdrawal petition properly and turn it in to the Office of Student Life prior to the last day for dropping classes for the term. Students who withdraw without filing such a petition may incur academic penalties. If a student wishes to withdraw from a term after the deadline for dropping classes, the withdrawal must be approved by the Academic Regulations Committee. If approved, the courses the student was registered for will appear on that student's transcript with the notation "W" but will not count in the units earned nor in calculation of the grade point average.

Changes in the Study Program

If the student desires to drop or add a course after filing registration material, a drop/add form must be completed, approved by the adviser and instructor, and processed in the Office of the Registrar or by way of the Web. Deadlines for dropping or adding courses are announced in the class schedule each term.

After the deadline dates have passed, requests to add or drop courses must be made by special petition and normally will be approved only if it can be shown that the request is warranted due to some special situation or hardship. Courses which a student is allowed to drop after the deadline will appear on the student's transcript with the notation "W" but will not count in the units earned nor in the calculation of the grade point average.

Any petitions approved after the deadline dates will be subject to a clerical service fee. The date on which the petition is filed with the Registrar is the effective date for financial and academic adjustments.

Course Audit

Auditing of courses is an option that allows exposure to a course with no course credit or grade given. To audit a course, approval must be granted by both the instructor and the chair of the department in which the course is offered. Auditing is not available in participation courses such as applied music, physical education, art courses of an applied nature, etc. Students auditing a course must pay both an auditing fee and any material or laboratory fees that are required. Courses taken through auditing may not subsequently be converted to course credit or grade. The student must indicate a desire to audit the course at the time of registration.

Enrollment in Graduate Level Courses by Undeergraduates

Qualified undergraduate students may take graduate classes (course numbers 200 or above) only under exceptional circumstances. Furthermore, undergraduates must have upper-division standing, receive approval of an adviser, and have approval from the Dean of the Graduate School. No assurance of student success is implied by permission of the faculty member/dean.

Repetition of a Course/Grade Replacement Policy

General Policy: Only a course in which the student receives a C- or lower may be repeated. Note: Once a course is passed (with a grade of C- or higher) the student may not repeat any prerequisites for that course. The grading option, when repeating a course must be the same grading basis as the original course. Students who wish to repeat a course for which they have as grade of C or higher must petition their respective school or college for permission. Failing grades as a consequence of an honor code violation will be included in the student's GPA even if the course is repeated with a passing grade.

Repeat Policy: The repeat rule applies in cases where either the original course or the repeated course is taken at another institution. When such repeats occur, both the original grade and repeat grade are averaged in the GPA although the student receives credit for the units of the course only once.

Grade Replacement Policy: Beginning in Fall 1999, a grade replacement policy was adopted for undergraduate students. The policy applies only to courses originally taken at Pacific and repeated at Pacific. When such a repeat occurs only the higher of the grades is included in the calculation of the GPA although the transcript will include all courses and earned grades. The student receives credit for the units of the course only once.

Credit by Examination

An undergraduate student in good standing and currently enrolled for four or more units may "challenge" by examination certain courses offered in the current term by the University. Departments have the right to designate which of their courses are appropriate for credit by examination. This policy is subject to the following restrictions:

1. A student may challenge a course covering material in which, because of independent study since high school graduation, or because of work at another college or university which was not accepted for transfer credit, the student feels prepared. It is the responsibility of the student to explain how the material was mastered.
2. A student wishing to challenge a course should not expect the instructor of the course to provide assistance beyond an explanation of the scope of the examination.
3. A student wishing to challenge a course may not attend the class meetings of the course.
4. A student may not receive credit by examination in the semester in which the student intends to receive his or her baccalaureate degree.
5. A student may not get credit by examination for a course which the student has already audited or failed with a grade of F or NC.
6. A student may not get credit by examination for a course in a structured sequence if the student has received credit for a higher level course in the sequence.
7. Credit earned by a challenge examination may not be used to meet the University residency requirement.

A student wishing to pursue the credit by examination option must:

1. obtain the appropriate form from the Office of the Registrar;
2. obtain approval from his or her adviser, the instructor offering the course, and the dean of the school or college offering the course, and
3. pay the scheduled service fee.

Successful completion of the examination will be recorded on the transcript with a grade of pass and will be made a part of the student's academic record in the term in which the examination is requested. Appropriate tuition fees will be assessed.

Change of Degree Objective

A student who has been admitted to one degree program and who later desires to change the objective to another degree or to another college or school of the University must submit the appropriate request to the Office of the Registrar.

Change of Major

A student who decides to change a major or to declare one must obtain the appropriate form from the office of the appropriate dean or from the Office of the Registrar. Requests for these changes are routinely approved and are needed to assure the assignment of an adviser.

Class Attendance

Students are expected to attend classes regularly. Specific attendance policies are, however, determined by individual instructors who will provide students with a written statement of such policies at the beginning of the semester.

At the request of a student to the Office of Student Life, his/her instructors will be notified of absences due to illness, University related activities, or other conditions beyond the control of the student.

Grading Policies

Symbols and Definitions

Undergraduate and first professional level students will be assigned grades in keeping with the following provisions. (Grading policies for graduate students are defined in the Graduate School Catalog.)

A = 4.0 Outstanding work, highly meritorious
A- 3.7
B+ 3.3
B = 3.0 Very good but not outstanding
B- 2.7
C+ 2.3
C = 2.0 Satisfactory
C- 1.7
D+ 1.3
D = 1.0 Barely passing but counts toward graduation
F = 0.0 Failure. Will count in the grade point average. Must be repeated with a satisfactory grade to receive credit toward graduation. Also, an F is a default grade given when an instructor does not report a grade.
AU= Audit
I = Incomplete work due to extenuating and hardship circumstances which prevent the completion of the work assigned within the

regular time of the term. Each incomplete grade assigned must be accompanied with a contract statement agreed to by both instructor and student as to:

a. what work remains to be completed
b. how it is to be evaluated
c. a time indicated for completion within but no later than the following deadlines: for fall semester, by July 1 following; for spring semester, by November 1 following; for summer term, by January 1 following.

If work is not completed within these stipulated times, the instructor may wish to indicate a grade in lieu of the F or NC which automatically would be imposed with failure to complete the work. All incompletes must be made up before graduation if the student intends to complete the course.

N= Deferred grading

NC= No credit recognition. Represents unsatisfactory work under pass/no credit option. Not assignable in the Conservatory of Music.

NG= No Grade Received

P= Passing work on the pass/no credit system. Approved only for certain courses and program of a college or school.

W= Authorized withdrawal from courses after the prescribed period. (Since 2/1980)

Pass/No Credit Grading System

Depending upon the regulation of a particular college or school, students may request to receive pass or no credit grades rather than the traditional letter grades. This is available to encourage enrollments in courses outside the student's area of major or specialization and thus to help broaden the student's general education.

Normally this freedom is limited to one course per student per term and does not include courses within a student's major field. Forms are available in the Office of the Registrar and must be submitted prior to the deadline for adding classes.

Scholastic Actions

Dean's Honor Roll

Each undergraduate student currently enrolled in the University of the Pacific who achieves a 3.5 grade point average at the close of a term in which twelve or more units of letter-graded (A through F) work have been completed will be declared as being on the Dean's Honor Roll for that term. A notation will be indicated on the student's academic record of this achievement.

Honors at Graduation

The determination of Honors at Graduation will be made by each college or school in conjunction with the approval of the Committee on Academic Affairs.

Academic Standing

At the end of each semester, a student's academic standing will be determined to be one of the following: good standing, good standing with warning, probation, or subject to disqualification. The criteria for these academic standings are based upon a combination of cumulative Pacific GPA and the term GPA and vary according to a student's classification. Unless admitted on probation, a student is in good standing during the first semester of attendance. Students who are subject to disqualification are reviewed by an appropriate committee and are either disqualified from further enrollment at the University or are allowed to continue for the next semester on probation. Criteria for the different academic standings are outlined below:

Good Standing: A term GPA of 2.00 or higher and a cumulative Pacific GPA of 2.00 or higher.

Good Standing with Warning: A term GPA below 2.00 and a cumulative Pacific GPA of 2.00 or higher.

Probation: After a semester in Good Standing. Freshmen through Juniors: a term GPA below 2.00 and a cumulative Pacific GPA below 2.00. After a semester in Good Standing with Warning or Probation. Freshmen: a term GPA below 2.00 and a cumulative Pacific GPA between 1.50 and 1.99. Sophomores: a term GPA below 2.00 and a cumulative Pacific GPA between 1.80 and 1.99. Juniors: a term GPA below 2.00 and a cumulative Pacific GPA between 1.95 and 1.99. All undergraduates: a term GPA of 2.00 or higher and a cumulative Pacific GPA below 2.00. A student on academic probation may not register for independent study.

Subject to Disqualification: After a semester in Good Standing. Seniors: a term GPA below 2.00 and a cumulative Pacific GPA below 2.00. After a semester in Good Standing with Warning or Probation. Freshmen: a term GPA below 2.00 and a cumulative Pacific GPA below 1.50. Sophomores: a term GPA below 2.00 and a cumulative Pacific GPA below 1.80. Juniors: a term GPA below 2.00 and a cumulative Pacific GPA below 1.95. Seniors: a term GPA below 2.00 and a cumulative Pacific GPA below 2.00.

Disqualified: The Academic Regulations Committee determines whether a student subject to disqualification is disqualified. If not disqualified, a student subject to disqualification will be on probation for the following term. If disqualified a student will not be allowed to register for further study at the University during a regular term while disqualified, but may attend the "open enrollment" summer sessions.

A student who has been disqualified may appeal immediately for reconsideration and possible reinstatement on probation within the same school or college or in another school or college of the University. A disqualified student who has been out of the University for one semester or more may apply for readmission to the University through the Admissions Office. If readmitted, such a student would enter on probation and would need to make up the earlier deficiency in order to attain good academic standing.

Residence Requirement

The minimum residence requirement for a bachelor's degree program is 32 out of the last 40 units of registration in the University of the Pacific just prior to receiving the degree. Normally these 32 units must be taken on the Stockton campus, but study in Pacific-affiliated programs elsewhere in the United States or abroad may count toward the residency requirement if the student has taken at least 32 units on the Stockton campus at the time of graduation. The school or college from which the student is to graduate may stipulate that the units in residence must include certain specific requirements in the major program and/or a certain minimum of units within the school or department of the major.

Application for Graduation

An application for graduation filed with the Office of the Registrar is an indication of an intent to graduate at a specific time. It should be filed with the Office of the Registrar in the spring semester by any student expecting to fulfill degree requirements during the next academic year. This allows time for a review of studies completed and to enable the students to enroll for any requirements not yet completed. Certification for actual graduation will be by the adviser and the faculty of the college or school.

Students may graduate at the end of the fall semester, end of the spring semester, or end of the summer sessions, but graduation ceremonies are held only once a year in May. Students who will complete their baccalaureate degree requirements during the following summer may request by petition to participate in the May commencement ceremonies.

Records and Transcripts

An academic record for each student is maintained in the Office of the Registrar. This official record is considered to be both private and confidential and is used in the conduct of the student's personal and academic affairs.

Upon written request by the student, an official transcript of his or her academic record is issued to whomever he or she designates provided that all of the student's financial obligations to the University are in order. A service fee of $4.00 per transcript is charged for processing the record.

Official transcripts of credit earned at other institutions which have been presented for admission or evaluation of credit become the property of the University and are not reissued or copied for distribution to other institutions. Copies of transcripts of work completed at other institutions must be obtained from the originating institution.

Class Standing

Undergraduate students will be designated freshmen, sophomores, juniors or seniors by the number of units which have been completed toward graduation as follows:

1 - 27 1/2 units designates a freshman.

28 - 55 1/2 units designates a sophomore.

56 - 91 1/2 units designates a junior.

92 - up units designates a senior.

Student Life

In a student-centered learning environment, much of a university student's education can take place outside the classroom. For this reason, the University of the Pacific has made a commitment to the development of students – their intellect, emotions, values, and purpose – in a holistic and cohesive manner that leads them toward a more coherent view of knowledge and a more integrated life. The implementation of this philosophy manifests itself in a wide variety of out-of-classroom services and programs that are designed to assist the students in achieving their educational and personal goals.

Division of Student Life

The fundamental responsibility of the Division of Student Life is to affirm student learning, and to promote student development. Under the direction of the Vice President for Student Life, the Division's departments, programs and services address the education of the whole person and to augment and enrich university life. The Office of Student Life serves as the central office for the Division. This Office, as well as all other departments in Student Life, are concerned and interested in students and serve as an accessible and ready means of assistance and support.

Residential Life and Housing

Central to student life at Pacific is the University's on-campus housing system. In keeping with its educational goals, the University considers the residential living experience to be an important part of its educational opportunities, and that such an experience can contribute significantly to a student's development and to the learning process. The University requires all students, with the exception of students residing with their parent(s) or legal guardian(s) at their permanent address within the Stockton area, of freshman or sophomore class standing (earned less than 56 units) to live on campus. Additional information on this policy is available in the *Tiger Lore: Student Handbook* and from the Office of Residential Life and Housing.

The residence system provides living accommodations in residence halls, fraternities, sororities and apartment facilities for approximately 2,200 students. All University-operated residence communities are staffed by, and staff is responsible to, the Residential Life and Housing Program.

Each of the University's residence halls is coeducational, where men and women reside within the same facility. All students living in the residence halls and some fraternities are required to purchase a meal plan.

Some residence halls are reserved for students interested in Thematic Living. Thematic Living options include the Academic Honors program, Academic Humanities program, Academic Pharmacy program, Intercultural interests, Leadership Involvement and a Healthy Lifestyles/ Substance-Free community. University apartments are reserved for students of a particular standing. For example, the University Townhouse Apartments are limited to sophomores and above, and the McCaffrey Center Apartments, located in the heart of the campus, are reserved for students of junior, senior or graduate standing. Priority for assignment to the new Brookside Hall Apartments is given to graduate level and professional school students, seniors and then juniors. The Tower View Apartments retain priority for married students. Residence within the fraternity and sorority system, with some exceptions, is limited to students who were members of the organization the previous semester.

Housing assignments to the residence halls and the apartments are made at the Office of Residential Life and Housing. Students already enrolled apply directly to the Office. Upon acceptance to the University an applicant will be sent a contract/application brochure for housing and dining services, along with more detailed information. The housing and dining contracts are for the complete academic year including both the fall and spring semesters. The residence halls and dining halls are not open during the winter and spring break recess periods.

Health Services

The Cowell Student Health Center is a student-oriented facility in which students are provided wellness care and health education on-site and elsewhere on campus. Limited specialists are available at clinics or for consultations.

Following the approval of a student's application for admission, a health form must be completed and returned. Also, a medical history, a physical exam, and the immunization record of the student must be on file with the Health Center. In accordance with California law, this information is confidential.

The Cowell Student Health Center is supported through the payment of a student health services fee, which is required of all students who live on campus or who are enrolled for nine units or more. Students with less than nine units may enroll as well. Additional charges may be made at the Center. Referrals are not covered by the health services fee. Diagnosis or treatment by any off-campus physician, nurse, nurse practitioner, physician assistant, surgeon, psychiatrist, psychologist, licensed clinical social worker or other health or mental health care provider are not covered by the health services fee.

A low-cost "group accident and sickness" insurance program is available to all students on the Stockton campus. This covers illness and injury both on and off campus and during vacation periods in addition to when the University is in session. Unless covered by another health insurance program, it is

strongly recommended that students subscribe to this program. Contact the Health Center for details of cost and coverage. Foreign students are required to carry insurance, and should contact International Programs and Services regarding requirements.

Counseling Services

The Counseling Center serves registered Pacific students who may be experiencing situational, psychological or interpersonal difficulties. Located in the Cowell Student Health Center, the Counseling Center offers individual and group counseling concerning a variety of issues. These include: dating, family relationships, depression, anxiety, grieving, sexuality, self-esteem and self-image, eating disorders, sexual abuse or harassment, drug and alcohol concerns, roommate disputes, stress management, assertiveness training, time management, decision making, goal setting, and values clarification. Personality testing is available as well as psychiatric consultation and limited medical management of psychotropic medications. Assessment of learning disabilities and attention deficit/hyperactivity disorder (ADHD) is available for a reduced fee.

The Center also serves as a liaison with other campus offices regarding mental health related concerns. In addition, the Counseling Center offers outreach programs to enhance the lives of students and to reduce impediments to achieving their full potential.

The Counseling Center staff includes licensed psychologists, licensed counselors, and experienced interns. Counseling sessions are confidential and free of charge.

Emergency crisis consultation is available from September through May (while classes are in session) on a 24-hour basis by contacting the Cowell Student Health Center (209) 946-2315 or the Department of Public Safety (209) 946-2537 and asking their staff to access the counselor-on-call. To make an appointment to see a counselor, stop by the Center or call (209) 946-2225, Monday through Friday, 8:30 a.m. to 5:00 p.m.

Career Services

The Career and Internship Center (CIC), located in the Main Gym, provides comprehensive services that facilitate career goal-setting, academic and non-academic internship search, and post-graduation employment efforts of students and alumni. The process usually begins with students seeking career planning information. CIC counselors then provide one-to-one and group counseling through the nationally recognized Career Focus Program. As students progress, they are assisted with development of skills required to obtain part-time, work-study, or summer jobs and, through specialized offerings, they are encouraged to obtain academic and non-academic internships. Increasing emphasis is placed on students participating in active career exploration and skills building through internship opportunities. Professionals assist seniors and alumni seeking to attain postgraduate education and employment goals.

The Career and Internship Center annually sponsors and coordinates an on-campus recruiting program as well as the Fall Career Fair and Spring Job and Internship Fair. These events bring well over 100 diverse companies and organizations to campus to interact with job seekers and career explorers. Engineering firms, technology manufacturers, pharmaceutical companies, consumer products merchandisers, consulting firms, banks, financial services firms, retailers, hospitals, government agencies, school districts and not-for-profit organizations actively recruit Pacific students and alumni. The CIC also coordinates the Educator Recruiting Reception and various other on-campus and off-campus recruiting events. In addition, various workshops, seminars, and special programs are offered each year.

The Center has an ever-expanding Career Resource Library containing published, video and on-line resources utilized to research career and academic opportunities, and offering job seekers information on various local, regional and national employers. Students and alumni are granted access to computers to write resumes and job search correspondence and to most effectively learn about Internet-driven job search techniques. Work-study, part-time, full-time and post-graduation opportunities are easily accessed in the office and advertised through the student newspaper.

Simply, this one-stop career center offers services for those seeking to set and meet employment, educational, and career goals. The Career and Internship Center has personalized counseling, job search coaching, posting mechanisms, and numerous specialized offerings.

McCaffrey Center

The Stanley E. McCaffrey Center, completed in 1975 and named after the University's 21st President, is the focal point for student activities programming on the campus, as well as a meeting place for students, faculty and staff. It's a place to enjoy a meal or attend a lecture. Facilities of the McCaffrey Center include a movie theatre, a lounge/games room, meeting rooms, the University Book Store, two separate dining facilities, a grocery store and the offices of the ASUOP (Associated Students of University of the Pacific).

Programs in the McCaffrey Center are sponsored by ASUOP Presents, the programming board for the Associated Students, which develops programming in such diverse areas as nightclub entertainment, outdoor programs, the arts and recreation. These programs, together with other student activities and events, add to the co-curricular experience of Pacific students.

Art Gallery

The Richard H. Reynolds Art Gallery is a professional art exhibition gallery featuring noted regional and national artists. The exhibition program is closely correlated with the Art Department's academic goals and features guest artists' lectures and demonstrations. The Gallery is located in the Art Center.

SUCCESS

A Student Support Services grant from the U.S. Department of Education provides funding for 200 eligible students to participate in a program designed to assist in retention and graduation and in the overall academic success of its students. SUCCESS is a federal TRIO program designed to assist students in overcoming academic, social, cultural and other barriers to academic success. The following services are available to SUCCESS students:

- One-on-one tutoring
- Personal, financial and career counseling
- Assistance with financial aid matters
- Workplace and graduate/professional school visits
- Assistance in applying to graduate/professional schools.

Studies by the U.S. Department of Education document that students who receive all of the services of SUCCESS are more than twice as likely to remain in college than students from similar backgrounds who do not receive services. The program is located in Bannister Hall, first floor. For more information contact the SUCCESS Office at: Bannister Hall, first

floor. Telephone: (209) 946-2439; FAX: (209) 946-2081; e-mail: abautista@uop.edu.

Students With Disabilities

Pacific is committed to assisting students who have disabilities in attaining their educational and career goals. Students are responsible for making their needs known either during the admissions process or at other times at any of the offices listed below. Students who have current documentation may request reasonable accommodations for their disabilities.

To request accommodations based on a disability, the appropriate office listed below must be provided with a medical or psychological evaluation or a signed release authorizing the University to obtain documentation. Students who have current documentation may be provided with reasonable accommodations for their disabilities. The following offices authorize accommodations, depending on the nature of the disability:

Disabled Student Services

The Disabled Student Services program assists students by providing reasonable accommodations, usually during regular business hours, based on documented disabilities. Arrangements can be made for the reasonable modification of programs, scheduling, and facilities to enable students with disabilities to participate as fully as possible in the University academic and social programs. Student needs are considered on a case-by-case basis and accomodations may include the following:

- Priority advance registration
- Campus orientation/mobility training
- Test administration/test proctoring
- Tutors, readers, note-takers
- Transportation to and from classes

For further information or questions, please contact Disabled Student Services, Bannister Hall, first floor, telephone (209) 946-2879 voice/TDD.Counseling Center, Cowell Student Health Center, (209) 946-2225. For students with psychological disabilities. See section under Student Life, Counseling Services, for more information.

Learning Disability Support Program

Support for students with documented learning disabilities is administered through the Office of Learning Disability support. A broad range of accommodations are provided to students according to the nature of the student's disability. Student records are kept confidential in the Coordinator's Office, located in Bannister Hall. For further information, call (209)946-3219. Counseling Center

For students with psychological disabilities, see Counseling Services for more information.

Religious Life

The University offers students a variety of opportunities to deepen knowledge and understanding of their faith and to express commitment through worship and service. The University Chaplain guides religious life at Pacific and serves as celebrant of Protestant worship in Morris Chapel. Denominational and other religious groups active on campus include Hillel Jewish Students' Organization, Chi Alpha, Newman House, Intervarsity Christian Fellowship, Wesley Fellowship, Muslim Students Association, and the Christian Life Center, among others.

In greater Stockton itself, over 160 different churches, synagogues and other religious organizations can be found. Many offer classes and activities especially oriented to the student.

Campus Safety

The University is policed by the Department of Public Safety. The campus police are dedicated to the goal of maintaining the excellent academic environment that the University provides. The department provides many services which are designed to make the time spent on campus a pleasant and rewarding experience. Students are encouraged to avail themselves of these services. University of the Pacific Public Safety programs include: date rape prevention, self-protection, crime prevention, emergency phones, harassing telephone call control, Ride Along Program, and gang awareness. For further information or questions that you may have, phone Public Safety (209) 946-2537.

Activities and Organizations

While giving primary emphasis to the goal of academic excellence, the University recognizes and encourages co-curricular activities through academic, political, recognition, professional, and fraternal activities. There are a wide variety of religious, social, cultural, recreational, special interest and governance organizations.

Student Government

The Associated Students function as the recognized student government of the University of the Pacific (ASUOP). It functions as a corporation, completely operated and funded by the University of the Pacific students. The organization houses six different entities which are the ASUOP Government, Annex, Event Programming, Pacific Student Radio, Static Attic and Tiger's Grocery. ASUOP has a dual mission: 1) to serve as an official channel for the free exchange of ideas and opinions among the administration, faculty, staff, and students; 2) to provide services and student activities across campus in order to enrich the social, cultural, and educational aspects of university life.

A fee of $52.50 per semester is automatically assessed to every undergraduate student registered with more than 8.5 units determining them as an ASUOP member. This fee income, combined with various revenue sources, amounts to a total budget to fund the programs services, activities, and goals of the Associated Students. ASUOP has designated a large part of the budget to fund the unique social and professional needs of the eight constituent schools. The student leadership within each constituent school provides additional attention and personal service for those students.

The success of ASUOP depends upon active student involvement. The University and the Associated Students encourage student involvement in campus governance and believe that a sound administration calls for shared responsibility among all members of the campus community. To get involved or for further information, visit the ASUOP office located on the second level of the McCaffrey Center, or call (209) 946-2233.

Intercollegiate Athletics

The University is an NCAA Division I-AAA institution and a member of the Big West Conference. A broad range of intercollegiate athletic opportunities are offered in both team and individual sports. Men's sports include baseball, basketball, golf, swimming, tennis, volleyball and water polo. Women's sports include basketball, cross country, field hockey, soccer, softball, swimming, tennis, volleyball and water polo. Notable among the facilities are the 30,000-seat A. A. Stagg Memorial Stadium, Pacific Aquatics Center with an Olympic-size swimming pool, Bill Simoni Field (softball), Hall Nelson Tennis Center and the 6,000-seat Alex G. Spanos Center.

Campus Recreation

In addition to physical education activity courses, the University offers recreational opportunities for students, faculty and staff through Intramurals, Sports Clubs and the Baun Student Fitness Center. The Intramural

program features both individual and team competition in a variety of activities ranging from flag football and volleyball teams to tennis and golf. Most events include men's, women's and co-rec divisions and are divided into different skill levels. Facilities are also made available to use on an informal recreational activity basis.

Sports clubs are organized by students who have a common interest in a particular sport. Each club develops its own purpose and goals, with some emphasizing instruction and skill development, while others participate within a competitive league format. Currently, there are recognized clubs for badminton, karate, lacrosse, rugby and soccer. For further information concerning academic credit for intercollegiate sports (SPTS 13) and competitive sport clubs (SPTS 12), turn to the course description in this catalog of the Department of Sport Sciences in the College of the Pacific.

Baun Fitness Center

The Baun Fitness Center is an 8,900 square foot facility that features two racquetball courts, a variety of cardio equipment, selectorized weight machines, free weights and group exercise classes. Memberships to the Fitness Center are available to all University students, faculty and staff.

Radio Broadcasting

The University of the Pacific is the licensee for KUOP-FM 91.3, a public radio station and a member of National Public Radio. KUOP was the first FM station in the Central Valley of California and a charter member of NPR. Students also have the opportunity to participate in the activities of KPAC, a student operated campus radio station operating on a closed circuit basis.

Theatre Arts

Highly rated among college production groups, University Theatre contributes to the cultural and entertainment life of the campus and community by presenting a regular season of plays and dance concerts in the Long Theatre and the DeMarcus Brown Studio Theatre. The theatres are a laboratory for theatre arts majors but are open to all others by tryout. Credits applicable to degree requirements may be earned by approved participation.

Forensics

Debate and other forms of competitive speaking are traditions at Pacific and are fields in which the University has attained national recognition. Forensics students at Pacific typically travel to ten tournaments throughout the academic year. They compete in Parliamentary Debate, Persuasive Speaking, Expository Speaking, After Dinner Speaking, Impromptu Speaking, Extemporaneous Speaking, Dramatic Interpretation, Duo Interpretation, Poetry Interpretation, and Prose Interpretation. Students who attain exceptional records often qualify for the National Parliamentary Debate Association Tournament and the American Forensics Association National Individual Events Tournament.

Orchestra

The University Symphony Orchestra presents a full series of symphony concerts each year. The Symphony also performs for opera, choral and commencement performances featuring student artists.

Bands

The Symphonic Wind Ensemble presents an on-campus concert series and is the Conservatory of Music touring wind ensemble. The University Concert Band presents on-campus and community concert series performing a variety of concert band literature. The Pep Band performs at various University athletic events. The Jazz Ensemble presents concerts, dances and programs emphasizing music of the jazz idiom. Students throughout the University are encouraged to audition for participation in all band ensembles.

Choruses

The Pacific Singers presents an on-campus choral concert series and is the Conservatory of Music touring choral ensemble. The University Chorus presents an on-campus concert series performing a variety of choral literature. The Oriana Choir (Women's Chorus) presents an on-campus concert series performing choral music for women's voices. Students throughout the University are encouraged to audition for participation in all choral ensembles.

Publications

The Pacifican is an independent weekly newspaper, published by the Pacifican Publication Board. It is financed by the ASUOP Fee and advertising. Student managed, this publication serves as a laboratory for those interested in journalism.

The major publication of the University is the *Pacific Review* and is published three times a year by the Office of Marketing and University Relations and its purpose is to inform alumni, parents, students and friends about the University, its people and its events.

Anderson Y Center

The Anderson Y Center has been with the University since its days in San Jose, California, in the late 1800s. Named in 1991 as one of the National "Points of Light" by President Bush, today the Anderson Y Center continues to provide an arena for student development and community service programs. Recognized as a leader in innovative programs on campus and in the community, the Center provides tutoring, mentoring and group recreation programs for younger students, outreach, training and development as well as numerous special events and projects.

The executive director oversees the student staff directors and works with campus and community volunteers and the board of directors to provide continuity and professional resources to student-led programs.

The Anderson Y Center receives support from Pacific's Division of Student Life, the Associated Students and numerous other organizations and individuals.

National Honor Societies

Alpha Lambda Delta. For freshmen with an academic average of 3.50 or more.

Alpha Sigma Lambda. Recognition of non-traditional students continuing their education.

Beta Beta Beta. Biology honor society for students with a Biological Sciences GPA of at least 3.0.

Beta Gamma Sigma. Honor society, recognizes outstanding scholarly accomplishment of those receiving their professional training in business and management.

Eta Kappa Nu. For honor students in electrical engineering.

Gamma Sigma Alpha. For members of fraternities and sororities who have a grade point average of 3.5 and above.

Mortar Board. For seniors winning recognition for scholarship and campus leadership.

Order of Omega. For leaders who are members of fraternities and sororities, maintaining a GPA of 3.0.

Phi Kappa Phi. Scholarship honor society for the upper tenth of each graduating class who have distinguished themselves, and for outstanding graduate students, alumni and faculty.

Pi Delta Phi. Theta Chi Chapter for honor students in French.

Sigma Tau Delta. Phi Chi Chapter recognizes and encourages outstanding achievement in English language and literature.

Tau Beta Pi. Engineering Honor Society – all engineering majors.

National Professional Organizations

Alpha Chi Sigma. Chapter for chemistry students who intend to make some phase of chemistry their life work.
Delta Sigma Pi. Lambda Mu Chapter for business majors.
Kappa Psi. Gamma Nu Chapter for male pharmacy students.
Lambda Kappa Sigma. Alpha Xi Chapter for female pharmacy students.
Phi Alpha Delta. Largest legal fraternity composed of pre-law members.
Phi Delta Chi. Alpha Psi Chapter for male pharmacy students.
Phi Mu Alpha Sinfonia. Beta Pi Chapter for male musicians.
Rho Pi Phi. Pharmaceutical fraternity. Lambda Sigma Delta Chapter.

Academic Organizations

American Chinese Pharmaceutical Association
American Society of Mechanical Engineers
American String Teachers Association
Associated Students of Civil Engineers Student Chapter
Associated Students of Engineering Management
Association for Supervision and Curriculum Development
Association of Computing Machinery
Beta Alpha Psi
Calliope (literary magaine)
Composer's Club
English Club
Geoscience Club
Graphic Designers Association
Institute of Electrical and Electronic Engineers
Math Club
Minority Engineering Students
Music and Entertainers Industry Student Association
Music Educators National Conference
National Society of Black Engineers
National Student Speech, Language and Hearing Association
Pacific Entrepreneurship Club
Pacific Humanities Center
Pacific Music Therapy Association
Pacific Student Athlete Council
Pacific Student Athlete Trainers
Pacific Student Radio
Pre-Dental Club
Pre-Physical Therapy Club
Public Relations Student Society of America
Society of Automotive Engineers
Society of Professional Hispanic Engineers
Society of Women Engineers
UOP Forensics Society
UOP Psychology Club

General Fraternities

Alpha Kappa Lambda. Omicron Chapter
Alpha Kappa Phi (Archania)
Omega Phi Alpha
Phi Delta Theta
Pi Kappa Alpha

General Sororities

Alpha Phi
Delta Delta Delta (Tau Kappa Kappa)
Delta Gamma (Epsilon Lambda Sigma)
Kappa Alpha Theta (Alpha Theta Tau)

Student Governance/Political

Academy of Pharmacy Students (ASP)
Amnesty International
Associated Students of the School of Education (ASSE)
Associated Students of the University of the Pacific (ASUOP)
Association of Engineering Students (ASE)
College of the Pacific Student Association (COPA)
Conservatory Student Senate (CSS)
Graduate Student Association
Greek Council
Multi-Cultural Student Association
Residence Hall Association (RHA)
Student Association of the School of Business (SASB)
University College Student Association (UCSA)

Clubs and Organizations

Cultural

African-American Student Union
Association of International Chinese Students
Cambodian Student Association
Hawaiian Club
Hmong Student Association
International Student Association
Japanese Culture Fans Association
Karate Club
Kilusan Pilipino
Latin American Dance Club
M.E.Ch.A.
Middle Eastern Student Association
Muslim Student Association
Pakistan Student Association
Russian Culture Club
Snow Bound
Spanish Club
Swim-Bike-Run-TriCorps
UOP Korean Students Association
Vietnamese Student Association

Recreational

Badminton
Men's Soccer Club
Middle Eastern Student Association
Tiger Wrestling
Ultimate Frisbee Club
UOP Rugby Club

Religious

Campus Apostolic Fellowship (C.A.Fe.)
Chi Alpha Christian Fellowship
Christian Science Organization
Fellowship International
Hillel Foundation
Newman House
Pacific Christian Fellowship

Special Interest

Alpha Phi Omega
Celebrate Diversity
Circle K International
Moonlight Puppeteers
Pacific Admissions Welcoming Service
Pacific Gay/Straight Alliance
Pacific Model United Nations

Other

ASUOP Presents
Crossroads
Responsible Options for Alcohol and Drugs (ROAD)
Student Health Advisory Committee (SHAC)
The Pacifican

Community Service

The Anderson Y Center, the Chaplain's office and the Campus Service Learning Coalition provide the primary focus for community service, although many individuals and groups on campus give extensively to the Stockton community and beyond.

Pacific students tutor youth in Stockton and surrounding communities, conduct on-campus enrichment programs for community youth, and volunteer at many local non-profits, including Deltakeepers, YMCA and St. Mary's Dining Room. Pharmacy students maintain a speaker's program on drugs and drug abuse for local schools and organizations.

At McGeorge, students working under the supervision of clinical professors in the School's Community Legal Services Center provide legal services for indigent clients. Physical education majors teach swimming to the handicapped and work as recreational aides in institutions for the blind and mentally disturbed. Music students, too, use their special talents as therapy for mental patients, and Spanish-speaking students teach adult Mexican-Americans to read English.

Over the years, Pacific students have been responsive to the needs of the individuals and

communities around them. The focus of the service and interest may change, but the involvement continues.

Traditional Events at the University

Celebrate Diversity

A year-round educational campaign to promote understanding and sensitivity toward diversity in ability, age, ethnicity, gender, religion, sexual orientation, size and socioeconomic class. Through cooperative leadership, students and community organizations from diverse backgrounds build lasting alliances that service and empower each individual, the campus, and the community. The year-long campaign culminates with an extended week of programming in the spring.

Fall Career Fair

The Fall Career Fair is for freshmen through seniors as well as alumni. It offers an opportunity for the student to explore career options as well as actively seek post-graduation and internship opportunities. Each year, well over 100 corporations, government agencies, and non-profit organizations participate in this exciting campus event.

Spring Job and Internship Fair

This Fair is designed to facilitate networking between employers and students prior to the spring on-campus recruiting events. Representatives from companies and non-profit agencies attend the Fair to meet with students who are seeking internships, part-time jobs, and post-graduate placement. The Fair offers a wonderful forum for students to learn more about the career opportunities that exist within each company or agency and how to apply for those they wish to pursue.

Homecoming

A day devoted to welcoming alumni back to the campus. Activities include the Alumni Awards Banquet, class reunions, campus tours and much more.

Founders Day

An annual spring event that celebrates the founding of the University by Methodist missionaries and the heritage that came from them. Events include a chapel service for all members of the University community and a luncheon with speakers from the Heritage Society.

Holiday Festival of Lights

An annual celebration, held in December, incorporating various religious and cultural traditions, including, Hanukkah, Christmas, Ramadan, Winter Soltice and Kwanza.

Student Activities Fair

The Student Activities Fair is held annually on the third Thursday of the Fall Semester in the McCaffrey Center. The fair showcases student organizations, together with local vendors and artisans. Student organizations use the fair as an opportunity to inform new students about involvement opportunities. The fair also features live music, games and giveaways.

Women's Week of Action

Generally in October, Women's Week of Action is a week of campus wide events which focuses on women's health and safety.

University Standards

Academic Standards

Honor System

All students on the Stockton campus will be expected, on applying for enrollment, to sign an honor pledge appropriate to the objectives and relationships of the University. Reconstituted by the Pacific Student Association in 1959, the Honor System calls each student "to exhibit in his or her university life a high degree of maturity and personal integrity." While the Honor System recognizes that its vitality "rests with each individual student as he or she chooses to be true to the honor spirit," a structure of controls and judiciary procedures to make the Honor Code effective is outlined in the Pacific Guide.

Academic Standards for Holding Student Office

In order to hold either an elected or appointed office in the Associated Students of the University of the Pacific (ASUOP), the constituent schools, fraternal societies, residence halls or the editorial staff of *The Pacifican*, a student must be registered for a full-time course of study (12 units undergraduate, 8 units graduate) each semester during which he/she holds office. He/she must successfully complete the above minimum units each semester in order to continue in the position. Exceptions to this may be made for seniors in the final semester prior to graduation.

A student must maintain a minimum of a 2.0 cumulative GPA in all letter-graded coursework attempted at the University of the Pacific. In addition, specific policies of professional schools may stipulate that in order to hold student office, a student must maintain a 2.0 GPA minimum in the required courses of the major program. Major leadership positions in ASUOP require a 2.5 GPA. Finally, a student may not be on disciplinary probation during the period of time which he/she holds office. Except for any professional school policy, exceptions to these standards may be considered by the Office of Student Life.

Campus Standards

Rather than publish in this catalog a complete and detailed code of the laws, rules and regulations that students are required to follow, the University declares its intention to uphold all federal, state and municipal laws applicable and expects all students to maintain accepted standards of good citizenship. At the time of admission each student agrees to follow such standards. Accordingly, any conduct not consistent with responsible and/or lawful behavior may be considered cause for the University to take appropriate administrative, disciplinary or legal action.

In addition, the University acknowledges and actively upholds the adult status of each student with all the rights pertaining thereto and, in accordance with that status, considers each student responsible for his/her own actions.

Basic University policies and regulations are published in the Pacific Guide and distributed annually to all students. Statements pertaining to or clarification of student rights can be obtained through the Office of Student Life.

There are, however, five University regulations which should be noted here. They are as follows:

Alcoholic Beverages. The University reminds students that the California Business and Professions Code stipulates that only persons 21 years of age or older may possess and consume alcoholic beverages in any place open to the public. This is State law and compliance with it is the student's obligation. Possession and consumption of alcoholic beverages on the campus is permitted provided that (a) it occurs in the privacy of the student's own living space (as determined by contract) or (b) at an activity which has been registered as a "student event at which alcohol will be served." Student events which include alcoholic beverages must be registered with the Director of Student Activities unless the event occurs in a private living space and is limited to the contractees of that particular living space.

Students may not possess or consume alcoholic beverages in any public University area, including the grounds. The sale or distribution of alcoholic beverages on

University premises for money, for token in lieu of money, or by any other device which in fact constitutes sale is not permitted at any student event. Drunk and disorderly behavior is prohibited. The off-campus use of alcoholic beverages by individuals, groups or University organizations renders the individual or individuals involved responsible under local and state laws.

This policy and the procedures which implement it apply only to the Stockton campus of the University and to the students, student groups, and student events held on that campus and sponsored by a registered student organization.

Drugs. The sale or distribution on or off University premises of drugs or other similar substances designated as illegal by state or federal law and the possession and use of such drugs on University property is prohibited and may be considered sufficient cause for dismissal.

Dangerous Weapons. The possession of firearms of all descriptions, including, but not limited to, air-powered weapons, firecrackers and any other exploding devices, and any instruments that can be construed as dangerous weapons is not permitted on University premises. The brandishment or use of such weapons on University premises shall be considered sufficient cause for immediate suspension pending an investigation. Residential students must arrange for off-campus storage of firearms intended for hunting or target practice purposes.

Pets. No pet of any kind may be kept or maintained on University grounds, with the exception of aquarium fish or pets approved under the Mascot Policy. Guide dogs are also excepted and must be on a leash. Animals for use in projects pertaining to academic programs must be kept and maintained in the appropriate designated areas.

Automobiles and Parking. The University policy for parking is regulated by the Department of Public Safety on the University campus. The Department of Public Safety has sworn peace officers regulating all traffic and parking laws. All citations, except parking, are adjudicated through the Stockton Municipal Court. Parking on the University premises is by permit only, and all vehicles are registered at the University Finance Center. Parking violations are enforced throughout the year.

University Programs and Services

Aerospace Studies (Air Force ROTC)

Air Force Reserve Officer Training Corps (AFROTC) is available to University of the Pacific students through a program offered at California State University, Sacramento (CSUS). The CSUS Department of Aerospace Studies offers two-, three-, and four-year programs leading to a commission in the United States Air Force. All coursework (12 or 16 semester units) is completed on the CSUS campus. Drills and courses are normally offered on Tuesdays, Wednesdays and Thursdays. Field training is conducted during part of the summer at an active Air Force base, normally between the student's sophomore and junior years.

Upon completion of the program and all requirements for a Bachelor's degree, cadets are commissioned second lieutenants in the Air Force and serve a minimum of four years on active duty. Graduates who are qualified and are selected may enter pilot or navigator training after graduation, or serve in a specialty consistent with their academic major, individual goals, and existing Air Force needs. Graduates may request a delay of entry on active duty to continue their education or may apply for Air Force-sponsored graduate study to begin immediately upon entry on active duty.

AFROTC offers 3-year and 2-year scholarships to qualified students. Applications are accepted in any academic discipline; however, particular emphasis is usually given to applicants in the fields of engineering, computer science, mathematics, and physics.

Due to firm scheduling requirements for the AFROTC program, students are encouraged to work closely with their academic advisers in planning this academic program. Application to the AFROTC program should normally be no later than during the first semester of a student's sophomore year. Juniors, seniors and graduate students may also apply under certain conditions. Contact the Unit Admissions Officer in the Aerospace Studies Department at CSUS, telephone (916) 278-7315, for information on the program or the entry process.

Clinical Services

The Clinical Services Testing Office in the Bernerd School of Education is an officially designated national testing center for various standardized tests, such as the Graduate Record Examination, Miller's Analogies Test, College-Level Examination Program, ACT, National Teachers Examination and the California Basic Educational Skills Test.

In addition, the Office maintains a collection of restricted tests and educational and vocational counseling materials for use by faculty and approved advanced students.

In the School of Pharmacy and Health Sciences, the Speech, Hearing and Language Center, in cooperation with the Stockton Scottish Rite Childhood Language Disorders Center, provides a program for children and adults who have need for individual or group therapy for such problems as stuttering, cleft palate, aphasia, cerebral palsy, and speech and language disorders. The Center also provides communication development, auditory training, and speech reading therapy for hearing impaired individuals. Comprehensive audiological assessment is also available for children and adults.

Experiential Learning at Pacific

For decades universities have used experiential learning programs as a way to assist students in integrating their academic training with the practical side of the work world. These programs have allowed the students to gain hands-on experience in a relatively risk-free environment while being supervised and mentored by their faculty and the work site professional. As a Pacific students enters a new century and starts new career journeys, the need to obtain work experience prior to graduation is at an all time high. Employers now want students who not only have the classroom training but also the training of the "trenches.":

Cooperative education, internship, and professional training programs have long been a hallmark of academic distinctiveness at the University of the Pacific. In 1999, Pacific's Academic Council approved a revision to the experiential learning programs that will meet the needs of the students far into the 21st century. In addition to traditional internship, cooperative education, and clinical programs, Pacific has expanded offerings to include fieldwork, service learning, research, practicum and study abroad. Now there is virtually something for every major and every academic program. There has never been a more appropriate or easier time to get involved in an experiential learning program.

Pacific's Career and Internship Center urges all current and future students to consider adding an Experiential Learning Opportunity

(ELO) to their academic pursuits. For additional information about ELO offerings, please contact the Career and Internship Center (CIC) office at (209) 946-2361.

Educational Resource Center

The Educational Resource Center, located in Bannister Hall, conducts classes and individual and group programs for students who desire to refine essential learning skills. All incoming students are assessed for the general education foundation skills requirements and the appropriate Educational Resource Center course placement recommendations are made. The Center has classes in reading and study efficiency, writing, mathematics, and ESL. In addition, the Center administers the University's Tutorial Program. The Center's programs are college-level and available to all students regularly enrolled in the University. Course descriptions can be found under the Gladys L. Benerd School of Education section of this catalog. For more information, call (209) 946-2458.

Holt-Atherton Special Collections

The primary purpose of the University Library's Holt-Atherton Special Collections is to collect, maintain and provide access to the University's collection of rare books, photographs, and manuscripts. Special Collections' materials do not circulate.

The centerpiece of the book collection is the 45,000-volume Stuart Library of Western Americana. This library focuses on the Trans-Mississippi West with special emphasis on California and the San Joaquin Valley.

There are over 300 manuscript collections. Foremost among these is the John Muir Papers which contain Muir's journals, sketchbooks, correspondence and writings. A recent addition is The Dave Brubeck Collection, containing musical manuscripts, recordings, business records, photographs, and newspaper clippings. Special Collections holds 70,000 historic photographs pertaining chiefly to San Joaquin County and the University of the Pacific. There are also collections of 19th and early 20th century maps and newspapers.

Holt-Atherton maintains the University Archives containing records of administration, faculty and students from 1851 to the present.

Academic Honors Programs

Freshman Honors Program: Admitted students receive an invitation to participate from the Director based on high school performance. Factors considered include Advanced Placement courses, general curriculum, SAT and/or ACT scores and the seventh-semester GPA. Participation is confirmed by returning a brief questionnaire.

Freshman Honors students may elect to live in John Ballantyne Hall, an academic living community reserved exclusively for them. Residents may chose to participate in special events scheduled to complement the Mentor Seminar series. The Director of University Honors Programs, whose office is located in John Ballantyne Hall, works closely with the residential life staff to coordinate programming. Freshman Honors Program residents in John Ballantyne Hall traditionally have taken a leadership role in campus politics, social activities and scholarship. Residency in "John B" is optional.

Faculty are carefully chosen to work with Honors sections of Mentor Seminars as well as special sections of selected general education courses reserved for Freshman Honors students. Each Freshman Honors student is expected to enroll in one Honors course each semester of the freshman year. Many students select more than one. Each month of the academic year, students select one event from a published calendar of "colloquia." A total of four events per semester is required for completion of the program.

An "H" appears on the transcript after each Honors course. Upon completion of all the requirements, the official transcript is annotated accordingly.

University Scholars Honors Program: University of the Pacific students completing their first semester of full-time university-level studies with a minimum GPA of 3.5 are invited to participate. Continuation and recognition in the Honors Program are subject to continual review. A minimum of 3.5 overall must be maintained to be eligible for the senior project and for completion of the program. A student may withdraw from the program at any time. The Honors designation for all courses remains on the transcript.

Recognition: Selected, motivated student/faculty interaction in an atmosphere of discovery. Special Honors recognition will differentiate completion of an approved path of the Honors Program from honors based on GPA alone.

Typical Program

Semester 1
Mentor I H

Semester 2
Freshman Honors course (optional)

Semester 3
Path Course 1

Semester 4
Path Course 2

Semester 5
Path Course 3

Semester 6
Path Course if needed

Semester 7
Capstone

Semester 8
Capstone if needed

**Note that this plan allows for acceleration by one or two semesters in those cases of accelerated programs, students in co-op, study abroad or students bringing units from AP or other universities.*

For personal consultation and a complete description of the courses offered, please see/call or e-mail Gregg E. Camfield, Director of Honors Programs at: gcamfiel@uop.edu or phone (209) 946-2610.

International Programs and Services

International Programs and Services (IPS). Located in the Bechtel International Center (BIC) on Baxter Mall, IPS offers comprehensive services for non-immigrant students coming to the United States as well as for Pacific students wanting a study experience abroad. IPS serves as a liaison between various University departments and offices, collaborating with them to enhance international education across the campus.

Bechtel International Center. The Bechtel International Center functions not only as home to the Office of International Programs and Services, but also as a gathering place for all Pacific students, especially multicultural and international students. BIC is open from 5-11 pm, Monday through Thursday nights, when classes are in session, and is used as a study center and for student group meetings. The Center may be used by multicultural and international groups, both on and off campus, for a variety of functions.

International Students and Scholars Services. IPS offers a comprehensive package of services for all non-immigrant students attending Pacific. This includes, but is not limited to, counseling in the following areas: immigration, financial, and personal. The International Student Advisor is also the Responsible Officer for Pacific's J-1 Exchange Visitor Program. This program serves both students and scholars (visiting professors and researchers) in the J-1 visa category. For more information call (209) 946-2246.

UOP Abroad. The University of the Pacific offers its students the opportunity to study abroad for a semester (including summer) or an academic year in a variety of programs around the glob. Students are encouraged to consider this option that will enrich their

lives, add an exciting dimension to study at Pacific, and further career preparation in an increasingly interdependent world. These programs, called UOP Abroad, are administered through IPS.

In addition to its own direct exchange and direct enrollment options, UOP Abroad sponsors programs through other universities and consortia. Credit earned on UOP Abroad is awarded through University of the Pacific. Costs for overseas study, tuition and room/board, if applicable, are the same as an equivalent period on campus. Most scholarships and federal loans apply.

Requirements for UOP Abroad programs vary, but viable options exist for nearly every major on campus. Most students choose to participate in their junior or senior years. However, interested students should investigate study abroad choices as early as possible in their academic careers to insure eligibility. Many programs require prerequisite courses (e.g., a certain level of language proficiency) and all require a minimum grade-point average. Group programs and individual exchanges are available. Additionally, some programs incorporate home stays with local families and some the opportunity for independent study and/or travel.

Many UOP Abroad sites offer a broad liberal arts and sciences curriculum, although some have a specific academic focus such as business, ecology, language immersion, studio arts or music performance. Internships in government, business, law, public relations, etc., are also available at numerous sites. All UOP Abroad programs offer students the challenges and benefits of studying and immersing themselves in a culture different from their own.

A collaborative orientation course is offered by the School of International Studies (SIS) and IPS to prepare students for their experience abroad. The course, INTL 151-Cross-Cultural Training I, is required for all students who wish to study abroad for a semester or longer. A companion course, INTL 161-Cross-Cultural Training II, is required for all SIS majors returning from a study abroad experience and is highly recommended for all students who study abroad. This course helps students critically evaluate their experience abroad. Both courses are two-unit offerings.

For more information on UOP Abroad, please call (209) 946-2592.

Library Services

The University Library delivers its services from two facilities: the William Knox Holt Memorial Library provides resources in the humanities, fine arts, social sciences, music, business, education, natural and physical sciences, and engineering. The focus of the *Health Sciences and Chemistry Branch* is pharmacy, physical therapy, and chemistry resources. These facilities offer a variety of study settings, including carrels, large tables, lounge areas, and group study rooms. Independent of facilities, a rapidly increasing number of network-based library resources are available throughout the campus, around the clock.

The Library is in the midst of a multi-phase restructuring project aimed at providing more networked group study rooms, better space for collaborative learning projects, new communication technologies, and increasing access to networked information resources and tools. The restructuring project also incorporates improved arrangement and housing of the Library's book and journal collections as well as numerous archival collections.

Library faculty and staff members are regularly singled out and recognized by students and faculty for their commitment to service and expertise in providing research assistance. Librarians present dozens of classes and workshops each year designed to help students and faculty use library resources and research tools effectively. Most of this instruction includes hands-on learning on computer workstations.

Information Commons

An integration of computer lab and library reference services, the Information Commons currently provides more than 55 ergonomic workstations, plus stations for laptops, that combine access to library databases and web-based resources with other software tools for creating and presenting academic work (word processing, spreadsheets, e-mail, presentation software, etc.). The Commons is staffed with reference librarians, who assist with research and information questions, and student assistants, who provide technical help with workstations and software tools.

Library Website: http://library.uop.edu

The website provides a portal to many crucial research tools: encyclopedias, PacifiCat (the Library's on-line catalog), periodical and other specialized databases, on-line journals and course materials, e-mail reference and interlibrary loan requests.

Interlibrary Loan staff obtain books, journal articles, and documents not held by Pacific from all types of libraries and commercial information providers. Music/AV staff provide access to listening and viewing equipment for sound and video recordings.

Holt-Atherton Special Collections staff collect, maintain and provide access to special collections, including the Stuart Library of Western Americana and the University Archives. Foremost among the 300 manuscript collections are the John Muir Papers (the father of the conservation movement) and the Dave Brubeck collection (the internationally known jazz musician and Pacific alumnus).

Pacific Alumni Association

The Pacific Alumni Association is made up of more than 39,411 living graduates and former students and is governed by a 48-member Board of Directors. Membership is free. Alumni are kept in touch with the University through nine regional Pacific Clubs and the *Pacific Review*. Activities and programs of the Association are organized and coordinated by the Office of Alumni and Parent Programs. The Alumni Office sponsors several campus gatherings during the year — Pacific Family Day, Homecoming, Reunions and Half-Century Weekend — all of which are designed to enable alumni to continue their friendships with each other and the University. For more information call (209) 946-2391.

University Book Store

Students will find the University Book Store an excellent source for living and learning needs. It provides students with a wide range of products and services for classroom and extra-curricular activities. In addition to required and recommended textbooks, a selection of over 12,000 titles is maintained in both academic and general subject areas.

The Book Store offers a complete line of school supplies. It also carries personal hygiene supplies, art supplies, computer supplies, electronics, an assortment of Pacific emblematic clothing and gift items, magazines, greeting cards, films, office products, CDs and videos, and much more. Other services offered include a complete special order service for books, supply items and film processing.

University Policy on Disclosure of Student Records

Family Educational Rights and Privacy Act (Buckley Amendment)

The University of the Pacific adheres to a policy of compliance with the Family Educational Rights and Privacy Act (Buckley Amendment). As such, it is the policy of the university (1) to permit students to inspect their education records, (2) to limit disclosure to others of personally identifiable information from education records without students' prior written consent, and (3) to provide students the opportunity to seek correction of their education records where appropriate.

I. Definitions

A. "Student" means an individual who is or who has been in attendance at University of the Pacific. It does not include any applicant for admission to the university who does not matriculate, even if he or she previously attended the university. (Please note, however, that such an applicant would be considered a "student" with respect to his or her records relating to that previous attendance.)

B. "Education records" include those records that contain information directly related to a student and that are maintained as official working files by the University. The following are not education records:

1. records about students made by instructors, professors and administrators for their own use and not shown to others;
2. campus police records maintained solely for law enforcement purposes and kept separate from the education records described above;
3. employment records, except where a currently enrolled student is employed as a result of his or her status as a student;
4. records of a physician, psychologist, or other recognized professional or paraprofessional made or used only for treatment purposes and available only to persons providing treatment.
5. records that contain only information relating to a person's activities after that person is no longer a student at the university.

II. It is the policy of the University of the Pacific to permit students to inspect their education records.

A. Right of Access

Each student has a right of access to his or her education records, except confidential letters of recommendation received prior to January 1, 1975, and financial records of the student's parents.

B. Waiver

A student may, by a signed writing, waive his or her right of access to confidential recommendations in three areas: admission to any educational institution, job placement, and receipt of honors and awards. The university will not require such waivers as a condition for admission or receipt of any service or benefit. If the student chooses to waive his or her right of access, he or she will be notified, upon written request, of the names of all persons making confidential recommendations. Such recommendations will be used only for the purpose for which they were specifically intended. A waiver may be revoked in writing at any time, and the revocation will apply to all subsequent recommendations, but not to recommendations received while the waiver was in effect.

C. Types of Education Records, Titles of Records Custodians

Please note that all requests for access to records should be routed through the Office of the Registrar.

1. Academic Records
   All ongoing academic and biographical records/Registrar.
2. Departments
   Miscellaneous records kept vary with the department/Department Chairs.
3. Schools/Colleges
   Miscellaneous records/Deans.
4. Residential Life
   Students' housing records/Assistant Dean of Students for Rental Life and Housing.
5. Advisors
   Letters of evaluation, personal information sheet, transcript, test scores.
6. Counseling Center
   Biographical data, summaries of conversations with students, test results. (Where records are made and used only for treatment purposes, they are not education records and are not subject to this policy)/Director.
7. Financial Aid
   Financial aid applications, needs analysis statements, awards made (no student access to parents' confidential statements)/Director of Financial Aid.
8. Career and Internship Center
   Recommendations, copies of academic records (unofficial)/Director.
9. SUCCESS
   Records of academic progress, transcripts/Director.
10. Business Services
    All student accounts receivable, records of students' financial charges, and credits with the University/Bursar.

D. Procedure to be Followed

Requests for access should be made in writing to the Office of the Registrar. The University will comply with a request for access within a reasonable time, at least within 45 days. In the usual case, arrangements will be made for the student to read his or her records in the presence of a staff member. If facilities permit, a student may ordinarily obtain copies of his or her records by paying reproduction costs. The fee for copies is $.25 per page. The University will not provide copies of any transcripts in the student's records other than the student's current university transcript. Official university transcripts (with university seal) will be provided at a higher charge.

III. It is the policy of University of the Pacific to limit disclosure of personally identifiable information from education records unless it has the student's prior written consent, subject to the following limitations and exclusions.

A. Directory Information

1. The following categories of information have been designated directory information:
   - Name
   - Address
   - Telephone listing
   - Electronic mail address
   - Date and place of birth
   - Photograph
   - Major field of study
   - Participation in officially recognized activities and sports
   - Weight and height of members of athletic teams

- Enrollment status (full-, part-time, undergraduate, graduate)
- Dates of attendance
- Degrees and awards received
- Most recent previous educational institution attended
- Grade level

2. This information will be disclosed even in the absence of consent unless the student files written notice requesting the University not to disclose any of the categories within three weeks of the first day of the semester in which the student begins each school year. This notice must be filed annually within the above allotted time to avoid automatic disclosure of directory information. The notice should be filed with the Office of the Registrar. See II.C.
3. The University will give annual public notice to students of the categories of information designated as directory information.
4. Directory information may appear in public documents and otherwise be disclosed without student consent unless the student objects as provided above.
5. All requests for non-disclosure of directory information will be implemented as soon as publication schedules will reasonably allow.
6. The University will use its best efforts to maintain the confidentiality of those categories of directory information that a student properly requests not be publicly disclosed. The University, however, makes no representations, warranties, or guarantees that directory information designated for non-disclosure will not appear in public documents.

B. Prior Consent Not Required

Prior consent will not be required for disclosure of education records to the following parties:

1. School officials of University of the Pacific who have been determined to have legitimate educational interests.
   a. "School officials" include instructional or administrative personnel who are or may be in a position to use the information in furtherance of a legitimate objective;
   b. "Legitimate educational interests" include those interests directly related to the academic environment;
2. Authorized representatives of the Comptroller General of the U.S., the Secretary of Education, the Secretary of the Department of Health and Human Services, the Director of the National Institute of Education, the Administrator of the Veterans' Administration, but only in connection with the audit or evaluation of federally supported education programs, or in connection with the enforcement of or compliance with Federal legal requirements relating to these programs. Subject to controlling Federal law or prior consent, these officials will protect information received so as not to permit personal identification of students to outsiders and destroy such information when it is no longer needed for these purposes;
3. Authorized persons and organizations that are given work in connection with a student's application for, or receipt of, financial aid, but only to the extent necessary for such purposes as determining eligibility, amount, conditions, and enforcement of terms and conditions;
4. State and local officials to which such information is specifically required to be reported.
5. Organizations conducting educational studies for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction. The studies shall be conducted so as not to permit personal identification of students to outsiders, and the information will be destroyed when no longer needed for these purposes;
6. Accrediting organizations for purposes necessary to carry out their functions;
7. Parents of a student who is a dependent for income tax purposes. (Note: The University may require documentation of dependent status such as copies of income tax forms.)
8. Appropriate parties in connection with an emergency, where knowledge of the information is necessary to protect the health or safety of the student or other individuals;
9. In response to a court order or subpoena, the University will make reasonable efforts to notify the student before complying with the court order.
10. To an alleged victim of any crime of violence of the results of any institutional disciplinary proceeding against the alleged perpetrator of that crime with respect to that crime.

C. Prior Consent Required

In all other cases, the University will not release personally identifiable information in education records or allow access to those records without prior consent of the student. Unless disclosure is to the student himself or herself, the consent must be written, signed, and dated, and must specify the records to be disclosed, the identity of the recipient, and the purpose of disclosure. A copy of the record disclosed will be provided to the student upon request and at his or her expense.

The University will maintain with the student's education records a record for each request and each disclosure, except for the following:

1. disclosures to the student himself or herself;
2. disclosures pursuant to the written consent of the student (the written consent itself will suffice as a record);
3. disclosures to instructional or administrative officials of the University.
4. disclosures of directory information. This record of disclosures may be inspected by the student, the official custodian of the records, and other university and governmental officials.

D. It is the policy of University of the Pacific to provide students the opportunity to seek correction of their education records.

1. Request to Correct Records

A student who believes that information contained in his or her education records is inaccurate, misleading, or violative of privacy or other rights may submit a written request to the Office of the Registrar specifying the document(s) being challenged and the basis for the complaint. The request will be sent to the person responsible for any amendments to the record in question. Within a reasonable period of time of receipt of the request, the University will decide whether to amend the records in accordance with the request. If the decision is to refuse to amend, the student will be so notified and will be advised of the right to a hearing. He or she may then exercise that right by written request to the Office of the Registrar.

2. Right to a Hearing

Upon request by a student, the University will provide an opportunity for a hearing to

challenge the content of the student's records. A request for a hearing should be in writing and submitted to the Office of the Registrar. Within a reasonable time of receipt of the request, the student will be notified in writing of the date, place, and time reasonably in advance of the hearing.

3. Conduct of the Hearing

The hearing will be conducted by a university official who does not have a direct interest in the outcome. The student will have a full and fair opportunity to present evidence relevant to the issues raised and may be assisted or represented by individuals of his or her choice at his or her own expense, including an attorney.

4. Decision

Within a reasonable period of time after the conclusion of the hearing, the University will notify the student in writing of its decision. The decision will be based solely upon evidence presented at the hearing and will include a summary of the evidence and the reasons for the decision. If the University decides that the information is inaccurate, misleading, or otherwise in violation of the privacy or other rights of the student, the University will amend the records accordingly.

5. Right to Place an Explanation in the Records

If, as a result of the hearing, the University decides that the information is not inaccurate, misleading, or otherwise in violation of the student's rights, the University will inform the student of the right to place in his or her record a statement commenting on the information and/or explaining any reasons for disagreeing with the University's decision. Any such explanation will be kept as part of the student's record as long as the contested portion of the record is kept and will be disclosed whenever the contested portion of the record is disclosed.

6. Right to File Complaint

A student alleging university noncompliance with the Family Educational Rights and Privacy Act may file a written complaint with the

Family Educational Rights and Privacy Act Office (FERPA)
Department of Education
600 Independence Ave, S.W.
Washington, D.C. 20202-4605.

general education program

The University General Education Program draws upon many traditions of learning. It prepares the student for a lifetime of reflection and for the application of knowledge to everyday life. The broad perspective it provides liberates the individual and energizes the citizen. Our goal is to present students with an overview of the borders of knowledge and an exposure to the different ways critical thought can be organized. Along the way, fundamental skills are evaluated and strengthened. The course of study outlined below is required for all students pursuing a bachelor's degree or a first professional degree from the University. Depending on the specific degree sought, general education courses compose between 27 and 36 percent of a student's required coursework at Pacific.

"Our most important task, we think, is not to train for a meal ticket the week after graduation, but to educate for 50 years of self-fulfillment."

Harlan Cleveland, The Knowledge Executive – Leadership in an Information Society

Mentor Seminars I and II
Seminar I (4 units); Seminar II (3 units)

During the first semester of the freshman year, all students take Mentor Seminar I: Timeless Issues. The course explores such issues as:

- Where do humans come from?
- What is knowledge and its value?
- How do humans differ from one another?
- How should humans live?
- What is a good life?

Mentor Seminar I is taught by an interdisciplinary team of faculty drawn from the humanities, social sciences, natural sciences, fine arts and professional faculties.

Students meet in small groups to discuss these topics and to write a series of short essays. These groups are assigned so that students from the University's professional schools are mixed with those from the College of the Pacific to ensure a diversity of points of view. Students are assisted in their reflections by carefully selected readings from original texts and a series of lecture/presentations.

In the second semester of the freshman year, all students take Mentor Seminar II: Today's Decisions. Here the focus is on the development of argumentation skills and the discussion of selected public policy decisions which these students may face during their lifetime. Representative topics covered in the course include social and economic inequities, race and gender issues, immigration concerns, welfare complexities, matters of education, the causes and consequences of crime, environmental issues, and the role of government in the economy. Again an interdisciplinary team of faculty interact with students in small seminar settings. After a preliminary examination of the topics chosen for a particular semester, students will select one problem for special attention and work with a group of students on an extended report analyzing it. The goal is a document from each group that parallels a British "White Paper" or report of a Congressional Committee. Students will be assisted with information retrieval and the organization of data from a variety of sources.

Taken together, the Mentor Seminars in the freshman year provide students with a strong foundation for future study at the University. Students experience a "living catalog" for the disciplines and perspectives offered on the campus. They are exposed to significant ideas and provided the opportunity to discuss them among themselves and with knowledgeable faculty. They sharpen their reading, writing, discussion, speaking, and research skills. Mentor Seminars help to generate solidarity among the freshman class, resulting in supportive peer relationships over the remaining years. Along with providing a common educational experience for all freshmen and accomplishing the several goals

described above, the Mentor Seminars also serve as introductions to broad disciplinary groupings. Mentor Seminar I is an introduction to the humanities and Mentor Seminar II is an introduction to the social and behavioral sciences.

All students who enter the University as freshmen must complete Mentor I and II. Students are not allowed to drop these courses for any reason, even if they plan to transfer to another college or university. Freshmen entering in the spring semester begin the Mentor sequence the following fall. Students who would benefit from special attention to reading and writing skills are deferred from the Mentor sequence until their sophomore year.

Mentor Seminar III (3 Units)

"The college or university clearly has the opportunity to provide the capstone to character development in the schooling years. Among those pursuing undergraduate education are the future leaders of every sector. Here is a key leverage point for the moral quality of our or any modern society."

W. Nicgorski,
"The College Experience and Character"

During the senior year, students complete Mentor Seminar III: Ethical Applications of Knowledge. This course offers an overview of moral decision-making strategies. Students are asked to explore the biography of a moral leader of their choice to discover the strategies he or she used. Finally, students write an autobiographical statement assessing their own moral development and suggesting ways their character might mature in the future. The goal of this final seminar is a graduate who knows the extent of his or her accomplishments and who can move with confidence into a world where valuing and learning never stop. In some programs of study the Mentor Seminar III requirement may be met by a specially designed capstone course.

The Path Requirement 6-9 Courses (3 or 4 Units Each)

General Education beyond the Mentor Seminars provides students considerable choice, but within a framework that assures that the result is the breadth necessary for students to meet the challenges that await them after graduation.

Students construct for themselves, with the help of their adviser, a personalized path comprised of courses selected from a set of approved lists. The courses on these lists have been selected by faculty to illustrate a particular field of study and to indicate the way in which that field relates to other disciplines or perspectives.

Students enrolled in schools or colleges other than the College of the Pacific are required to satisfactorily complete six courses. Two courses should be selected from each of the major categories listed below (I, II or III). However, only one class can come from each subdivision (A, B or C) and of the two courses taken under the third category, one must be from the first subdivision and the other from the second. Courses in the paths component of the General Education Program will normally have a value of three or four units.

There is an important exception in category IIC-Practice and Perspective in the Visual and Performing Arts. In this area students may take three 1-unit courses in applied music or two 2-unit courses in dance to meet the requirement. The courses must be taken in successive semesters in which the courses are offered and must be for the same instrument, ensemble, or dance form in each semester.

For those enrolled in the College of the Pacific, nine courses are required, one from each subdivision listed below. The only exception to this rule is in category III where students may take two courses under the first subdivision rather than one course each under the first and third subdivision. These regulations guarantee that a student's choices result in a path of sufficient breadth. Students should check with their school or college dean's office for path requirements in addition to the University-wide requirements.

The categories and subdivisions which organize the courses offered to students who wish to create their own path are as follows:

I. The Individual and Society
   - A. Individual and Interpersonal Behavior
   - B. Society and Culture in the United States
   - C. Society and Cultures Outside the United States

II. Human Heritage
   - A. Literature, Letters and Language
   - B. Fundamental Human Concerns
   - C. Practice and Perspective in the Visual and Performing Arts

III. Natural World and Formal Systems of Thought
   - A. Life and Physical Laboratory Sciences
   - B. Formal Systems of Thought
   - C. Science, Technology and Society

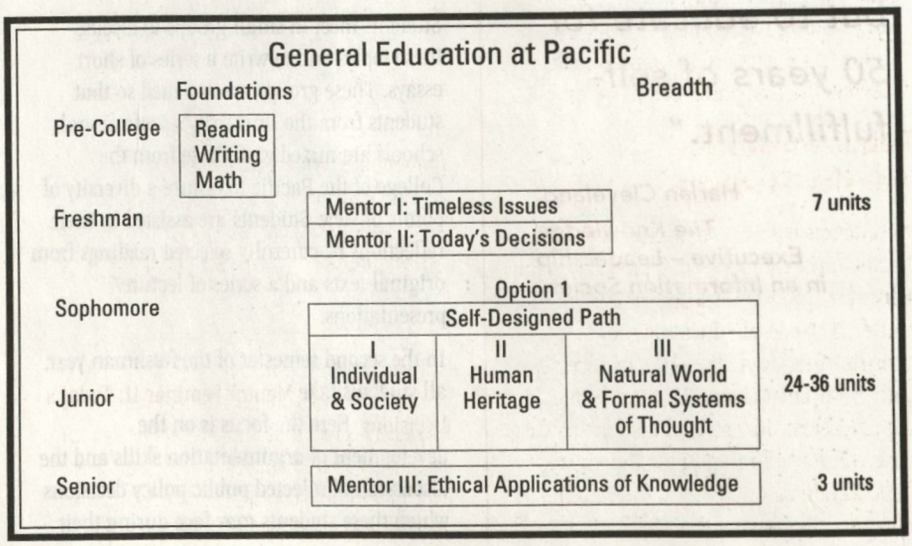
The titles of the courses themselves are listed by category and subdivision later in this section.

Fundamental Skills

As part of the General Education Program, all students are required to be competent in three fundamental skills at entrance: reading, writing and quantitative analysis. Students may demonstrate competence in these skills in one of three ways: 1) completion of approved, college-level courses at an accredited college or university; 2) satisfactory performance on an approved, nationally administered examination; or 3) satisfactory performance on examinations given at Pacific during its student orientation.

Any student who does not pass one or more of these examinations must take course work to remedy the skill deficiency as follows:

- Any student not passing the quantitative



analysis (math) examination must successfully complete MATH 5 (Intermediate Algebra), Statistics, or an equivalent course from another accredited college or university during the first full year of study including summer sessions.

- Any student not passing the writing examination must successfully complete WRIT 21 (Writing for College) or an equivalent course from another accredited college or university during the first full year of study including summer sessions.
- Any student not passing the reading examination must successfully complete READ 31 (Reading for College) during the first full year of study including summer sessions.
- Successful completion of course work in quantitative analysis, writing and reading requires a grade D or better. Course work taken in quantitative analysis or writing at another college or university must be approved in advance.
- Failure to make progress toward remediating a basic skill deficiency during the first year of study will be grounds for being placed on academic probation. Failure to satisfy the basic skill requirements by the end of four semesters of full-time study at the University will be grounds for academic disqualification.
- Students with documented learning or physical disabilities which directly affect their mastery of these skills or students concurrently enrolled in an approved English-as-a-Second-Language (ESP) Program of instruction in reading and writing may seek a written waiver of the deadline for demonstrating competence.
- The quantitative analysis (math), writing, and reading requirements must be met before a student graduates with a bachelor's degree or a first professional degree.

Requirements for Transfer Students

All students entering the University of the Pacific must complete an approved General Education program before graduation. The University General Education program consists of fundamental skills requirements, path requirements and Mentor Seminar requirements. University of the Pacific accepts for credit toward meeting the University General Education Program the general education requirements of the University of California and the California State University systems. The general education programs of additional colleges and universities may be accepted for credit by the Director of General Education if the student provides a catalog description of the program. Transfer students have their official transcripts and certification of their previous general education programs assessed prior to entrance to the University. Students who enter the University in 2001-2002 are not required to take Mentor Seminar III unless they have taken Mentor Seminar I and Mentor Seminar II or unless their program requires Mentor Seminar III.

Transfer students will divide into the following three categories:

1. Transfer students who have been certified as completing an approved general education program at a previously attended institution,
2. Transfer students who have been certified to have two or fewer courses remaining to complete an approved general education program at a previously attended institution (such students will be notified at orientation of the University courses which satisfy these requirements), and
3. Transfer students who have not been certified to be within a two-course completion of an approved general education program at a previously attended institution.

The requirements which remain for students in each of these categories to fulfill the University General Education Program are:

For category 1, no fundamental skill requirements, except as noted below, no path requirements.

For category 2, no fundamental skill requirements, except as noted below, but completion of general education requirements from previous colleges or universities.

For category 3, all fundamental skills requirements apply; nine (or twelve in the College of the Pacific) path courses.

Individual schools or colleges may impose general education graduation requirements, including fundamental skills requirements, beyond the University General Education Program.

Implementation of this policy began with transfer students entering during the 1993-94 academic year. Students who entered the University before that time and who desire an evaluation of their records in regard to general education should contact the associate dean or appropriate adviser in their school or college.

Path Course Lists for General Education

The courses listed below are approved as counting toward the breadth requirement in each of the nine areas of the program. One-unit dance courses must be completed for three successive semesters in which the courses are offered. Although not listed here, some "special topics" courses taught during a particular term may also be approved for general education. Some professional schools on campus have more restrictive requirements under which only some of the courses listed in each area will count for students pursuing those professional programs.

The listing of general education courses being taught during a particular term, can be found in each term's Schedule of Classes.

I-A. Individual and Interpersonal Behavior

COMM 43	Introduction to Interpersonal Communication
CURR 115	Introduction to Language
ECON5 3	Introductory Microeconomics
ENGL 122	Literature and Psychology
GEND 11	Introduction to Gender Studies
PSYC 29	Child Development
PSYC 31	Introduction to Psychology
PSYC 66	Human Sexuality
PSYC 110	Psychoactive Drugs and Behavior
PSYC 111	Abnormal Psychology
PSYC 131	Adolescence and Young Adulthood
PSYC 133	Adulthood and Aging
PSYC 177	Psychological Stress
SLPA 51	Introduction to Communicative Disorders
SOCI 133	Criminology
SOCI 135	Deviant Behavior

I-B. Society and Culture in the United States

BUSI 53	Legal and Ethical Environment of Business
COMM 31	Introduction to Mass Communication
EADM 152	The Mexican-American in Contemporary Society
ECON 51	Economic Principles and Problems
ECON 55	Introductory Macroeconomics
ENGL 51	Major American Authors I
ENGL 53	Major American Authors II
HIST 61	U.S. History I
HIST 63	U.S. History II
HIST 120	The Civil War Era
HIST 126	U.S.A. World War II to Vietnam
HIST 160	History of American Business
HIST 182	Women in U.S. History

HIST 184 African-American History
POLS 41 U.S. Government and Politics
SOCI 51 Introduction to Sociology
SOCI 61 Urban Society and Policy
SOCI 104 Sociology of Sport
SOCI 106 Popular Culture
SPTS 141 Sports in America

I-C. Society and Cultures Outside the United States

ANTH 53 Cultural Anthropology
CHIN 23 Chinese Through Culture, 3rd Semester
CHIN 25 Chinese Through Culture, 4th Semester
CLAS 100 History of Ancient Greece
CLAS 102 History of Ancient Rome
CLAS 115 Classical Mythology
COMM 143 Intercultural Communication
FREN 23 French Through Culture, 3rd Semester
FREN 25 French Through Culture, 4th Semester
FREN 122 La Francophonic
GERM 23 German Through Culture, 3rd Semester
GERM 25 German Through Culture, 4th Semester
HIST 80 Native American
HIST 100 History of Ancient Greece
HIST 102 History of Ancient Rome
HIST 114 Europe in Turmoil, 1900-1945
HIST 115 Europe Since 1945
HIST 125 East Asian Civilization I
HIST 127 East Asian Civilization II
HIST 128 The Spanish Empire
HIST 129 The Roots of Russian History
HIST 130 Modern Latin America
HIST 131 History of Modern Russia
HIST 133 Women in Latin America
HIST 140 History of Soviet Foreign Policy
HIST 146 History of Mexico
HIST 152 Pre-Modern China to 1840
HIST 153 Modern Chinese History
HIST 176 History of American Immigration
INTL 123 Literature Across Cultures
JAPN 23 Intermediate Japanese, 3rd Semester
JAPN 25 Intermediate Japanese, 4th Semester
MHIS 6 Introduction to the Music of the World's People
POLS 11 Introduction to Political Science
POLS 51 International Politics
POLS 148 Politics of the Middle East
POLS 152 Politics of Asia
RELI 35 Judaism
RELI 134 World Religions
RUSS 23 Intermediate Russian, 3rd Semester
RUSS 25 Intermediate Russian, 4th Semester
RUSS 73 Russian Culture and Civilization
SOCI 108 Food, Culture and Society
SPAN 23 Intermediate Spanish, 3rd Semester
SPAN 25 Intermediate Spanish, 4th

II-A. Literature, Letters and Language

CHIN 11 First-Year Chinese, 1st Semester
CHIN 11 First-Year Chinese, 2nd Semester
CLAS 31 English Vocabulary Building
CLAS 33 Bioscientific Terminology
COMM 27 Public Speaking
COMM 29 Introduction to Argumentation
CURR 123 Syntax and Semantics
ENGL 25 English 25
ENGL 41 Major British Authors I
ENGL 43 Major British Authors II
ENGL 131 Shakespeare
FREN 11 First-Year French, 1st Semester
FREN 11 First-Year French, 2nd Semester
FREN 51 French Literature in English
GERM 11 First-Year German, 1st Semester
GERM 11 First-Year German, 2nd Semester
GERM 128 German Poetry
GREK 11 First-Year Ancient Greek, 1st Semester
GREK 11 First-Year Ancient Greek, 2nd Semester
GREK 23 Intermediate Greek, 3rd Semester
GREK 25 Intermediate Greek, 4th Semester
GREK 127 Advanced Greek
JAPN 11 First-Year Japanese, 1st Semester
JAPN 11 First-Year Japanese, 2nd Semester
LATN 11 First-Year Latin, 1st Semester
LATN 11 First-Year Latin, 2nd Semester
LATN 23 Intermediate Latin, 3rd Semester
LATN 25 Intermediate Latin, 4th Semester
LATN 127 Advanced Latin
LATN 151 Intensive Latin for Language Students
RUSS 11 First-Year Russian, 1st Semester
RUSS 11 First-Year, 2nd Semester
SLPA 53 Beginning Sign Language I
SPAN 11 First-Year Spanish, 1st Semester
SPAN 11 First-Year Spanish, 2nd Semester
THEA 103 Theatre Heritage I
THEA 105 Theatre Heritage II

II-B. Fundamental Human Concerns

CLAS 31 English Vocabulary Building
CLAS 110 Greek Literature in English
CLAS 112 Roman Literature in English
CLAS 120 Sexuality in Greek Society
CLAS 122 Sexuality in Roman Society
ENGL 128 The Medieval Mind
ENGL 140 The English Renaissance
HIST 51 History of Western Civilization I
HIST 53 History of Western Civilization II
HIST 66 Women in Time and Place
HIST 75 History of Medicine
HIST 106 Renaissance and Reformation
HIST 178 History of Modern Ideas
INTL 81 Perspectives on World History
PHIL 11 Introduction to Philosophy
PHIL 21 Moral Problems
PHIL 25 The Meaning of Life
PHIL 27 Fundamentals of Ethics
PHIL 35 Environmental Ethics
PHIL 39 Dimensions of Freedom
PHIL 47 Philosophers in Depth
PHIL 53 Ancient and Medieval Philosophy
PHIL 55 History of Modern Philosophy
PHIL 101 Philosophers in Conflict
PHIL 106 Philosophy of Law
PHIL 124 Philosophy of Religion
PHIL 135 Political Philosophy
PHIL 180 Metaphysics
PHIL 182 Theory of Knowledge
RELI 23 Biblical Studies
RELI 27 Life and Teaching of Jesus
RELI 34 Introduction to Religion
RELI 43 Social Ethics
RELI 44 Sex, Sin and Salvation
RELI 70 Religion and American Culture
RELI 130 The Christian Tradition
RELI 140 Religion and Politics
RELI 142 Ethics and Capitalism
RELI 145 Biomedical Ethics
RELI 170 Religion and Modern Literature
RELI 172 Biblical Themes in Literature

II-C. Practice and Perspective in the Visual and Performing Arts

ART 7 Survey of Western Art To 1400
ARTH 9 Survey of Western Art After 1400
ARTH 108 Renaissance Art and Architecture
ARTH 110 17th Century Art – Age of Rembrandt
ARTH 112 19th Century European Art
ARTH 114 20th Century European Art
ARTH 116 American Art Before 1900
ARTH 118 Contemporary Art
ARTH 120 Chinese Art History
ARTH 122 Japanese Art History
ARTH 124 Sex, Gender and the Arts
ARTH 130 Greek Art and Architecture
ARTH 132 Roman Art and Architecture
ARTS 3 Visual Arts Exploration
ARTS 25 Drawing I
ARTS 31 Design and Color
ARTS 41 Ceramics I
ARTS 47 Sculpture I
ARTS 50 Figure Sculpture I

ARTS 131 Visual Arts Education
ARTS 145 Photography I
CLAS 130 Greek Art and Architecture
CLAS 132 Roman Art and Architecture
ENGL 31 Aesthetics of Film
ENGL 121 Major Filmmakers
ENGL 123 Film, Literature and the Arts
FREN 120 La Cinema Francais/French Cinema
MHIS 11 Survey of Music History I
RELI 71 Religion and Cinema
THEA 10 Introduction to Theatre
THEA 12 Expressive Movement
THEA 13A Ballet: Beginning I
THEA 13B Ballet: Beginning II
THEA 13C Jazz: Beginning I
THEA 13D Jazz: Beginning II
THEA 13E Modern Dance: Beginning I
THEA 13F Modern Dance: Beginning II
THEA 13G Tap: Beginning I
THEA 13H Tap: Beginning II
THEA 14A Survey of Dance I
THEA 14B Survey of Dance II
THEA 17 Beginning Acting
THEA 55 Puppetry

III-A. Life and Physical Laboratory Science

BIOL 11 Human Anatomy and Physiology
BIOL 31 Animal Societies
BIOL 51 Principles of Biology
BIOL 61 Principles of Biology
BIOL 74 Biology of Insects
BIOL 79 California Flora
CHEM 23 Elements of Chemistry
CHEM 25/27 General Chemistry
GEOS 51 Physical Geology
GEOS 53 Geologic Evolution of the Earth
GEOS 55 Physical Geography
GEOS 57 Earth System Science
GEOS 61 Geology of California
PHYS 17 Concepts of Physics
PHYS 23/25 General Physics
PHYS 39 Physics of Music
PHYS 41 Astronomy
PHYS 53/55 Principles of Physics

III-B. Formal Systems of Thought

COMP 25 Computer/Information Processing
COMP 47 Discrete Mathematics for Computer Science
COMP 51 Introduction to Computer Science
ECON 61 Economic Statistics
MATH 33 Elements of Calculus
MATH 35 Elementary Statistical Inference
MATH 37 Probability and Statistics
MATH 39 Probability with Applications to Statistics
MATH 41 Elementary Functions
MATH 45 Introduction to Finite Mathematics and Calculus
MATH 51 Calculus I
MATH 53 Calculus II
MATH 55 Calculus III
PHIL 37 Introduction to Logic
PSYC 103 Experimental Research/Statistics

III-C. Science, Technology and Society

ANTH 112 Physical Anthropology
BIOL 35 Environment: Concepts and Issues
ENGR 10 Information Highway
ENGR 11 Technology and Society
GEOS 41 Environmental Geology
GESL 43 The Changing Environment
RELI 146 Technology, Ethics and Religion
SPTS 41 Heart, Exercise and Nutrition
SPTS 45 Science of Nutrition

college of the pacific

The home of the arts and sciences at the University of the Pacific, featuring thirty-five undergraduate majors, thirty-five minors and opportunities for interdisciplinary and experiential study.

Dean
Robert R. Benedetti

Associate Dean
Kenneth D. Day

Assistant Dean
Susan C. Giraldez

Department Telephone
209.946.2141

Website
www1.uop.edu/cop

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Sport Sciences
Studio Art
Theatre Arts

The College of the Pacific offers students self-discovery, intellectual development and a large measure of choice in selecting an academic program. Within a context of high academic expectations, students develop self-discipline, rigor, persistence and a willingness to explore.

With the assistance of faculty advisers, students plan their academic programs to include general education courses, courses required by the majors and minors a student selects, and courses which satisfy a student's individual interests.

Students will find an extensive array of major and minor programs from which to choose. The College of the Pacific provides many pathways toward fulfilling careers and an appreciation of the world in which we live.

In the classroom, in residential life and through their contributions to the College and University, students are provided with the opportunity to learn more about themselves and their world, to define personal and professional goals, and to acquire the knowledge and skills necessary to fulfill a role of service to others.

General Education Requirements

College of the Pacific students participate in the University General Education Program. The curricular emphasis of the College of the Pacific is on the liberal arts, and participation in the program is a vital part of the student's academic program. Freshmen are required to take Mentor Seminars I, II and III.

1. In addition to participation in three Mentor Seminars, College of the Pacific students are required to successfully complete nine courses, three in each of the three main categories of the University General Education Program, totaling a minimum of 30 units. Students must take three courses listed under Category I-The Individual and Society (one in each subcategory), and three courses listed under Category II-Human Heritage (one in each subcategory). In Category III-The Natural World and Formal Systems of Thought, students have the option of taking one course from each of the three areas, or two courses from area A-Life and Physical Laboratory Sciences, and one course from area B-Formal Systems of Thought.
2. Mentor Seminars cannot be taken pass/no credit.
3. No more than three courses from a single department or other school or college may be applied to meet the requirements of the general education program.
4. Credit earned through advanced placement

or "challenge" tests cannot be used to meet general education requirements.

5. Coursework in independent or directed study, field experience or similar activities such as internships, practicums and cooperative education cannot be used to meet general education requirements.

Information about the University General Education Program as modified by the College of the Pacific may be obtained from the Dean of the College. Students who are transferring into the College as internal transfers or from another institution will have a general education analysis made of their transcripts at the time of matriculation into the College to determine what requirements remain to be completed.

Students pursuing a degree in another school of the university may elect to complete a major in the College of the Pacific without fulfilling the General Education requirements of the College in addition to those of the school that is granting their degree. Any student who wishes to be awarded a degree in another school at the University of the Pacific and a degree in the College of the Pacific must satisfy all degree requirements of both schools including those in General Education.

College of the Pacific Language Requirement

In order to promote an appreciation of diverse cultures and to encourage greater understanding of the English language, the College of the Pacific requires one year of college instruction or equivalent training in a language other than English for all students seeking a Bachelor of Arts (B.A.) degree. Students who transfer to the College with sophomore standing or above, or who seek a Bachelor of Science (B.S.) degree or a Bachelor of Fine Arts (B.F.A.) degree, are exempt from this requirement, but are encouraged to cultivate their language skills.

This requirement can be met entirely, or in part, by completing coursework at the College, at approved colleges and universities, or by examination. To fulfill the requirement by completing coursework a grade of C- or better must be obtained in each course. In addition to modern and ancient written languages, students may elect to complete the requirement in American Sign Language. Computer languages cannot be substituted for the requirement. Individual departments may choose to increase, but not to decrease, the level of proficiency required.

The Major Program

The College of the Pacific provides students with opportunities for specialized study in a major through an unusually varied and flexible arrangement of courses. The College has designed a wide variety of majors to respond to the needs and career goals of students including majors in a single subject such as chemistry, history or mathematics and majors in pre-professional studies, such as pre-law. The College of the Pacific also has cross-disciplinary majors combining two areas of study, such as chemistry/biology. There are multi-disciplinary majors which combine the resources of several departments, such as liberal studies.

A unique opportunity for students who have a special academic or career objectives not directly met by existing majors is the "self-designed" interdisciplinary major. In this program a student will work with several faculty members from two or more academic areas to construct a major organized around a particular theme or interdisciplinary course of study. This option is offered under the direction and guidance of the Associate Dean of the College.

In addition, students may take advantage of the courses and programs offered by the other schools on the University campus. Students working toward a teaching credential take professional coursework in the Gladys L. Benerd School of Education. There are several programs in the College which include coursework from the Eberhardt School of Business. Many students take elective coursework in the Conservatory of Music. In fact, a student may elect to take any undergraduate course in the University provided that the course prerequisites are met.

The result of this diversity and openness of curricular offerings and programs is that students receive the benefits normally associated with a large university while experiencing the close personal relationship between students and faculty which is a hallmark of the College of the Pacific.

Minors

Minors consist of a coherent set of related courses in a particular disciplinary or interdisciplinary area. Programs include 20 units or more, and where possible, advanced level courses. Ten units or more, depending on the specific program, must be taken at the University of the Pacific. Courses that count toward a minor cannot be taken on a "pass/no credit" basis. Students must maintain a minimum GPA of 2.0 in a minor program. Students may not take a major and a minor in the same discipline.

To complete a minor, a student should obtain a Minor Work Sheet from the appropriate department or program, that will give information on requirements and procedures for completing the minor. The Registrar must receive an approved copy of the work sheet before a notation of completion of a minor can be placed on the student's transcript.

For a complete description of approved minors, see the appropriate department or program description in this catalog.

Special On-Campus Minor Programs

The ***Film Minor*** deals with film in the context of the liberal arts, with focus on the medium as an art form. A variety of special topics courses are offered. Contact Professor Diane M. Borden in the English Department for an assignment to an adviser.

A ***Thematic Minor*** designed to fit student interests is available to all students in the University under certain conditions. The student with a declared major and a minimum 2.65 grade point average may select the Thematic Minor so long as it does not duplicate or closely parallel an existing major or minor. At least one year before graduation the student shall submit to the Associate Dean of the College for approval a proposal which will include both the rationale for the Thematic Minor and the specific courses for its completion. Two faculty members must act as sponsors for the minor. The Thematic Minor must contain at least 20 units, normally five courses, of which not more than two may be used to complete the General Education requirement. No course may count for both the student's major and the Thematic Minor, and no more than two courses may be completed outside the University. Some advanced courses must be included.

Special Off-Campus Study Programs

College of the Pacific students have the opportunity to study abroad in their sophomore, junior or senior years in more than 200 locations. Some programs are for an academic year, some for only a semester. The countries include: Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Malta, Netherlands,

Norway, Russia, Spain, Sweden, Switzerland and the United Kingdom in Europe; China, Hong Kong, India, Indonesia, Japan, Korea, Nepal, Philippines and Thailand in Asia; Australia and Fiji in the South Pacific; Cameroon, Egypt, Ivory Coast, Kenya, Morocco, Nigeria, Senegal, Tanzania, and Zimbabwe in Africa; Argentina, Brazil, Canada, Colombia, Costa Rica, Dominican Republic, Ecuador, Mexico, Peru and Uruguay in the Americas. For information about study abroad opportunities, contact the Office of International Programs and Services in the Bechtel International Center.

The Washington Semester Program, conducted by American University in Washington, D.C., is open to academically qualified juniors and seniors. Students live on campus in Washington, D.C., attend seminars with government officials and take part in internships. Special topics include foreign policy, economic policy, justice and journalism. The Washington Center Internship allows students to work full-time in the nation's Capitol while receiving full credit toward graduation. The Washington Center coordinates a program of work experience in a variety of governmental, not-for-profit and private enterprises; these are supplemented with academic seminars and lectures. A full-time student will also take an independent study supervised by a Pacific faculty member.

Students interested in California State Government are invited to apply for the ***Capitol Campus program*** in which they attend seminars at the University of California at Davis, visit capitol offices of lawmakers and participate in internships with state agencies, legislators and lobbying groups during the spring semester. More information about the Washington Semester or Capitol Campus may be obtained from the Political Science Department.

The College of the Pacific (COP) Student at University of the Pacific

The cooperative relationship between the College of the Pacific and other schools and colleges on the Stockton campus offers the COP student opportunities for personal and intellectual enrichment. Students from COP who meet the appropriate prerequisites may take courses in any other unit on the campus. Activities such as athletics, music, forensics and drama are University-wide and bring students with various interests and objectives together in common endeavors. The University newspaper, *The Pacifican*, is student-edited and -published.

Most students live on campus in residences which are close to classrooms and laboratories. Students govern their own residence halls through student house councils. Thus, all students are responsible for their own conduct and have a voice in determining their standards of behavior. There are, however, a number of students in COP who are residents of the Stockton area. At the University Center, students living on or off campus are drawn together by special educational and entertainment programs. Students living on or off campus may also come together in a great variety of organizations such as Le Cercle Francais, the Pacific Model United Nations Association or the Public Relations Society of America.

During the senior year, students have an opportunity to compete for student awards including The Stanley E. McCaffrey University Service Award and the Frederick J. and Marguerite C. Early Undergraduate Science Research Award. The Early award carries a $5,000 stipend.

Student Government in COP

Students participate in determining the academic and social policies of the College. They are voting members of virtually all college and department committees where important questions of policy are discussed.

Within COP, the College of the Pacific Association (COPA) provides students with an opportunity to become involved in College activities and service. COPA is organized to foster identity among College of the Pacific students, to enhance student-faculty relationships, to enable students to obtain a better understanding of the College and University academic and administrative operations, and to develop programs which integrate academic and residential life. Its activities include the funding of student groups which benefit COP students and the appointment of representatives to College and University committees.

Majors and Specialized Programs Offered In and Through College of the Pacific

Art (B.A.)
Art History (B.A.)
Art History (Arts Administration) (B.A.)
Biochemistry (B.S.)
Biological Sciences (B.A., B.S., M.S.)
Chemistry (B.A., B.S., M.S., Ph.D.)
Chemistry-Biology (B.S.)
Classics (B.A.)
Communication (B.A., M.A.)
Computer Science (B.S.)
Economics (B.A., B.S.)
English (B.A.)
Environmental Studies (B.A.)
French (B.A.)
Geology (B.A., B.S.)
Geology-Geoscience (B.S.)
Geophysics (B.S.)
German (B.A.)
Graphic Design (B.F.A.)
History (B.A.)
Information Systems (B.S.)
Japanese (B.A.)
Liberal Studies (B.A.)
Mathematics (B.A., B.S.)
Philosophy (B.A.)
Physics (B.A., B.S.)
Political Science (B.A.)
Psychology (B.A., M.A.)
Religious Studies (B.A.)
Self-Designed (see COP Associate Dean)
Social Sciences (B.A.)
Sociology (B.A.)
Spanish (B.A.)
Sport Sciences (B.A., M.A.)
Studio Art (B.F.A.)
Theatre Arts (B.A.)

Minors Offered In and Through College of the Pacific

Art History
Biological Sciences
Chemistry
Chinese
Classical Languages
Classics
Communication
Computer Science
Economics
English
Ethnic Studies
Film Studies
French
Gender Studies
Geography
Geology
German
Greek
History
Information Systems
Japanese
Latin
Mathematics
Modern Languages
Organizations
Philosophy
Political Science
Pre-Law
Psychology
Religious Studies
Sociology
Spanish
Sport Sciences
Studio Art
Theatre Arts
Thematic Minor

General Academic Regulations

Requirements for Graduation

A. To receive a baccalaureate degree in the College of the Pacific, students must complete at least 124 units with a minimum grade point average of 2.0 in all college-level work completed, all work completed at University of the Pacific and all courses taken as part of the major program. The Bachelor of Fine Arts degree requires 136 units.

B. In order to complete the requirements for a baccalaureate degree, at least 32 of the last 40 units must be earned at University of the Pacific. To obtain a second baccalaureate degree from the College, the candidate must complete at least 32 units at University of the Pacific after the awarding of the first degree.

C. Students must complete a major program of studies prescribed by the College to fulfill the requirements for a baccalaureate degree. For courses in the major (including cognate courses) students must achieve a grade point average of 2.0 or better. The maximum number of units a student may take for graduation credit in any department is 60 including transfer courses.

D. Students must complete the University of the Pacific and College of the Pacific General Education Program to fulfill the requirements for a baccalaureate degree. Please refer to the University General Education Program statement and the statement on College of the Pacific General Education Modifications for the requirements of the program. Students are encouraged to consult with their advisers or the Office of the Dean if they have any questions or problems.

E. The College will not hood at graduation ceremonies any student who does not meet all requirements for graduation.

F. Students who do not meet all requirements for graduation may petition to walk-through graduation ceremonies. For a walk-through petition to be approved, a student must meet all of the following conditions:

1. The student must have no more than 24 remaining units toward completion of their degree.
2. Students are required to have a 2.00 overall and University of the Pacific GPA at the end of the fall semester as verified by transcript received from the Registrar's Office. Students must provide the most recent transcript. Transcripts must be submitted at the time the petition is returned to the College of the Pacific Dean's Office.
3. Students must have met all basic skills requirements by the end of the fall semester as verified by the transcript received from the Registrar's Office.

This policy is effective beginning with May 2001 graduation.

Special Requirements for Transfer Students

A. All students must fulfill the requirements of the University of the Pacific and College of the Pacific General Education Program. Courses taken at other institutions will be evaluated by the Office of the Dean to determine which will fulfill the General Education Program requirements. Only courses carrying three or more semester units, or four or more quarter units, of credit will be accepted.

B. For College of the Pacific students, a minimum of 124 units are required for graduation. (Certain major programs may require additional units.)

C. Each academic program adviser evaluates transfer courses to determine if they satisfy any of the major or minor course requirements. Transfer courses with content similar to courses required for major and minor programs at the College of the Pacific may be applied with departmental approval. Some departments limit the number of courses they will accept for the major or minor from other institutions.

D. Transfer courses are given departmental designations at the time of transfer. A maximum of 60 units (or 83 units for a B.F.A.) taken in one department will be counted toward the 124 units (or 136 units for a B.F.A.) required for graduation.

Academic Honors

Honors at graduation are awarded upon the recommendation of the faculty to students achieving a grade point average, appropriately computed, of: cum laude, 3.50; magna cum laude, 3.70; summa cum laude, 3.90. Each semester students earning a grade point average of 3.50 or higher in 12 or more letter-graded units are named to the Dean's list.

Class Attendance

Students are expected to attend classes regularly. Specific attendance policies are, however, determined by individual instructors who will provide students with a written statement of such policies at the beginning of the semester. At the request of a student through the Student Life Office, his/her instructors will be notified of absences due to illness, University related activities or other conditions beyond the control of the student.

Policies and Grading in the College of the Pacific

A. With few exceptions, courses taken in the major must be on a letter grade basis. Students are permitted to take courses on a pass/no credit basis in general education or in electives in order to encourage enrollment in courses outside their areas of specialization. Normally this option is limited to one course per student per semester. Students electing this option in College of the Pacific courses must understand that a grade of "pass" will be awarded for work evaluated at the level of C- or better and a grade of "no credit" will be awarded for work evaluated at the level of D+ or below. The student must declare the intention to enroll in a course on the pass/no credit basis with the instructor by completing a form available from the Office of the Registrar prior to the deadline established for adding classes.
In cooperation with the Office of the Dean, departments may designate certain courses to be graded only on the pass/no credit basis. In such courses the nature of the learning does not provide an adequate basis for meaningful rank ordering of student performance and under no circumstances shall the students' work be evaluated on a letter-graded system.

B. Courses numbered 87/187 (Internship), 89/189 (Practicum) and 92/192 (Cooperative Education) must be graded on a pass/no credit basis only. Courses numbered SPTS 11 and SPTS 13 in the Department of Sport Sciences, and THEA 5 and THEA 13 in the Theatre Arts Department are deemed Physical Education Activity, Intercollegiate Athletics classes and Dance Activity classes, respectively, and are graded on a pass/no credit basis only. Fieldwork courses are normally graded on a pass/no credit basis also.

C. The grade "P" is given for courses passed by examination, by the College Level Equivalency Program examinations or by advanced placement.

Course Numbering Policies and Restrictions

A. Courses numbered 1 to 199 are undergraduate courses, certain of which may be accepted toward graduate degrees when taken in the graduate year. Courses numbered 1 to 99 are lower-level courses designed primarily for freshman/sophomore students and/or for students with little or no prerequisite training. Courses numbered 100 to 199 are upper-level courses designed primarily for junior/

senior students and/or for students with appropriate prerequisite training.

B. Courses numbered 92/192 indicate cooperative education study and may be offered by departments or on a college-wide basis (ACC) without specific departmental designation. Courses carrying the 92/192 designation indicate work experiences on a full-time or parallel (part-time) basis, which are coordinated by the Office of Cooperative Education and a faculty supervisor from an appropriate department of the College. Students from other schools and colleges on the Stockton campus may also participate in the Cooperative Education Program. Students who elect 92/192 normally are expected to undertake at least two work experiences (the equivalent of two semesters or six months in total) separated by at least one period of full-time academic study. Students may earn two to four units of academic credit for each working period for a total of eight units. Students on a part-time (parallel) basis are encouraged to register for additional coursework on campus providing that the total combination of units does not exceed a normal load. In the first of two work experiences, students will enroll in 92, in the second, 192. Students may not exceed the 20-unit limitation stipulated in "F" below.

C. Courses numbered 87/187 and 89/189 indicate internship and practicum study when included in the course number of departments in the College of the Pacific. Courses numbered 87/187 designate work experiences that usually are conducted off-campus, primarily under the supervision of someone not holding a full-time appointment on the faculty of the College of the Pacific. Courses numbered 89/189 designate work experiences conducted usually on campus, under the direct supervision of a College of the Pacific faculty member. Courses numbered 87/187 and 89/189 may be taken for two, three or four units of credit. If a department's 87/187 and/or 89/189 courses carry alphabetic subscripts designating different categories of study experiences, then the 87/187 or 89/189 course may be repeated for credit as long as the student does not repeat a category (subscript) or exceed the 20-unit limitation (see "F" below). In some cases, the department may indicate special restrictions.

D. Courses numbered SPTS 11 in the Department of Sport Sciences and THEA 5 and 13 in the Theatre Arts Department are Activity courses. Courses numbered SPTS 12 are Club Sports courses and courses numbered SPTS 13 are Intercollegiate Athletics courses. Students will be able to apply no more than a total of eight units in Activity, Club Sports and Intercollegiate Athletics courses toward graduation. Only four of the eight units can be in Club Sports and only four of the eight units can be in Intercollegiate Athletics. A one-unit Activity class can be repeated only once. No two-unit Activity class may be repeated for credit. All Activity, Club Sports and Intercollegiate Athletics classes will be evaluated on the pass/no credit basis.

E. A total of no more than eight units of extension credit offered by University of the Pacific may be applied to the units required for a baccalaureate degree. Regularly enrolled students (full- or part-time) may not receive more than two units of extension credit in any given semester. Extension courses may not be repeated for credit.

F. No more than 20 units of Cooperative Education (92/192), Internship (87/187), Practicum (89/189), Physical Education Activity (SPTS 11), Club Sports (SPTS 12), Theatre Activity (THEA 5), Dance Activity (THEA 13) and Intercollegiate Athletics (SPTS 13) courses in any combination may be applied to the units required for a baccalaureate degree.

G. Courses numbered 201 to 299 carry credits for graduate degrees.

H. Courses numbered above 300 are exclusively for students admitted to a doctoral program.

I. Courses numbered 193: Each department of the College of the Pacific may offer, on occasion, special topics courses (193). Some departments also offer lower-level special topics courses numbered 93 and/or graduate-level courses numbered 293. The material of the special topics courses may reflect the current research of the instructor or the needs and interests of a group of students. Detailed descriptions of these courses may be obtained from the chair of the department in which the courses are offered or in a publication prepared each semester by the Office of the Dean.

J. The following sets of course numbers designate a similar function in each department of the College of the Pacific: 191 and 291, independent study, undergraduate and graduate; 195, 295 and 395, seminar, undergraduate, graduate and doctoral; 197, 297 and 397, independent research, undergraduate, graduate and doctoral; 299, master's thesis; 399, doctoral dissertation. Courses numbered 191 or 197 may be offered for two, three or four units of credit only.

K. When two course numbers are separated by a comma, the first is a prerequisite to the second; when they are separated by a semicolon, either course may be taken independently of the other. Course numbers separated by a hyphen indicate no credit is given until both courses have been completed in proper sequence. Course numbers separated by a slash or virgule indicate that both courses are simultaneously offered by the same instructor but are available for upper and lower-division, or upper-division and graduate enrollment.

L. Normally, odd-numbered courses are offered every year; even-numbered courses are offered every other year.

Art and Art History

Professors: D. Kasser, Schleier
Associate Professors: DeBoer, Flaherty (Chair), L.Kasser, Wenzel
Assistant Professor: Burkett, Todd
Visiting Assistant Professor: Bartlett
Visitiing Lecturers: Cooperman, Kakuda, Wolfe
Department Phone: (209) 946-2241
Website: www1.uop.edu/cop/art

The study of art involves learning about the cultural and historical significance of the visual arts as well as developing an understanding of, and individual approaches to, human expression and the creative process. The department provides an undergraduate curriculum that is appropriate for students who plan careers in art and is responsive to liberal arts students seeking to expand their knowledge and understanding of the visual arts.

Degrees in Art and Art History

The department offers two coherent programs of study. One program leads to the Bachelor of Arts degree, a liberal arts degree which expands perception of the many directions an artist may take in his/her career and the interrelationship of the study of the visual arts with other academic disciplines. Majors in the B.A. degree program are as follows: Art, Art History and Art History with an emphasis in Arts Administration.

The other program of study leads to the Bachelor of Fine Arts degree. It is a professional degree with majors in either

Studio Art or Graphic Design. A selection of one of the B.F.A. majors indicates a more particularly defined career goal.

Admission to the B.A. and the B.F.A. degree programs requires the filing of a declaration of major form and consultation with a department adviser.

The Department of Art and Art History offers two minor programs. One program emphasizes the Studio Arts and the other, Art History. Each minor requires a minimum of 20 units. No more than ten transfer units will count toward a minor. Students interested in working toward a minor should contact the Chair of the Department of Art and Art History.

Typical First Year Program

B.A. in Art or B.F.A. in Studio Art:

Fall: ARTS 3-Visual Arts Exploration (4)
ARTH 7-Survey of Western Art to 1400 (4)
Mentor Seminar I (4)
General Education Course (3-4)
Electives (1-2)

Spring: ARTS 25-Drawing I or ARTS 31-Design and Color (3)
ARTH 9-Survey of Western Art After 1400 (4)
Mentor Seminar II (3)
General Education Course (3-4)
Art Electives (3)

B.F.A. in Graphic Design:

Fall: ARTS 3-Visual Arts Exploration (4)
ARTS 25-Drawing I or ARTS 31-Design and Color (3)
Mentor Seminar I (4)
General Education Course (3-4)
Electives (1-2)

Spring: ARTH 9-Survey of Western Art After 1400 (4)
ARTS 25-Drawing I or ARTS 31-Design and Color (3)
Mentor Seminar II (3)
General Education Course (3-4)
Art Electives (3)

B.A. in Art History and Art History (Emphasis: Arts Administration)

Fall: ARTS 3-Visual Arts Exploration (4)
ARTH 7-Survey of Western Art to 1400 (4)
Mentor Seminar I (4)
General Education Course (3-4)
Electives (2-3)

Spring: ARTH 9-Survey of Western Art After 1400 (4)
An additional art history course (4)
Mentor Seminar II (3)
General Education Course (3-4)
Electives (1-2)

Requirements for the B.A. Degree (124 Units)

1. Successful completion of the General Education Program of the College of the Pacific - at least 42 units.
2. Successful completion of selected University electives - 24 to 26 units in areas other than art.
3. Successful completion of selected major.

Major in Art

Students are required to take a minimum of 56 units in art courses.

1. Introductory Program - 16 units: ARTS 3-Visual Arts Exploration; ARTH 7-Survey of Western Art to 1400; ARTH 9-Survey of Western Art After 1400; and one additional art history course.
2. Major Program - 40 units: ARTS 25-Drawing I; six units of additional drawing; ARTS 31-Design and Color; ARTS 41-Ceramics I; ARTS 47-Sculpture I; ARTS 63-Introduction to Printmaking; ARTS 145-Photography I; ARTS 181-Senior Studio/Seminar; six units in painting; and an additional six units in other art studios or art history courses to be elected.

Major in Art History

Students are required to take a minimum of 58 units in art courses. It is recommended that students planning to do graduate studies in Art History take an appropriate modern language (consult adviser).

1. Introductory Program - 16 units: ARTS 3-Visual Arts Exploration; ARTH 7-Survey of Western Art to 1400; ARTH 9-Survey of Western Art After 1400; and ARTH 116-Contemporary Art.
2. Major Program - 42 units: ARTS 108-Renaissance Art and Architecture; ARTH 110-17th Century Art - Age of Rembrandt; ARTH 112-19th Century European Art; and either ARTH 114-20th Century European Art or ARTH 118-20th Century American Art and either ARTH 120-Chinese Art or ARTH 122-Japanese Art; ARTH 183-Art History Senior Seminar; and 12 units in other selected art history courses. In addition ARTS 145-Photography I and one other art studio are required.

Major in Art History (Emphasis: Arts Administration)

Students are required to take a minimum of 45 units in art courses, 24 units in courses in the School of Business (this meets the requirements for a Minor in Management in the School of Business) as well as ECON 53-Introductory Microeconomics: Theory and Policy and MATH 31-Elementary Probability and Statistics.

1. Introductory Program - 16 units: ARTS 3-Visual Arts Exploration; ARTS 7-Survey of Western Art to 1400; ARTS 9-Survey of Western Art After 1400; and ARTS 116-Contemporary Art.
2. Major Program, Art - 29 units: Studios, ARTS 31-Design and Color; Arts Management; ARTS 145-Photography I; and ARTH 183-Art History Senior Seminar. Art History, either ARTH 114-20th Century European Art or ARTH 118-20th Century American Art; one Art History elective; and Internship or Practicum.
3. Major Program, Business Administration - 24 units: BUSI 31-Principles of Financial Accounting; BUSI 81-Introduction to Business; BUSI 107-Marketing Management; BUSI 109-Management and Organizational Behavior; and two additional four-unit courses in the School of Business (consult adviser).

Students seeking the B.A. degree in Art or Art History may elect additional art courses but may not exceed 60 units within the department.

Transfer credit courses taken outside the department must have the approval of the department to be counted as part of the courses required for the major.

Teacher Credential Candidates. Single Subject Credential candidates who are seeking either the B.A. or the B.F.A. degree with a major in art should include ARTS 131-Visual Arts in Education as a departmental elective. ARTS 136-Visual Arts Management is highly recommended. Close contact with the credential adviser department regarding appropriate courses in the School of Education is advised in order to obtain a basic preliminary teaching credential concurrent with the baccalaureate degree.

Prerequisite Courses. Students majoring in any art degree program should complete the introductory program before proceeding to other departmental courses. The following non-prerequisite courses are normally available to all students: Studios - ARTS 3, 25, 31, 41, 47, 50, 83, 131, 136, 145. Art History - ARTH 7, 9, 108, 110, 112, 114, 116, 118, 120, 121, 122, 124.

Requirements for the B.F.A. Degree (136 Units)

The Department of Art offers a four-year program of studies leading to the awarding of a B.F.A. degree in either Studio Art or Graphic Design. To complete a B.F.A. in eight semesters a student should take 17 units each semester. For students seeking an intensive education in the visual arts, the B.F.A. programs are designed with a professional orientation. This approach permits the development of special abilities in advanced studies in art, becoming preparation for graduate study and careers.

1. Successful completion of the General Education Program of the College of the Pacific - at least 42 units.
2. Successful completion of selected University electives - at least 11 units in areas other than art.
3. Successful completion of selected major and electives - not more than 83 units.

Major in Studio Art

Students are required to take 83 units in Studio and Art History courses.

1. Introductory Program - 16 units: ARTS 3-Visual Arts Exploration; ARTH 7-Survey of Western Art to 1400; ARTH 9-Survey of Western Art After 1400; ARTH 116-Contemporary Art.
2. Concentration, Studios - 67 units: ARTS 25-Drawing I; ARTS 31-Design and Color; ARTS 33-Life Drawing I; Drawing electives - six units; Painting electives - nine units; ARTS 41 and 43-Ceramics I and II; ARTS 47-Sculpture I; Sculpture elective - three units; ARTS 63-Introduction to Printmaking; ARTS 65-Printmaking II; ARTS 83-Computer Art I; ARTS 145-Photography I; ARTS 171-Fine Arts Studio/Seminar; ARTS 181-Senior Studio/Seminar; and required additional studio electives - 12 units.

Major in Graphic Design

Students are required to take 83 units in Studio and Art History courses.

1. Introductory Program - 16 units: ARTS 3-Visual Arts Exploration; ARTH 9-Survey of Western Art After 1400; ARTH 114-20th Century European Art; and ARTH 116-Contemporary Art.
2. Concentration, Studios - 67 units: ARTS 25-Drawing I; ARTS 31-Design and Color; ARTS 33-Life Drawing I; Drawing elective - three units; Sculpture or Ceramics elective - three units; Painting elective - three units; ARTS 75-Graphic Design I; ARTS 77-Graphic Design II; ARTS 78-Lettering and Typography; ARTS 80-Illustration I; ARTS 84-Graphic Production; ARTS 91-Computer Graphic Design for Publication; ARTS 95-Computer Graphic Design: Typography and Illustration; ARTS 145-Photography I; ARTS 147-Photography II; ARTS 162-Graphic Design III; ARTS 173-Graphic Design Studio/Seminar; ARTS 185-Senior Graphic Design Seminar; and required additional studio electives - 12 units.

Course Offerings

Some studio courses require nominal laboratory fees.

Art History

ARTH 7. Survey of Western Art to 1400 (4)
A basic art history course exploring the major periods and movements in Western art up to 1400. A lecture course with visual support to document the characteristics and styles of each period.

ARTH 9. Survey of Western Art After 1400 (4)
A continuation of ARTH 7, examining painting, sculpture, architecture and the variety of artistic directions from 1400 to the present. Areas to be covered include: Renaissance, Baroque, Neoclassicism, Impressionism, Abstract Expressionism, Pop Art and Conceptual Art.

ARTH 106. Italian Renaissance Art (4)
The artists of the Italian Renaissance, together with their patrons, conceived of themselves as living in a very special time. This self-conscious revival of the civilizations of classical antiquity is found in many elements of society including art, literature and politics. This course will explore the painting, sculpture and architecture created in Italy from the 13th to the 16th century in order to reveal the motivations of Renaissance artists and patrons. Artists discussed include: Michelangelo, Leonardo da Vinci, Botticelli, Giotto, Raphael, and Titian.

ARTH 108. Renaissance Art and Architecture (4)
The examination of the art (painting, sculpture and architecture) of the 16th century in Italy and Northern Europe, focusing on the major artists of the period including Leonardo, Michelangelo, Raphael, Bramante and Titian. The works of art will be discussed in the contexts of their artistic, historical and cultural milieu.

ARTH 110. 17th Century Art - Age of Rembrandt (4)
The exploration of the art of the 17th century, focusing on the masters including Rembrandt, Vermeer, Hals, Rubens, Vaelasquez, Caravaggio and Bernini. The central concerns of the period will be introduced: the development of naturalism; new interests in space, time and light; the relationship to tradition, examined in the context of the historical and cultural milieu of the period.

ARTH 112. 19th Century European Art (4)
Major artists and artistic movements of the period will be explored, including Neoclassicism, Romanticism, Realism and Impressionism. We will analyze the effects of gender upon representation and artistic practice, the effects of politics and class upon visual representation, and the impact of urbanization. Paining, sculpture, photography, and architecture will be considered. Art historical methods including formalism, psychoanalysis, Marxism, and gender theory will be explored in our analyses.

ARTH 114. 20th Century European Art and Film (4)
Major styles of the 20th century, including Fauvism, Cubism, Expressionism, Surrealism, etc., and their appearance in the visual arts, theater design, and film will be explored. We will also evaluate how Western European artists borrowed imagery from other cultures and their relationship to colonialist concerns. We will also consider representations of the body and how this imagery relates to gender constructions. The effects of urbanization upon the artistic enterprise and the development of abstract and non-objective art will also be considered. This course satisfies a requirement of the Film Studies minor.

ARTH 116. Contemporary Art and Film (4)
European and American art from World War II until the present day will be explored. Gestural abstraction, Pop, Photorealism, Happenings, Video, Performance, Conceptual and Political art as well as film are a few of the trends that will be considered. Ever-expanding notions of what constitutes art in this pluralistic era will be examined. This course satisfies a requirement of the Film Studies minor.

ARTH 118. 20th Century American Art and Film (4)
A study of the major developments in painting, sculpture, architecture, film and photography from the early days of this century to World War II. The Ashcan School, Stieglitz Circle, the Armory Show, Precisionism, New Deal Art, the

New York School and other significant trends will be examined. Issues concerning patronage, gender and modernism will be addressed throughout. This course satisfies a requirement of the Film Studies minor.

ARTH 120. Chinese Art History (4)
Designed as an introduction to the arts of China, from pottery of the Stone Age to paintings of the present day. Works of art are analyzed stylistically and their meaning examined within the original political and social setting. The enduring art tradition of China will be emphasized.

ARTH 122. Japanese Art History (4)
Designed as an introduction to the arts of Japan, from prehistoric Jomon pottery to present day Westernized painting. Works of art are analyzed stylistically and their meaning examined within the original political and social setting. Emphasis will be given to the Japanese art tradition of absorbing and adapting influences from abroad.

ARTH 124. Sex, Gender and the Arts (4)
We will explore the construction of masculinity and femininity in Western art from the Renaissance to the present. The art will be analyzed in the context of literary, philosophical, medical and legal discourses. We will examine how gender is encoded in visual representation, and often serves as prescriptions rather than descriptions of human behavior.

ARTH 126. Medieval Art (4)
This course addresses the art created in Europe and Byzantium from the beginnings of Christianity in Rome to the great age of cathedrals in Gothic France. Hiberno-Saxon, Carolingian, Byzantine, Romanesque and Gothic art will be included. Students will examine objects and architecture and their connections to the societies that made them to gain understanding of medieval art. The creation of sacred space, the origins of private life, monastic disciplines and pilgrimage routes will be discussed in this context.

ARTH 130. Greek Art and Architecture (4)
An introductory survey of the art and architecture of ancient Greece from the Bronze Age to the Hellenistic period. While exploring the stylistic development of Greek sculpture, painting and architecture, we will examine what this art can tell us about the ancient Greeks and how extensively it has influenced our world. Offered in alternate years.

ARTH 132. Roman Art and Architecture (4)
An introductory survey of the art and architecture of ancient Etruria and Rome from 600 B.C. to the 4th century A.D. We will explore the role of Roman art and architecture and its Etruscan influences in Roman life and history. Attention will be given to examples of Roman influence that surround us today. Offered in alternate years.

ARTH 183. Art History Senior Seminar (4)
Designed as the culminating experience for art history majors, this course is designed to familiarize students with the multitude of research strategies available to the art historian. A selection of reading assignments, including selections from formalist, iconographic, Marxist, feminist and psychoanalytic texts will enable majors to begin to differentiate between different ways of approaching the field. The student will also be expected to complete a major research project employing the methodological approach of his or her choice, so as to develop critical thinking skills.

ARTH 87, 187. Internship (2-4, 2-4)
Off-campus, non-classroom experiences/ projects related to art history.

ARTH 89, 189. Practicum (2-4, 2-4)
On-campus, non-classroom experiences/ projects related to art history.

ARTH 191. Independent Study (2-4)
Enrollment by permission of faculty. Unless indicated, independent study courses may be counted only as electives.

Studio Art

ARTS 3. Visual Arts Exploration (4)
Designed as a studio-discussion experience with emphasis on providing an opportunity to understand the practical as well as the theoretical aspects of the creative process. Included will be participation in two-dimensional and three-dimensional activities such as drawing, painting, printmaking, sculpture and ceramics.

ARTS 25. Drawing I (3)
Designed to challenge the intellectual and artistic natures of an individual so that his/ her own abilities to communicate visually will increase through the development of the creative process.

ARTS 29. Introduction to Painting (3)
This course introduces the concepts, methods, and materials of painting. Emphasis is on development of personal imagery with parallel development of the skills and conceptual structures of painting. Prerequisite: ARTS 25.

ARTS 31. Design and Color (3)
A foundation course focusing on the understanding and creative use of the elements and principles of design and practical color theory. It aims to build both a working and a conceptual understanding of the way in which an artist organizes or designs visual art. Exercises in visual thinking and the use of traditional principles of composition and media are emphasized.

ARTS 33. Life Drawing I (3)
Primary emphasis is placed on the development of visual and perceptual skills relative to drawing the human body. Covered are structural, anatomical, formal and expressive factors of the figure. *Prerequisite: ARTS 25.*

ARTS 35. Life Drawing II (3)
Designed to afford the student an opportunity to build on the experiences realized in ARTS 33. Focuses on the extension of the personal expression of the nude figure. *Prerequisite: ARTS 33.*

ARTS 41. Ceramics I (3)
Basic studio course working with clay, coloring oxides, glazes, textures and fire to discover the expressive potential in ceramics. Beginning wheel-throwing as well as hand-building techniques.

ARTS 43. Ceramics II (3)
Develops naturally on ARTS 41 with increased focus on formulation of glazes, oxidation/ reduction firing effects and demonstrated wheel-throwing ability. Special attention to an awareness of rhythm, proportions, texture, scale, appropriate glazing and unity of design. *Prerequisite: ARTS 41.*

ARTS 47. Sculpture I (3)
An introduction to the three-dimensional process through a series of studio problems. A variety of sculptural concepts and media will be explored. Students will be introduced to and expected to use appropriate hand and power tools for assigned projects.

ARTS 49. Sculpture II (3)
Designed to afford the student an opportunity to build on the principles introduced in ARTS 47. An additional variety of media such as construction, welding, carving, fiber, earth works, kinetic and electric will be employed. Individual directions, with the instructor's acceptance, will characterize the course. *Prerequisite: ARTS 47.*

ARTS 50. Figure Sculpture I (3)
An introduction to the uses of human anatomy in art through a series of studio problems. On occasion, students will work from a nude model. Recommended that ARTS 47 be taken prior to this course.

ARTS 52. Figure Sculpture II (3)
An extension of the research of ARTS 50. The creative use of expression, abstraction and realism through the controlled use of distortion and anatomy will comprise the major purpose of the course. *Prerequisite: ARTS 50 or permission of the instructor.*

ARTS 60. Relief Printmaking (3)
Through demonstrations, readings, discussions and studio performance, the student will develop his own understanding of the woodcut, linoleum block, collagraph and other printmaking processes. Special attention to composition, effective use of value, texture and color. *Prerequisite: ARTS 25 and ARTS 31 or ARTS 63.*

ARTS 63. Introduction to Printmaking (3)
An exploratory course designed to introduce the history, processes, and techniques of basic relief and intaglio printmaking. The aim is to facilitate and demystify the technical nature of the processes and to focus on using the techniques for artistic ends. *Prerequisites: ARTS 25 and ARTS 31 or ARTS 60.*

ARTS 65. Printmaking II (3)
Intermediate-level course with an emphasis on an assigned problem and a concentration upon a specific printing process. *Prerequisite: ARTS 63.*

ARTS 67. Watercolor Painting (3)
A studio course designed to explore the materials, techniques, and traditions of transparent watercolor painting. *Prerequisite: ARTS 25.*

ARTS 69. Intermediate Drawing and Painting (3)
A studio course designed to build on the experiences realized in ARTS 25 and ARTS 29. This course focuses on problem-solving assignments using traditional and contemporary media with an emphasis on greater depth and understanding in the development of expressive visual imagery. *Prerequisites: ARTS 25, ARTS 29.*

ARTS 75. Graphic Design I (3)
Designed as a beginning course introducing a broad and thorough exposure to the graphic design field. *Prerequisites: ARTS 25 and 91.*

ARTS 77. Graphic Design II (3)
Designed to further and expand the skills and knowledge incorporated in ARTS 75. More advanced problems with the attendant upgrading of professional competency and solutions. *Prerequisites: ARTS 75 and 78.*

ARTS 78. Lettering and Typography (3)
Designed to assist the student in a deeper understanding of the art of typography. To extend the student's knowledge of its use and application in graphic design, and its use as a creative, illustrative tool. *Prerequisite: ARTS 31.*

ARTS 80. Illustration I (3)
Designed to expose the student to illustration as applied to the commercial field. A variety of media will be employed in rendering specific assignments. Prerequisite: ARTS 25.

ARTS 82. Illustration II (3)
Designed to afford the student an opportunity to build on the experiences realized in ARTS 80. *Prerequisite: ARTS 80.*

ARTS 83. Computer Art (3)
Designed to assist students in learning to create art on a full color computer graphics system. Through lectures, demonstrations and hands-on experiences, students will explore graphic and artistic potential of the computer.

ARTS 84. Graphic Production (3)
Presentation of the production methods of printing, typesetting and photographic technologies as they relate to the graphic designer. An introduction to the basics of typography, graphic design and various presentation techniques. *Prerequisite: ARTS 31.*

ARTS 87, 187. Internship (2-4, 2-4)
Off-campus, non-classroom experiences in activities related to visual arts.

ARTS 89, 189. Practicum (2-4, 2-4)
On-campus, non-classroom experiences in activities related to visual arts.

ARTS 91. Computer Graphic Design for Publication (3)
An exploration of computer assisted publication design. Students will seek creative solutions to publication design problems utilizing software programs pertinent to the graphic design field.

ARTS 95. Computer Graphic Design: Typography and Illustration (3)
An exploration of computer generated typography and illustration. Students will seek creative solutions to design problems utilizing software programs pertinent to the graphic design field. *Prerequisite: ARTS 75.*

ARTS 97. Digital Imaging (3)
This course is designed to introduce the foundational vocabulary, theories and techniques of computer assisted imaging and multimedia applications. Focus is placed upon understanding digital imaging techniques and aesthetics as a historical transition of graphic technologies into the twenty-first century. Inquiry will reach into the traditional graphic processes, including still photography and cinematography, with added emphasis placed upon their creative application through the software tools. *Prerequisite: ARTS 145.*

ARTS 131. Visual Arts in Education (4)
Designed to assist the student in developing an understanding of the visual arts and the way in which they interface with children's development. Concepts and processes, suitable for children through age 14, in the areas of aesthetic perception, creative expression, visual arts heritage, and aesthetic valuing, will be explored. Junior standing recommended.

ARTS 136. Visual Arts Management (4)
Designed as an experiential as well as a seminar/discussion course leading to the understanding of practical experiences with a number of concepts and situations related to organizing and managing visual arts agencies and facilities.

ARTS 145. Photography I (3)
Introductory-level course with an emphasis on the history of photography and the fundamentals of camera work and black and white photography. *No prerequisite.*

ARTS 147. Photography II (3)
Intermediate-level course with an emphasis upon applied knowledge in the areas of documentary, journalistic, pictorial, and studio photography. *Prerequisite: ARTS 145.*

ARTS 151. Ceramics III (3)
Open to the advanced ceramic student with the content developed by the student and instructor in a written statement and a high quality visual presentation of the stated goal. *Prerequisite: ARTS 43.*

ARTS 153. Sculpture III (3)
Open to the advanced sculpture student with the direction developed by the student and instructor with a high quality visual presentation fulfilling set goals. *Prerequisite: ARTS 49 or 52.*

ARTS 155. Painting III (3)
Open to the advanced painting student with the direction developed by the student and instructor with a high quality visual

presentation fulfilling set goals. *Prerequisite: ARTS 67 or 69, both recommended.*

ARTS 157. Printmaking III (3)
Designed to provide foundational work for students considering graduate level work in printmaking or entry-level positions. Emphasis will be placed upon studio management and portfolio development. *Prerequisites: ARTS 63 and 65.*

ARTS 159. Photography III (3)
Designed to provide students with the foundational work necessary for graduate work in photography or entry-level positions. Emphasis upon studio management and portfolio development. *Prerequisite: ARTS 145 and 147.*

ARTS 162. Graphic Design III (3)
An intensive individual studio involvement. Full concentration is brought to bear on the design processes, concepts and professional presentation of work. *Prerequisite: ARTS 77.*

ARTS 171. Fine Arts Studio/Seminar (3)
Designed to provide a variety of experiences for students who are pursuing the B.F.A. degree in the areas of drawing, painting, sculpture, ceramics and/or other studies in the fine arts.

ARTS 173. Graphic Design Studio/Seminar (3)
Designed to provide a variety of in-depth experiences for students who are pursuing the B.F.A. degree in the area of graphic design. Open only to B.F.A. majors in Graphic Art with junior standing.

ARTS 181. Senior/Studio Seminar (4)
The culminating experience for all art majors in both the B.A. and B.F.A. degrees. Designed to encourage the student to build upon all previous experiences and to focus on an intensive involvement in a selected area of study. Open only to B.A. or B.F.A. majors in Studio Art with senior standing.

ARTS 185. Senior Graphic Design Seminar (4)
The culminating experience for all graphic design majors. This course is designed as an intensive investigation focused on selected graphic design problems, professional portfolio preparation and research of the graphic design field. Students will be encouraged to build upon and further explore previous experiences and areas of interest. Open only to seniors in the B.F.A. Graphic Design program.

ARTS 191. Independent Study (2-4 units)
Enrollment by permission of faculty only. Unless indicated, independent study courses may be counted only as electives.

ARTS 193. Special Topics (3-4 units)
The privilege is reserved to hold any student work permanently. Student property left on the premises after semester's end will be subject to disposal.

Biological Sciences

Professors: L. Christianson, McNeal, Richmond (Chair), Tenaza
Associate Professors: Thomas, Vierra
Assistant Professors: Jongeward, G. Lin Cereghino, J. Lin Cereghino, Maxwell, Moore
Department Phone: (209) 946-2181
Website: www.uop.edu/cop/biology

Degrees in Biological Sciences

The Department of Biological Sciences provides curricula leading to a Bachelor of Science or a Bachelor of Arts in Biological Sciences. In addition, the department cooperates with the Department of Chemistry in offering a Bachelor of Science degree in Chemistry/Biology.

Career Opportunities

The program of studies is sufficiently flexible to prepare students to pursue careers in cell and molecular biology, botany, microbiology, physiology or zoology as graduate students. Programs in the department also prepare students for professional fields such as dentistry, medicine, pharmacy, medical technology, nursing or physical therapy. No matter what career objective, the student will be exposed to the major areas of the biological sciences, and thus will be able to make an intelligent choice of specialization in post-baccalaureate study.

Preparation for admission to the undergraduate program should include high school work in algebra, geometry, trigonometry, biology, chemistry and physics.

Typical First-Year Program

Fall: BIOL 51
CHEM 25
Mentor Seminar I
General Education Course (I or II)

Spring: BIOL 61
CHEM 27
Mentor Seminar II
General Education Course (I or II) or Math Course

Bachelor of Arts Requirements

The Bachelor of Arts option permits flexibility in the selection of electives.

Biological Sciences
51 Principles of Biology
61 Principles of Biology
101 Genetics
175 Ecology
179 Evolution

Three electives (numbered above BIOL 61, but not including BIOL 89, 93, 191 or 197; a minimum of two of the electives must have a laboratory component).

Chemistry
25 General Chemistry
27 General Chemistry

Physics
23 General Physics
25 General Physics

Mathematics
Two courses in Mathematics (MATH 33 or higher; one course in statistics recommended; credit will not be given for both MATH 33 and MATH 51, and only MATH 51 serves as the prerequisite for MATH 53).

Two additional electives
Two additional electives in Biological Sciences (restricted as above, and at least one of the two must have a laboratory component) or Chemistry (numbered CHEM 121 or higher, but not including CHEM 191 or CHEM 197), or one course each in either Biological Sciences, Chemistry or Geology (not including GEOL 191).

Bachelor of Science — Biology Requirements

The Bachelor of Science option is designed for pre-professional students and others who require Organic Chemistry for post-baccalaureate study.

Biological Sciences
51 Principles of Biology
61 Principles of Biology
101 Genetics
175 Ecology
179 Evolution

Five electives (numbered above BIOL 61, but not including BIOL 89 or BIOL 93; four units of BIOL 197 may be included or four units of BIOL 191, but the latter only with departmental approval; a minimum of three of the electives must have a laboratory component). The above classes must total 38 or more units.

Chemistry
25 General Chemistry
27 General Chemistry
121 Organic Chemistry
123 Organic Chemistry

Physics
23 General Physics or 53
25 General Physics or 55

Mathematics
Two courses in mathematics (MATH 33 or higher; one course in statistics recommended; credit will not be given for both MATH 33 and MATH 51, and only MATH 51 serves as the prerequisite for MATH 53).

Chemistry-Biology Requirements

The B.S. degree in Chemistry-Biology is a carefully structured interdisciplinary degree for students with a strong background in science and mathematics involving both the Departments of Biology and Chemistry. This major is especially recommended for students with interests in medicine and/or graduate work in cellular or molecular biology.

Biological Sciences
51 Principles of Biology
61 Principles of Biology
101 Genetics
175 Ecology, or
179 Evolution
Plus three electives (numbered above BIOL 61, but not including BIOL 89, BIOL 93, BIOL 191 or BIOL 197).

Chemistry
25 General Chemistry
27 General Chemistry
121 Organic Chemistry
123 Organic Chemistry
169 Elements of Physical Chemistry, or
161 Physical Chemistry I

Plus two electives (numbered above CHEM 123, but not including CHEM 191 or CHEM 197).

Physics
23 General Physics or 53
25 General Physics or 55

Mathematics
51 Calculus I
53 Calculus II

Teaching Credential Candidates

Students wishing to pursue a State of California Single Subject Teaching Credential in Science, with a Biological Sciences Concentration, must complete a Bachelor of Science in Biological Sciences with the restrictions and additions listed below. Students should consult with the department's adviser for credentialing to carefully select their electives in Biological Sciences. Note that Teaching Credential Candidates must take three courses beyond the standard Bachelor of Science in Biology; two courses in Geology and one in Astronomy.

B.S. in Biology for Teaching Credential Candidates

Biological Sciences
51 Principles of Biology
61 Principles of Biology
101 Genetics
153 Cell Biology
175 Ecology
179 Evolution

One course in Anatomy chosen from:
71 Human Anatomy
162 Comparative Vertebrate Anatomy
166 Vertebrate Embryology

One course in Physiology chosen from:
81 Human Physiology
234 Comparative Physiology

Two courses in Organismal Biology; one course in Plants and one course in Animals chosen from:
79 California Flora
130 Plant Kingdom
and
74 Biology of Insects
77 Marine Birds and Mammals
172 Vertebrate Biology
185 Comparative Animal Behavior

Chemistry
25 General Chemistry
27 General Chemistry
121 Organic Chemistry
123 Organic Chemistry

Physics
23 General Physics
25 General Physics
41 Astronomy

Mathematics
Two courses in Mathematics (MATH 33 or higher; one course in statistics recommended; credit will not be given for both MATH 33 and MATH 51, and only MATH 51 serves as the prerequisite for MATH 53).

Geology
51 Physical Geology
53 Geologic Evolution of the Earth

Many students participate in undergraduate research (BIOL 197). Over a period of one or more semesters these students closely interact with faculty on research projects and get hands-on experience with modern research instruments. Stipends are available to selected undergraduates for summer research. Awardees are given the title of Hornage Undergraduate Research Fellow. Students also are encouraged to participate in Co-op/Internship experiences at dental offices, medical clinics, Micke Grove Zoo and other work areas.

Minor in Biological Sciences

A minor can be granted after the completion of five courses and 20 units of course work in Biological Sciences including the following: BIOL 51, 61 or the equivalent, three additional courses in Biological Sciences chosen from those designated to count toward a major. At least three of the above courses must be taken at PACIFIC and all of the courses counted for the minor must have the approval of the minor adviser in the Department of Biological Sciences. A student majoring in Biological Sciences, Chemistry/Biology, Biochemistry, Medicinal Chemistry or in Liberal Studies with a Biology concentration may not minor in Biological Sciences.

Course Offerings

BIOL 11. Human Anatomy and Physiology (4)
A lecture and laboratory introduction to the structure and function of the various systems of the human body. Intended primarily for non-science majors; not open to biology majors. *No prerequisites.*

BIOL 22. Human Biology and Medicine (4)
Current topics in medicine along with biological background material. Topics popularized by the press will be emphasized. Examples include "test tube" babies, cloning, AIDS and genetic engineering. Recommended for non-biology majors; not open to biology majors. *No prerequisites.*

BIOL 31. Animal Societies (4)
Students conduct original research on animal behavior in a zoo, integrate their findings with prior knowledge, and present their findings to others in oral and written reports. Lectures cover social systems, animal diversity, evolution and causation of behavior, and history of the study of animal behavior. Field trips required. This course is recommended for non-biology majors at any level, not open to biology majors. Letter grades only. *No prerequisites.*

BIOL 35. Environment: Concepts and Issues (4)
Introduction to principles of ecology as they bear on world environmental problems. Emphasis is on biological aspects of world problems and on the interrelationships between culture and environment. Global dimension of population, resources, food, energy and environmental impact are considered. Course does not count toward a biology major. *No prerequisites.*

BIOL 39. Introduction to Botany (4)
The study of plants, their diversity, structure and physiological processes. Lecture topics include metabolism, structure and development at the cellular and subcellular level, ecology, classification and diversity. Laboratory topics include microscopy, tissue structure, fossil plants and plant propagation. Recommended for non-majors. Course does not count toward a biology major. *No prerequisites.*

BIOL 41. Introduction to Biology (4)
A lecture and laboratory introduction to the concepts of biology. Physical structure, physiology, nutrition, reproduction, growth and behavior examined from the perspective of adaptation and interaction with the environment. Human, animal and plant systems will be covered. Recommended for non-majors. Course does not count toward a biology major. *No prerequisites.*

BIOL 45. Basic Nutrition (4)
Aspects of nutrition relative to food components, nutritional practices, and the physiological, metabolic use of food by the body. Brief survey of availability, production of food and fads, fancies of human nutrition. Course does not count toward a biology major. *No prerequisites.*

BIOL 47. AIDS and STDs (4)
A survey of bacterial, viral, fungal and protozoan diseases of the reproductive system. About one-third of the course will concentrate on Acquired Immune Deficiency Syndrome (AIDS), emphasizing the medico-biological aspects and the ethical socio-economical problems associated with it and other sexually transmitted diseases (STDs). Guest speakers. Recommended for non-majors. Course does not count toward a biology major. *No prerequisites.*

BIOL 51. Principles of Biology (4)
A lecture and laboratory introduction to plant and animal diversity and development, and evolution. Preparation for continued studies in biological science. *Prerequisite: a score of 45 or higher on the University of the Pacific Basic Reading Test or completion of the recommended reading course.*

BIOL 61. Principles of Biology (4)
A lecture and laboratory introduction to vertebrate anatomy and physiology, cellular and molecular biology, cellular energetics, genetics and ecology. Preparation for continued studies in biological science. *BIOL 51 recommended.*

BIOL 71. Human Anatomy (4)
A study of the structure of the organ systems of humans which will be illustrated in the laboratory by dissection of a cat. *Prerequisites: BIOL 51, 61.*

BIOL 74. Biology of Insects (4)
A broad study of the structure and function of this class of over 700,000 different species. It includes a study of their morphogenesis, reproduction, behavior and relation to humans. The laboratory work will include at least three field trips on Saturdays in addition to the preparation of 50-75 classified insects. Both anatomy and physiology of insects will be covered in the two weekly laboratories. *No prerequisites.*

BIOL 76. Marine Biology (4)
Introduction to general concepts of community ecology, taxonomy and phylogeny, anatomical and physiological adaptations of marine organisms, and their interaction with the physical environment. Emphasis on natural history and identification of marine organisms of the Central California intertidal and sub-tidal environment. *Prerequisites: BIOL 51, 61.*

BIOL 77. Marine Birds and Mammals (4)
An introduction to the ecology, behavior, economic importance and conservation of cetaceans, pinnipeds, otters, sirenians, seabirds and shorebirds. Physical and biological oceanography are considered as they relate to distribution and abundance of marine birds and mammals. *Prerequisite: junior standing. Open to non-majors as well as majors.*

BIOL 78. Diving Biology (4)
Natural history and identification of aquatic organisms of the Central California inter-tidal and sub-tidal environments. *Prerequisites: open water SCUBA certification, good health with no medical conditions that would prevent SCUBA diving, ability to swim.* Letter grades only.

BIOL 79. California Flora (4)
The identification and classification of flowering plants, gymnosperms, ferns and fern allies as represented in Northern California. *No prerequisites.*

BIOL 81. Human Physiology (4)
A lecture- and lab-based review of the functions of the major organ systems of vertebrates with emphasis on the human body. Lab exercises demonstrate basic physiological processes in the human body and emphasize techniques of instrumental data acquisition and data presentation. Credit will not be given if a student has already received credit for BIOL 82. *Prerequisites: BIOL 51, 61; one semester of genetics suggested.*

BIOL 82. Human Physiology Non-Lab (3)
A lecture-based review of the functions of the major organ systems of vertebrates with emphasis on the human body. Credit will not be given if a student has already received credit for BIOL 81. *Prerequisites: BIOL 51, 61; one semester of genetics suggested.*

BIOL 89. Lab Assistant in Biology (2 or 4)
Students attend organizational meetings during which laboratory material is discussed and then assist in the laboratory answering student questions, doing dissections, etc. Attendance at class lectures is recommended and students are expected to take lecture and laboratory examinations. Usually one laboratory meeting per week will earn two units credit; two laboratory meetings per week will earn four units credit. Pass/no credit grading only.

BIOL 93. Special Topics (3 or 4)
BIOL 101. Genetics (4) Heritable variations and their relation to structure, behavior and function of genetic material. A basic course for students concentrating on biological sciences, medical sciences and liberal arts. Recommended for the sophomore year. *Prerequisites: BIOL 51, 61.*

BIOL 128. Animal Histology (4)
A study of the tissues which comprise the organs of the body. This course is limited to animal, and specifically human, tissues. Thin sections of organs will be studied and their structure related to function. *Prerequisites: BIOL 51, 61; 101 recommended.*

BIOL 130. Plant Kingdom (4)
Through lectures, laboratories and field trips, students will be introduced to the morphology, reproduction biology and environmental requirements of all major groups of plants. Included will be material bearing on the evolutionary relationships within and between each major group. Individual projects are required. *Prerequisites: BIOL 51, 61; 101 recommended.*

BIOL 145. Microbiology (4)
The biology of microorganisms with emphasis on viruses, bacteria and fungi including techniques of cultivation and identification. *Prerequisites: BIOL 51, 61, CHEM 25, 27; BIOL 101 recommended.*

BIOL 147. Medical Microbiology (4)
A survey of microorganisms implicated in human disease; emphasis on characteristics and properties of microorganisms, chiefly bacteria and fungi, responsible for pathogenesis. Laboratory includes methods of isolation, characterization, and identification of bacteria and fungi responsible for human disease. *Prerequisites: BIOL 51, 61, 101, 145; CHEM 121 or permission of the instructor.*

BIOL 149. Biology of AIDS (4)
An in-depth study of the biological and clinical basis of Acquired Immune Deficiency Syndrome (AIDS) and its social and economic context. The nature of viruses as a group and that of retroviruses and HIV in particular are examined. An introduction to immunology will be covered to serve as the foundation for understanding the clinical ramifications of AIDS. *Prerequisites: BIOL 51, 61, 101, 145; CHEM 121.*

BIOL 151. Parasitology (4)
Principles of parasitism. Biology of animal parasites with special emphasis on the protozoa, platyhelminths, nematodes, acanthocephala and arthropods. Techniques of recovery of parasites from various vertebrate hosts; staining, mounting and identification. *Prerequisites: BIOL 51, 61, 101.*

BIOL 153. Cell Biology (4)
Cell structure and function with emphasis on the dynamic nature of the cellular environment and the methodologies of cell biology. The experimental basis of our present understanding of the cell is also stressed. *Prerequisites: BIOL 51, 61, 101 and CHEM 25, 27. Organic chemistry is recommended.*

BIOL 155. Biological Electron Microscopy (4)
The processes and techniques involved in examining biological specimens with the transmission electron microscope will be covered in detail. When competence in specimen processing is achieved, each student will perform an original experiment as a term project. *Prerequisites: BIOL 51, 61, CHEM 25, 27; BIOL 101 recommended.*

BIOL 157. Topics in Biomedical Research (4)
Basic research in the areas of cell biology, biochemistry, molecular biology and physiology will be examined in their applications to current problems in medicine. Topics covered will include genetic engineering, gene therapy, transplants and monoclonal antibodies. *Prerequisites: BIOL 51, 61, 101, CHEM 121.*

BIOL 162. Comparative Vertebrate Anatomy (4)
The evolution of vertebrate organ systems as revealed by comparative morphology. *Prerequisites: BIOL 51, 61; 101 recommended.*

BIOL 166. Vertebrate Embryology (4)
Representative vertebrate and invertebrate embryos, with emphasis on the role of gene action in early development, and the origin and establishment of organs and organ systems. *Prerequisites: BIOL 51, 61, 101.*

BIOL 172. Vertebrate Biology (4)
Taxonomy, life history, ecology and evolutionary histories of the vertebrates. *Prerequisites: BIOL 51, 61; 101 recommended.*

BIOL 175. Ecology (3)
The structure and dynamics of populations, biotic communities and ecosystems, with emphasis upon relationships of organisms to their environments. *Prerequisites: BIOL 51, 61; 101 recommended.*

BIOL 179. Evolution (4)
Lectures and readings on the mechanisms of evolutionary change in organisms. *Prerequisites: BIOL 51, 61, 101.*

BIOL 185. Comparative Animal Behavior (4)
The ecology and evolution of animal behavior. Laboratory involves a quantitative study of animal behavior at Micke Grove Zoo. *Prerequisites: BIOL 51, 61, or senior standing in psychology; BIOL 101 recommended.*

BIOL 191. Independent Study (2-4)

BIOL 193. Special Topics (3 or 4)

BIOL 197. Undergraduate Research (2-4)

BIOL 221. Immunology (4)
Immunoglobin structure, function and expression in animals. Mechanisms of humoral immune response, cell-mediated immunity and complement system; autoimmune diseases; tolerance induction; transplantations; cancer immunity; vaccines; infectious disease; and cytokines. *Prerequisite: graduate standing.*

BIOL 234. Comparative Physiology (4)
A detailed review of organ function in diverse groups of organisms. Emphasis on physiological adaptation to the environment. *Prerequisite: graduate standing.*

BIOL 244. Developmental Biology (4)
The genetic control of development and the physiological mechanisms involved in fertilization and differentiation. *Prerequisite: graduate standing.*

BIOL 247. Medical Microbiology (4)
Same as BIOL 147. Three additional hours per week of seminar and/or special project. *Prerequisite: graduate standing.*

BIOL 251. Parasitology (4)
Same as BIOL 151. Special project required. *Prerequisite: graduate standing.*

BIOL 253. Cell Biology (4)
Same as BIOL 153. Special project required. *Prerequisite: graduate standing.*

BIOL 255. Biological Electron Microscopy (4)
Same as BIOL 155. *Prerequisite: graduate standing.*

BIOL 279. Evolution (4)
Same as BIOL 179. Special project required. *Prerequisite: graduate standing.*

BIOL 291. Independent Study (2 or 4)

BIOL 293. Special Topics (3 or 4)

BIOL 295. Graduate Seminar (4)

BIOL 297. Graduate Research (1-6)

BIOL 299. Thesis (2 or 4)

Black Studies

Associate Professor: Darlington (Chair)
Department Phone: (209) 946-2245

Black Studies is interdepartmental and interdisciplinary, and accepts the following goals set by the National Council For Black Studies, Inc. as unique to the discipline: 1) to question the basic tenets and direction of American education; 2) to offer students a perspective that emanates uniquely out of the African World Experience; 3) to make Black Studies students social change agents. The primary objective is to provide learning opportunities for students through courses and experiences that will foster knowledge and understanding of the history, struggles and contributions of Africans and African-Americans.

Course Offerings

BLKS 51. Introduction to Black Studies (4)
A survey course exploring the origin and development of Black Studies in higher education. Addresses the philosophy and relevant historical, political, economic and social information that is unique to this academic discipline.

BLKS 97. Prejudice and Racism (4)
An examination of the development and perpetuation of prejudice and racism in individuals, social groups and societies.

BLKS 142. Implementation for Social Change (4)
A course designed to examine the rationale and strategies for social change within an environment that has been socially, psychologically and economically oppressive for African-Americans.

BLKS 146. Cultural Contributions of African-Americans (4)
An analysis and exploration of the cultural contributions of African-Americans to American society.

BLKS 164. Ghetto Life (4)
The psychological, social, economic, religious and educational urban "ghetto experiences" of African-Americans.

Ethnic Studies Minor

Coordinator: Darlington, Black Studies
Department Phone: (209) 946-2245

The Ethnic Studies Minor with concentrations in African-American, Mexican-American and Asian-American studies is a joint venture with California State University, Stanislaus. The Ethnic Studies Minor is multi-disciplinary and accepts as its primary objective: to provide learning opportunities for students through courses and experiences that will foster knowledge and understanding of the history, struggles and contributions of three population groups - African-American, Mexican-American and Asian-American.

Requirements in the Minor
(minimum of 19 units and six classes).

Complete 19 or more units (6 classes) in the Ethnic Studies Program as approved by the minor adviser, distributed as follows:

African-American Concentration
1. Two courses for at least 6 units, including either but not both ETHS 2000 (CSU) or BLKS 51 from Category I.
2. Two courses for at least 6 units, each from a different Category (II-IV), but limited to the following:
   ANTRO (CSU) 3070
   ETHS (CSU) 4010
   ETHS (CSU) 4020
   HIST (CSU) 3860
   HIST (CSU) 3880
   BLKS 97
   BLKS 142
   BLKS 164/POLS 104
   ENGL 193 (if appropriate)
   HIST 184
3. Two courses for at least six units from Category V, including ETHS 4200.

*Mexican American Concentration**
1. Two courses, at least six units, from Category I: BLKS 51 and ETHS 2100.
2. Two courses for at least 6 units, each from a different Category (II-IV), but limited to the following:
   ETHS (CSU) 3000
   ETHS (CSU) 3110
   ETHS (CSU) 3200
   ETHS (CSU) 4000
   ETHS (CSU) 4100
   HIST (CSU) 3510
   HIST (CSU) 3520
   HIST (CSU) 4500
   HIST (CSU) 4710
   HIST 130
   HIST 146
   SPAN 103
   SPAN 105
   SPAN 107
   SPAN 112
3. Two courses for at least 6 units from Category V, including ETHS 4200.

*Asian-American Concentration**
1. Two courses, at least 6 units, from Category I: BLKS 51 and ETHS 2100.
2. Two courses for at least 6 units each from a different Category (II-IV), but limited to the following:
   ANTH (CSU) 3106
   ANTH (CSU) 4130
   ETHS (CSU) 3100
   ETHS (CSU) 4030
   HIST (CSU) 3800
   HIST (CSU) 3810
   HIST (CSU) 4800
   HIST (CSU) 4850
   ANTRO 120
   ANTRO 121
   ANTRO 122
   CHIN 102
   HIST 149
   HIST 150
   HIST 151
   HIST 152
   HIST 153
   JAPN 170
   JAPN 172
   JAPN 174
   JAPN 176
   JAPN 180
   POLS 152
   RELI 135
3. Two courses for at least six units from Category V, including ETHS 4200.

**A minimum of one class or 4 units must be taken at the University of the Pacific. Up to 5 students from the "visitor" campus may enroll in each of these classes.*

Categories I-V

Category I
An introduction to the study of the role, function, and lifestyles of American ethnic groups.

CSU Stanislaus
ETHS 2000 Contemporary African American Studies (3)
ETHS 2100 Contemporary Chicano Studies (3)
ETHS 2200 Contemporary Asian American Studies (3)

University of the Pacific
BLKS 51 Introduction to Black Studies (4)

Category II
A detailed study of the cultural development of ethnic groups in America.

CSU Stanislaus
ANTH 3070 Peoples and Cultures of Africa (3)
ANTH 3106 Peoples and Cultures of Asia (3)
ANTH 3301 The American Indian (3)
ANTH 3320 Native Peoples of Latin America (3)
ANTH 4130 Urban Subcultures: Chinatown (3)
ETHS 3100 Asian-American Images in Arts and Media (3)
ETHS 3110 Looking for America: Chicano Images in Art and Film (3)

University of the Pacific
ANTH 120 Japanese Culture and Society (4)
ANTH 121 South Asian Civilization (4)
ANTH 122 Contemporary African Society (4)
ARTH 120 Chinese Art History (4)
ARTH 122 Japanese Art History (4)
BLKS 146 Cultural Contributions of African Americans (4)
CHIN 102 Classics of Asian Civilization (4)
ENGL 193 African American Novel or Multicultural Autobiography (4)
JAPN 170 Japanese Literature in Transition (4)
JAPN 172j Japanese Culture and Civilization (4)
JAPN 174 Modern Japanese Theatre (4)
JAPN 176 Meiji Literature (4)
JAPN 180 Modern Japanese Fiction (4)
RELI 135 Asian Religious Traditions (4)
SPAN 103 Literatura Hispanoamericana Hasta el Siglo XX (3)
SPAN 105 Literatura Hispanoamericana: del Siglo XX (4)
SPAN 107 Civilizacion Hispanoamericana (3)
SPAN 112 Literatura Mexicana Contemporanea (3)

Category III
A detailed study of the historical background of minority groups in America.

CSU Stanislaus
HIST 3510 Latin America in Colonial Times (3)
HIST 3520 Latin American States Since Independence (3)
HIST 3800 East Asia in Traditional Times (3)
HIST 3810 East Asia in the Modern World (3)
HIST 3860 Africans in the Modern World (3)
HIST 3880 Contemporary Africas, 1945 to the Present (3)
HIST 4500 History of Mexico (3)
HIST 4719 Mexican American History
HIST 4800 Modern China (3)
HIST 4850 China and the United States (3)

University of the Pacific
HIST 130 Modern Latin America (4)
HIST 146 History of Mexico (4)
HIST 149 Southeast Asia and the West (4)
HIST 150 Japan to 1868 (4)
HIST 151 Modernization of Japan (4)
HIST 152 Premodern China to 1840 (4)
HIST 153 Modern Chinese History (4)
HIST 154 History of Communism in China (4)
HIST 184 African American History (4)
POLS 152 Politics of Asia (4)

Category IV
A study of the psychological, sociological, economic educational and political adjustments necessary for members of each of the groups to function in American society.

CSU Stanislaus
EDU 4200 Cultural Diversity and the Classroom (3)
EDU 4430 Cross-Cultural Techniques for Teachers: Language and Sociocultural Issues in School Settings (3)
ETHS 3000 Mexican American Politics Since 1850 (3)
ETHS 3200 Chicanas in Society (3)
ETHS 4000 Mexican American Family (3)
ETHS 4010 The African America Family (3)
ETHS 4020 The African American Women: Soul Sister (3)
ETHS 4030 Asian American Family (3)
ETHS 4100 Chicanos in Education (3)
University of the Pacific
BLKS 97 Prejudice and ?Racism (4)
BLKS 142 Implementation for Social Change (4)
BLKS 164/POL 104 Ghetto Life/Urban Politics (4)

Category V
A synthesis of knowledge gained in the preceding courses with some information of research methodology for the study of each ethnic group.

CSU Stanislaus
ETHS 4200 The Minority Experience (3)
ETHS 4350 Multiculturalism: From Bias to Reality (3)
ETHS 4940 Field Work in Ethnic Studies (4)
ETHS 4950 Selected Topics in Ethnic Studies (1-5)
ETHS 4960 Seminar in Ethnics Studies (3)
SSCI 4960 Social Science Interdisciplinary Seminar (3)
ETHS 4980 Individual Study (1-4)

*University of the Pacific**
BLKS 187 Field Work (2-4)
BLKS 191 Independent Study (2-4)
BLKS 193 Special Topics (3-4)
**Approval of these courses is pending.*

Chemistry

Professors: Jones (Chair), Rodriguez, Spreer, Wedegaertner
Associate Professors: McCallum, Samoshin
Assistant Professors: Day, Pryor, Hellmann-Blumberg
Department Phone: 209 946-2271
Website: http://chemistry.cop.uop.edu

Chemistry is the scientific study of the composition, properties and transformations of matter. The emphasis in all courses offered by the Department of Chemistry is the scientific approach to the solution of problems. A wide variety of degree programs designed to meet a range of career goals are offered. The Bachelor of Science in Chemistry degree recipients who complete the professional requirements will be certified by the American Chemical Society.

Degrees in Chemistry

The Bachelor of Arts degree is designed to give the student a broad understanding of chemistry and degree serves as a preparation for careers in medicine, dentistry and teaching. The candidate for the B.A. degree must complete eight courses in chemistry, two in physics and two in calculus.

The more rigorous Bachelor of Science degree prepares students for a variety of options including advanced degree studies in chemistry and biochemistry, professional schools of medicine and dentistry, and careers in the chemical industry. The Bachelor of Science candidate must complete 10 courses in chemistry, two in physics and four in mathematics.

Virtually all Bachelor of Science and many Bachelor of Arts candidates choose undergraduate research as one of their chemistry electives. In this course the student has the opportunity to use the modern instrumentation available in the department and to work closely with faculty and graduate students on an original research project. The graduate students are typically doing research projects as part of a Master of Science or a Ph.D. program.

Minor in Chemistry

The Department of Chemistry offers a minor in chemistry. The minor requires a minimum of 23 units and five courses including CHEM 25, 27, 121 and two courses selected from CHEM 123, 141, 151 and 161 or 169. Students interested in working toward the minor should contact the Chair of the Chemistry Department and file an application in the department office.

Transfer Units

The Chemistry Department will determine the acceptability of courses taken at other institutions to satisfy departmental major and minor requirements. Transfer students are required to take at least four of their major required courses in the COP Chemistry Department. Transfer students choosing a minor in Chemistry must complete at least two of their courses in the COP Chemistry Department.

Typical First-Year Program

Fall: Chemistry 25
Math 51
Biology 51 or Physics 23/53
Mentor Seminar I

Spring: Chemistry 27
Math 53
Biology 61 or Physics 25/55
Mentor Seminar II

Note: Degree candidates in the B.S. Chemistry-Biology, B.S. Chemistry (Emphasis in Medicinal Chemistry) or B.S. Biochemistry are advised to take Biology (51, 61) in their freshman year.

Chemistry Core Curriculum

All majors in chemistry will complete a common core (except for the Chemistry-Biology degree) of chemistry courses in addition to requirements specific to the individual majors and degree.

Core Courses		Units
25	General Chemistry	5
27	General Chemistry	5
121	Organic Chemistry	5
123	Organic Chemistry	5
141	Analytical Chemistry	4
	Core Total	**24**

Bachelor of Arts

The B.A. in Chemistry program is designed to give students a broad understanding of chemistry and yet allow sufficient flexibility for students to pursue a large number of courses in other science and non-science areas. This degree plan is chosen by many students as a preparation for careers in dentistry and in medicine.

The Bachelor of Arts degree candidate must complete eight courses in chemistry, two in physics and two in mathematics.

Degree Requirements

	Courses
General Education	9
University Electives	10
Non-major Requirements	19
Chemistry	8
Mathematics & Physics	4
Major Requirements	12
Graduation Total*	**31**

**Presumes courses of at least three units each.*

Major Requirements

		Units
Chemistry		
CORE COURSES		24 plus
169	Elements of Physical Chemistry	4
	Chemistry elective*	4
	Chemistry elective*	4
	Total	**36**
Physics		
23	General Physics	(5) and
25	General Physics	(5) or
53	Principles of Physics	(5) and
55	Principles of Physics	(5)
	Total	**10**
Mathematics		
51	Calculus	4
53	Calculus	4
	Total	**8**
Major Total		**54**

**The two chemistry electives provide flexibility in scheduling and a tailoring of the subject matter to fit individual student needs and interests.*

Bachelor of Science

Chemistry

The B.S. in Chemistry degree is certified by the American Chemical Society. The B.S. program has increased breadth and depth as well as increased mathematical rigor compared to the B.A. degree. The program prepares students for advanced degree programs, for work in the chemical industry, and for the professional schools of dentistry and medicine. The student graduating with the certified B.S. degree is well prepared for a career in chemistry.

The B.S. candidate must complete 10 courses in chemistry, two in physics and four in mathematics.

Degree Requirements

	Courses
General Education	9
University Electives	4
Non-major Requirements	13
Chemistry	10
Mathematics & Physics	6
Major Requirements	16
Graduation Total*	**29**

**Presumes courses of at least three units each.*

Major Requirements

		Units
Chemistry		
CORE COURSES		24 plus
143	Instrumental Analysis Laboratory	4
161	Physical Chemistry I	4
163	Physical Chemistry II	4
167	Experimental Physical Chemistry	4
171	Inorganic Chemistry	4
	Total	**44**
Physics		
53	Principles of Physics	5
55	Principles of Physics	5
	Total	**10**
Mathematics		
51	Calculus I	4
53	Calculus II	4
55	Calculus III	4
57	Ordinary Differential Equations	4
	Total	**16**
Major Total		**70**

**Students in this program are strongly encouraged to engage in undergraduate research as an elective.*

Chemistry-Biology

The Bachelor of Science in Chemistry-Biology is an interdepartmental major jointly offered by the Chemistry and Biology Departments. The degree is recommended for students with career interests in medicine, dentistry or advanced degree work in cellular and molecular biology. The B.S. Chemistry-Biology candidate acquires basic coursework in the natural sciences without, however, meeting the strict requirements of either the B.S. Biology or the B.S. Chemistry programs.

Degree Requirements

	Courses
General Education	9
University Electives	3
Non-major Requirements	12
Chemistry	7
Biology	7
Mathematics & Physics	4
Major Requirements	18
Graduation Total*	**30**

**Presumes courses of at least three units each.*

Major Requirements

		Units
Chemistry		
CORE COURSES (less CHEM 141)		20 plus
169	Elements of Physical Chemistry or CHEM 161	4
	Elective	4
	Elective	4
	Total	**32**
Biological Sciences		
51	Principles of Biology	4
61	Principles of Biology	4
101	Genetics	4
175	Ecology	3 or
179	Evolution	4 plus
	Three additional biology courses	12
	Total	**27 or 28**
Mathematics		
51	Calculus I	4
53	Calculus II	4
	Total	**8**
Physics		
53	Principles of Physics or 23	5
55	Principles of Physics or 25	5
	Total	**10**
Major Total		**77 or 78**

Biochemistry

The B.S. in Biochemistry is designed for students with interests in careers in medicine, dentistry and graduate work in molecular and cellular biology or biochemistry.

Degree Requirements

	Courses
General Education	9
University Electives	1
Non-major Requirements	10
Chemistry	9
Biology	6
Mathematics and Physics	4
Major Requirements	19
Graduation Total*	**29**

**Presumes an average of four units per course.*

Major Requirements

		Units
Chemistry		
CORE COURSES		24 plus
151	Biochemistry	5
153	Biochemistry	5
169	Elements of Physical Chemistry	4
	Physical Chemistry elective	4
	Total	**42**

In addition, students are encouraged to

complete at least one other course in biochemistry and at least one semester of research.

Biological Sciences

51	Principles of Biology	4
61	Principles of Biology	4
101	Genetics	4
145	Microbiology	4
153	Cell Biology	4
	Biology elective	4
	Total	**24**
Mathematics		
51	Calculus I	4
53	Calculus II	4
	Total	**8**
Physics		
23	General Physics	(5) and
25	General Physics	(5) or
53	Principles of Physics	(5) and
55	Principles of Physics	(5)
	Total	**10**
Major Total		**84**

Emphasis in Medicinal Chemistry

The emphasis in Medicinal Chemistry is offered by the College of the Pacific with the support of the Thomas J. Long School of Pharmacy and Health Sciences. Students completing the emphasis in medicinal chemistry are well prepared for advanced work in any area that deals with compounds of biological activity. This includes careers in medical research, medicinal chemistry, toxicology, biochemistry and the pharmaceutical industry. In addition to the fundamental chemistry classes, students take the necessary biology courses and courses in the School of Pharmacy and Health Sciences to provide the expertise for a career in medicinal chemistry or a related field.

Requirements

	Courses
General Education	9
University Electives	1
Non-major Requirements	10
Chemistry	7
Pharmacy	7
Other Science & Math	7
Major Requirements	21
Graduation Total*	**31**

**Presumes courses of at least three units each.*

Major Requirements

		Units
Chemistry		
CORE COURSES		24 plus
151	Biochemistry	5
169	Elements of Physical Chemistry	4
	Total	**33**
Biological Sciences		
51	Principles of Biology	4
61	Principles of Biology	4
145	Microbiology	4
	Total	**12**
Mathematics		
51	Calculus I	4
53	Calculus II	4
	Total	**8**
Physics		
23	General Physics	(5) and
25	General Physics	(5) or
53	Principles of Physics	(5) and
55	Principles of Physics	(5)
	Total	**10**
School of Pharmacy and Health Sciences		
117	Human Physiology & Anatomy I	4
127	Human Physiology & Anatomy II	4
135	Pharmacology-Toxicology I	4
145	Pharmacology-Toxicology II	4
136	Pharmacology Lab	.5
134	Medicinal Chemistry I	3
144	Medicinal Chemistry II	3
	Total	**22.5**
Emphasis Total		**85.5**

Course Offerings

Prerequisite Policy: Only courses passed with a grade of C- or better meet prerequisite requirements.

Definition of class period: Three class periods per week means four contact hours.

Students are assessed **laboratory use fees** that vary with the level of the laboratory class to cover the cost of expendable materials and chemicals.

CHEM 22. Science: Controversy and Consensus (3)
The course examines the historical development of several key ideas in science and addresses the evidence for and against the views that ultimately prevailed as the modern scientific consensus. The Copernican, Newtonian, and Darwinian scientific revolutions, as well as the rise of the atomic theory of chemical reactions and the Huttonian view of the earth, are discussed in detail. The history of science is traced from its roots in Greek and Arabic science to the rise of modern biology and chemistry in the late 19th century.

CHEM 23. Elements of Chemistry (4)
A course designed for general interest in physical science and for preparation for further study in chemistry. Three class periods and one three-hour laboratory period a week are required.

CHEM 25, 27. General Chemistry (5, 5)
The important general principles, theories and concepts of chemistry are studied. Three class periods and two three-hour laboratory periods a week are required. Prerequisite: high school algebra or the equivalent. High school chemistry is recommended. Successful completion of the Chemistry Diagnostic Examination is required.

CHEM 93. Special Topics (3, 4)

CHEM 121, 123. Organic Chemistry (5, 5)
The fundamental principles of the chemistry of carbon compounds are systematically presented with an emphasis given to biologically important reactions and classes of compounds. The course includes functional group chemistry, nomenclature, physical properties of compounds, synthesis, stereochemistry, mechanisms and spectroscopy. Three class periods and two three-hour laboratory periods a week are required. *Prerequisite: grade of C- or better in CHEM 27 (or CHEM 121).*

CHEM 141. Analytical Chemistry (4)
Introduces analytical methods including classical techniques, separations and selected instrumental procedures. *Prerequisite: CHEM 27.*

CHEM 143. Instrumental Analysis Lab (4)
Advanced analytical methodology involving electronic instrumentation is offered with emphasis on practical application and "hands-on" experience, but the theory of instrumental operation is covered. Examples from spectrophotometry, chromatography and electrical methods of analysis are included. *Prerequisite: CHEM 141.*

CHEM 151. Biochemistry (5)
Introduction to the biochemistry of proteins, carbohydrates, lipids, nucleic acids, metabolism and enzyme mechanisms. Three class periods and two four-hour laboratory periods a week are required. *Prerequisite: CHEM 123, 161 or 169, or permission of the instructor.*

CHEM 153. Biochemistry (5)
The biochemistry of replication, transcription, translation and the mechanisms of biological regulation. Includes lecture and lab. Graduating seniors and graduate students must present an original research proposal in a formal oral final examination. *Prerequisite: CHEM 151 or permission of the instructor.*

CHEM 161. Physical Chemistry I (4)
A classical course on equilibrium

thermodynamics including the laws of thermodynamics, the Gibbs equations, the phase rule, solutions, chemical reactions, non-ideal systems, multi-component phase equilibrium and equilibrium electrochemistry. Three class periods a week are required. *Prerequisites: CHEM 27, MATH 51, 53, 55, PHYS 53, 55 or permission of the instructor.*

CHEM 163. Physical Chemistry II (4)
Quantum chemistry and applications, atomic spectra, bonding, symmetry and group theory, molecular spectra, statistical thermodynamics, transport theory of gases and ions, chemical kinetics and activated complex theory. Three class periods a week are required. *Prerequisite: CHEM 161 or permission of the instructor.*

CHEM 167. Experimental Physical Chemistry (4)
A laboratory course designed to illustrate experimentally the theoretical principles and methods of thermodynamics, quantum chemistry and kinetics. It provides a research orientation through the preparation of research manuscripts and oral presentations of results. Error analysis and statistical treatment of data are emphasized. *Prerequisite: CHEM 161 or 169.*

CHEM 169. Elements of Physical Chemistry (4)
Principles of thermodynamics, kinetics and spectroscopy including transport phenomena, the thermodynamics of metabolism and electrochemistry. The emphasis is on applications to biological systems. Three class periods a week are required. Recommended for pre-health science students. *Prerequisites: MATH 51, CHEM 27; two Physics courses (PHYS 53, 55 recommended).*

CHEM 171. Inorganic Chemistry (4)
Ionic and covalent bonding: theory, energetics and reactivity; applications of acid-base concepts; aqueous and nonaqueous electrode potentials; coordination chemistry; theory, spectra, structure, reaction mechanisms and kinetics; introduction to organometallic chemistry; periodicity. *Prerequisite: CHEM 163 or permission of the instructor.*

CHEM 191. Independent Study (2-4)

CHEM 193. Special Topics (3, 4)

CHEM 197. Independent Research (2-4)
Prerequisite: CHEM 25.

CHEM 231. Advanced Synthesis Laboratory (4)
Selected problems in synthesis.
Prerequisite: CHEM 123.

CHEM 232. Qualitative Organic Analysis (4)
One lecture period and two laboratory periods a week. *Prerequisite: CHEM 123.*

CHEM 233. Advanced Organic Chemistry (4)
Synthetically useful organic reactions not normally covered in the introductory courses are emphasized. The reactions are grouped according to their mechanistic type and discussed in terms of their reaction mechanisms and synthetic utility. *Prerequisites: CHEM 123 and 161 or 169.*

CHEM 234. Selected Topics — Organic Chemistry (4)
Topics presented at various times under this course description include: physical organic, natural products and structure elucidation, stereochemistry, heterocycles and carbohydrate chemistry.

CHEM 243. Advanced Instrumental Analysis (4)
Comprehensive investigation of absorption, emission, partition and electrical methods of chemical analysis. Theoretical basis and practical experience are combined in a total course. Some background in elementary optics and electronics useful but not required. *Permission of the instructor required.*

CHEM 245. Advanced Instrumental Methods (4)
Team-taught course. Students select from a number of instrumental projects, including: FTNMR, GC-mass spectrometry, advanced electrochemical techniques, high pressure liquid chromatography, photochemistry, fluorescence and phosphorescence and radioimmunoassay. *Permission of the instructor required.*

CHEM 251. Proteins and Nucleic Acids (3)
Chemical, physical and biological properties of the proteins and nucleic acids and their constituents; isolation, determination of composition, sequence, and structure; correlation of structure and biological properties. *Prerequisite: CHEM 151 or permission of the instructor.* (Cross-listed from School of Pharmacy and Health Sciences.)

CHEM 253. Biochemistry of Enzymes (3)
The study of biological catalysis, including isolation, characterization in terms of composition and biological activity, of enzymes; mechanisms of biological catalysis; correlation of structure and activity. *Prerequisite: CHEM 151 or permission of the instructor.* (Cross-listed from School of Pharmacy and Health Sciences.)

CHEM 264. Selected Topics — Physical Chemistry (4)
Topics presented at various times under this course description include: advanced thermodynamics, statistical mechanics, physical chemistry of solutions, physical methods in chemistry, photoluminescence and molecular photochemistry, and advanced kinetics. *Permission of the instructor required.*

CHEM 265. Advanced Physical Chemistry (4)
An advanced treatment of molecular structure, spectroscopy and photochemistry. *Prerequisite: CHEM 163 or equivalent, or permission of the instructor.*

CHEM 271. Advanced Inorganic Chemistry (4)
Review of basic concepts; descriptive transition metal chemistry; studies in main group and coordination chemistry; inorganic chemistry in biological systems; organometallic systems. *Permission of the instructor required.*

CHEM 274. Selected Topics — Inorganic Chemistry (4)
Topics presented at various times under this course description include: mechanisms of inorganic reactions, bonding theory, physical methods, nuclear chemistry and geochemistry.

CHEM 291. Independent Study (2-4)

CHEM 293. Special Topics (3, 4)

CHEM 295. Graduate Seminar (2)

CHEM 297. Graduate Research (1-4)

CHEM 299. Thesis (1-4)

CHEM 381. Apprentice Teaching (1-4)

CHEM 391. Independent Study (2-4)

CHEM 395. Seminar in the Teaching of College Chemistry (2)

CHEM 397. Graduate Research (1-6)

CHEM 399. Dissertation (1-6)

Classics

Professor: Bowsky
Associate Professors: Kraynak, Thomas (Chair)
Department Phone: (209) 946-2498

The Department of Classics offers students an opportunity to study the cultures and languages of ancient Greece and Rome, and their lasting effects on the modern world. In alternate years Classics-in-English courses may have a Greek or Roman focus. See the Classics Department chairperson or bulletin board for information about coming years. Courses in English and Latin and ancient Greek languages are designed to be relevant for students who wish to acquire a broad, fundamental liberal arts education, while deepening their knowledge of the Greco-Roman roots of Western civilization. They are also designed to be relevant for students preparing to teach or to pursue graduate study in classics or several other fields in the humanities. The department offers, in addition, a Liberal

Studies Major which is described in the section on cross-disciplinary majors.

Degrees in the Classics

The department offers a Bachelor of Arts degree in Classics with a choice of three areas of emphasis, and a minor in Classics with a choice of four areas of emphasis.

Classical Studies. A broad program of courses, available in both the major and minor, that emphasizes the interdisciplinary nature of the field. Students undertake historical, literary, archaeological and mythological study in courses in English translation, and language studies in Latin and ancient Greek. This emphasis is most useful for students who desire a varied and rewarding program of intercultural study, or who plan to undertake further study in classical archaeology or museum studies, and such disciplines as art, drama, English, history, political science, law and religious studies.

Latin and Greek. A pair of specially designed programs available in both the major and minor. Each provides for advanced ability in reading, translating and interpreting works written in Latin or ancient Greek, and includes courses that set the study of a language and its literature in the broader context. These two emphases are most relevant to students preparing to teach or to pursue graduate study in classics or in such fields as comparative literature, modern languages, or philosophy.

Classical Languages. An unusual program of courses available only within the Classics Minor. This program is designed to provide intermediate reading and translating ability in Latin or ancient Greek and beginning ability in the other classical language. This emphasis is recommended for students who are interested generally in the study of languages; for students majoring in one of the modern languages, in philosophy or pre-ministerial studies; and for students planning further study in such areas as comparative literature, philosophy or linguistics.

First-Year Program

There is no single typical first-year program. It is essential, however, that students who elect the Greek or Latin emphasis within the Classics major, and who have had no previous study of that language in high school, commence that language in their first college semester, by taking Greek 11a or Latin 11a. Students who have had previous study of that language should take a departmental placement test to determine the level at which they can continue their study of Greek or Latin.

Academic Requirements

The Classics Major

Students seeking a Classics Major must complete the following core courses and the specified number of courses drawn from the Classics-in-English courses listed below.

Core Curriculum

– two courses in Latin or Greek beyond the first-year level, e.g., 23 and 25

– two courses in the language not selected for study beyond the first-year level, i.e., 11a and 11b

Classics-in-English Courses

– History of Ancient Greece or Rome

– Greek or Roman Literature in Translation

– Greek or Roman Art and Architecture

– Sexuality in Greece or Rome

Classical Studies Emphasis

Students who wish to pursue a major with a Classical Studies emphasis must complete:

– all four Classics-in-English courses listed above, at least one with a Greek and one with a Roman focus;

– a course in Greek and Roman Myths; and

– one elective course.

Eligible electives include additional study in Latin or Greek, Special Topics or Independent Study courses offered by the department, or adjunct courses identified with the advice and approval of the department. Courses currently considered as possible adjunct courses reflect the interdisciplinary nature of the field:

ARTH 7	Survey of Western Art to 1400
ENGL 125	Critical Colloquium
ENGL 182	Introduction to Linguistics
ENGL 184	History of the English Language
HIST 104	Medieval History
FREN 11b	First-Year French
GERM 11b	First-Year German, or
SPAN 11b	First-Year Spanish

(other languages may also serve, with departmental permission)

PHIL 53	History of Ancient and Medieval Philosophy
POLS 130	Western Political Theory
RELI 134	World Religions

A student seeking a Classics major with a Classical Studies emphasis can also take a minor in the language not selected for study beyond the first-year level, but cannot take a minor with an emphasis in either Classical Languages or in the language already selected for study beyond the first-year level.

Latin or Greek Emphasis

Students who desire to pursue the major with a Latin or Greek emphasis must complete:

– four courses in Latin or Greek beyond the second-year level, e.g., 127, and

– two courses, one with a Greek and one with a Roman focus, drawn from the Classics-in-English courses listed above.

A student seeking a Classics Major with a Latin or Greek emphasis can also take a minor in the language not selected for study beyond the first-year level, but cannot take a minor in Classics with an emphasis in either Classical Languages or Classical Studies.

The Classics Minor

Students seeking a Classics Minor must complete the following core courses and the designated number of courses drawn from the Classics-in-English courses listed below.

Core Curriculum

Two courses in Latin or Greek at the college level, e.g., 11a and 11b for the minor with a Classical Studies or Classical Languages emphasis; 11b and 23 for a minor with a Latin or Greek emphasis

Classics-in-English Courses

– History of Ancient Greece or Rome

– Greek or Roman Literature in English

– Greek or Roman Art and Architecture

– Sexuality in Greek or Roman Society

Classical Studies Emphasis

Students who wish to pursue a minor with a Classical Studies emphasis must complete three courses, at least one with a Greek and one with a Roman focus, selected from a course in Greek and Roman Myths, and the four Classics-in-English courses listed above.

Latin or Greek Emphasis

Students desiring a minor with a Latin or Greek emphasis must complete:

– two additional courses in Latin or Greek at the college level, e.g., 25 and 127, and

– one course selected from the Classics-in-English courses listed above, with the appropriate Roman or Greek focus.

Classical Languages Emphasis

Students undertaking a minor with a Classical Languages emphasis must complete:

– two additional courses in Latin or Greek beyond the first-year level, e.g., 23 and 25, and

– two courses in the language not selected for study beyond the first-year level, i.e., 11a and 11b.

Course Offerings

Classics-in-English

CLAS 31. English Vocabulary Building (4)
Analysis of the Latin and Greek element in modern English and study of the influence of classical languages on English and modern European languages. May include a special unit devoted to analysis of scientific and technical English, with specific attention to the vocabulary of the life sciences and pharmacy.

CLAS 33. Bioscientific Terminology (4)
Analysis of the Latin and Greek element in scientific English with special emphasis on the vocabulary of pharmacy and the life sciences.

CLAS 100. History of Ancient Greece (4)
An introductory survey of the social, economic, political and military history of ancient Greece, from the very first Greeks and the age of the Homeric heroes to the legacy of Alexander the Great. We will focus on Greece and the Greeks as the mainstream culture, with marginal groups - such as women, slaves, non-citizens, and other ethnic groups - providing the context for the development of an exclusively Greek cultural identity. Offered in alternate years.

CLAS 102. History of Ancient Rome (4)
An introductory survey of the social, economic, political and military history of ancient Rome, from the legendary founder hero Aeneas to the height of Rome under the emperors. We will focus on Rome and the Romans as the mainstream culture, with marginal groups - such as women, slaves, non-citizens, and other ethnic groups - providing the context for the development of an exclusively Roman cultural identity. Offered in alternate years.

CLAS 110. Greek Literature in English (4)
An introductory survey of the literature of ancient Greece, read in English translation. Works studied will be representative of the extraordinary literary achievement of Greece in the genres of epic, tragedy, comedy, history, philosophical dialogue, and lyric poetry. Attention will be given to the perennial importance which the themes and questions raised have had for subsequent western literature. Offered in alternate years.

CLAS 112. Roman Literature in English (4)
An introductory survey of the literature of ancient Rome, read in English translation. Works studied will include the genres of comedy, epic, rhetoric, lyric poetry, history, the novel, and satire. Particular focus will be on these works' continued relevance and the extensive influence which Rome had on later western thought and literature. Offered in alternate years.

CLAS 115. Classical Mythology (4)
The Greek and Roman myths of major importance in Western literature, art and music. May focus, in alternate offerings, upon Greek mythology against the background of Roman, or Roman mythology against the background of Greek. Offered twice a year.

CLAS 120. Sexuality in Greek Society (4)
An introductory survey of the sexual attitudes and gender roles of women and men in ancient Greek society. We will focus on the suppression of female sexuality and the channeling of male sexuality, in the different places and times of ancient Greece, from the Homeric heroes and their women to the heirs of Alexander the Great. Offered in alternate years.

CLAS 122. Sexuality in Roman Society (4)
An introductory survey of the sexual attitudes and gender roles of women and men in ancient Roman society. We will focus on the subordination, exploitation, and suppression of male and female sexuality from the charter society of Aeneas to the politics and economy of the Roman Republic, and the philosophies and religions of the Roman Empire. Offered in alternate years.

CLAS 130. Greek Art and Architecture (4)
An introductory survey of the art and architecture of ancient Greece from the Bronze Age to the Hellenistic period. While exploring the stylistic development of Greek sculpture, painting and architecture, we will examine what this art can tell us about the ancient Greeks and how extensively it has influenced our world. Offered in alternate years.

CLAS 132. Roman Art and Architecture (4)
An introductory survey of the art and architecture of ancient Etruria an Rome from 600 B.C. to the 4th century A.D. We will explore the role of Roman art and architecture and its Etruscan influences in Roman life and history. Attention will be given to examples of Roman influence that surround us today. Offered in alternate years.

CLAS 191. Independent Study (2-4)

CLAS 193. Special Topics (4)

Greek

GREK 11a. First-Year Ancient Greek, First Semester (4)
Beginning training in the basic language skills of reading and writing, with attention to aspects of ancient Greek culture and the influence of ancient Greek on English vocabulary. Offered every fall.

GREK 11b. First-Year Ancient Greek, Second Semester (4)
Continued training in reading and writing skills, study of ancient Greek culture and English vocabulary derived from Greek, with appropriate readings from classical Greek authors. Offered every spring.

GREK 23. Intermediate Greek, Third Semester (4)
Selected readings with attention to grammar as needed. Students have the option of reading in appropriate Classical authors such as Herodotus or Plato, or in the Greek New Testament. *Prerequisite: second semester Greek, equivalent or permission.*

GREK 25. Intermediate Greek, Fourth Semester (4)
Selected readings with attention to grammar as needed. Students have the option of reading in appropriate Classical authors such as Homer or the Greek dramatists, or in Koine Greek. *Prerequisite: third semester Greek, equivalent or permission.*

GREK 93. Special Topics (4)

GREK 127. Advanced Greek (4)
Readings suited to the abilities and interests of the students. Attention to grammar and prose composition as needed. May be taken more than once with different content. *Prerequisite: GREK 25 or equivalent.*

GREK 191. Independent Study (2-4)

Latin

LATN 11a. First-Year Latin, First Semester (4)
Beginning training in the basic language skills of reading and writing, with attention to aspects of Roman culture and the influence of Latin on modern languages. Offered every fall.

LATN 11b. First-Year Latin, Second Semester (4)
Continuation of training in the basic reading and writing skills; appropriate readings from Latin authors. Offered every spring.

LATN 23. Intermediate Latin, Third Semester (4)
Selected readings from prose authors. Attention to grammar as needed; simple composition exercises. *Prerequisite: second semester Latin, equivalent or permission.*

LATN 25. Intermediate Latin, Fourth Semester (4)
Selected readings from Vergil's Aeneid or other authors suited to the needs and interests of the students. Attention to grammar as needed. *Prerequisite: third semester Latin, equivalent or permission.*

LATN 93. Special Topics (4)

LATN 127. Advanced Latin (4)
Readings suited to the abilities and interests of the students. Attention to grammar as needed; practice in prose composition. May be taken more than once with different content. *Prerequisite: LATN 25 or equivalent.*

LATN 151. Intensive Latin for Language Students (4)
A comparative study of Latin and its relationship to modern European languages. Reading of selected texts. *Prerequisite: permission of the instructor.*

LATN 191. Independent Study (2-4)

Communication

Professors: Day, Koper, Schamber
Associate Professors: Dong (Chair), Hackley
Assistant Professors: Batt, Hilton, R. A. Ray
Department Phone: (209) 946-2505

Mission

The mission of the Communication Department is to prepare students as leaders in their communities and careers by developing their understanding of communication theory and research methodologies as well as their proficiency in oral, written and mediated communication. Coursework is offered which leads to emphases in Communication Studies, Media Studies or Public Relations and Organizational Communication. Each of these provides the student with a specific approach to communication processes and includes both theoretical and applied learning experiences.

Career Opportunities

Coursework in the Department of Communication provides preparation for careers in teaching, speech writing, law, labor relations, personnel development, public relations, journalism, broadcasting, media management, international relations, and many other professional areas.

Communication Major

The major in communication is designed to allow students to pursue an in-depth learning experience in their chosen area of emphasis, while at the same time assuring that each student has experienced the discipline from each of its perspectives and has been given a solid background in communication theory and research. Fundamental skills-building courses are built into the major program so that students work toward the improvement of their communication competencies while increasing their knowledge of the discipline.

Areas of Major Emphasis

Communication Studies. This area covers the rhetoric and communication theory traditions in communication. Rhetoric and public address courses stress the development of rhetorical thought from the classical period to the present, as well as the historical and critical study of public speaking and speakers. Courses in communication theory explore the nature of human communication interaction in dyadic, group, and intercultural contexts.

Media Studies. Students choosing this emphasis area receive instruction on the nature and use of broadcast and print media, as well as mass communication in general. Coursework in broadcasting focuses on functional, operational, and theoretical aspects. Coursework is supplemented by KPAC, a student-operated, carrier-current station, or at other local radio and television stations. Coursework in print focuses on news writing, reporting, and editing in addition to practicum opportunities with *The Pacifican* (student newspaper) or internships with local newspapers or magazines.

Public Relations and Organizational Communication. This emphasis area explores the role of communication inside and outside of organizations. Courses in organizational communication examine organizational structure and communication from major theoretical perspectives. Special attention is given to the function of communication within organizations, conflict management, decision-making, and the dynamics of group interaction. Courses in public relations explore the role of internal and external communication in reputation management. Students are provided with a broad background in both theoretical and applied areas of communication to permit application of creative solutions to public relations problems. Courses in both organizational communication and public relations can be supplemented with practicum and internship experiences.

Student Opportunities

Forensics. For over seven decades, Pacific has competed with distinction in intercollegiate debate, individual events, and Readers Theatre. The University offers forensics scholarships to students who have demonstrated a high level of performance proficiency and require financial assistance. Scholarships are awarded on a competitive basis and selections are made by the director of forensics in conjunction with the Financial Aid Office.

KPAC. KPAC is the student-operated carrier-current radio station on campus. It is programmed by students. Supported by the sales of radio advertising, the station offers students experience in managing, announcing, and sales of advertising time in a commercial radio environment.

The Pacifican. *The Pacifican* is a student-managed independent weekly newspaper. This publication serves as a laboratory for those interested in pursuing careers in journalism.

PRSSA. The University of the Pacific boasts a chapter of the Public Relations Student Society of America (PRSSA). Serious public relations students meet monthly to hear professionals invited from San Francisco and other major market areas discuss contemporary public relations topics. They also join together in teams to compete in national case-study competition. PACIFIC PRSSA teams have distinguished themselves over the years by placing in national competition.

Internships and Practica

The department believes that practica and internships are an important adjunct to learning. These experiences are available both on and off campus in the areas of radio, television, public relations, journalism, organizational communication, and forensics. Internships and practica are available to students who meet the prerequisites. Internships and practica are taken on a pass/no credit grading basis.

Internship and Practica Requirements
Students taking an internship or a practica through the department must satisfy the following requirements: (1) Students must have an overall cumulative GPA of 2.5 or above in order to register for an internship, Comm 087/187, to count toward the major; otherwise, (2) students with a minimum overall cumulative GOA of 2.0, may be placed in practicum, Comm 089, to serve in an on-campus setting; (3) students should complete the three communication lower core courses (Comm. 27, 31, and 43), as well as appropriate emphasis area courses as prescribed by the Faculty Supervisor, before the Internship or Practica is undertaken (exceptions

must be approved by the Faculty Supervisor); (4) undergraduate students may complete a total of 16 units through Comm 07/187 (Internships) and/or Practica, Comm 089.

Independent Study and Independent Research Requirements

Students enrolling in independent study and/or independent research through the department must satisfy the following requirements: (1) The student must have a department GPA of 3.0 or higher and the permission of the instructor. (2) The student must have completed all category II courses for the particular emphasis area of the major.

Academic Requirements

To major in communication, students must complete the minimum requirements for one of the area emphases in the department. Each emphasis area requires completion of 13 courses. Seven of the courses form the communication core and six center on the particular emphasis area. Students must earn a 2.5 grade point average in the three lower core courses (COMM 27, COMM 31 and COMM 43) in order to count them toward the major and in order to meet the prerequisites for COMM 160-Communication Research Methods. Communication courses in which grades are received which are below C- are not accepted toward completion of the major. Practica or internships do not satisfy department requirements unless specifically indicated below. No more than a total of four units of internship and practicum in any combination will count toward major requirements, nor may students in any case accumulate for credit more than eight units in any specific internship (a total of four in an COMM 87 course and a total of four in an COMM 187 course). A student may not accumulate more than four units in a specific practicum in the department.

Core Curriculum

Each emphasis area of the department requires the completion of seven courses which constitute the core of the major. The core consists of three lower-level and four upper-level courses. The lower-level core includes:

COMM 27 Public Speaking
COMM 31 Intro. to Mass Communication
COMM 43 Intro. to Interpersonal Communication

Communication majors are strongly encouraged to complete the lower-level core during their freshman and sophomore years and before undertaking advanced coursework in the department. The courses in the upper-level core are:

COMM 116 Rhetorical Theory and Criticism
COMM 139 Theory of Mass Communication
COMM 145 Human Communication Theory
COMM 160 Communication Research Methods

Typical First-Year Program

Fall: COMM 27-Public Speaking or COMM 31- Intro. to Mass Communication
COMM 43-Intro. to Interpersonal Communication
General Education
General Education
Mentor I

Spring: COMM 27-Public Speaking or COMM 31-Intro. to Mass Communication (Lower-level core course remaining after Fall)
General Education
General Education
Mentor II
Elective (one or more units)

Communication Studies Emphasis

1. Communication Core (7 courses)
2. Take all of the following:
   COMM 29 Intro. to Argumentation
   COMM 143 Intercultural Communication
   COMM 147 Nonverbal Communication
   COMM 155 Persuasion
3. Take two of the following:
   COMM 89d Forensics Practicum
   COMM 114 Argumentation Theory and Practice
   COMM 144 Advanced Interpersonal Communication
   COMM 146 Communication and Conflict
   COMM 148 Decision-Making

Media Studies Emphasis

Students choosing the Media Studies Emphasis must complete at least one of the following sequences:

Broadcast Sequence

1. Communication Core (7 courses)
2. Take all of the following:
   COMM 121 Basic News Writing
   COMM 131 Media Production
   COMM 132 Broadcast Writing
   COMM 136 Broadcast Administration and Promotions
   COMM 138 Media Law and Ethics
3. Take one of the following:
   COMM 87b Broadcast Internship
   COMM 89b Broadcast Practicum
   COMM 124 Publications Editing

Print Sequence

1. Communication Core (7 courses)
2. Take all of the following:
   COMM 121 Basic News Writing
   COMM 122 Advanced News Writing
   COMM 124 Publications Editing
   COMM 132 Broadcast Writing
   COMM 138 Media Law and Ethics
3. Take one of the following:
   COMM 87a Print Internship
   COMM 89a Print Practicum
   COMM 131 Media Production

Public Relations and Organizational Communication Emphasis

Students choosing the Public Relations and Organizational Emphasis must complete at least one of the following sequences:

Public Relations Sequence

1. Communication Core (7 courses)
2. Take all of the following:
   COMM 135 Principles of Public Relations
   COMM 137 Public Relations Case Studies and Problems
   COMM 140 Writing for Public Relations
   COMM 149 Introduction to Organizational Communication
3. Take two of the following:
   COMM 87c Public Relations Internship or
   COMM 89c Public Relations Practicum
   COMM 121 Basic News Writing
   COMM 143 Intercultural Communication
   COMM 146 Communication and Conflict
   COMM 148 Decision-Making
   COMM 152 Public Relations Administration
   COMM 155 Persuasion

Organizational Communication Sequence

1. Communication Core (7 courses)
2. Take all of the following:
   COMM 135 Principles of Public Relations
   COMM 146 Communication and Conflict
   COMM 148 Decision-Making
   COMM 149 Introduction to Organizational Communication
3. Take two of the following:
   COMM 87f Organizational Communication Internship
   COMM 137 Public Relations Case Studies and Problems
   COMM 140 Writing for Public Relations
   COMM 142 Group Dynamics
   COMM 143 Intercultural Communication
   COMM 155 Persuasion

Communication Minor

A minor in Communication requires the completion of three lower-core courses, two upper-core courses, and one elective course as specified below. Students must earn a 2.5

grade point average in the three lower-core courses (COMM 27, COMM 31, and COMM 43) in order to count them toward the minor and to meet the prerequisite for COMM 160. Grades received in Communication courses that are below C- are not accepted toward completion of the minor. In addition, students must maintain a minimum 2.0 grade point average for the minor.

1. Lower-Core Courses (9 units)
   Must take all of the following:
   COMM 27 Public Speaking
   COMM 31 Introduction to Mass Communication
   COMM 43 Introduction to Interpersonal Communication
   Note: COMM 27, COMM 31, COMM 43 must be taken before enrolling in COMM 160.
2. Upper-Core Course (take two of the following as specified below) (8 units)
   Must take the following:
   COMM 160 Communication Research Methods (must take)
   Note: COMM 160 must be taken before enrolling in COMM 139.
   Must take one of the following:
   COMM 116 Rhetorical Theory and Criticism, or
   COMM 139 Theory of Mass Communication, or
   COMM 145 Human Communication Theory
3. Elective Course (take one) (3-4 units)
   Take one additional Communication course (excluding COMM 87, COMM 89, COMM 187, COMM 191, or COMM 197).

Total Units: 20-21

Course Offerings

COMM 27. Public Speaking (3)
A study of the basic principles of public speaking. This course is one of the three lower core courses for the communication major.

COMM 29. Introduction to Argumentation (4)
A study of the process of reasoning through evidence.

COMM 31. Introduction to Mass Communication (3)
A survey of the growth and development of mass communications in America (newspaper, radio, television, magazines, public relations) from a historical and descriptive perspective. Principles of the mass communication process. This course is one of the three lower core courses for the communication major.

COMM 43. Introduction to Interpersonal Communication (3)
Introduction to the study of human interaction that occurs in relatively informal, everyday social contexts. Using models, theories, and skills of communication as takeoff points, the course introduces students to dimensions related to trust, openness, feedback, listening, perception, language, nonverbal communication, and communication competence. Focus is to develop an increasing student awareness of the complexities of interpersonal relationships. This course is one of the three lower core courses for the communication major.

COMM 87, 187. Internship (2-4)
Experiences in a work setting, to be contracted on an individual basis. Internships are awarded on a competitive basis and are limited to the number of placements available. COMM 187 represents advanced internship work involving increased independence and responsibility; a corresponding COMM 87 course or equivalent is a prerequisite. Students may not accumulate for credit more than eight units in any specific internship (a total of four in a COMM 87 course and a total of four in a COMM 187 course). Students will register for one of the courses listed below. Pass/no credit grading only.

COMM 87a, 187a. Newspaper Internship (2-4)
Supervised experience in news writing or editing in a work setting in the commercial press. Job conditions will be contracted on an individual basis and will be determined by the instructor and the newspaper editor. *Prerequisite: see department internship requirements.*

COMM 87b, 187b. Broadcast Internship (2-4)
Supervised experience at an off-campus radio or television station. Job conditions will be contracted on an individual basis and will be determined by the instructor and the station manager. *Prerequisite: see department internship requirements.*

COMM 87c, 187c. Public Relations Internship (2-4)
Supervised experience in an off-campus work setting. Students will work in publicity, promotion, advertising, or some other aspect of public relations work. *Prerequisite: see department internship requirements.*

COMM 87f, 187f. Organizational Communication Internship (2-4)
Supervised experience in an off-campus work setting. Students will apply communication theory and skills while working in areas of organizational functioning such as sales, the training and selection of personnel, employee relations, information systems, etc. *Prerequisite: see department internship requirements.*

COMM 89. Practicum (2-4)
Non-classroom experience in activities related to the curriculum under conditions determined by the appropriate faculty member. Students will register for one of the courses listed below.

COMM 89a. Print Practicum (2-4)
Supervised experience in news writing or editing on the student newspaper, The Pacifican. Assignment conditions to be determined by the instructor after consulting with *The Pacifican* editor. Supervised experience can also be acquired for work on a student magazine. *Prerequisites: grade of "B" or better in COMM 121 or permission of the instructor.*

COMM 89b. Broadcast Practicum (2-4)
Supervised experience at the University public radio station, KUOP-FM, or the student-operated, carrier-current station, KPAC. Students will work in news, production, development and other areas. *Prerequisites: coursework appropriate to assignment; permission of the instructor.*

COMM 89c. Public Relations Practicum (2-4)
Supervised experience in public relations within the University. *Prerequisite: COMM 135.*

COMM 89d. Forensics Practicum (2-4)
Supervised activities in forensics including participating in individual events, Readers Theatre and debate in tournaments throughout the nation. *Prerequisite: COMM 27 or permission of the instructor.*

COMM 114/214. Argumentation Theory and Practice (4)
A study of argumentation theory from the classical period to the present. An examination of the uses of reasoning and evidence in a moot court setting. *Prerequisite: COMM 29 or permission of the instructor.*

COMM 116/216. Rhetorical Theory and Criticism (4)
A study of the development of rhetorical theory with emphasis on fantasy theme analysis, genre criticism, narrative criticism, value criticism, and movement studies. *Prerequisite: COMM 160 or permission of the instructor.*

COMM 121. Basic News Writing (4)
Study and practice in the fundamentals of news writing with emphasis on news style, leads, story structure, and legal and ethical aspects of journalism. This course involves in-class writing exercises and writing assignments of actual news

events. *Prerequisite: basic writing and typing skills; COMM 31 or permission of the instructor.*

COMM 122. Advanced News Writing (4)
This course offers instruction in advanced news writing and reporting. Specific styles of news writing covered include feature writing, public affairs reporting, investigative journalism, and interpretive reporting. *Prerequisite: COMM 121 or permission of the instructor.*

COMM 124/224. Publications Editing (4)
Copy editing, proofreading, headline writing, and makeup and layout for newspapers, magazines, newsletters, pamphlets and brochures comprise the many elements of this course. Students will explore all phases of the editing business, including revision and rewriting of copy to make it succinct and readable. Projects in each editing area will be required. *Prerequisite: COMM 121, 140 or permission of the instructor.*

COMM 131. Media Production (4)
This course covers practical and theoretical application of audio and video production techniques. Emphasis on aesthetic qualities of sight and sound productions. Some work in student media facilities involved. *Prerequisite: COMM 31 or permission of the instructor. Lab fee required.*

COMM 132. Broadcast Writing (4)
Examination and production of broadcast writing techniques. Emphasis on writing news, information, and entertainment messages for the broadcasting industries. Some work in student media facilities involved. *Prerequisite: COMM 31. Lab fee required.*

COMM 134. Advertising Theory and Practice (3)
This course provides a basic understanding of the principles and procedures of the advertising industry. Topics include the relationship between client and agency, the selection of media, preparation of advertising plans, and general economic aspects of the industry.

COMM 135. Principles of Public Relations (4)
Principles and methods of public relations will be discussed and analyzed. Study of the mass media as publicity channels will acquaint the students with the nature of the media, its limitations, and uses. Case studies involve students in practical application of public relations activities. *Prerequisite: COMM 31.*

COMM 136/236. Broadcast Administration and Promotions (4)
An examination of the theoretical and practical issues involved in the operation of a radio, TV, or broadcast-related facility. Emphasis on the strategies involved in successful programming and promotion to the mass audience. *Prerequisite: COMM 31.*

COMM 137/237. Public Relations Case Studies and Problems (4)
Advanced course in public relations. The course will engage students in case study research and application of public relations principles. Written and oral presentations; adherence to professional standards of excellence. *Prerequisite: COMM 135.*

COMM 138/238. Media Law and Ethics (4)
A study of law and ethics as they relate to mass communication. Legal topics include the First Amendment, libel, copyright, invasion of privacy, and regulations of government agencies such as the FCC. Criteria for evaluating ethical behavior are considered as well as the relation of ethics to professional codes. *Prerequisite: COMM 31 or permission of the instructor.*

COMM 139/239. Theory of Mass Communication (4)
An overview of major theories and research in mass communication. Application of theories that explain and predict communication effects of political campaigns, advertising, entertainment, and information. Theoretical areas to be covered include socialization, information, diffusion, advertising, persuasion, and uses and gratifications research. The state, function, and form of theory in mass communication will be discussed. *Prerequisite: COMM 160 or permission of the instructor.*

COMM 140. Writing for Public Relations (4)
Theory and practice in public relations writing in the context of publicity. Students will learn to write news releases, backgrounds, business letters and feature stories. *Prerequisite: COMM 135.*

COMM 141/241. Group Dynamics (4)
A study of the process of human interaction occurring within the context of the small group. *Prerequisite: COMM 43 or permission of the instructor. Not recommended for freshmen.*

COMM 143. Intercultural Communication (4)
Analysis of the major variables affecting interpersonal communication between persons of differing cultural backgrounds. *Prerequisite: COMM 43 or permission of the instructor.*

COMM 144/244. Advanced Interpersonal Communication (4)
This course focuses on current theoretical issues in interpersonal communication. Topics of interest include: communicator competence, individual differences in communication behavior, social power, emotion, interpersonal influence, and relationship development in both personal and professional contexts. *Prerequisite: COMM 43.*

COMM 145/245. Human Communication Theory (4)
A study of contemporary social-psychological theory of human interaction. *Prerequisite: COMM 160 or permission of instructor.*

COMM 146/246. Communication and Conflict (4)
This course is offered to introduce students to some of the major elements involved in the everyday social conflicts people experience. The purpose of the course is to provide awareness and practice in the identification of potential conflict situations and the various means by which resolution may be accomplished. *Prerequisite: COMM 43 or permission of the instructor.*

COMM 147/247. Nonverbal Communication (4)
The course examines major dimensions of nonverbal behavior exhibited by human beings in everyday social interactional contexts. Special emphasis is given to such areas as human territoriality, proxemics, kinesics and paralinguistics. *Prerequisite: COMM 43 or permission of the instructor.*

COMM 148/248. Decision-Making (4)
A study of decision-making theory applied to individuals and organizations as well as opportunities to develop practical means for improving the quality of decisions made by individuals and groups. The course provides a comprehensive theory of how people cope with decisional conflicts concerning management of organizations, career choice, marriage, divorce, and a variety of other significant choices. *Prerequisite: COMM 43, 141 or permission of the instructor.*

COMM 149/249. Introduction to Organizational Communication (4)
This course takes both a theoretical and an applied approach in introducing the student to the role of communication in various aspects of organizational functioning, such as motivation, leadership, decision-making, conflict management, message management, etc. *Prerequisite: COMM 43, 27 or permission of the instructor.*

COMM 152/252. Public Relations Administration (4)
Theoretically grounded, the course focuses on how public relations managers can effect change. Communication strategies for

effective leadership and motivation of public relations professionals are emphasized. The course will enhance critical skills of management for the understanding of public relations research, action/planning, communication and evaluation. *Prerequisites: COMM 135, 137 (may be taken concurrently), and senior standing.*

COMM 155/255. Persuasion (4)
A study of the principles and methods of influencing behavior. *Prerequisite: COMM 27, 29 or permission of the instructor.*

COMM 160/260. Communication Research Methods (4)
A study of research methods appropriate for examining communication-related problems. Topics for the course include historical-critical methods, descriptive methods, experimental methods, statistical models for data analysis and research reporting and writing. *Prerequisites: COMM 27, 31, and 43 with a GPA of 2.5 or better, or permission of the instructor. Recommended for sophomores.*

COMM 191/291. Independent Study (2-4)
COMM 193/293. Special Topics (4)
COMM 197. Independent Research (2-4)
COMM 287. Graduate Internship (2 or 4)
COMM 289. Graduate Practicum (2 or 4)
COMM 295. Graduate Seminar (4)
COMM 297. Graduate Research (1-4)
COMM 299. Thesis (2 or 4)

Computer Science

Professors: Ford, D. Smith (Chair), Topp
Assistant Professors: Doherty, Neilsen, Wensch
Lecturers: Lundy, Schuler, Wehrle
Department Phone: (209) 946-2655
Website: http://bailey.cs.uop.edu

The Computer Science faculty are committed to providing a strong undergraduate education that:

- meets all professional accreditation standards;
- prepares students to enter the profession upon graduation;
- provides a basis for continued study and growth in the field;
- provides an understanding of the relationship of computers and technology in a modern society.

The department educates professionals who have an understanding of core computer concepts and a specialization in one of the areas of computer technology. The training enables a student to select from a wide range of career options in the computer field. Computer Science majors typically work in areas such as software design and application programming, networks, network programming, Windows programming, database systems and UNIX/NT system administration. Computer Information Systems majors combine a strong computer background with a study of business systems. Students select the major based on career goals.

Degrees in Computer Science

The department offers two majors and two minors under the B.S. degree: Computer Science and Computer Information Systems. Computer Science majors take selected courses from Pacific's School of Engineering. The School of Business provides professional business courses for students majoring in Computer Information Systems.

A faculty adviser will assist students in coordinating the total educational program, including selection of major or minor and career direction.

Accreditation

The Computer Science major is accredited by the Computer Science Accreditation Commission (CSAC) of the Computing Sciences Accreditation Board, Inc. (CSAB), a specialized accrediting body recognized by the Council on Post-secondary Accreditation and the U.S. Department of Education. Minors are also available in Computer Science and Computer Information Systems.

Facilities

The University has a fully networked set of computers that includes UNIX and NT servers, HP and Sun workstations, and PC computers. Students have personal accounts with unlimited use of the systems for their course assignments and research. Full access to the Internet is readily available and encouraged. The Department operates a dedicated laboratory for majors. The lab features a variety of operating system environments, software design and production tools, database systems and network utilities.

Experiential Learning

The Department offers a variety of experiential learning opportunities. A Co-op/Internship is available in all computer science programs. Work assignments are made through the Career and Internship Center, and are supervised by the Co-op employer and the Department of Computer Science. All students are strongly encouraged to have a Co-op/Internship in an area of their career interests. Students may participate in undergraduate research as part of a senior project under the direction of the Department's project coordinator.

Transfer Students

The department makes every effort to accommodate the needs of transfer students. Faculty offer advice on programs of study prior to coming to the University and then match student background with program requirements. Students are encouraged to complete an introductory object-oriented programming course (C++ or Java) and their lower-division mathematics prior to entering the program. Computer Science majors should attempt to complete most of the science requirements while Computer Information Systems majors should complete most of the accounting and economics requirements.

Typical First-Year Program

Fall: Computer Science: Introduction to Computer Science
Calculus I
Mentor Seminar I
General Education Course
Computer Information Systems: Introduction to Computer Science
Finite Math and Calculus
Introduction to Microeconomics
Mentor Seminar I

Spring: Computer Science: Data Structures
Discrete Mathematics for Computer Science
Calculus II
Mentor Seminar II
Computer Information Systems: Data Structures
Discrete Mathematics for Computer Science
Introduction to Macroeconomics
Mentor Seminar II

Academic Requirements–Computer Science Major

The Computer Science major provides a strong background in the theory and practice of computer science. The major includes coursework in computing theory, data structures and algorithms, software design, application and windows programming, network programming with Java and database systems. Additional support courses are required in mathematics and computer engineering.

Requirements (81-84 units)
A major must successfully complete COMP 51 and 53 with a cumulative average of C or better before proceeding to advanced (100 level) courses. Students must complete ENGR 25 before beginning COMP 187.

1. Computer Science Courses (47-50 units)
   a. Lower Division: (16 units)
      COMP 37, 51, 53, 63, 73
   b. Advanced Courses: (15 units)
      COMP 129, 141, 147, 151, 173, 129
   c. Applied Experience: (2-5 units)
      COMP 189 or 197, or ENGR 25 and COMP 187
   d. Computer Engineering: (8 units) ECPE 71, 173
   e. Elective Courses: (6 units)
      Two courses chosen from: COMP 127, 137, 163, 171, ECPE 151, 153
2. Support Courses (30 units)
   a. Mathematics: (16 units)
      MATH 37, 51, 53, COMP 47
   b. Laboratory Science: (8-10 units)
      A two-semester science sequence from: Physics (PHYS 53, 55), Chemistry (CHEM 25, 27), Biology (BIOL 51, 61), Geology (GEOS 51, 53, or 61)
   c. Other Science: (4 units)
      One elective chosen from: ENGR 79, CHEM 23, 25, BIOL 41, 51, GEOS 51, 53, or 61, PHYS 23, 25, 53, 55. The elective must be from a science not selected in B.
   d. Mathematics-Science: (optional 2+ units)

Courses in parts a-c must total 30 units. If units are lacking, an additional science or mathematics course must be taken.

3. Technical Communication Proficiency (4 units)
   Majors must demonstrate proficiency in technical speaking and writing by taking ENGL 105-Technical Writing.

All Computer Science majors, including transfer students, must take Mentor III-COMP 125.

Computer Science Minor

Computing technology is an integral part of many fields of study. The Computer Science minor provides students with an introduction to application programming, databases, and networks. Students must take the two introductory programming course (COMP 51, 53) and five elective courses that can be tailored to a specific interest. It is recommended that students begin the minor program early in their college career.

The Computer Science minor is not available to students majoring in Computer Information Systems.

Requirements (22 units)

1. Basic Programming (7 units)
   COMP 51, 53
2. Electives (15units)
   Five courses, approved by the minor adviser, from the lower division, advanced or elective courses listed in the major. Courses COMP 37 and 63 are recommended.

Computer Information Systems Major

The Computer Information Systems major provides a strong background in the fundamentals of computer science. The major includes courses in networks, network programming with Java, databases, and system design. The major also includes courses in applications programming, business and support courses in mathematics, economics and technical writing.

Requirements (80-83 units)

A major must successfully complete COMP 51 and 53 with a cumulative average of C or better before proceeding to advanced (100 level) courses. Students must complete ENGR 25 before beginning COMP 187.

1. Computer Science Courses (36-40 units)
   a. Lower Division: (16 units)
      COMP 37, 51, 53, 63, 73
   b. Advanced Courses: (12 units)
      COMP 125, 127, 129, 163
   c. Applied Experience: (2-5 units)
      COMP 189 or 197, or ENGR 25 and COMP 187
   d. Elective Courses: (6-7 units)
      Two additional courses chosen from: COMP 137, 147, 151, 171, 173, ECPE 71
2. Business Courses (20 units)
   BUSI 31, 33
   Three electives chosen from: BUSI 53, 101, 105, 109, 113a, 113b, 117, 125, 143 (Program may lead to a minor in management.)
3. Mathematics Courses (12 units)
   MATH 37, 45 or 73, and COMP 47
4. Economics Courses (8 units)
   ECON 53, 55
5. Technical Communication Proficiency (4 units)

Majors must demonstrate proficiency in technical speaking and writing by taking ENGL 105-Technical Writing.

Computer Information Systems Minor

The minor is designed for students who wish to develop computing and business skills that supplement their major. Students must take the two introductory programming courses (COMP 51, 53), accounting (BUSI 31), and four elective courses that can be tailored to a specific interest. It is recommended that students begin the minor program early in their college career.

The Computer Information Systems minor is not available to students majoring in Computer Science.

Requirements (23 units)

1. Basic Courses (11 units)
   COMP 51, 53, BUSI 31
2. Electives (12 units)
   Four courses, approved by the minor adviser, from the lower division, advanced and elective courses listed in the major.

Course Offerings

Prerequisite Policy: Only Computer Science courses passed with a grade of C or better meet prerequisite requirements.

COMP 23. Computer Concepts and Applications (3)

A general introduction to computers with a focus on applications in word processing and spreadsheets. The students will also study the basic concepts of computer architecture, the Internet, and network communications. Students explore graphical design concepts with Web pages and PowerPoint presentations. The course may not be taken by students who have completed COMP 25. *Prerequisite: students must have completed the basic math skills requirement.*

COMP 25. Computers and Information Processing (4)

A general introduction to computers. Topics include: computer organization, operating systems, word processing, spreadsheets, database systems, principles of data communication, networking and an introduction to GUI scripts. This course is recommended for students wishing a general introduction to computers. *Prerequisite: students must have completed the basic math skills requirement (Fall, Spring, Summer).*

Basic Courses

COMP 37. The Data Communication Environment (3)

A first course in digital communication. Topics include: data transmission; local area network topologies and protocols; wide area network protocols; internetworking; high speed networks; asynchronous transfer mode; application support protocols. This course has a significant lab and programming component. *Prerequisite: COMP 51 (Fall, Spring).*

COMP 47. Discrete Math for Computer Science (4)

Designed to develop skills in deductive reasoning and in fundamental concepts of mathematics and computer science. Topics include logic, deductive reasoning, math induction, set theory, functions, relations, matrices, Boolean Algebra, switching circuits,

graph theory, binary trees, recurrence relations, and an overview of various algorithms. *Prerequisite: students must have completed the basic math skills requirement (Spring).*

COMP 51. Introduction to Computer Science (3)
Designed for majors and other students with strong interests in computer applications. The programming language C++ is used to introduce object design and object-oriented problem solving techniques. Algorithm development is stressed, along with basic concepts of programming such as assignment, flow control and iteration. Class declarations and files are used as problem solving tools. *Prerequisite: students must have completed the basic math skills requirement (Fall, Spring, Summer).*

COMP 53. Data Structures (4)
Algorithm design and analysis, including recursive algorithms and dynamic memory management. Implementation of abstract data types for vectors, lists, stacks, queues, linked lists, and binary trees. UML is used as an aid for object design.

COMP 63. Application Development Tools: Java (3)
This course gives rapid introduction to Java, assuming that students already know an object-oriented language. Topics include inheritance and polymorphism, the structure of Java applet and application programs, string processing, GUI concepts using Swing components, exception handling, files and streams, and threads. The fundamentals of Java internet programming. *Prerequisite: COMP 53 (Fall).*

COMP 73. File Structures and UNIX (3)
An introduction to the Unix user and programming environment. Topics include Unix tools, scripts, and UNIX installation and administration. The course introduces C programming language and applies it to UNIX programming, including file and directory structures. *Prerequisite: COMP 51 (Fall, Spring).*

Advanced Courses

COMP 125. Information Systems Management (3)
An introduction to the processes and skills used to manage an information system. Classic topics of Information Systems Management are addressed from technical, managerial and ethical approaches. Participants will investigate the fundamentals of ethical theory and explore some classic computer ethics issues. Individuals and groups will then investigate current events from popular and industrial publications, and evaluate those events in light of the afformentioned ethical theories and managerial practices. Course format includes group discussions and case studies. This course fulfills the Mentor III requirement. *Prerequisite: core courses and Senior status or permission of the instructor (Spring).*

COMP 127. Electronic Data Systems (3)
Based on a foundation of previous course work, this course integrates a number of tools into an operational distributed data processing system. Students use HTML, client server side scripting, dynamic HTML, XML, CGI, ODBC, CORBA and a variety of other tools to construct an operational distributed system. *Prerequisites: COMP 63 (Spring).*

COMP 129. Systems Analysis and Design (3)
Provides students with experience in analysis and design of medium to large scale software systems. Topics include: current systems analysis and design methodologies such as object-oriented design and UML; applying current methodologies to understand large systems; learning techniques to communicate analysis and design ideas with co-workers and clients. Students are expected to produce documents and presentations of professional quality and depth. The course may be combined with COMP 189 to create a senior project. *Prerequisites: COMP 47, 51, 53 and junior standing (Fall).*

COMP 137. Network Programming (3)
Review of OSI and TCP/IP protocols, sockets, remote procedure calls, and streams. Development of client/server applications including web servers, browsers, multimedia communications, and database access. Design of internet components, including gateways, caches, and firewalls. Application platforms will include at least two of the following: Python, Perl, Java, C/UNIX, Windows. *Prerequisites: COMP 37, 53 (Spring).*

COMP 141. Programming Languages (3)
Characteristics of programming languages and run-time environments. Topics include implementation of data structures, subprograms, recursion, parameter passing, scope of variables, dynamic memory allocation, system exception handling, re-entrant and position independent code, support for concurrency/parallel execution, interprocess communication, and comparison of programming languages and environments. *Prerequisites: COMP 51, 53 (Fall).*

COMP 147. Computing Theory (3)
Study of automata, formal languages and computability. Topics include: finite state automata, regular languages, and their applications; pushdown automata, context-free languages and their applications; Turing machines and phrase-structure languages; Turing machines and undecidability; Chomsky hierarchy of formal grammars and their corresponding classes of languages. *Prerequisites: COMP 51, 53 and COMP 47 or ECPE 71 (Spring).*

COMP 151. Design and Analysis of Algorithms (3)
Efficient algorithm development and object-oriented program design techniques are developed. Topics include the principles and techniques of computational complexity analysis; the associative containers, sets and maps, and their implementation using hash tables and balanced binary trees; heaps and the heapsort; recursive algorithms including sorting and backtracking; graph algorithms. Additional topics may include compression and encryption algorithms, dynamic programming, and NP-competeness. *Prerequisites: COMP 51, 53 and COMP 47 or ECPE 71 (Fall, Spring).*

COMP 163. Database Management Systems (3)
DBMS application development; relational and object-oriented data models, database design, SQL, normal forms, constraints and views. DBMS implementation theory; physical layer organization, indexing, query processing, concurrency control, and security. *Prerequisites: COMP 51, 53 (Spring).*

COMP 171. GUI Programming (3)
Graphical User Interface programming using object libraries. Development of Windows software using class libraries and visual programming tools. Object-oriented design is applied to GUI programming projects. Other topics may include: multiple document interface (MDI), dynamic data exchange, and com programming. *Prerequisites: COMP 51, 53 (Fall).*

COMP 173. Operating Systems (3)
An introduction to the fundamental concepts of modern operating systems. Topics include an overview of the computers hardware that supports the operating system, process management, threads, and CPU scheduling. Process synchronization using primitive and high-level languages. Virtual memory management, file systems, system protection, and distributed systems. *Prerequisites: COMP 51, 53 and junior standing (Spring).*

Experiential Learning

COMP 87. Industrial Fellowship (4)
Supervised experience in an approved work setting for outstanding lower division students. Students must apply and be selected for this fellowship opportunity. *Prerequisites: GPA 3.0 or above; COMP 47, 51, 53, either COMP 37 or 63, one additional COMP course and ENGR 25 (Summer).*

COMP 187a, b. Internship in Computer Science (4)
Supervised experience in an approved work setting to be contracted on an individual basis. *Prerequisites: GPA 2.7 or above; COMP 47, 51, 53, three COMP courses of which two are 127 and above and ENGR 25 (Fall, Spring, Summer).*

COMP 187c, d. Internship in Information Systems (4)
Supervised experience in an approved work setting to be contracted on an individual basis. *Prerequisites: GPA 2.7 or above; COMP 47, 51, 53, three COMP courses of which two are 127 and above and ENGR 25 (Fall, Spring, Summer).*

COMP 189. Practicum: Computer Project (2)
A supervised computer design and programming project, under the direction of the Department's project coordinator. *Prerequisite: COMP 129 or permission.*

COMP 197. Undergraduate Research (2-4)
Students conduct supervised research that contributes to current active topics in Computer Science. Topics may be selected by the student, related to faculty research, or provided by industrial sponsors. *Prerequisite: Permission of the Undergraduate Research Coordinator.*

Special Areas

COMP 191. Independent Study (2-4)
Student-initiated projects covering topics not available in regularly scheduled courses. A written proposal outlining the project and norms for evaluation must be approved by the department chairperson.

COMP 193. Special Topics (upper level) (3, 4)

Economics

Professor: Flynn
Associate Professors: Herrin (Chair), Keefe, Meyer, Ordovensky Staniec, Warner
Assistant Professor: Dennis, King
Department Phone: (209) 946-2258
Website: www1.uop.edu/cop/economics

The study of Economics examines how societies choose to use their limited resources to produce goods and services; it is also concerned with the mechanisms through which societies decide to distribute products to its members. Economics, therefore, by necessity studies interactions among households, firms and governmental institutions. Economic policy decisions ultimately rest upon economic theory, so considerable care is taken to explain the basic theories which render economics a scientific discipline.

Mission

The mission of the Economics Department is twofold. First, students from all majors are taught how to conceptualize their own roles in society, whether acting as individuals, members of private-sector firms or as public servants in the government sector. Second, economics majors and minors learn how to apply higher-level theoretical and technical skills (e.g. statistics and computers) to any number of specialized areas within the broad reach of the discipline.

Degrees in Economics

The Economics Department offers both a Bachelor of Arts program and a Bachelor of Science program. The B.A. is suggested for students interested in a broad liberal arts economics background in preparation for a wide range of careers with possibilities of developing double majors. The B.S. in Economics is suggested for those majors considering graduate study in economics or business administration, or professional careers in economics, law, business or the financial industries. The department also offers a minor in Economics.

The Department of Economics, in conjunction with the Department of Modern Language and Literature, offers a cross-disciplinary program in which a student pursuing either the B.A. or B.S. who is interested in an international career may obtain a certified concentration in French, German, Spanish, Japanese, Chinese or Russian. The language concentration requires five courses, three of which must be taken on this campus. For information, see the chairperson of Economics or Modern Language and Literature.

Once a student has registered as a major in the Economics Department, any economics course to be taken elsewhere for application to the major must normally have the prior approval of the Economics faculty.

Degree Requirements:

1. All Economics majors must take the following:

Economics Core Courses:

ECON 53 Introductory Microeconomics
ECON 55 Introductory Macroeconomics
ECON 61 Economic Statistics (or MATH 37 or MATH 39)
ECON 101 Intermediate Microeconomic Theory
ECON 103 Intermediate Macroeconomic Theory

2. The Bachelor of Arts in Economics is offered as a general social science degree, with a specialized Political Economy Track, or with a specialized International Track. In addition to the Economics core courses, these three tracks require the following courses:

a. Bachelor of Arts – General Social Science Track:
ECON 111 History of Economic Thought
ECON 161 Computer Applications in Economics
Four (4) Economics electives numbered 71 or higher

b. Bachelor of Arts – Political Economy Track:
ECON 111 History of Economic Thought
ECON 171 Political Economy
POLS 11 Intro. to Political Science
POLS 132 Modern Political Theory
Two (2) Economics electives numbered 71 or higher
Two (2) approved Political Science electives

c. Bachelor of Arts – International Track:
ECON 111 History of Economic Thought
ECON 121 International Trade
ECON 123 International Finance
ECON 125 Economic Development
ECON 161 Computer Applications in Economics
Two (2) upper-division international elective courses to be chosen from:
BUSI 106 International Business
BUSI 163 International Financial Management
BUSI 168 Multinational Strategic Management
ECON 127 Comparative Economic Systems
ECON 128 World Population and Economics
INTL 166 Global Environmental Policy
POLS 164 International Political Economy
Or others as approved by Economics Department faculty advisors
Four (4) semesters of one (1) non-

English language (or proven competence at the 4th semester level)

3. The Bachelor of Science in Economics can be earned by following one of three different tracks - the Social Science Track, the Applied Economics Track (designed for students interested in Business), or the Mathematical Economics Track (designed for students interested in Math or in graduate study in Economics).

   In addition to the Economics core, the three B.S. tracks require the following additional courses:

   a. Bachelor of Science – Social Science Track
      - ECON 111 History of Economic Thought
      - ECON 190 Econometrics
      - MATH 33 Calculus (or the entire MATH 51, 53, 55 Calculus sequence)
      - Six Economics electives numbered 71 or higher

   b. Bachelor of Science – Applied Economics Track
      - ECON 190 Econometrics (or ECON 161-Computer Applications)
      - MATH 33 Calculus (or MATH 45-Finite Math and Calculus)
      - BUSI 31 Financial Accounting
      - BUSI 53 Legal and Ethical Environment of Business
      - Four (4) Economics electives numbered 71 or higher
      - One approved Business elective

   c. Bachelor of Science – Mathematical Economics Track:
      - ECON 160 Mathematical Economics
      - ECON 190 Econometrics
      - MATH 51, 53 and 55 Calculus I, II and III
      - MATH 72 Operations Research Methods (or MATH 74-Discrete and Combinatorial Mathematics)
      - MATH 141 Linear Algebra (or MATH 145 Applied Linear Algebra)
      - Two (2) Economics electives numbered 71 or higher
      - One approved Math elective

   d. First-Year Program

      In addition to Mentor Seminars I and II and other general education courses, students majoring in Economics should complete ECON 53-Introductory Microeconomics during the fall semester and ECON 55-Introductory Macroeconomics during the spring semester of the freshman year.

4. The Minor in Economics requires six courses, at least 10 units of which must be taken at Pacific. The minor requires:
   - ECON 53 Intro. to Microeconomics
   - ECON 55 Intro. to Macroeconomics
   - Four economics electives numbered 61 or higher (ECON 101 is strongly recommended as it is a prerequisite to several upper-division courses.)

Course Offerings

ECON 51. Economic Principles and Problems (3)
A general introduction to the nature, significance and scope of economics. The principles of economic analysis are developed and used to examine a wide variety of current and/or controversial economic issues. This course is ideal for students who are unlikely to take another economics course; however, for students choosing to major or minor in economics after taking this course, ECON 51 may substitute for the ECON 55 requirement. Students can receive departmental credit for ECON 51 only if it is taken prior to both ECON 53 and ECON 55.

ECON 53. Introductory Microeconomics (4)
A study of the economic decisions of individuals and firms. Evaluates efficiency and equity in individual choice processes. Examines economics of monopoly and competition as well as economics of pollution and governmental regulation. *Prerequisite: passing score on the General Education quantitative skills examination or MATH 5.*

ECON 55. Introductory Macroeconomics: Theory and Policy (4)
A study of the national economy. Special emphasis is placed on policies designed to meet the national goals of full employment, stable prices and economic growth. The course examines the spending and saving behavior of households and business, government spending and taxing policies, and the Federal Reserve's monetary policies. *No prerequisite, although ECON 53 is recommended first for students planning to take both ECON 53 and 55.*

ECON 61. Economic Statistics (4)
An introduction to probability and statistics for students wishing to pursue business/commerce careers or graduate studies in the social sciences. Descriptive statistical tools and probability theory are developed and used as the foundation for the study of statistical inference. Emphasis is placed on the intuitive understanding of statistical concepts and their application to problem-solving and data analysis relevant to economics and business. Topics include probability density functions, sampling distributions, and the Central Limit Theorem. Estimation methods include confidence intervals, hypothesis testing, analysis of variance, and simple linear regression. *Prerequisite: passing score on the General Education quantitative skills examination or MATH 5.*

ECON 71. Global Economic Issues (4)
An introduction to all aspects of the global economy. Consideration of how the U.S. economy is linked to the rest of the world and how the world's economic problems affect the well-being of every U.S. citizen. Reviews economic principles in covering the basics of international trade, international finance, economic development of the poor countries, world population problems, international environmental economics, and a brief comparison of the U.S. economic system with that of Japan and that of Russia. *Prerequisites: ECON 53 and 55 (or 51).* (ECON 71 cannot be taken for credit if the student has taken or is concurrently enrolled in ECON 121 or 123. ECON 71 is also listed as an SIS course.)

ECON 101. Intermediate Microeconomic Analysis (4)
The behavior of individuals and firms in a market economy. Price theory, distribution and welfare economics. The course provides a rigorous development of the tools that economists have utilized for studying the allocation of resources. *Prerequisite: ECON 53.*

ECON 103. Intermediate Macroeconomic Analysis (4)
Study of the measurement of the level of economic activity; the determinants of national income, employment and the price level; use and appraisal of economic data in the context of a dynamic market economy. Stabilization problems and the relevance of fiscal, monetary and income policy. *Prerequisites: ECON 53 and 55.*

ECON 111. History of Economic Thought (4)
An adventure in the evolution of ideas through human history in discovering and explaining economic activity. Explores historical foundations to the emergence of economic beliefs influencing current climate of opinion, economic analysis and public policy. It is not an antiquarian's obsession with quaint ideas from lore to philosophy-science but a quest for insights into the methods by which economic ideas are formulated, modified, clarified. Examines the intellectual foundations and theoretical formulations of selected contributors to economics such as Adam Smith, Thomas Malthus, Jeremy Bentham,

David Ricardo, John Stuart Mill, Karl Marx, Alfred Marshall, John Maynard Keynes, et al. *Prerequisite: ECON 53 and 55 or permission of the instructor.*

ECON 118. Early Modern Economic History (4)
The interaction between economics and politics during the early modern period. The course will analyze, among other things, the transition from feudalism to capitalism, the cause of 16th century price inflation, the so-called Price Revolution, Spain's emergence as the western world's premier power in the 16th century and its 17th century collapse, the flow of Mexican, Peruvian and Japanese silver into China, similarities and differences between Imperial Spain and Shogunate Japan. The central purpose of this course is to demonstrate that all these seemingly disparate world developments were interrelated. *Prerequisites: ECON 53 and 55.*

ECON 121. International Trade (4)
A study of the economic theory surrounding the exchange of goods and services between countries and the application of this theory to current international issues. Topics include the determination of world trade patterns, the effects of changing trade patterns on income distribution within a country; the pros and cons of trade barriers; trade concerns of developing countries; and the effects of international trade on the world's natural environment. *Prerequisites: ECON 53 and 55.* (Course also listed among SIS courses).

ECON 123. International Finance (4)
A study of the financial side of international economics. Topics include balance of payments accounts and the foreign exchange market; exchange rate determination and the macro economy; the international debt crisis and capital flight; and the history of international monetary systems. *Prerequisites: ECON 53 and 55.* (Course also listed among SIS courses.)

ECON 125. Economic Development (4)
Examines the plight of the world's poor countries. Discussion of the extent of world poverty. Review of the evolution of ideas on the topic of economic development over the past three decades. Course considers the following types of questions: What are the causes of development and/or underdevelopment? Are Third World countries merely at a primitive stage of development analogous to European countries prior to the Industrial Revolution? What are the roles of climate, the legal system, education, health and sanitation, natural resources, technology, multinational corporations, religious beliefs and so on? Are rich countries making a meaningful effort to aid poor countries? Can we, or even should we, help? Should emphasis be placed on the agricultural or industrial sector? *Prerequisites: ECON 53 and 55 or permission of the instructor.* (Course also listed among SIS courses.)

ECON 127. Comparative Economic Systems (4)
Analysis of economic systems different from the U.S. with emphasis on the successes and failures of the transition to market economies of China, Eastern Europe and the former Soviet Union. The mixed and welfare economies of Western Europe and Japan are also examined. In Western Europe the major economies studied are France, West Germany, Sweden and the United Kingdom. The course includes an introduction to formal planning models and their solution on the computer. Similarities and dissimilarities from the U.S. in aims, institutions and basic problems are evaluated. *Prerequisites: ECON 53 and 55 or permission of the instructor. No prior experience with computers is required.*

ECON 128. World Population and Economics (4)
A study of the interactions between a society's population and its economy. Analysis of how the economic well-being of society affects fertility, mortality and migration, and how they in turn affect the structure of the economy. A look at Malthusian and neo-Malthusian theories of population growth, the theory of the demographic transition, and Marxist views on population growth. Analysis of overpopulation, food production, pollution and the economic development of poor countries. Emphasis on feedback effects in the population system and in the economic system. *Prerequisite: ECON 53 or ECON 55.* (Cross-listed as INTL 128.)

ECON 131. Public Finance (4)
Study of the role of the government in the economy. Uses the tools of economic analysis to examine how government policies affect not only the efficiency with which the economy operates but also the welfare of its citizens. Covers both the expenditure and the taxation sides of government activity, examines public choice questions of policy selection and implementation and, throughout the course, considers the equity implications of government actions. Primary focus is on government at the national level; however, significant attention is paid to issues relevant or specific to state and local governments. *Prerequisites: ECON 53 and either ECON 55 or ECON 51; ECON 101 is recommended.*

ECON 141. Money and Banking (4)
The nature of money and credit and their roles in directing the economic activity of a nation. The development and operation of the central bank and monetary institutions of the United States; problems of achieving full employment and price stability through monetary policy. *Prerequisites: ECON 53 and 103, or permission of the instructor.*

ECON 151. Urban Economics (4)
An economic analysis of the evolution, growth, and decline of urban areas and the location choice decisions of households and firms within urban areas. Attention then focuses on normative analyses of urban policy issues such as housing, poverty, crime and pollution. *Prerequisite: ECON 53.*

ECON 154. Industrial Organization and Policy (4)
The history, structure, conduct, and performance of industry as well as currently proposed industrial policy will be examined. After studying the evolution of modern U.S. industries and firms; monopoly, oligopoly, and competitive structures; and anti competitive conduct among firms, the course will analyze government regulation of business, especially antitrust and price regulation policies, as well as recent trends to deregulation and reindustrialization. *Prerequisite: ECON 53; ECON 101 recommended.*

ECON 157. Environmental and Natural Resource Economics (4)
The application of economic theory to natural resource and environmental issues. Microeconomic principles are used to suggest what a proper balance between human activity and environmental preservation might be and to critically analyze current environmental policy. Both domestic and global issues are addressed. Topics include resource scarcity, sustainability and sustainable development, water conservation, mobile- and stationary-source air pollution, global warming, and toxic substances. *Prerequisite: ECON 53.*

ECON 160. Mathematical Economics (4)
A mathematical analysis of neoclassical theories of production and consumption. Differential calculus and linear algebra applied to unconstrained and constrained extrema, including the envelope properties of optimization problems. Primary emphasis is placed on the application of mathematics to

economic theory. Topics include competitive and noncompetitive firms and industries, Cobb-Douglas and CES production functions, the Slutsky equation and applications of homogeneous functions to economics. *Prerequisites: ECON 101, 103 and MATH 33, or permission of the instructor.*

ECON 161. Computer Application in Economics (4)
A quantitative analysis of a variety of micro- and macroeconomic problems by means of the computer. The emphasis is upon the application of economic and statistical models, e.g., input-output, linear programming and linear regression. These models and their computer analogues are used to evaluate economic changes due to such phenomena as the energy, pollution, defense spending and inflation/unemployment problems. *Prerequisites: ECON 53, 55; MATH 37, its equivalent or permission of instructor; some familiarity with computer programming recommended.*

ECON 171. Political Economy (4)
This course begins with an examination of the ideology which underlies Neoclassical Economics. Once the world view of economics is understood, we explore three specific "social/economic/political" issues wherein ideology plays a decisive role in current debates. We look, first, at the topic of "Income Distribution, Poverty and Welfare in the U.S." (including such diverse issues as human capital theory, minimum wage and foreign competition). Next, we turn to the topic of "Women in the Workforce," (including the issues of comparable worth, the feminization of poverty and affirmative action). Last, we explore the subject of "Environmental Economics," focusing here on the equity/efficiency issues surrounding the economists' perspective of the crises and the solutions they offer for this critical world problem. *Prerequisites: ECON 53 or 51.*

ECON 180. Labor Economics (4)
Examination of labor's role in the market system and the response of labor and government to market failures. Microeconomic analysis of labor supply and demand, wage and employment determination, and the effects of discrimination. Development of the labor movement from a chronological and theoretical perspective with emphasis on the collective bargaining process. Influence of public policy on labor relations and labor market functioning. *Prerequisite: ECON 53.* (Course also listed under Gender Studies.)

ECON 190. Econometrics (4)
A study of the methods used to test economic theory with real-world data. The course presents the theory underlying common econometric methods and gives students experience in applying these analytical tools to data from a variety of sources. Students learn to develop testable hypotheses based on economic theories they have learned in earlier courses and to make reliable statistical inferences about these hypotheses. Students will gain a working, applicable knowledge of the skills and software used by many professional economists and sought by many employers. *Prerequisites: ECON 53, ECON 55 (or ECON 51) and ECON 61 (or MATH 37 or MATH 39).*

ECON 191. Independent Study (2-4)

ECON 193. Special Topics (4)

English

Professors: Borden, Camfield, Cox (Chair), McCullen, Schedler
Associate Professors: Lutz, Norton, Tedards
Assistant Professors: Dobbs, Heredia, Lehmann, Sonstroem, Smith
Department Phone: (209) 946-2121
Website: www1.uop.edu/cop/english

The undergraduate major in English prepares students for careers that put a premium on critical thinking and literacy. While many majors become teachers, many more enter business, government service, law, medicine or other professions after further schooling.

Degrees in English

Undergraduate majors may focus their elective courses to emphasize writing, literature, language, or film studies. The department offers a minor in English for students committed to a different academic major; it also provides courses required for certification in elementary and secondary teaching.

English courses are offered in the following areas: British and American literature; writing; criticism of literature and allied arts (including film); English language. Upper-division courses (those numbered 100 or above) are more specialized or applied than lower-division courses and often presume prior training in the subject.

Please refer to the Web site (www1.uop.edu/cop/english) for up-to-date course listings.

Requirements for a Major in English

Candidates for the B.A. degree with a major in English must complete a minimum of 11 courses (at least 40 units), including a four-course lower-division core:

1) ENGL 25 any section of English 25
2) ENGL 41 British Literature before 1800
3-4) Two of the following survey courses:
ENGL 43 British Literature after 1800
ENGL 51 American Literature before 1865
ENGL 53 American Literature after 1865

The upper-division requirement consists of:
5) A course in critical theory, either
ENGL 125 Critical Colloquium or
ENGL 127 Contemporary Critical Issues
6-11) Six electives: at least five of these electives must be upper-division courses; ENGL 31 Aesthetics of Film or a fourth lower-division survey course is acceptable as the sixth elective.

First-Year Program

Students majoring in English should complete ENGL 25 and at least one additional course from the lower-division core during the freshman year. In the sophomore year they should complete the remaining two courses in the lower-division core.

Requirements for a Minor in English

Candidates for the minor in English who are taking a major in another academic discipline must complete a minimum of six courses (22 units) in English, including the following:

ENGL 25 and two of the following five courses:
ENGL 41 British Literature before 1800
ENGL 43 British Literature after 1800
ENGL 51 American Literature before 1865
ENGL 53 American Literature after 1865
ENGL 31 Aesthetics of Film
and three or more upper-division electives.

Requirements for Single and Multiple Subject Credentials in English

Candidates for the Single-Subject Credential (grades 7-12) or Multiple-Subject Credential (grades K-6) must complete approved subject matter programs in English in addition to completing requirements through the Benerd School of Education. Currently, the single-subject program in English requires a minimum of 12 courses (45 units) and the multiple-subject program with concentrations in literature or language arts requires a minimum of 4 courses (15 units). See the English Department Credential Advisor for further information.

Course Offerings

ENGL 25. English 25 (4)
English 25 provides an introduction to the discipline of English studies. Students are expected to write about and discuss various topics that arise in the study of literary works. *Prerequisites: passing scores on the General Education writing skills and reading examinations. Multiple and varied sections are listed by thematic focus title each semester.*

ENGL 31. Aesthetics of Film (4)
An introduction to the principles of artistic expressiveness of films; shots, angles, lighting, color, camera distance, composition, space, movement, image, setting and sound. Attention is also given to narrative techniques and editing styles. Explores such theories as realism, formalism, surrealism, Marxism, psychoanalysis and gender theory. Both American and foreign films are viewed and discussed.

ENGL 41. British Literature before 1800 (4)
A study of major authors, works and traditions from Beowulf through the Pearl Poet, Chaucer, Spenser, Shakespeare, Donne, Milton, Dryden, Pope, Swift and others, to Johnson. Balanced concern for particular works, for historical continuity, for distinctive features of movements and periods such as the Renaissance and the Augustan period, and for the expanding definition of English literature.

ENGL 43. British Literature after 1800 (4)
Begins with Blake and ends with Pinter, and includes such authors as Wordsworth, Byron, Keats, Tennyson, Browning and Hardy, Yeats, Thomas, Joyce, Eliot, Lawrence, and Lessing. The approach is historical, with a focus on the distinctive qualities of the Romantic, Victorian, Modern and Contemporary traditions. Connects with ENGL 41, but that course is not a prerequisite.

ENGL 51. American Literature before 1865 (4)
A survey of principal American writers through the middle of the 19th century, including poetry, prose and at least one longer work of prose. Writers that may be treated include Hawthorne, Poe, Melville, Douglass, Stowe, Bradstreet, Jefferson and Dickinson. Emphasis will be placed on the thought, aesthetics, and cultural impact of these and other writers.

ENGL 53. American Literature after 1865 (4)
The second half of the American literature survey, beginning with the Realists (writers such as Twain, Crane and Chopin) and moving into the 20th century with such authors as Pound, Stevens, Eliot, Frost, Hemingway, Cummings, Faulkner, Williams and Hughes. Attention to Postmodernists in relation to Realism and Modernism will include writers like O'Hara, Ginsberg, O'Connor, Snyder, Morrison, Li-Young Lee, and Alice Walker.

ENGL 87/187. Internship (2-4/2-4)
Supervised experience in an off-campus work setting drawing on skills particular to English studies, such as writing, editing, analyzing of texts, etc. Internships are limited to the number of placements available. ENGL 187 represents advanced internship work involving increased independence and responsibility.

ENGL 101. Integrative Tutorial (1)
Integrative Tutorial (1 unit/semester, with the expectation that a student will take it at least three and as many as six consecutive semesters). Designed to help students draw their studies together, the integrative tutorial is a form of independent study in which a faculty member helps a student see the connections between courses she/he has taken to fill in gaps that would otherwise go unaddressed in course work. *Prerequisite: permission of the instructor.*

ENGL 103. Writing in the Disciplines (4)
Covers the elements of effective writing in any academic discipline and provides opportunities to write discipline-specific assignments in the humanities, social sciences, and sciences. The goal is to prepare students to enter into these communities of writing with greater understanding and confidence, both as readers of selected texts in academic disciplines and as writers in discipline-based courses within the university.

ENGL 105. Technical Writing (4)
Study of the process of preparing the documents most frequently used in professional settings: memos, letters, instructions, proposals, and reports. While the emphasis is on professional writing in science and engineering fields, the principles apply to other fields as well.

ENGL 107. Seminar in Writing (4)
An upper-division seminar in the writing of non-fiction prose, emphasizing such familiar forms as the essay, biography, autobiography, professional and academic articles and free-lance writing. These and other sub-genres of non-fiction will be the focus for this collaborative, seminar-style course intended for apprentice writers interested in polishing and publishing their work.

ENGL 109. Writing in the Workplace (4)
Advanced practical writing course on how to produce clear, concise, and persuasive documents for a variety of readers and in a variety of contexts. Proofreading and revision skills are emphasized, and assignments cover the most commonly used forms in professional writing, such as letters, memos, and proposals. Course includes one service learning project, which gives students the opportunity to apply their skills outside of the classroom.

ENGL 111. Creative Writing: Fiction and Drama (4)
Emphasizes steady, productive writing of stories and plays. Practical advice is offered in fictional and dramatic techniques, and in ways to improve writing, especially through revision. Student manuscripts are submitted regularly for response and verbal-written criticism by peers and by instructor in a workshop setting.

ENGL 113. Creative Writing: Poetry (4)
For students who want to write poetry and need the discipline and guidance of a class. Focuses on careful analyses of poems submitted by students, interspersed with poems written by published poets. The goals: to find one's unique voice, to enlarge one's skills and visions, to encourage discipline and editing.

ENGL 121. Major Filmmakers (4)
Focus is on the work of such major directors as Coppola, Fassbinder, Lean, Fellini, Kubrick, Bergman, Hitchcock, Antonioni, Losey, Bertolucci and Truffaut. The course also considers major schools of cinema: French New Wave, Italian Neo-Realism, New German Cinema and narrative genres such as the psychological thriller, chamber film and epic. Emphasis is placed on critical analysis and interpretation of the individual director's styles and themes.

ENGL 122. Literature and Psychology (4)
A study of psychoanalytical methods in the interpretation of literary texts through a close investigation of language, narrative, structure, symbol and archetypal patterns. Considers such phenomena as family romance, primal scene, return of the repressed, and the schizophrenic experience as related to the literary work and creative process.

ENGL 123. Film, Literature, and the Arts (4)
Investigates the theory, practice and critical methods underlying aesthetic form in the arts, including film, literature, painting and sculpture. Corollary illustrations are drawn from

music and architecture. This comparative course attempts to examine the underlying styles and structures among the arts.

ENGL 124. Film History (4)
Comprehensive look at the history of cinema, from its beginnings in Europe and America, through the emergence of national cinematic traditions and the classical period tied to the Hollywood studio system, and concluding with current transnational developments. Screening and analysis of outstanding American and international films such as Broken Blossoms, Citizen Kane or Schindler's List and La Strada, 400 Blows, and Ju Dou.

ENGL 125. Critical Colloquium (4)
A study of the theory and practice of the major modes of interpreting and criticizing literature, including but not limited to historical, sociocultural, formalistic, psychoanalytic, structuralistic and post-structural in representative perspectives offered by designated English Department members and guest lecturers.

ENGL 127. Contemporary Critical Issues (4)
Examines major aspects of literary theory from structuralism to post-structuralism. Focuses on the interplay between and among such movements as deconstruction, semiotics, the new historicism, phenomenology and psychoanalysis. The course also discusses how contemporary theory has impacted such topics as gender, canon, reader-response and post-modernism.

ENGL 129. Topics in Critical Theory (4)
Offers advanced study of one or more critical approaches to literature, such as psychoanalysis and deconstructin; courses may also approach a thematically organized body of literature by way of a number of critical theories. Possible courses include: Marx, Freud, and the 20th Century Novel; Feminist Theory; The Revenge Tragedy; Postcolonial Literature.

ENGL 131. Shakespeare (4)
Eight to ten of Shakespeare's plays, studied from a variety of critical perspectives, such as the historical, psychological, philosophical, formalist, cultural and theatrical approaches. Selections from each major genre (comedy, tragedy, history). Specific plays vary from term to term; the reading list may include such works as *Twelfth Night, The Tempest, King Lear, Macbeth, Richard II, Henry IV* (Parts One and Two) and *Henry VIII*.

ENGL 133. Major British Authors (4)
Advanced, in-depth analysis of an individual author (or pair of authors). Topics likely to be covered include the range of the author's work, cultural context, significant literary influences, impact on other authors, and major scholarship written about the author. Students will conduct directed research. By semester the course varies to focus on authors such as Chaucer, Milton, Austen, G. Eliot, Hardy, Forster, Joyce, Woolf, and Murdoch/ Byatt. May be repeated for credit with a different focus.

ENGL 135. Major American Authors (4)
Advanced, in-depth analysis of an individual author (or pair of authors) including aesthetic qualities of the work throughout the author's career, historical and cultural contexts shaping the work, literary influences on the author's writing and thought, influence on other writers, and major scholarship about the work. Students will conduct directed research. By semester the focus of the course changes to include authors such as Twain, Dickinson & Whitman, Ellison & Wright, Faulkner & Morrison, Frost & Stevens, Kingston & Tan, Melville, Steinbeck & Dos Passos. May be repeated for credit with a different focus.

ENGL 141. Topics in British Literature Before 1800 (4)
Study of a single literary period designed to strengthen students' critical reading and writing skills as well as examine questions of literary themes, cultural and intellectual context, national identity, ethnicity, class, and/or gender. Students will conduct directed research. Topics vary with titles such as The Age of Beowulf, The Medieval Mind, English Renaissance, Women Writers before Austen, and The Age of Unreason: 18th Century Literature. May be repeated for credit with a different focus.

ENGL 143. Topics in British Literature After 1800 (4)
Study of key literary movements, genre and aesthetic developments, historical and social contexts, and thematic concentrations from Romanticism to the Victorian Age to Modernism and the Post World War II era. Students will conduct directed research. Topics change. Representative titles include the Victorian Novel, British Lyric poetry, and Modern and Contemporary British Literature. May be repeated for credit with a different focus.

ENGL 151. Topics in American Literature before 1865 (4)
Study of significant literary periods or movements in America before 1865. Topics change while the course examines the signature features of a specific period or movement: its aesthetic and thematic concerns, as well as the political, economic, intellectual, and cultural contexts shaping and shaped by the literature in question. Possible titles include The American Renaissance, The Birth of the American Short Story, Early American Humor, The Politics of Home Life, and Slavery and The American Imagination. May be repeated for credit with a different focus.

ENGL 153. Topics in American Literature after 1865 (4)
In-depth analysis of significant literary periods or movements in America after 1865. Topics change while the course examines the signature features of a specific period or movement: its aesthetic and thematic concerns, as well as the political, economic, intellectual, and cultural contexts shaping and shaped by the literature in question. Possible titles include American Realism, American Modernism, Modern American Novel, American Nature Writing, Literature of the American South, Literature of California, Contemporary American Fiction, and Contemporary American Poetry. May be repeated for credit with a different focus.

ENGL 161. Topics in American Ethnic Literature (4)
Studies of contributors to American Literature within the context of their shared ethnicity. Topics change. Possible offerings include American Immigrant Literature, African-American Poetry, Black Women Writers, Blues, Jazz and Literature, and Chicano/a Literature. May be repeated for credit with a different focus.

ENGL 163. Topics in Trans-national Literatures (4)
Comparative analysis of literature from two or more national traditions, including works from several historical periods or a single period, with an emphasis on genre, style, cultural milieus, and critical affinities between texts. Topics change. Possible offerings include Masterpieces of World Literature, Romanticisms, International Modernism, Postcolonial Literature, Literature and Film of the Pacific Rim, and Modernist Poetry. May be repeated for credit with a different focus.

ENGL 171. Topics in Genre (4)
Study of the stylistic and formal elements of a particular genre. Critical emphases may include how formal strategies define and condition response to content, style affects

point of view, historical, social and literary contexts influence stylistic conventions, one author's style may influence another, experimentation affects the evolution of a form, and how scholars conceptualize genre studies. Topics change. Offerings may include Drama, Gothicism, Literary Nonfiction, The Novel, Poetry and Poetics, The Short Story, Satire/Humor, and Travel Literature. May be repeated for credit with a different focus.

ENGL 181. English Language I (4)
Studies the nature and use of English as a language. Considers word-formation (morphology) and phrase and clause structure (syntax) in relation to meaning (semantics). Also considers English in customary use (pragmatics) and the structure of texts. The course is intended for prospective teachers, writers, lawyers and other professionals who work with language.

ENGL 182. English Language II (4)
Studies the linguistic and stylistic properties of texts. Continues study of pragmatics and text structure begun in ENGL 181 English Language I and proceeds to stylistics, poetics, and linguistic register. Considers English phonology and orthography in connection with the study of texts in historical (Old, Middle, and Early Modern) English and regional English. Intended for English majors and others who will use linguistic knowledge in the analysis and production of texts. *Prerequisite: ENGL 181.*

ENGL 191. Independent Study (2-4)
Student-initiated projects involving subjects not addressed by current course offerings. In consultation with a faculty director, the student shall submit in writing a proposal which defines the specific subject matter, the goals, the means of accomplishing the goals and the grounds for evaluating the student's work. The proposal must receive the approval of the director of the project prior to registration, and responsibility for fulfilling the terms of the proposal lies with the student.

ENGL 193. Special Topics (4)
Additional courses not covered by regular offerings.

ENGL 197. Undergraduate Research (2-4)
Provides opportunity for qualified students to complete a supervised original research project. Students are encouraged to travel to collections and use unique materials and resources in developing an original paper or other public presentation of their findings.

Film Studies

Professors: Borden, Schleier
Associate Professors: Golsan, Lutz
Assistant Professors: Lehmann, Lu

The program deals with film in the context of the liberal arts, with focus on the medium as an art form. It examines film as a "text" which can be studied through diverse critical and theoretical perspectives, including such approaches as Formalism, Neo-Historicism, psychoanalysis, gender theory, the mythopoetic and political/philosophical positions. Film is analyzed both from its technical aspects and its function as a cultural referent. It accommodates both high art and popular culture, both an international discourse and an individual auteurism.

Students can take film courses to enhance their liberal education through cultivation of critical and aesthetic knowledge, or they may use their studies to enter a variety of professions. These include: teaching, filmmaking, writing, work in the film/television industry, advertising, computer software, graphic design, entertainment law, production finance. Graduate programs in film, film and literature, and interdisciplinary studies are available. Also, students may go on to technical training in editing, cinematography, directing and screenwriting.

Degrees in Film

The Major: A self-designed major is possible with the assistance of a faculty adviser.

The Minor: A minimum of five courses (or 18 units) including the required core course ENGL 31-Aesthetics of Film.

Regular Offerings

ARTH 114 20th Century European Art and Film
ARTH 116 Contemporary Art and Film
ARTH 118 20th Century American Art and Film
CHIN 193 Special Topics: China Through Film and Literature
ENGL 31 Aesthetics of Film
ENGL 121 Major Filmmakers
ENGL 122 Literature, Film and Psychology
ENGL 123 Film, Literature and the Arts
ENGL 131 Shakespeare and Cinema
ENGL 170 Contemporary Critical Issues (when taught by film faculty)
ENGL 191 Independent Study
ENGL 193 Special Topics such as: The War Film, Alfred Hitchcock, Film History, Woody Allen, Film Noir, Love and Romance in Cinema.
FREN 120 French Cinema
RELI 71 Religion and Cinema

One course toward the minor may be chosen from among the following pool of adjunct offerings.

ARTS 145 Photography I
ARTS 147 Photography II
ARTS 159 Photography III
COMM 131 Media Production

Course Offerings

ARTH 114. 20th Century European Art and Film (4)
Introduction of major artists and artistic movements of 20th century European art. There will be examinations of paintings and sculpture from Cubism through the contemporary scene and architecture from the Bauhaus through the International Style and its influences.

ARTH 116. Contemporary Art and Film (4)
European and American art from World War II until the present day will be explored. Gestural abstraction, Pop, Photorealism, Happenings, Video, Performance, Conceptual and Political art as well as film are a few of the trends that will be considered. Ever-expanding notions of what constitutes art in this pluralistic era will be examined. This course satisfies a requirement of the Film Studies minor.

ARTH 118. 20th Century American Art and Film (4)
A study of the major developments in painting and sculpture and photography from the early days of this century to World War II. The Ashcan School, Stieglitz Circle, the Armory Show, Precisionism, New Deal Art, the New York School and other significant trends will be examined.

ARTS 145. Photography I (3)
Introductory level course with an emphasis on the history of photography and the fundamentals of camera work and black and white photography. *No prerequisite.*

ARTS 147. Photography II (3)
Intermediate level course with an emphasis upon darkroom and studio work and the fundamentals of color photography. *Prerequisite: ARTS 145 or permission of the instructor.*

ARTS 159. Photography III (3)
Designed to provide students with the foundational work necessary for graduate work in photography or entry level positions.

Emphasis upon studio management and portfolio development. *Prerequisites: ARTS 145, 147 or portfolio submission.*

CHIN 193. Special Topics (4)
China Through Film and Literature.

COMM 131. Media Production (4)
This course covers practical and theoretical application of audio and video production techniques. Emphasis on aesthetic qualities of sight and sound productions. Some work in student media facilities involved. *Prerequisite: COMM 31 or permission of the instructor.*

ENGL 31. Aesthetics of Film (4)
An introduction to the principles of artistic expressiveness of films: shots, angles, lighting, color, camera distance, composition, space, movement, image, setting and sound. Attention is also given to narrative techniques and editing styles. Explores such theories as realism, formalism, surrealism, Marxism, psychoanalysis and gender theory. Both American and foreign films are viewed and discussed.

ENGL 121/221. Major Filmmakers (4)
Focus is on the work of such major directors as Coppola, Fassbinder, Lean, Fellini, Kubrick, Bergman, Hitchcock, Antonioni, Losey, Bertolucci and Truffaut. The course also considers major schools of cinema: French New Wave, Italian Neo-Realism, New German Cinema, and narrative genres such as the psychological thriller, chamber film and epic. Emphasis is placed on critical analysis and interpretation of the individual director's styles and themes.

ENGL 122. Literature and Psychology (4)
A study of psycho-analytical methods in the interpretation of film and literary texts through a close investigation of language, narrative, structure, symbol and archetypal patterns. Considers such phenomena as family romance, primal scene, return of the repressed, and the schizophrenic experience as related to the literary work and creative process.

ENGL 123/223. Film, Literature and the Arts (4)
Investigates the theory, practice and critical methods underlying aesthetic form in the arts, including film, literature, painting and sculpture. Corollary illustrations are drawn from music and architecture. This comparative course attempts to examine the underlying styles and structures among the arts.

ENGL 131. Shakespeare and Cinema (4)
Eight to 10 of Shakespeare's plays on film, studied from a variety of critical perspectives, such as the historical, psychological, philosophical, formalist, cultural and theatrical approaches. Selections from each major genre (comedy, tragedy, history). Specific works vary from term to term; the list may include such works as *Twelfth Night, The Tempest, King Lear, Macbeth, Richard II, Henry IV* (Parts One and Two) and *Henry VIII* from directors such as Branagh, Welles, and Kurosarva.

ENGL 170/270. Contemporary Critical Issues (4)
Examines major aspects of film and literary theory from structuralism to post-structuralism, from auteur theory to the gaze and spectatorship. Focuses on the interplay between and among such movements as deconstruction, the new historicism, phenomenology and psychoanalysis. The course also discusses how the study of film and literature is impacted by such topics as gender, canon, narratology and post-modernism.

ENGL 191/291. Independent Study (2-4)
Student-initiated projects on subjects not addressed in current course offerings. Recent examples include "Hollywood Woman's Films of the '30s and '40s," "Scriptwriting," "Psychological Approaches to Cinema," "Bertolucci, Antonioni, and Fellini." See adviser to work out project.

ENGL 193/293. Special Topics (3-4)
Courses that supplement regular offerings, primarily in Winter and Summer Sessions. Frequently offered courses include: The War Film, Alfred Hitchcock, Love and Romance in Cinema, Woody Allen, Film Noir, Contemporary American Film, World Cinema, the Italian Film, China Through Film and Literature.

FREN 120. Le Cinéma Français/French Cinema (4)
A study of the development of French cinema through the analysis of themes, styles, and cinematic techniques. In French. Films with English subtitles. Offered occasionally in English.

RELI 71. Religion and Cinema (4)
A study of the way religious ideas, institutions and figures are presented on film. The course involves screening and analyzing a variety of films. The scope of the course will be international and intercultural, but the majority of the images will inevitably be Biblical and Western. The course intends to demonstrate the power of cinematic images to define, enrich and sometimes pervert the religious sensibility.

Geosciences

Professors: Kramer, Pearson
Associate Professor: Fox (Chair)
Assistant Professor: Williamson
Department Phone: (209) 946-2482
Website: www1.uop.edu/cop/geology

"Civilization exists by geological consent, subject to change without notice." ***– Will Durant***

Degrees in Geosciences

Four degree programs are offered through the department: the Bachelor of Arts in Geology, the Bachelor of Science in Geology, the Bachelor of Science in Geology-Geoscience Teaching Track, and the Bachelor of Science in Solid Earth Geophysics.

The Bachelor of Arts in Geology is for liberal arts students with a strong interest in the environment, but who do not desire to pursue geology as a career. The Bachelor of Science in Geology prepares the student for graduate study or professional employment in geology. The Bachelor of Science-Geoscience Teaching Track covers subject areas required of students seeking the California Single-Subject Teaching Credential in Science. The Bachelor of Science in Solid Earth Geophysics prepares the student for graduate study in geophysics or a career in exploration geophysics.

Students seeking a minor in geology must complete a minimum of 20 units of coursework in the geosciences including an introductory course (with laboratory) GEOS 51, GEOS 53, GEOS 55, GEOS 57 or GEOS 61 and at least three courses numbered GEOS 100 or higher.

Typical First-year Program

B.A. in Geology:

Fall: GEOS 51-Physical Geology (4)
Mentor Seminar I (4)
General Education Courses

Spring: Chem 23-Elements of Chemistry (4)
Or Chem 25-Generak Chemistry (5)
GEOS 53-Geologic Evolution of the Earth (4)
Mentor Seminar II (3)
General Education Courses

B.S. in Geology:

Fall: GEOS 51-Physical Geology (4)
Mentor Seminar I (4)
MATH 51-Calculus I (4)
or CHEM 25-General Chemistry (5)
General Education Course

Spring: GEOS 53-Geologic Evolution of the Earth (4)

Mentor Seminar II (3)
MATH 53-Calculus II (4) or
CHEM 27-General Chemistry (5)
General Education Course

B.S. in Geology - Geoscience Teaching Track:

Fall: GEOS 51-Physical Geology (4)
Mentor Seminar I (4)
CHEM 25-General Chemistry (5)
or BIOL 51-Principles of Biology (4)
General Education Course

Spring: GEOS 53-Geologic Evolution of the Earth (4)
Mentor Seminar II (3)
CHEM 27-General Chemistry (5)
or BIOL 61-Principles of Biology (4)
General Education Course

B.S. in Geophysics:

Fall: GEOS 51-Physical Geology (4)
Mentor Seminar I (3)
MATH 51-Calculus I (4)
CHEM 25-General Chemistry (5)

Spring: Mentor Seminar II (3)
MATH 53-Calculus II (4)
CHEM 27-General Chemistry (5)
General Education Course

Academic Requirements

B.A. in Geology (124 units)

1. Successful completion of the General Education Program of the College of the Pacific - at least 42 units.
2. Successful completion of major courses following the formula in this list:
   - GEOS 51 Physical Geology or
   - GEOS 53 Geologic Evolution of the Earth or
   - GEOS 61 Geology of California
   - GEOS 100 Mineralogy
   - GEOS 110 Igneous and Metamorphic Petrology
   - GEOS 112 Sedimentary Petrology
   - GEOS 114 Structural Geology
   - GEOS 161 Geologic Field Methods
   - One course in paleontology or stratigraphy (GEOS 53 or GEOS 120 or GEOS 193-Stratigraphy of North America)
   - One course in applied geology (GEOS 142 or GEOS 144 or GEOS 145 or GEOS 148 or GEOS 193-Geophysics)
   - CHEM 23 Elements of Chemistry or
   - CHEM 25 General Chemistry
   - One computer course (may be met by GEOS 193-Spatial Analysis)
3. Balance of courses to complete 124 units can be electives, general education courses or major courses.

B.S. in Geology (124 units)

1. Successful completion of the General Education Program of the College of the Pacific – at least 42 units.
2. Successful completion of major courses following the formula in this list:
   - GEOS 51 Physical Geology or
   - GEOS 53 Geologic Evolution of the Earth or
   - GEOS 61 Geology of California.
   - GEOS 100 Mineralogy
   - GEOS 110 Igneous and Metamorphic Petrology
   - GEOS 112 Sedimentary Petrology
   - GEOS 114 Structural Geology
   - GEOS 134 Optical Mineralogy
   - GEOS 136 Petrography
   - GEOS 161 Geologic Field Methods
   - One course in stratigraphy or paleontology (GEOS 120 or GEOS 193-Stratigraphy of North America)
   - Two courses in applied geology (GEOS 142, GEOS 144, GEOS 145, GEOS 148, GEOS 193 Geophysics)
   - One additional elective course in geology.
   - CHEM 25, 27 General Chemistry
   - PHYS 23, 25 General Physics or PHYS 53, 55-Principles of Physics
   - MATH 51, 53 Calculus I & II
   - One statistics course or computer course. (May be met by GEOS 193-Spatial Analysis)
3. Balance of courses to complete 124 units can be electives or general education courses.

B.S. in Geology - Geoscience Teaching Track (124 units)

1. Successful completion of the General Education Program of the College of the Pacific – at least 42 units.
2. Successful completion of major courses following the formula in this list:
   - GEOS 51 Physical Geology
   - GEOS 53 Geologic Evolution of the Earth
   - GEOS 100 Mineralogy
   - GEOS 110 Igneous and Metamorphic Petrology
   - GEOS 112 Sedimentary Petrology
   - GEOS 114 Structural Geology
   - GEOS 120 Paleontology
   - GEOS 144 Geomorphology
   - GEOS 161 Geologic Field Methods
   - BIOL 51, 61 Principles of Biology
   - CHEM 25, 27 General Chemistry
   - PHYS 23, 25 General Physics or PHYS 53, 55-Principles of Physics
   - PHYS 41 Astronomy
   - Two courses in mathematics (MATH 37 or higher)
   - One computer course (May be met by GEOS 193-Spatial Analysis)
3. Balance of courses to complete 124 units can be electives or general education courses.

B.S. in Geophysics (124 units)

1. Successful completion of the General Education Program of the College of the Pacific – at least 42 units.
2. Successful completion of major courses following the formula in this list:

   Area I: Physics (six courses)
   - PHYS 53, 55 Principles of Physics
   - PHYS 57 Modern Physics
   - PHYS 101 Electricity and Magnetism
   - PHYS 161 Thermal Physics
   - PHYS 181 Theoretical Mechanics

   Area II: Geosciences (five courses)
   - GEOS 51 Physical Geology
   - GEOS 100 Mineralogy
   - GEOS 110 Igneous and Metamorphic Petrology or
   - GEOS 112 Sedimentary Petrology
   - GEOS 114 Structural Geology
   - GEOS 161 Geologic Field Methods

   (Advise taking GEOS 193-Geophysics when available.)

   Area III: Additional required coursework
   - MATH 51 Calculus I
   - MATH 53 Calculus II
   - MATH 55 Calculus III
   - MATH 57 Ordinary Differential Equations
   - MATH 37 Probability and Statistics
   - CHEM 25, 27 General Chemistry
   - CIVL 130 Fluid Mechanics
   - One computer course (May be met by GEOS 193-Spatial Analysis)
3. Balance of courses to complete 124 units can be electives or general education courses.

Course Offerings

GEOS 41. Environmental Geology (3)
A study of the interaction between humans and the physical environment. Analysis of the physical constraints placed on human activities by geological processes and the effects that human activities have on the environment. The course includes fieldwork.

GEOS 43. The Changing Environment (3)
Interdisciplinary and field-oriented introduction to environmental studies. Study of natural and human induced changes in the atmosphere, biogeography and landforms. The course includes field work.

GEOS 51. Physical Geology (4)
Nature and origin of the earth materials, the

processes and forces which create and change the surface morphology of the earth and the nature and origin of the earth's structures. A study of earth resources and human interactions with the environment. The course includes laboratory and field work.

GEOS 53. Geologic Evolution of the Earth (4)
An introduction to the geologic history of the earth as interpreted through analysis of both the stratigraphic and fossil record, structural relationships and isotopic dating techniques. Particular emphasis is placed on the geologic evolution of North America. The course includes laboratory and field work.

GEOS 55. Physical Geography (4)
An overview of the interactions of earth's atmosphere, organisms, rocks and soil. The emphasis is on climate, energy and nutrient cycles and landform evolution. The course includes laboratory and field work.

GEOS 57. Earth System Science (4)
An introduction to the study of the Earth using a systems approach. The focus will be on the subsystems (geosphere, hydrosphere, atmosphere, biosphere) and the dynamic interactions between them. The approach will be to develop an understanding of the balance that exists in the global environment as a result of the interactions between the systems. The course begins with a study of the Earth relative to the rest of the solar system, continues to a study of the various Earth systems and processes (plate tectonics, earthquakes, weather, oceans, etc.), and end with a study of global climate change. The course involves laboratory and field work.

GEOS 61. Geology of California (4)
A field-oriented study of the mountain belts and basins of California. A study of landform evolution, processes of mountain building, geologic hazards, origins of rocks plus biogeography and climate changes in California. The course includes laboratory and field work.

GEOS 93. Special Topics in Geosciences (3-4)

GEOS 100. Mineralogy (4)
A study of crystal morphology and identification of the most common minerals. The course includes laboratory work. *Prerequisites: CHEM 23 or 25 (may be taken concurrently) and GEOS 51, or permission of the instructor.*

GEOS 110. Igneous and Metamorphic Petrology (4)
A study of the characteristics, occurrence, origin and classification of igneous and metamorphic rocks. The course includes laboratory work. *Prerequisite: GEOS 100 or permission of the instructor.*

GEOS 112. Sedimentary Petrology (4)
A study of the characteristics, occurrence, origin and classification of sedimentary rocks with an emphasis on the materials and processes of sedimentation. The course includes laboratory work. *Prerequisite: GEOS 100 or permission of the instructor.*

GEOS 114. Structural Geology (4)
Geologic structures and their origin. Tectonics, folding, faulting and processes of mountain building and plate motion. The course includes laboratory and field work. *Prerequisite: GEOS 51 or permission of the instructor.*

GEOS 120. Paleontology (4)
A study of the description, identification, uses, principles, interpretation and methods of study of major groups of fossils; invertebrate and vertebrate animals, plants and single-celled organisms. *Prerequisite: GEOS 53, or permission of the instructor. The course includes laboratory work.*

GEOS 134. Optical Mineralogy (1)
A lab-oriented study of the optical methods of mineral identification using a polarizing microscope. *Prerequisite: GEOS 100 (may be taken concurrently) or permission of the instructor.*

GEOS 136. Petrography (4)
Microscopic identification of rocks, their textures and mineral components. The course includes laboratory work. *Prerequisites: GEOS 110 and 134, or permission of the instructor.*

GEOS 142. Geochemistry (3)
The application of chemical principles to the study of geological processes. *Prerequisites: GEOS 51 and CHEM 23 or 25, or permission of the instructor.*

GEOS 144. Geomorphology (4)
Comprehensive treatment of the principles of landscape development, analysis of topographic maps and interpretation of aerial photographs. The course includes laboratory work. *Prerequisite: GEOS 51 or permission of the instructor.*

GEOS 145. Engineering Geology (4)
An introduction to the study of applied geology in which geologic principles, data and techniques are applied to civil engineering problems. The course includes laboratory work. *Prerequisite: GEOS 51 or GEOS 61 or CIVL 140.*

GEOS 148. Hydrogeology (4)
A study of the different processes of water movement, including analysis of the importance of water in earth systems, the interactions of surface and subsurface water systems, and water as a human resource. Laboratory exercises involve methodologies and principles used in research and practical applications. *Prerequisities: introductory geology course with lab, Math 41 and an appropriate score on the intermediate algebra placement test, CHEM 25 (CHEM 27 recommended), or permission of the instructor.*

GEOS 161. Geologic Field Methods (4)
Introduction to the methods of field geology. *Prerequisite: GEOS 51, 110, 114 or permission of the instructor.*

GEOS 187. Internship in Geosciences

GEOS 191. Independent Study in Geology (2-4)

GEOS 193. Special Topics in Geology (4)

GEOS 197. Undergraduate Research (2-4)

History

Associate Professors: Albala, Brennan (Chair), Pasztor, Swaggit
Assistant Professors: Cox, Gerhard, Rohlf, Sparks
Department Phone: (209) 946-2145
Website: www1.uop.edu/history

"The past is intelligible to us only in the light of the present; and we can fully understand the present only in the light of the past. To enable us to understand the society of the past and to increase our mastery over the society of the present is the dual function of history." E.H. Carr

The offerings of the Department of History are predicated on the assumptions thus expressed by historian E. H. Carr.

History students, majors, minors and non-majors, will be expected to gain a degree of skill in the analysis and interpretation of historical materials and to formulate generalizations on the basis of historical evidence. However, the emphasis is less upon the accumulation of factual data as such than upon the comprehension of the political, economic, social and intellectual ideas and institutions of the past by which humans have attempted to bring meaning and order into their world.

Degrees in History

The Department of History offers a Bachelor of Art degree with a major History as well as a minor program. History is a field that makes

an excellent double major with a number of other majors and programs, and departmental advisers will be pleased to consult with interested students in this regard.

Recommended Progression of Study

Students are advised to begin a B.A. program with the broad introductory courses (HIST 51/53 and HIST 61/63) that normally precede rather than follow other European and American history courses. These courses should be taken first in the case of those without adequate background, and in most cases should not be taken later after upper-division courses have been pursued. From experience, most beginning students should start with HIST 51/53-History of Western Civilization I & II. In addition, in the freshman year students would be well advised to begin coursework in fields closely related to history or useful in the interpretation of the past. Thus a student would profit from courses in Black studies, economics, English (composition and literature), geography, modern languages, philosophy, political science and sociology.

History offerings are organized into a clear progression of courses. The introductory survey courses are for freshmen and sophomores, for whom they are intended as foundations for more advanced study in history and for general education. The intermediate (broad chronological) courses are designed for students who have foundations in history and for strong general education offerings in the social sciences. The intermediate (national, regional, topical) classes and the special study classes are generally smaller in size, and they best serve students with a background in history.

Students should not concurrently enroll in the basic survey classes in Western Civilization or United States history with the 100-level courses in those fields. If the student chooses to undertake more advanced study, this should follow the introductory courses. In some cases, a student may seek permission to do otherwise, but consultation with and the permission of the instructor will be required.

Together with their departmental advisers, history majors must build a planned program that is designed to move them from introductory through intermediate to special studies. Non-majors may seek departmental advice regarding the level of demand in each course and the content that most suits their own major concentrations. At the time of enrollment for each semester, a departmental bulletin board displays the nature of each course for the use of students.

Students may wish to consider the excellent programs of historical study that may be taken in the junior year through the Institute of European Studies at the Universities in Vienna, Durham, Madrid, Paris and Freiburg.

Academic Requirements

Major in History

History majors take a minimum of nine courses for 33 units, six of which must be at the 100 level or above. Two courses must be in United States history, two in European history and two in non-United States and non-European history (such as Africa, Asia or Latin America); HIST 51, 53, 61 and 63 or their equivalents may fall within this basic core of six courses. Any final program should ideally seek a balance of three or four courses in both United States and European history, with exposure for comparison and contrast to a field in Asian or Latin American history.

The following are a few examples, among others, of suitable history courses at the 100 level.

United States History Component:

HIST 118	Revolution and the New Nation
HIST 120	Civil War Era
HIST 122	Emergence of Modern U.S.
HIST 126	U.S. from WW II to Vietnam
HIST 182	Women in U.S. History

European History Component:

HIST 106	Renaissance and Reformation
HIST 114	Europe in Turmoil
HIST 129	Roots of Russian History
HIST 131	History of Modern Russia
HIST 178	History of Modern Ideas Since 1750

Non-Western or Comparison and Contrast History Component:

HIST 125	East Asian Civilization I
HIST 127	East Asian Civilization II
HIST 128	The Spanish Empire
HIST 146	History of Mexico
HIST 151	Modernization of Japan

Each student can build that program which most suits his or her talents, professional goals and general balance in preparation in historical study. Majors may not count more than eight units combined of 187/287, 189/289 and 191/ 291 toward the major.

Minor in History

History minors take six courses for a minimum of 21 units, 10 of which must be taken at Pacific: two European, two United States, one "Other" or Non-Western, one elective from courses to be approved by the department. As with the major, students taking a minor should not concurrently enroll in the U.S. or Western Civilization introductory courses and 100-level ones in these areas. Four of the six courses must be at the 100-level. Students may count no more than four units combined of 187/287, 189/289 and 191/292 toward the minor.

Teaching Credential Track

Teaching credential candidates wishing to qualify to teach history at the secondary level should complete the Single Subject Credential in the Social Sciences. Information on specific course requirements may be obtained from the department chair. For other credential requirements, students should consult the teacher credential guidelines in the School of Education listings.

Course Offerings

Introductory

HIST 51. History of Western Civilization I (4)
An introductory analysis of the institutions and ideas which have shaped and influenced European history and the rise of the West from ancient Greece to the middle of the 17th century. Ordinarily not open to junior or senior history majors.

HIST 53. History of Western Civilization II (4)
Political, cultural and intellectual history of western civilization from the mid-17th century to the present. Emphasis is placed upon those ideas, movements and persons that have had the greatest impact upon the modern world. Ordinarily not open to junior and senior history majors. HIST 51 not required.

HIST 61. United States History I (4)
A broad survey of United States history from European exploration and settlement through the Civil War and Reconstruction. Ordinarily not open to junior and senior history majors.

HIST 63. United States History II (4)
A broad survey of United States history from the Civil War to the present. Ordinarily not open to junior and senior history majors. HIST 61 not required.

HIST 66. Women in Time and Place (4)
An introductory survey of the experiences of women in various periods and in different cultures, including a consideration of the major feminist documents in history. The emphasis is on American women in their various ethnic background.

HIST 75. A History of Medicine (4)
This course will begin by objectively examining ancient medical systems across the globe: Chinese, Ayurvedic, Native American, and will come to focus on the Greek tradition in the West. We will also discuss the transmission of medical knowledge through Arab, Jewish and medieval Christian authorities and the impact of the discovery of the New World. The second half of the course will trace the influence of the scientific revolution and the development of modern medicine in the 19th and 20th centuries. Particular emphasis will be placed on the subfields of physiology, nutrition and herbal lore; in the second half of the course on anatomy, pathology and surgery. Biology, Pre-med, and Pharmacy students are encouraged to enroll, as well as non-science majors. No prerequisites or specialized knowledge required.

HIST 76. A Global History of Food (4)
This course will cover history of the interaction of humans with food resources from the earliest hunting and gathering societies to the present. It will focus on how and why civilizations have been shaped by geography, native flora and fauna and technological/structural developments that have enabled humans to exploit natural resources. It will emphasize the fact that feeding people has always been the primary concern of our species and that more than any other factor finding growing or trading food products has been the prime catalyst in human history. The scope of this course will be global, covering civilizations of Asia, America, Africa, and Europe and how cultures of these domesticated unique staples, which literally enabled these civilizations to expand and flourish. The course will also cover the marginalized and colonized cultures, which were dominated largely to feed or entice the palates of the great. A major theme of the course will be the process of globalization, imperialism and the growth of capitalist enterprise at the cost of indigenous cultures and traditional farming practices and how these processes were shaped by trade in food.

HIST 80. Native American History (4)
Taking an international interdisciplinary approach, this course will examine the history of native peoples of different regions of North America from contact to the present. This course will examine how environmental change, disease, and biological vulnerability interacted with racial ideologies, economic, and social factors to facilitate European conquest. While this course is primarily concerned with the United States, considering the whole of North America will enable students to see the similarities and differences between Indian experiences in a variety of regions.

HIST 93. Special Topics (4)

Intermediate (Broad Chronological)

HIST 100. History of Ancient Greece (4)
An introductory survey of the social, economic, political and military history of ancient Greece, from the very first Greeks and the age of the Homeric heroes to the legacy of Alexander the Great. We will focus on Greece and the Greeks as the mainstream culture, with marginal groups - such as women, slaves, non-citizens, and other ethnic groups - providing the context for the development of an exclusively Greek cultural identity. Offered in alternate years.

HIST 102. History of Ancient Rome (4)
An introductory survey of the social, economic, political and military history of ancient Rome, from the legendary founder hero Aeneas to the height of Rome under the emperors. We will focus on Rome and the Romans as the mainstream culture, with marginal groups - such as women, slaves, non-citizens, and other ethnic groups - providing the context for the development of an exclusively Roman cultural identity. Offered in alternate years.

HIST 106. Renaissance and Reformation (4)
Often the Renaissance is considered the start of modern times. The Reformation, besides beginning the Protestant faiths, is also frequently thought of as a gateway to the modern age. At a time when many of our crucial values, beliefs and institutions in the Western world are undergoing hard questioning and examination both from within and without, it is useful to study historical periods as relevant as these two related ones. Furthermore, were they that creative in breaking away from the Middle Ages? Why did they think they were and why do so many still think so? Approximate chronology, 1350-1600. *Prerequisite: HIST 51 or the instructor's permission if that has not been taken.*

HIST 110. The European Age, 1815-1914 (4)
A study of Europe following the French Revolution and Napoleonic era and the dynamic new forces which transformed European societies: nationalism, liberalism, socialism, industrialism, imperialism and their impact upon culture and intellectual life.

HIST 114. Europe in Turmoil, 1900-1945 (4)
Includes the fundamental long-range problems and immediate causes leading to World War I, Europe between the wars, and the collapse of the old order under the ordeal of World War II.

HIST 115. Europe Since 1945 (4)
A comparative social, political, economic and intellectual study of Europe from the end of World War II to the present. Includes recovery from the war, the Cold War, end of the European empire, the neo-liberal welfare state, European unification, and the collapse of Communism. Offered every other year.

HIST 116. Colonial America (4)
A study of the settlement of the English colonies in North America and their political, economic, religious and social development to the mid-18th century. *Prerequisite: sophomore standing or permission of the instructor.*

HIST 118/218. Revolution and the New Nation (4)
A study of the period from 1763 to the 1790s emphasizing the origins and course of the Revolution, its impact on society, government under the Articles of Confederation, and the writing of and ratification of the Constitution of 1787.

HIST 120/220. The Civil War Era (4)
A survey and analysis of the factors leading to Civil War, the major military campaigns and their consequences, the impact of war on the homefront, and the problems of reconstructing the nation after the war.

HIST 125. East Asian Civilization I (4)
A survey of the history of China and Japan, and to a lesser extent that of Central Asia, up to the mid-19th century. Offered every other year.

HIST 126/226. USA World War II to Vietnam (4)
1941 ushered in the next half-century of war and Cold War. The forgotten economic miracle of the 1940s, alternatives to the "American Century," McCarthyism, Korea, Fifties conformity, and Sixties protest studied to resolve whether the New Frontier and Civil Rights Movement or deepening Vietnam war pointed to the future.

HIST 127. East Asian Civilization II (4)
A survey of the history of China and Japan in the 19th and 20th centuries. Offered every other year.

HIST 128/228. The Spanish Empire (4)
Covers the late Middle Ages to the 18th century. An attempt to objectively assess the emergence of the first world empire, its

triumphs and tragedies, and its motivations for conquest: glory, greed and God. Social and economic forces will be examined as well as disease, warfare, slavery and statecraft in Spanish possessions throughout Europe, the Americas, and Asia.

HIST 129. The Roots of Russian History (4)
A study of the political, economic, social and cultural forces that went into the formation of the Russian nation state. Particular attention is paid to the roots and development of the autocratic state and the polarized society of noble and serf.

HIST 130/230. Modern Latin America (4)
An exploration of the Latin American Republics during the 19th and 20th centuries, with attention to political, economic, and cultural trends. Surveys the major South American countries of Argentina, Brazil, and Chile, as well as the Andean countries and those of Central America and the Caribbean.

HIST 131. History of Modern Russia (4)
World War I and the revolutions of 1917 shattered the old Russian nation with its autocracy, tradition, backwardness and poverty (despite the appearance of wealth and power), as well as forces of modernization. Under the Soviet regime, using the dynamics of revolutionary change and a totalitarian system, Russia has sought to overcome her traditional backwardness and has emerged as a world power. This course will study that transformation in depth, paying particular attention to the Soviet period.

Intermediate (National, Regional, Topical)

HIST 133. Women in Latin America (4)
This interdisciplinary course explores the various roles that women have played throughout Latin America's history, as well as the institutions and ideas that have expanded and limited their options. Through the use of art, literature, and religious forms, it examines cultural attitudes that have affected Latin American women since pre-Columbian times. Topics include: Indian women and the conquest of Latin America, the Virgin Mary in Latin America, and Women and Revolution.

HIST 134. Tudor and Stuart England (4)
Focuses on the personalities, noble and base, which have shaped English history from 1487-1688. Traces the development of institutions (Crown, Parliament, Church) and longtime trends in society and economy, intellectual and cultural history.

HIST 138. French and Russian Revolutions (4)
Revolution is one of the most extreme examples of conflict in a changing society. What causes revolutions to occur? What happens when they do occur? Do revolutions tend to follow a similar course and process of development? Are revolutions likely to resolve the problems and conflicts that produce them? These are some of the questions to be faced in this study of two major European revolutions: the Great French Revolution of 1789 and the Russian Revolution of 1917.

HIST 140. History of Soviet Foreign Policy (4)
An examination of the foundations and historical evolution of Soviet foreign policy from 1917 to the collapse of the USSR, including the role of ideology and tradition, the Soviet view of the outside world, the relationship of Russia to it and the elements of continuity and change.

HIST 144. Modern Germany (4)
An examination of selected political, social and intellectual issues and institutions which shaped the development of Germany in the later 19th and 20th centuries, including nationalism, the Empire, the Weimar Republic, the Third Reich, the divided Germanies and reunification.

HIST 146/246. History of Mexico (4)
Ancient indigenous Mexico, Spanish conquest, the development of colonial institutions, independence and the rise of the republic. The aim of the course is to view the treatment of colonial-like institutions in the context of 20th century national social revolution.

HIST 149. Southeast Asia and the West (4)
A history of the states of Southeast Asia from the time of earliest contact with the West until the present day, with focus on the growth of contemporary problems in the relationship. The course will analyze the impact of the West on an important region of today's Third World and trace the course of imperialist encroachment, liberation to nationhood and the internal and external problems attending modernization.

HIST 150. Japan to 1868 (4)
A course on the unique cultural development of Japanese civilization - from ancient times up to the point of her second encounter with the West in the mid-19th century.

HIST 151. Modernization of Japan (4)
A general history of Japan from the point of renewed contact with the West (1853) until the present day, with emphasis on political change and growth.

HIST 152. Pre-modern China to 1840 (4)
A general history of pre-modern China, from the founding of her ancient civilization until her final decline (1840) as the world's oldest continuous traditional culture. Students will discover the dynamic basis for a civilized alternative to the Western tradition.

HIST 153. Modern Chinese History (4)
A political, social, and cultural history of China from the opium war (1840) to the present day. We will examine selected political, social, cultural issues and institutions which have shaped and influenced Chinese historical development. Time will be devoted to the major historical periods, with emphasis on contemporary China. Students will see that China has been experiencing, in different ways, many similar cultural problems, conflicts and dilemmas throughout her modern times.

HIST 154. History of Communism in China (4)
A seminar for advanced students dealing with the development of the Communist movement in China from World War I to the near present. *Prerequisites: history or international studies major with junior or senior class standing or juniors and seniors who have taken HIST 127 or 153.*

HIST 160/260. History of American Business (4)
A description and analysis of the important changes in American business from Colonial times to the present. Major emphasis will center on the evolution of the business firm, government-business relations and the role played by key businessmen in shaping the American economy.

HIST 166/266. U.S. Intellectual History I (4)
An issue-oriented survey of the philosophical and ideological currents in American thought from the 17th to the 19th centuries. The focus is on the historical roots of such American values and/or ideals as democracy, intolerance, materialism, limited government and civil disobedience. The course begins with a consideration of the Puritans and ends with the issue of slavery.

HIST 168/268. U.S. Intellectual History II (4)
An issue-oriented survey of the philosophical and ideological currents in American thought from the Civil War to the present. The focus is on the development of attitudes toward such issues as presidential power, active centralized government, racism and foreign policy.

HIST 172/272. History of the American West (4)
A study of the causes and consequences of

America's westward expansion and settlement from the Lewis and Clark expedition to modern times, with emphasis on the people, the myths, and the technologies that have shaped western development and culture. No prerequisites, but at least one semester of the US history survey recommended.

HIST 173/273. History of California (4)
A survey of the major themes, forces, and personalities in the development of California from the beginnings of Spanish exploration and settlement through the 1990s.

HIST 174/274. John Muir and the Environment (3)
John Muir, a watershed figure in American history, was a prime mover in the growth and development of environmental consciousness. This course will address modern environmental issues from a broad historical perspective, and assess Muir's role as naturalist, writer, chief spokesman for wilderness values and precursor of modern environmental movement. No prerequisites.

HIST 176/276. History of American Immigration (4)
An examination of immigration from 1620 to the 1990s focusing on the United States as a nation of immigrants. Causes of emigration will be considered as well as problems of immigrant adjustment. Emphasis will be given to key topics such as assimilation, the so-called melting pot, cultural pluralism and contemporary refugees.

HIST 178. History of Modern Ideas Since 1750 (4)
Reading course with informal seminar-format discussions. Covers major ideas in historical context, as well as the impact of these ideas on the present. Beginning in 1750, major authors include Rousseau, Kant, Smith, Hegel, Marx, Darwin, Nietzsche, Freud, Sartre and others.

HIST 182/282. Women in United States History (4)
This course will trace the experience of women in the United States. Legal, economic, political, social and cultural dimensions will be analyzed in order to understand women's rights, restrictions and roles from colonial times to the present.

HIST 184/284. African-American History (4)
A study of the role of African-Americans in the development of American policy and culture.

HIST 186. History of the Holocaust (4)
Concerned with the antecedents and the events of the Holocaust. Attention will be given to the emergence of Nazism and the position of European Jewry before 1933, with concentration then on the Nazi policies of discrimination and genocide.

HIST 187/287. Internship (2-4)
This course will provide work experience for students interested in the practical application of historical method and training to a variety of professional occupations off campus. Work will be done at the California State Archives in Sacramento or at other appropriate institutions. *No prerequisites are required but preference will be given to students with some background skills. Open to juniors and above by permission only. Pass/no credit grading only.*

HIST 189/289. Practicum (2-4)
This course will provide work experience for students interested in the practical application of historical method and training. Work will be done on campus at the John Muir Center for Regional Studies, the Holt-Atherton Library, or at other appropriate academic agencies. *No prerequisites are required but preference will be given to students with some background in U.S. history and with basic typing skills. Open to juniors and above by permission only. Pass/no credit grading only.*

Special Study

HIST 191/291. Independent Study (2-4)
Majors may take no more than two courses for a maximum of eight units, minors no more than one course for a maximum of four units. *Prerequisite: sophomore standing, minimum B (3.0) average in history courses.*

HIST 193/293. Special Topics (4)

HIST 299. Thesis (4)

Mathematics

Professors: D. Christianson (chair), Whittington, Zimmermann
Associate Professors: Merz, Panico, Parker
Assistant Professors: Bhattacharyya, Langley
Lecturers: Amaral, Cook, Rosasco
Department Phone: (209) 946-2347
Website: www1.uop.edu/cop/math

The Mathematics Department shares the University mission of providing a superior, student-centered education. Education in mathematics assists students in developing, to their fullest potential, their mathematical reasoning, communication and problem solving skills. Students who choose to major in mathematics will be provided opportunities to develop strong problem solving skills using quantitative methods and appropriate technology. They will understand the strengths, limitations and wide applicability of mathematical modeling in a variety of disciplines. Students will develop an appreciation for the discipline and esthetics of mathematics, effectiveness in problem solving, and an appropriate understanding of theory. Graduates who major in mathematics will be prepared for the many careers in which mathematics plays an important role, for further study in Mathematics at the graduate level, or for careers in teaching mathematics.

Degrees in Mathematics

The Bachelor of Arts in Mathematics, the Bachelor of Science in Mathematics and the Bachelor of Science in Applied Mathematics are the degrees which are offered. Mathematics, Applied Mathematics, and Statistics minors are also offered.

Students preparing for careers in mathematics, mathematics teaching, or for graduate study in mathematics should elect the Bachelor of Science degree. Students interested in applied areas or majoring in a discipline which uses mathematics should elect the Bachelor of Science in Applied Mathematics. Students interested in mathematics primarily as a component of a liberal education or as a second major may elect the Bachelor of Arts degree. Mathematics, Applied Mathematics and Statistics minors are available to students who wish to add this component to their college experience. Students who choose to double major or minor in mathematics or choose to study mathematics as part of their liberal arts education will learn the major methods, applicability, and spirit of the mathematical sciences.

The Department of Mathematics also provides courses offering opportunities for students from other disciplines and professional programs to develop the quantitative skills necessary for success in their chosen field.

Preparation for Studying Mathematics

Since many degree programs within the University require courses in mathematics, students are encouraged to complete four years of high school mathematics. In general this would include two years of algebra, a year of geometry and a year of Math Analysis which includes Trigonometry. Four years of IMP or CPM mathematics are usually equivalent to these traditional courses. Students with Advanced Placement AB credit usually start college mathematics in Calculus II while students with AP BC credit normally start in

Calculus III. AP credit in Statistics is equivalent to MATH 35 and is accepted as meeting a beginning course in Statistics in most majors. For College of the Pacific students, AP credit in mathematics does not satisfy a general education requirement in Area IIIB. If students wish to repeat a course for which they have AP credit, such as Calculus I, II or Statistics, they must register as an auditor.

All students are tested for quantitative skills during student orientation sessions. A quantitative basic skills requirement is part of the general education program and requires passing an Intermediate Algebra or higher level test during orientation or completing a college level Statistics or Intermediate Algebra course. In order to enroll in mathematics department courses numbered 33,35,41,45,51, or 161, students must take and pass a mathematics placement examination appropriate to the course prerequisite. Some courses in Economics, Chemistry, Physics, Computer Science, Psychology, the Mathematics Resource Center and Political Science also have mathematics placement requirements. Students will choose the test level to be taken in consultation with their faculty adviser. All freshmen are tested. These tests include placement tests in Calculus for students who have had Calculus but do not have AP credit or do not know their AP score. The Calculus test is for placement only and does not award credits. Subject material for the examinations and sample questions are available from the Student Advising Center and are sent to all students participating in student orientation.

For students needing additional preparation before entering introductory college mathematics courses, the Mathematics Resource Center in the Benerd School of Education offers developmental skill courses in the areas of basic mathematics and algebra.

Preparation for the Major

The first course in all Mathematics majors is Calculus I, II or III depending on the student's high school preparation in mathematics. Majors with AP A/B credit should start in Calculus II and are admitted to the honors section of Calculus II whether they are in the honors program or not. Majors with AP B/C credit should start in Calculus III. Students who are not able to start in Calculus I because of deficiencies in their algebra or Trig skills will start in MATH 41, Pre-calculus. Students who place lower than MATH 41 should discuss with their adviser how much time will be required to complete their degree program because of the required developmental work. Mathematics majors should be proficient with graphing calculators and should consider taking elective courses that use quantitative skills in areas such as business, economics, computer science, science and engineering. Mathematics majors may also choose to meet their Mentor Seminar III requirement by taking MATH 164, Topics in the History of Mathematics.

Typical First-year Program B.A or B.S. in Mathematics

Fall: MATH 51,53 or 55 (Calculus I, II or III) depending on placement and AP credit
MENT 1- Mentor Seminar I
General Education (two courses)

Spring: MATH 53,55 or 49 or first elective mathematics course
MENT 2- Mentor Seminar II
General Education (two courses)

Academic Requirements–Bachelor of Arts in Mathematics

This degree provides a major in mathematics as a component of a liberal education or as a second major. Requirements: (10 courses, minimum 36 units)

Core Curriculum (7 courses)

MATH 51,53,55-Calculus I, II, III (12 units)
AP credits may be accepted for MATH 51 (AB test) and MATH 53 (BC test) as part of the major
MATH 49 Introduction to Abstract Mathematics (4 units)
MATH 141 Linear Algebra or MATH 145 Applied Linear Algebra (4 units)
MATH 131 or MATH 37 or 39 Probability/ Statistics (4 units)
MATH 143 Abstract Algebra I or MATH 155 Real Analysis I
Electives (3 courses)
Electives must be approved by a mathematics adviser. Students may meet their Mentor Seminar III requirement by taking MATH 164, Topics in the History of Mathematics, as a major elective.

Bachelor of Science Mathematics

This degree prepares students for careers as mathematicians, applied mathematicians, or mathematics teachers or for graduate study in mathematics or a mathematical science. Mathematics majors are encouraged to minor or take courses in other Departments or Schools which use mathematics such as: Computer Science, Engineering, Business, Physics, Chemistry, Biology or Economics. 13 courses, 47-51 units.

Core Curriculum (7 courses –28 units)

MATH 51,53,55-Calculus I, II, III (12 units)
AP credits may be accepted for MATH 51 (AB test) and Math 53 (BC test) as part of the major.
MATH 49-Intro to Abstract Math (4 units)
MATH 141 Linear Algebra (4 units)
MATH 143 Abstract Algebra I (4 units)
MATH 155 Real Analysis I (4 units)

Electives (6 courses)
Electives should be selected in consultation with a faculty adviser. Students must take at least three 100 level courses excluding MATH 161, 162 and 166.

Mathematics Teaching Credential

In order to meet California State secondary teaching credential requirements, the following courses are required for teacher preparation. Students must also take CURR 87, Fieldwork, from the School of Education. This plan requires 14 courses, with a minimum of 46 units. Contact the Mathematics Credential Coordinator, Dr. Dennis Parker, for additional credential requirements. Besides the core courses the student must take:

MATH 72 Operations Research (4 units)
MATH 131 Probability and Mathematical Statistics I (4 units)
MATH 164 Topics in the History of Mathematics (Mentor III) (3 units)
MATH 166 Math Concepts in Secondary Education (3 units)
MATH 168 Modern Geometries (4 units)
COMP 51 Intro to Computer Science (3 units)

Graduate Preparation

Students planning to attend graduate school in Mathematics should take both of the following electives:

MATH 144 Abstract Algebra II
MATH 156 Real Analysis II

Bachelor of Science in Applied Mathematics

This degree is recommended for students interested in mathematics and its applications in the physical sciences, engineering, economics, management science, statistics or operations research or for students in applied fields who would like to add a second major in mathematics. 13 courses, 46-52 units.

Core Curriculum (5 courses, 20 units)

MATH 51,53,55-Calculus I, II, III (12 units)
AP credits may be accepted for MATH 51(AB

test) and MATH 53 (BC test) as part of the major

MATH 57 Applied Differential Equations I (4 units)

MATH 145 Applied Linear Algebra (4 units)

Electives (4 courses 14-16 units)

With the consultation of a major adviser, the student will select 4 electives chosen from the following:

MATH 72 Operations Research or
MATH 74 Discrete and Combinatorial Mathematics
MATH 110 Numerical Analysis
MATH 130 Topics in Applied Statistics
MATH 131,132 Probability and Mathematical Statistics I and II
MATH 143 Abstract Algebra I
MATH 152 Applied Analysis
MATH 155 Real Analysis I
MATH 157 Applied Differential Equations II
MATH 174 Graph Theory.

Students may also choose one of the following experiences as an elective: Special Topics, Undergraduate Research, Internship, or Practicum offered through the Mathematics Department.

Mathematical Sciences: Four courses (12-16 units)

Four mathematically oriented courses from one or several of the disciplines using mathematical methods (e.g. Physics, Chemistry, Engineering, Computer Science, Economics, Management Sciences or other fields), chosen with the approval of the major adviser in accordance with departmental guidelines.

Cross-Disciplinary or Self-Designed Major

Students may design a cross-disciplinary or self-designed major with the assistance of a mathematics adviser. Some possible combinations are Mathematics/Physics or Mathematics/Economics. These programs require approval of the Dean of the College.

Minors

The study of mathematics is a process which develops important modes of critical thinking. Because quantitative problem solving is a desirable skill, a mathematics minor can be a beneficial addition to the program of any student at Pacific irrespective of his/her major. Mathematics minors may also benefit students planning on further graduate education in related areas. Minors in mathematics are designed to offer a measure of breadth and some depth in the student's mathematical experience. Only courses passed with a C- or better grade can be used to meet the minor requirements. A minimum of 12 of the minor units must be completed at Pacific. Students planning to minor in mathematics should contact the chair of the Mathematics Department to be assigned a minor adviser.

Mathematics Minor Requirements:

Analysis: MATH 51 and 53 (8 units) AP credits may be accepted for MATH 51(AB test) and MATH 53 (BC test) as part of the minor.

Algebra/Logic: MATH 49 and MATH 141 (8 units)

Electives: Students with the approval of their minor adviser select two additional courses. One from MATH 37,39, 55, 57, 72, 74 and one from MATH 131, 143, 152, 154, 155, 164, 168, 174 for a total of 8 units.

Statistics Minor Requirements:

Analysis: MATH 51 and 53 (8 units) AP credits may be accepted for MATH 51(AB test) and MATH 53 (BC test) as part of the minor.

Statistics: 11-12 units taken from MATH 37 or 39, MATH 130, MATH 131, MATH 132

Elective: Students with the approval of their minor adviser select one additional course. (3 or 4 units) This course may be a mathematics course such as Linear algebra or a Statistical Consulting Practicum or a course in another department that usesstatistical techniques such as PSYCH 105, Experimental Psychology or ECON 190, Econometrics.

Applied Mathematics Minor Requirements

Analysis: MATH 51 and 53 (8 units) AP credits may be accepted for MATH 51 (AB test) and MATH 53 (BC test) as part of the minor.

Algebra: MATH 145 (4 units)

Statistics: MATH 37 or MATH 39 or MATH 131 (4 units)

Discrete Mathematics: MATH 74 or MATH 174 (4 units)

Electives: Students with the approval of their minor adviser select two additional applied mathematics courses for a total of 7-8 units.

Course Offerings

Only courses passed with a grade of "C-" or better meet prerequisite requirements for all Mathematics Department courses.

MATH 33. Elements of Calculus (4)

Polynomial, rational, exponential and logarithmic functions. Differentiation. Integration. Maxima/minima of functions of several variables. Elementary differential equations. Applications to natural sciences, social sciences and other fields. Credit will not be given for this course if a student has received credit for MATH 51 or AP credit in Calculus. *Prerequisites: two years of high school algebra and an appropriate score on the Intermediate Algebra placement test.*

MATH 35. Elementary Statistical Inference (4)

Emphasis is on the applications and limitations of statistical methods of inference, especially in the social and behavioral sciences. Topics include: estimation and test of hypothesis concerning a single group, One-way Analysis of Variance and analysis of categorical data. Use of statistical computer programs. Credit will not be given for this course if a student has received credit for MATH 37 or has AP credit in Statistics. *Prerequisite: MATH 3 or an appropriate score on the Elementary Algebra placement test or permission of the instructor.*

MATH 37. Introduction to Statistics and Probability (4)

Elements of descriptive statistics: graphs, tables, measures of central tendency and dispersion. Probability models including binomial and normal. Introduction to estimation, hypothesis testing and analysis of variance. Linear and multiple regression and correlation. Use of statistical computer programs. The course is not recommended for first semester freshmen. Credit will not be given for this course if a student has received credit for MATH 35 or has AP credit in Statistics. *Prerequisite: MATH 33 or MATH 45 or MATH 51 or AP credit in Calculus, or permission of the instructor.*

MATH 39. Probability with Applications to Statistics (4)

Probability concepts in discrete and continuous spaces will be explored in some depth as well as important probability models (e.g., binomial, Poisson, exponential, normal, etc.), mathematical expectation and generating functions. Applications to statistical inference including maximum likelihood, moment and least squares estimation, confidence intervals and hypothesis testing will be covered. *Prerequisite: MATH 53.*

MATH 41. Pre-calculus (4)

The algebraic and trigonometric concepts which are necessary preparation for Calculus I. Topics include the real number system, algebraic, trigonometric exponential and logarithmic functions. Emphasis is on the

function concept; graphing functions; solving equations, inequalities and linear systems; and applied problems. Credit for this course will not be given if a student has AP Calculus credit. *Prerequisites: an appropriate score on the Intermediate Algebra placement test.*

MATH 45. Introduction to Finite Mathematics and Calculus (4)
Systems of equations. Elements of matrix algebra. Elementary linear programming. Introduction to calculus. Applications to problems in economics, management and other fields. *Prerequisites: two years of high school algebra and an appropriate score on the Intermediate Algebra placement test.*

MATH 49. Introduction to Abstract Mathematics (4)
An introduction to the spirit and rigor of mathematics. Course content may vary with instructor, but the objective is to develop the skills required to read and write mathematics and prove theorems. Concepts: elementary logic, sets and functions, cardinality, direct and indirect proofs, mathematical induction. *Prerequisite: MATH 53 or permission of the instructor.*

MATH 51. Calculus I (4)
Differential calculus of algebraic and elementary transcendental functions. Anti-derivatives, introductory definite integrals, and the Fundamental Theory of Calculus. Applications, including the first and second derivative tests and optimization. Students earning AP A/B Calculus credit will not receive credit for MATH 51. *Prerequisites: MATH 41 or four years of high school mathematics including Trigonometry and an appropriate score on the placement test for Calculus I.*

MATH 53. Calculus II (4)
Techniques and applications of integration. Sequences and series. Convergence of series. Taylor Polynomials. Students earning AP B/C Calculus credit will not receive credit for MATH 53. *Prerequisite: MATH 51 or AP A/B credit.*

MATH 55. Calculus III (4)
An introduction to multivariable calculus. Topics covered include vector geometry of the plane and Euclidean 3-space; differential calculus of real-valued functions of several variables, including partial derivatives, gradient, max-min theory, quadric surfaces, multiple integrals. *Prerequisite: MATH 53 or AP B/C credit.*

MATH 57. Applied Differential Equations I (4)
Ordinary differential equations, first-order equations, separable and linear equations. Direction fields. Second order linear equations with constant coefficients. Method of undetermined coefficients. Laplace Transforms. Unit impulse response and convolutions. Homogeneous systems of first order linear equations. Matrix algebra determinants, eigenvalues, eigenvectors. Existence and uniqueness theorems. Use of calculators or computers to display solutions. Applications. *Prerequisite: MATH 55 or permission of the instructor.*

MATH 72. Operations Research Models (4)
Operations Research (OR) is concerned with scientific design and operation of systems which involve the allocation of scarce resources. This course will survey some of the quantitative techniques used in OR. Linear Programs will be solved using graphical techniques and the simplex algorithm. Among the other models studied will be the transportation, assignment, matching, and knapsack problems. *Prerequisite: MATH 33 or MATH 45 or MATH 51 or AP credit in Calculus.*

MATH 74. Discrete and Combinatorial Mathematics (4)
The fundamental principles of discrete and combinatorial mathematics. Topics include the fundamental principles of counting, the Binomial Theorem, generating functions, recurrence relations and introductory graph theory, including trees and connectivity. *Prerequisite: MATH 33 or 45 or MATH 51 or AP credit in Calculus.*

MATH 89a, 189a. Statistical Consulting Practicum (2)
While working under close faculty supervision, students will gain valuable practical experience in applying statistical methods to problems presented by University researchers, business and industry. Students enrolled in MATH 189a will ordinarily participate in more sophisticated projects and take a more responsible role than students in MATH 89a. Pass/No credit. *Prerequisites: for MATH 89a, concurrent enrollment in MATH 130 or permission of the instructor; for MATH 189a, 89a and permission of the instructor.*

MATH 110. Numerical Analysis (4)
Numerical analysis deals with approximation of solutions to problems arising from the use of mathematics. The course begins with a necessary but brief discussion of floating point arithmetic, and then proceeds to discuss the computer solution of linear algebraic systems by elimination and iterative methods, the algebraic eigenvalue problem, interpolation, numerical integration, including a discussion of adaptive quadrature, the computation of roots of nonlinear equations and the numerical solution of initial value problems in ordinary differential equations. *Prerequisite: MATH 55.*

MATH 130. Topics in Applied Statistics (3)
This course covers topics in applied statistics not normally covered in an introductory course, including multiple regression and correlation, analysis of variance of one- and two-way designs; other topics selected from non-parametric methods, time series analysis, discriminant analysis, factor analysis, depending upon student interest. Extensive use of packaged computer programs. *Prerequisite: an introductory course in statistics.*

MATH 131. Probability and Mathematical Statistics I (4)
Counting techniques; discrete and continuous random variables; distribution functions; special probability densities such as Binomial, Hpergeometric, Geometric, Negative Binomial, Poisson, Uniform, Gamma, Exponential, Weibull, and Normal; joint distributions; marginal and conditional distributions; mathematical expectations, moment generating functions; functions of random variables; sampling distribution of the mean; Central Limit Theorem. *Prerequisite: MATH 53 or AP B/C credit.*

MATH 132. Probability and Mathematical Statistics II (4)
Sampling distributions such as Chi-square, t and F; estimation methods such as methods of moments, maximum likelihood, least squares; properties of estimators such as unbiasedness, consistency, sufficiency; tests of hypothesis concerning means, difference between means, variances, proportions; one and two-way analysis of variance. *Prerequisite: MATH 131 and MATH 55.*

MATH 141. Linear Algebra (4)
This is a first course in linear algebra emphasizing theory and proof. Topics covered include systems of linear equations, vector spaces, subspaces, linear independence, bases, dimension, linear transformations, matrices, determinants, eigenvalues, and eigenvectors. Computational techniques will be included. *Prerequisite: MATH 49.*

MATH 143. Abstract Algebra I (4)
An introduction to groups, rings and fields,

with an emphasis on number theory and group theory: including, finite groups, permutation groups, cyclic groups, factor groups, homomorphisms, and the isomorphic theorem. The course concludes with an introduction to polynomial rings. *Prerequisite: MATH 49 or permission of instructor.*

MATH 144. Abstract Algebra II (4)
This course is a continuation of MATH 143; it emphasizes field theory and the application of groups to geometry and field extensions. Algebraic and separable field extensions, dimension, splitting fields, Galois theory, solvability by radicals, geometric constructions. *Prerequisite: MATH 143 or permission of instructor.*

MATH 145. Applied Linear Algebra (4)
Matrix algebra. Systems of linear equations. Euclidean spaces and subspaces. Bases and dimension. Determinants. Linear transformations, coordinates and coordinate transformations. Eigenvalues and eigenvectors. Diagonalization. Symmetric, orthogonal and other special matrices. Linear models and applications from the physical sciences, economics and other fields. Use of calculators or computer software. *Prerequisite: MATH 55.*

MATH 152. Applied Analysis (4)
Vector fields. Gradient, divergence and curl. Line and surface integrals. Cylindrical and spherical coordinates. Integral Theorems. Algebra of complex numbers. The complex plane. Euler's Formula. Functions of a complex variable. Analytic functions. Contour integrals. Cauchy Integral Theorem. Applications from physics and engineering. *Prerequisite: MATH 55.*

MATH 154. Topology (4)
An introduction to general topology and its relation to manifold theory. Topics include metric spaces, general spaces, continuous functions, homeomorphisms, the separation axioms, connectedness, compactness, and product spaces. *Prerequisite: MATH 49 or permission of instructor.*

MATH 155. Real Analysis I (4)
Properties of the real numbers. Sequences and series of real numbers. Limits, continuity and differentiability of real functions. *Prerequisites: MATH 49 and 55.*

MATH 156. Real Analysis II (4)
Integration, series of real numbers, sequences and series of functions, and other topics in analysis. *Prerequisite: MATH 155.*

MATH 157. Applied Differential Equations II (4)
Non-linear differential equations. The qualitative analysis of linear and non-linear ordinary differential equations. Phase-plane analysis. Equilibrium solutions. Stability. Introduction to dynamical systems and chaos. Partial differential equations. Heat and wave equations. Boundary value problems. Fourier series and Fourier transform techniques. The use of computer packages in computing and displaying solutions. *Prerequisite: MATH 57.*

MATH 161. Elementary Concepts of Mathematics I (4)
Concepts of arithmetic and geometry underlying elementary school programs in mathematics. Laboratory materials will be used to reinforce understanding of concepts. *Prerequisite: MATH 3, or appropriate score on placement test. Not open to freshman.*

MATH 162. Elementary Concepts of Mathematics II (4)
Development of arithmetic and geometric concepts within a classroom setting. The course includes related topics such as diagnostic/prescriptive techniques, the use of calculators and computers, approaches to a K-8 math curriculum and current trends within mathematics education. The course will include field experiences, seminar discussions and laboratory workshops. *Prerequisite: MATH 161, or permission of the instructor.*

MATH 164. Topics in the History of Mathematics (3)
Topics in mathematics will be studied from a historical perspective. Topics will be chosen from: numeration systems; mathematics of the ancient world, especially Greece; Chinese, Hindu and Arabic mathematics; the development of analytic geometry and calculus; and modern axiomatic mathematics. Students will solve problems using historical and modern methods. Students will study the ethical practice of mathematics, will write an autobiography, and read and report on the biography of a mathematician. This course meets the Mentor III requirement. *Prerequisites: Calculus II, MATH 49 and junior standing or permission of the instructor.*

MATH 166. Mathematical Concepts for Secondary Education (3)
An in-depth coverage of the secondary mathematics curriculum. The course includes related topics such as problem solving, recreational mathematics, approaches to a 7-12 math curriculum, and current trends within mathematics education. Recommended for prospective high school mathematics teachers. *Prerequisites: MATH 53 and EPSY 121.*

MATH 168. Modern Geometries (4)
Selected topics from Euclidean, non-Euclidean and transformational geometry. Both analytic and synthetic methods. History of the development of geometries and axiomatic systems. Laboratory materials and computer packages used to reinforce understanding of the concepts. Required for high school teacher candidates. *Prerequisite: MATH 49 or permission of the instructor.*

MATH 174. Graph Theory (4)
An in-depth consideration of discrete structures and their applications. Topics include connectivity, Eulerian and Hamiltonian paths, circuits, trees, Ramsey theory, digraphs and tournaments, planarity, graph coloring, and matching and covering problems. Applications of graph theory to fields such as computer science, engineering, mathematics, operations research, social sciences, and biology are considered. *Prerequisites: MATH 51, or MATH 74 or COMP 47.*

MATH 93. Special Topics (3 or 4 units)

MATH 187. Internship in Mathematics (2-4 units)

MATH 191. Independent Study (2-4 units)
Student-initiated projects covering topics not available in regularly scheduled courses. A written proposal outlining the project and norms for evaluation must be approved by the department chairperson.

MATH 193. Special Topics (3-4 units)

MATH 197. Undergraduate Research in Mathematics (2-4 units)

Modern Language and Literature

Professors: Dash, A. Giraldez, Sharp
Associate Professors: Golsan (Chair), Sayles
Assistant Professors: Casillas, Cipris, S. Giraldez, J. Lu, Triantaphilides
Department Phone: (209) 946-2291

The Department of Modern Language and Literature offers language, literature and cultural history courses in Chinese, French, German, Japanese and Spanish, as well as in Portuguese on demand. Programs are offered leading to a major or minor in French, German, Japanese or Spanish language and literature, a major in French, German or Japanese, and a minor in Chinese. Cross-disciplinary degree programs with the Department of Economics, the School of International

Studies, the School of Engineering and the Eberhardt School of Business are also offered. Some literature, civilization, film and interdisciplinary courses are taught in English translation.

Classes, particularly at the intermediate and upper-division level, are small and provide opportunity for a great deal of individualized attention.

The University has chapters of three national honor societies for outstanding work in a language, literature and culture: Pi Delta Phi for French; Delta Phi Alpha for German; and Sigma Delta Pi for Spanish. The Jan Good Award is presented to winners of an annually posted essay contest in French or Spanish. Each of the language areas also has a student-organized club which may convene for culturally specific academic or social events.

Academic Requirements

The list below which deals with degree requirements illustrates the portion of a student's program which is devoted to the courses needed to complete the major, as compared with the portion devoted to non-major course work (i.e., general education and electives). Since some courses required by the major may "double-count" as general education courses, the actual number of G.E. courses taken outside the major may be less than the 12 required for College of the Pacific students. The flexibility gained by this "double-counting" is reflected in a slight increase in electives. The section below already reflects any adjustments. Please refer to the separate University General Education Program sheet for specific details regarding G.E.

Course Offerings by Language

Chinese

11a First-Year Chinese
11b First-Year Chinese
23 Chinese through Culture, 3rd semester
25 Chinese through Culture, 4th semester
102 Classics of Asian Civilization
HIST 152 China to 1800
HIST 153 China in Transition
191 Independent Study
193 Special Topics

French

11a First-Year French
11b First-Year French
23 French through Culture, 3rd semester
25 French through Culture, 4th semester
29 Spoken & Written French
51 French Literature in English
93 Special Topics
107 Introduction to French of Business & Economics
110 Grammaire, Composition et Discussion
112 Civilisation Française A
114 Civilisation Française B
116 Littérature Française A
118 Littérature Française B
120 Le Cineema Français/French Cinema
122 La Francophonie
124 Individu et Sociétee
126 Penseurs et Philosophes
128 Images et Voix de Femmes
191 Etudes Indépendantes
193 Etudes Spécialisés

German

11a First-Year German
11b First-Year German
15 German Proficiency Maintenance
23 German through Culture, 3rd semester
25 German through Culture, 4th semester
93 Special Topics
104 German Culture & Society I
106 German Culture & Society II
108 Introduction to German for Business and Economics
111 Spoken and Written German
124 German Writers of the Nineteenth Century
128 German Poetry
132 Goethe & Schiller
134 Modern German Prose
136 Modern German Drama
191 Independent Study
193 Special Topics

Japanese

11a First-Year Japanese
11b First-Year Japanese
23 Japanese through Culture, 3rd semester
25 Japanese through Culture, 4th semester
93 Special Topics
125 Advanced Japanese I
126 Advanced Japanese II
128 Advanced Writing and Conversational Japanese
140 Modern Business Japanese
170 Japanese Literature in Translation
172 Japanese Culture and Civilization
176 Meiji Literature
180 Modern Japanese Fiction
191 Independent Study
193 Special Topics

Portuguese

PORT 124 Intensive Portuguese
PORT 126 Reading and Discussion on Luso-Brazilian Culture

Russian

11a First-Year Russian
11b First-Year Russian
23 Russian through Culture, 3rd semester
25 Russian through Culture, 4th semester
73 Russian Culture and Civilization
191 Independent Study
193 Special Topics (usually a literature course, such as 19th Century Russian Literature, 20th Century Russian Literature, Tolstoy or Dostoevsky)

Spanish

11a First-Year Spanish
11b First-Year Spanish
23 Spanish through Culture, 3rd semester
25 Spanish through Culture, 4th semester
27 Conversacion
29 Expresion Oral y Escrita
93 Special Topics
101a Historia de la Literatura Española Hasta 1800
101b Historia de la Literatura Española Desde 1800
103 Literatura Hispanoamericana Hasta el Siglo XX
105 Literatura Hispanoamericana: del Siglos XX
107 Civilizacipn Hispanoamericana
108 Traduccipn y Composicipn
111 Gramatica Anal'tica
112 Literatura Mexicana Contemporanea
122 Siglo de Oro
135 Español Comercial
152 Literatura Española del Siglo XIX
154 Literatura Española del Siglo XX
191 Independent Study
193 Special Topics

Descriptions of Major Programs

The major requirements for all four majors within the Modern Language and Literature Department have been designed so that students with no prior training or those with advanced training are equally well served. The major requirements which are listed separately under each language are the requirements which begin after the student has acquired a strong intermediate proficiency in the language and culture. Thus the primary requirement of any major is the acquisition of the equivalent of four college semesters of a particular language.

The number of advanced courses which constitutes the major is kept intentionally moderate so that a student has the opportunity to begin a language in college. Similarly an advanced student will be strongly encouraged to do coursework beyond the minimum courses. The extra coursework that students will need for the acquisition of language skills before they can begin the major will increase

the number of major courses which form the total degree, while reducing the number of University electives.

Students majoring or minoring in a language who study abroad for on e semester may count up to 8 units of appropriate courses from an approved program toward the major or minor. Majors studying two or more semesters abroad may count up to 12 units of appropriate coursework. Students may petition the department to count additional units from abroad. These petitions will be considered on a case-by-case basis. All majors must enroll in at least one advanced course in the target language upon return to meet the major or minor requirements.

Requirements for the Major

French

The curriculum in French includes beginning video-based language classes, intermediate courses focusing on culture and language, advanced language and composition courses, surveys of literature and civilization, theme-based advanced courses covering French and Francophone literatures and cinema, and other more specialized courses, such as the French of Business and Economics. All courses in French unless otherwise specified.

The B.A. in French has two tracks, 1) the Language and Literature track which requires completion of six French courses above the intermediate level, providing background in French civilization, French and Francophone literatures and/or film; and 2) the French Studies track which requires five French courses beyond the intermediate level plus three approved related courses in complementary fields.

Degree Requirement	Courses
General Education*	8
University Electives	12-16
Non-major Requirements	**20-24**
Basic Language Courses	0-4
French-Major	6
Major Requirements	**6-11**
Graduation Total **	***31***

**See Degree Requirements paragraph.*

***Presumes an average of four units per course.*

Major Requirements for French

Language and Literature Track Units

One course in Advanced Language such as:

110	Grammaire, Composition et Discussion	4 or
107	French of Business & Economics	4

Plus five additional advanced courses, to include one course A and one course B of the following series:

116	Littérature Française A	4
112	Civilisation Française A	4
118	Littérature Française B	4
114	Civilisation Française B	4

And/or however many of the following to bring number to five:

120	Le Cinéma Français/French Cinema	4
122	La Francophonie	4
124	Individu et Société	4
126	Penseurs et Philosophes	4
128	Images et Voix de Femmes	4
191	Etudes Indépendantes	2-4
193	Etudes Spécialisées	4
Major Total		**24**

Approved equivalents of major requirements are acceptable, but at least four advanced courses must be completed in the French section of the Department of Modern Language and Literature. Demonstrated oral proficiency at the ACTFL advanced level is expected at the time of graduation.

French Studies Track

Requirements for the French Studies major are five courses in French beyond FREN 25-Intermediate French, fourth semester. Students may take French 51 or French 120 in English when offered to count for one of the five. Assignments may be completed in French as an option, or at the discretion of the instructor. Two of the advanced courses may be completed in a study abroad program. Three related courses in other departments are an additional requirement. Among the options for related courses are: ARTH 112-19th Century European Art; ARTH 114-20th Century European Art and Film; GEOG 116-Western Europe; GEOG 118-Canada: Land, Resources, and People; HIST 104-Medieval History, HIST 110-The European Age; HIST 114-Europe in Turmoil; HIST 115-Europe since 1945; HIST 138-French and Russian Revolutions; HIST 178-Historyof Modern Ideas Since 1750; HIST 180-European Socialist Tradition; POLS 141-Comparative Politics of Western Europe; POLS 168-Comparative Foreign Policy; ECON 121-International Trade (prerequisites: ECON 53, 55). Other courses may be negotiable with the French Studies faculty adviser and be pre-approved for credit in the major. At least one semester of study abroad in a French-speaking country and in a program in the target language is strongly urged. A student may not major in both French and French Studies.

German

The curriculum in German includes beginning and intermediate language classes, advanced language courses, surveys of German culture and literature, period literature courses as well as section on Introduction to German for Business and Economics. All courses are taught in German. The B.A. in German has two tracks, 1) the Language and Literature track which requires completion of six German courses above the intermediate level, and 2) the German Studies track which requires five advanced German courses plus three related courses taught in English.

At least three advanced courses must be completed in the German section of the Department of Modern Language and Literature. Demonstrated oral proficiency at the ACTFL advanced level is expected at the time of graduation.

Degree Requirement	Courses
General Education*	8
University Electives	12-16
Non-major Requirements	**20-24**
Basic German Courses	0-4
German-Advanced	6
Major Requirements	**6-11**
Graduation Total **	***31***

**See Degree Requirements paragraph. Total may vary depending on level of basic preparation and elective choice.*

***Presumes an average of four units per course.*

Major Requirements for German

Language and Literature Track		*Units*
104	German Culture & Society I	4
106	German Culture & Society II	4
111	Spoken & Written German	4
Plus three additional advanced courses in German		
	Language or Literature:	
	Advanced German Elective	4
	Advanced German Elective	4
	Advanced German Elective	4
Total		**24**
Plus one course in:		
	Linguistics or Ancient or Modern Language other than German	4
	Total	**4**
Major Total		***28***

German Studies Track

Requirements for the German Studies major are five advanced courses in German beyond GERM 25- Intermediate German, fourth semester. These five courses should include

GERM 111-Spoken and Written German, GERM 106-German Culture and Society II and three more courses in recent literature or in German for Business and Economics. Three related courses in other departments are an additional requirement. Among the options for related courses are HIST 144-Modern Germany; HIST 186-History of the Holocaust; GEOG 116-Western Europe; HIST 110-The European Age; HIST 114-Europe in Turmoil; HIST 115-Europe Since 1945; HIST 178-History of Modern Ideas Since 1750; ARTH 114-20th Century European Art and Film. Other courses may be negotiable with the German Studies faculty adviser. Two of these courses may be completed in a study abroad program which conducts its coursework in German. At least one semester of study abroad in a German-speaking country and in a program which conducts its coursework in German is strongly urged. Double majors in German Language and Literature and in German Studies are not permitted.

Japanese

The curriculum in Japanese includes beginning and intermediate language classes, advanced language courses, surveys of Japanese culture and literature, period literature courses and a course in Modern Business Japanese. Some survey-type courses are given in English for a general audience. Most courses are taught in Japanese. At least three advanced courses must be completed in the Japanese section of the Department of Modern Language and Literature.

The B.A. in Japanese has two tracks, 1) the Language and Literature track, which requires completion of six Japanese courses above the intermediate level and 2) the Japanese Studies track which requires five advanced Japanese courses plus three related courses taught in English. Demonstrated oral proficiency in Japanese at the ACTFL advanced level is expected at the time of graduation.

Among the six advanced courses required for the major, no more than two approved courses in which the Japanese language is not a major element in instruction will be accepted.

Degree Requirements

	Courses
General Education*	8
University Electives	12-16
Non-major Requirements	**20-24**
Basic Japanese Courses	0-4
Japanese-Advanced	6
Non-Japanese/Language	1
Major Requirements	**7-11**
Graduation Total **	***31***

**See Degree Requirements paragraph. Total may vary depending upon entering level of preparation and elective choice.*

***Presumes an average of four units per course.*

Major Requirements for Japanese

Language and Literature Track

		Units	
JAPN 125	Advanced Japanese I	4	or
JAPN 126	Advanced Japanese II	4	
Plus one comprehensive survey course:			
JAPN 170	Japanese Literature in Translation	4	or
JAPN 172	Japanese Culture & Civilization	4	
Plus four additional advanced Japanese courses:***			
Advanced Japanese Elective		4	
Advanced Japanese Elective		4	
Advanced Japanese Elective		4	
Advanced Japanese Elective		4	
Total		**24**	
Plus one course in: Linguistics or Ancient or Modern Language other than Japanese		4	
Total		4	
Major Total		**28**	

****These remaining courses to be selected in consultation with the major adviser.*

Japanese Studies Track

Required courses for the major in Japanese Studies are five advanced Japanese language courses plus three related courses in other departments selected from such courses as ARTH 122-Japanese Art History; HIST 125 and HIST 127-East Asian Civilizations I and II; HIST 150-Japan to 1868; HIST 151-Modernization of Japan; JAPN 170-Japanese Literature in Translation; JAPN 172-Japanese Culture and Civilization; POLS 152-Politics of Asia; ANTH 120-Japanese Culture and Society. Other courses in related fields may be negotiable with the Japanese Studies faculty adviser. Oral proficiency in Japanese at the "Intermediate High" level is expected at the time of graduation. At least one semester of study abroad in Japan in a program which conducts coursework in Japanese is strongly urged.

Spanish

The curriculum in Spanish includes beginning and intermediate language classes, conversation, commercial Spanish, advanced language classes, surveys of Spanish and Hispano-American literature and period literature courses. All courses are given entirely in Spanish.

Major Requirements for Spanish

The student should complete a minimum of 26 units beyond the intermediate level (i.e., above courses 25, 29 or equivalent). Fourteen of the 26 advanced units must be completed in the Modern Language and Literature Department on this campus.

Degree Requirements

	Courses
General Education*	8
University Electives	11-15
Non-major Requirements	**19-23**
Basic Spanish Courses	0-4
Spanish-Advanced	7
Major Requirements	**8-12**
Graduation Total **	***30***

**See Degree Requirements paragraph. Total may vary depending on entering level of preparation and elective choice.*

***Presumes an average of four units per course.*

Major Requirements

		Units
101a	Historia de la Literatura Española Hasta 1800	3
101b	Historia de la Literatura Española Desde 1800	3
105	Literatura Hispano-americana del Siglo XX	4
111-Gramtiáca Analítica		4
Plus additional courses necessary to bring total to 26 units		
Advanced Spanish courses		12
Total		**26**
Major Total		***30***

Requirements for the Minor

a. Minor in Modern Languages:

1) Five courses (20 units), including at least three in the Modern Language and Literature Department, as specified below: completion of fourth semester college-level courses in three of the following languages - French, German, Japanese, Spanish. Proficiency examination may be substituted for one or more of these courses. Completion in the Modern Language and Literature Department of two advanced courses in the principal language (the language chosen among the three).

2) Japanese and Chinese administers its own test for demonstrated oral proficiency.

b. Minor in Chinese:

Six courses (a minimum of 24 units) to

include CHIN 11a, 11b, 23, and 25. In addition, two advanced courses in the Modern Language and Literature Department, or other approved department, one of which must be in the Chinese language. Or: CHIN 11a, 11b, and 23, plus completion of an approved semester (minimum 15 units) or year-long program in China or Taiwan. Students who acquired competency in Chinese prior to University study may be exempted by the Modern Language and Literature Department from a maximum of 8 units.

c. Minor in French:
Five courses (20 units), in French beyond second semester, first-year. At least three of the five required courses (two of them at the advanced level), are to be completed in the Modern Language and Literature Department. At least three of the five courses must be advanced courses.

d. Minor in German:
Five courses (20 units), in German beyond second semester, first-year. At least three of the five required courses (two of them at the advanced level), are to be completed in the Modern Language and Literature Department. At least three of the five courses must be advanced courses, and must include GERM 111 and either GERM 104 or 106 or their equivalent. Demonstrated oral proficiency at the ACTFL Intermediate Level.

e. Minor in Japanese:
Six courses (a minimum of 24 units) to include: JAPN 11a, 11b, 23, and 25. In addition, two approved advanced courses of which at least one must be in the Japanese language. Demonstrated proficiency at the intermediate level. At least three of the six required courses, including the two advanced courses, must be taken in the Department of Modern Language and Literature. Students who acquire competency in Japanese prior to University studies may be exempted from a maximum of eight units of the requirement. (Japanese administers its own test for demonstrated oral proficiency on the intermediate level.)

f. Minor in Spanish:
Twenty units beyond SPAN 23-Intermediate Spanish, third semester. SPAN 25 or SPAN 29. Thirteen units must be studied in the Department of Modern Language and Literature and include the following courses or their equivalent: SPAN 27, 101b, 105 and 111.

Cross-Disciplinary Study

a. A program in Economics-Modern Languages provides preparation for graduate study and careers in international business, economics, international management, international studies, government, foreign languages and literatures. Students unable to complete a double major in economics and a foreign language may major in economics and develop a certified concentration in French, German, Japanese or Spanish, or major in one of these languages while completing a certified concentration in economics. The concentration in economics consists of five specified courses (ECON 53, 55, 121, 124, 127 or substitute courses approved by the Economics Department). The concentration in French, German, Japanese or Spanish requires five courses or their equivalents, a minimum of one being at the advanced level. The last three courses of the concentration must be completed in this department. For information see B. Sayles, Modern Language and Literature, or the chairperson of the Economics Department.

b. Combination of a Bachelor of Arts (Language and Literature) and Master of Business Administration. A joint program of the College of the Pacific and the Eberhardt School of Business. Students earn a B.A. in French, German, Japanese or Spanish in four years while completing a minor in management and the first year of the MBA program. Students who meet performance requirements are guaranteed admission to the MBA program and can complete the MBA in one additional year.

c. Combination of a Bachelor of Arts (Language and Literature) and Bachelor of Science (Engineering). In five years, students earn a B.A. in French, German, Japanese or Spanish and a B.S. in Civil, Electrical, or Management Engineering. Consult Modern Language faculty for details.

d. French Studies. Requirements for the French Studies track of the French major are five courses in French beyond FREN 25-Intermediate French, fourth semester. Two of the advanced courses may be completed in a study abroad program. Three related courses in other departments are an additional requirement. Among the options for related courses are: ARTH 112-l9th Century European Art; ARTH 114-20th Century European Art and Film; GEOG 116-Western Europe; GEOG 118-Canada: Land, Resources, and People; HIST 104-Medieval History; HIST 110-The European Age; HIST 114-Europe in Turmoil; HIST 115-Europe Since 1945; HIST 138-French and Russian Revolutions; HIST 178-History of Modern Ideas Since 1750; HIST 180-European Socialist Tradition; POLS 141-Comparative Politics of Western Europe; POLS 168-Comparative Foreign Policy; ECON 121-International Trade (prerequisites: ECON 53, 55). Other courses may be negotiable with the French Studies faculty adviser. Two of these courses may be completed in a study abroad program which conducts its coursework in French. These courses should be pre-approved for credit in the major. At least one semester of study abroad in a French-speaking country and in a program in the target language is strongly urged. A student may not major in both French and French Studies.

e. German Studies. Requirements for the German Studies track of the German major are five advanced courses in German beyond GERM 23-Intermediate German, third semester. These five courses should include GERM 111-Spoken and Written German, GERM 106-German Culture and Society II and three more courses in recent literature or in German for Business and Economics. Three related courses in other departments are an additional requirement. Among the options for related courses are HIST 144-Modern Germany; HIST 186-History of the Holocaust; GEOL 116-Western Europe; HIST 110-The European Age; HIST 114-Europe in Turmoil; HIST 115-Europe Since 1945; HIST 178-History of Modern Ideas Since 1750; ARTH 114-20th Century European Art and Film. Other courses may be negotiable with the German Studies faculty adviser. Two of these courses may be completed in a study abroad program which conducts its coursework in German. At least one semester of study abroad in a German-speaking country and in a program which conducts its coursework in German is strongly urged.

f. Japanese Studies. Required courses for the Japanese Studies track of the Japanese major are five advanced Japanese language courses plus three related courses in other departments selected from such courses as ARTH 122-Japanese Art History; HIST 125 and HIST 127-East Asian Civilizations I and II; HIST 150-Japan to 1868; HIST 151-Modernization of Japan; JAPN 170-Japanese Literature in Translation; JAPN 172-Japanese Culture and Civilization; POLS

152-Politics of Asia; ANTH 120-Japanese Culture and Society (other courses in related fields may be negotiable with the Japanese Studies faculty adviser). Oral proficiency in Japanese at the level of intermediate high is expected at the time of graduation. At least one semester of study abroad in Japan in a program which conducts coursework in Japanese is strongly urged.

Course Offerings

Unless otherwise specified in this listing all coursework is done in the foreign language.

Language courses 11A through 25 must be taken in sequence

General

LANG 30. Introduction to Formal Analysis of Language (4)
In this course students will learn the basic principles and structures of language. The focus is on the procedures which linguists use to discover the underlying structure and forms in language. Students will examine and practice these procedures. Their ability to analyze and solve problems will be enhanced. The target language is English, although other languages might be used to clarify language structures where necessary.

FREN 51. French Literature in English (4)
See description under French.

LANG 87. Internship in Applied Language (2)
This course provides opportunities to use French, Japanese or Spanish under supervised conditions in area schools or businesses. Registration is subject to departmental approval and is ordinarily limited to advanced students who are registered in another course in the same language. Credit may not be counted for the major. May be repeated once. Pass/No credit grading only.

LANG 89. Practicum (2)
This course is designed to give the student opportunity to work with language in practical situations under supervised conditions. Practicum courses may not be counted among the six courses required for the major. Permission of the instructor is required for registration. Registration is ordinarily limited to advanced students who are registered in another course in the same language. Pass/No credit grading only.

JAPN 170. Japanese Literature in Translation (4)
See description under Japanese.

JAPN 172. Japanese Culture and Civilization (4)
See description under Japanese.

Chinese

CHIN 11a. First-Year Chinese, First Semester (4)
Beginning training in the basic language skills of understanding, speaking, reading and writing at the first semester level. Cultural approach. Laboratory.

CHIN 11b. First-Year Chinese, Second Semester (4)
Training in the basic language skills of understanding, speaking, reading and writing at the second semester level. Cultural approach. Laboratory. *Prerequisite: first semester Chinese, equivalent or permission of the instructor.*

CHIN 23. Chinese Through Culture, Third Semester (4)
Chinese culture and society through readings, videos, conversations on daily life and cultural behaviors in China. Emphasis on developing critical thinking as well as 4-skills proficiency in Chinese language at the intermediate level. *Prerequisite: second semester Chinese, equivalent or permission of the instructor.*

CHIN 25. Chinese Through Culture, Fourth Semester (4)
A continuation of cultural themes begun in CHIN 23. Chinese culture and society through readings, videos, conversations on daily life and cultural behaviors in Greater China (China, Taiwan and Hong Kong). Continued emphasis on developing critical thinking as well as 4-skills proficiency in Chinese language at the intermediate level. *Prerequisite: third semester Chinese, equivalent or permission of the instructor.*

CHIN 102. Classics of Asian Civilization (4)
A survey of some of the major literary, religious, and philosophical texts that constitute the "Great Traditions" of Asian civilization. The course treats India, China, Japan, Korea, and Vietnam, with primary emphasis on China.

CHIN 191. Independent Study

CHIN 193. Special Topics (4)

French

FREN 11a. First-Year French, First Semester (4)
Beginning training in the basic language skills of understanding, speaking, reading and writing at the first semester level. Video-based communicative and cultural approach. Students with previous experience in French will be initially placed in accordance with their linguistic proficiency. Placement is subject to continuing re-evaluation.

FREN 11b. First-Year French, Second Semester (4)
Training in the basic language skills of understanding, speaking, reading and writing at the second semester level. Video-based communicative and cultural approach. Placement is subject to continuing re-evaluation. *Prerequisite: first semester French, equivalent or permission of the instructor.*

FREN 23. French Through Culture, Third Semester (4)
Culture and civilization through study of French daily life situations and customs, based on the video program French in Action, with discussion of reading material and exploration of French-language web sites. Integrated acquisition and review of grammar as a functioning language-system. *Prerequisite: second semester French, equivalent or permission of the instructor.*

FREN 25. French Through Culture, Fourth Semester (4)
Continuation and expansion of cultural themes begun in FREN 23, to include history and memory, national identity and diversity, "francophonie", current issues and events in the French-speaking world. Reading selections, discussion, exploration of French-expression web sites, with emphasis on the press. Continuation of integrated acquisition and review of grammar as a functioning language-system. *Prerequisite: intermediate French, 3rd semester, equivalent or permission of the instructor.*

FREN 29. Spoken and Written French (4)
Conversation. Composition exercises. An advanced intermediate level course designed to be taken immediately before or after French 25 or equivalent.

FREN 51. French Literature in English (4)
A study of selected themes, periods or forms in French literature. Readings, discussions, lectures, exams in English. Applicable to French Studies major. *No prerequisite.*

FREN 93. Special Topics (4)

FREN 107. Introduction to French of Business and Economics (4)
This course will provide: 1) an opportunity to acquire and to discuss, in French, background on contemporary French life and the economic systems which serve it; 2) workshop opportunities to solve practical problems of commerce through business correspondence, oral interviews, etc., in French. Students will gain introductory knowledge about France and its economy, acquiring at the same time

active and passive abilities in the practical uses of French for commercial, business and academic purposes. At the conclusion of the course, students may seek certification through the exams of the Certificat Pratique de Français Economique et Commercial of the Chambre de Commerce et d'Industrie de Paris (optional). *Prerequisite: four semesters of college French, equivalent or permission of the instructor.*

FREN 110. Grammaire, Composition et Discussion (4)
Essential principles of syntax; Composition; oral presentations. *Prerequisite: four semesters of college French or equivalent.*

FREN 112, 114, 116 and 118 are scheduled only in the fall semester. Each is given once during a four-year period.

FREN 112. Civilisation Française A (4)
A survey of the culture and civilization of France from the Middle Ages through the 17th century. *Prerequisite: four semesters of college French, equivalent or permission of the instructor.*

FREN 114. Civilisation Française B (4)
A survey of the culture and civilization of France from the 18th century to the present. *Prerequisite: four semesters of college French, equivalent or permission of the instructor.*

FREN 116. Littérature Française A (4)
An introductory study of French literature from the Middle Ages through the 18th century. *Prerequisite: four semesters of college French, equivalent or permission of the instructor.*

FREN 118. Littérature Française B (4)
An introductory study of French literature of the 19th and 20th centuries. *Prerequisite: four semesters of college French, equivalent or permission of the instructor.*

FREN 120. Le Cinéma Français/French Cinema in English (4)
A study of the development of French cinema through the analysis of themes, styles, and cinematic techniques. In French. Films with English subtitles. Offered occasionally in English with no prerequisite. *Prerequisite for French version only: four semesters of college French or equivalent.*

FREN 122. La Francophonie (4)
Studies in francophonic literary and cinematographic productions from Africa, the Antilles and/or Canada. Works analyzed in their cultural, geographical and historical context with an emphasis on the issues of language, race, gender, power, and cultural identity. In French. Offered occasionally in English as FREN 51. *Prerequisite: four semesters of college French or equivalent.* May be repeated with permission of the instructor.

FREN 124. Individu et Societe (4)
An exploration of the construction of the self and its relation to the social in various epochs in French culture. Focus on universality and difference, the autobiographical project, social determinism, exclusion and revolt. In French. *Prerequisite: four semesters of college French or equivalent.* Offered occasionally in English as FREN 51. May be repeated with permission of the instructor.

FREN 126. Penseurs et Philosophes (4)
The French moralists, essayists and philosophers from the Renaissance to the present. A history of French thought and its preferred fields of speculation. Selected readings from Montaigne, Descartes, Pascal, Montesquieu, Voltaire, Diderot, Rousseau, Sartre, Camus, Foucault and others. In French. *Prerequisite: four semesters of college French or equivalent.*

FREN 128. Images et Voix de Femmes (4)
Images and voices of women from courtly love to the present. An analysis of "la condition feminine" in the French literary and cultural context. In French. *Prerequisite: four semesters of college French or equivalent.* Offered occasionally in English as FREN 51. May be repeated with permission of the instructor.

FREN 191. Etudes Indépendantes (2-4)
Ordinarily limited to majors in their senior year.

FREN 193. Etudes Spécialisés (4)
Prerequisite: four semesters of college French or equivalent.

German

GERM 11a. First-Year German, First Semester (4)
Beginning training in the basic language skills of understanding, speaking, reading and writing at the first semester level. Cultural approach. Laboratory. Students with previous experience in German will be initially placed in sections in accordance with their linguistic proficiency. Placement is subject to continuing reevaluation.

GERM 11b. First-Year German, Second Semester (4)
Training in the basic language skills of understanding, speaking, reading and writing at the second semester level. Cultural approach. Laboratory. Placement is subject to continuing reevaluation. *Prerequisite: first semester German, equivalent or permission of the instructor.*

GERM 15. German Proficiency Maintenance (1)
This course will permit students who are unable to continue the sequence of language courses in German to maintain their abilities in the language. May be repeated once for credit. Pass/No credit grading only. *Prerequisite: a minimum of two semesters of college German, equivalent or permission of the instructor. Course may not be taken concurrently with another course in the same language.*

GERM 23. German Through Culture, Third Semester (4)
Culture and civilization of the German-speaking countries through readings, conversations, and videos about daily life and customs in Germany, Austria and Switzerland as well as exploration of German-language web sites. Integrated review of German as a functioning language-system. *Prerequisite: second semester German, equivalent or permission of the instructor.*

GERM 25. German Through Culture, Fourth Semester (4)
A continuation of the cultural themes begun in GERM 23. Culture and civilization of the German-speaking countries through readings, conversations, and videos about daily life and customs in Germany, Austria and switzerland as well as exploration of German-language web sites. Continuation of the integrated review of German as a functioning language-ssytem. *Prerequisite: intermediate German, third semester, equivalent or permission of the instructor.*

GERM 93. Special Topics (4)

GERM 104. German Culture and Society I (4)
A survey of major cultural and artistic developments in Germany from the Roman times to Bismarck with emphasis on the period from the Enlightenment to 1871. Readings, discussions and lectures on philosophy, art, literature, music, politics and religion. *Prerequisite: four semesters of college German, equivalent or permission of the instructor.*

GERM 106. German Culture and Society II (4)
A study of the major cultural, artistic and political forces of the past 100 years that have shaped the German mind of today. Figures such as Nietzsche, Freud, Schönberg, Thomas and Heinrich Mann, Goebbels, Heinrich Böll along with topics such as Expressionism, Dada, New Objectivity, the Third Reich, the postwar experience form the subject matter of the course. *Prerequisite: four semesters of college German, equivalent or permission of the instructor.*

GERM 108. Intro. to German for Business and Economics (4)
An introduction to the vocabulary and practices of the German-speaking business community and economic environment. Students will gain an overview of these facets of the German culture while practicing and extending their language skills through readings, audiovisual materials and through oral and written reports that focus on topics such as economic geography, production, trade and services. *Prerequisite: GERM 25, equivalent or permission of the instructor.*

GERM 111. Spoken and Written German (4)
Intensive practice in composition and conversation with an emphasis on topics current in German-speaking countries after World War II. *Pre-requisite: four semesters of college German, equivalent or permission. Course may be repeated for credit at the discretion of the instructor.*

GERM 124. German Writers of the 19th Century (4)
This course focuses on developments in the drama and the Novelle in the work of such writers as Bÿchner, Kleist, Tieck, Mörike, Hoffmann, Eichendorff, Grabbe, Keller, Stifter and Storm. *Prerequisite: four semesters of college German, equivalent or permission of the instructor.*

GERM 128. German Poetry (4)
Traditions and innovation in German lyric poetry seen against the backdrop of sociocultural patterns of selected periods from the Middle Ages to the present. *Prerequisite: four semesters of college German, equivalent or permission of the instructor.*

GERM 132. Goethe and Schiller (4)
This course will focus on these two great figures as the culmination of cultural developments in the eighteenth century from the Enlightenment to Romanticism. *Prerequisite: four semesters of college German, equivalent or permission of the instructor.*

GERM 134. Modern German Prose (4)
Revolving around particular themes such as experiment and tradition, protest and prophesy in the novel, this course will study the great prose works of some of the following writers: Kafka, Thomas Mann, Musil, Hesse, Grass, Broch and Böll.

GERM 136. Modern German Drama (4)
A study of the major currents and writers in 20th Century German theater, such as Naturalism, Expressionism, Epic Theatre, Theater of the Absurd, Hauptmann, Brecht, Weiss and Handke. *Prerequisite: four semesters of college German, equivalent or permission of the instructor.*

GERM 191. Independent Study (2-4)
Ordinarily limited to majors in their senior year.

GERM 193. Special Topics (4)

Japanese

JAPN 11a. First-Year Japanese, First Semester (4)
Beginning training in the basic language skills of understanding, speaking, reading and writing at the first semester level. Cultural approach. Laboratory. Students with previous experience in Japanese will be initially placed in accordance with their linguistic proficiency. Placement is subject to continuing reevaluation.

JAPN 11b. First-Year Japanese, Second Semester (4)
Training in the basic language skills of understanding, speaking, reading and writing at the second semester level. Cultural approach. Laboratory. Placement is subject to continuing reevaluation. *Prerequisite: first semester Japanese, equivalent or permission of the instructor.*

JAPN 23. Japanese through Culture, Third Semester (4)
Instruction in the intermediate language skills, including writing and conversation: emphasis on reading and translating from Japanese into English. In addition to an assigned text, materials from other Japanese sources such as current magazines and newspapers will be included. Laboratory. *Prerequisite: second semester Japanese, equivalent or permission of the instructor.*

JAPN 25. Japanese Through Culture, Fourth Semester (4)
Continued language training at the advanced intermediate level. In addition to a standard reader, materials from other Japanese sources will be introduced. *Prerequisite: third semester Japanese, equivalent or permission of the instructor.*

JAPN 93. Special Topics (4)

JAPN 125. Advanced Japanese I (4)
Selective reading in Japanese of contemporary literary works in prose, poetry and drama. Translation projects. Continued training in writing and conversation at the advanced level. *Prerequisites: JAPN 25 or equivalent; permission of the instructor.* (JAPN 125 or 126 may be taken independently.)

JAPN 126. Advanced Japanese II (4)
Selective reading and discussion in Japanese of contemporary literary works in prose, poetry and drama. Translation projects. Continued training in writing and conversation. *Prerequisites: JAPN 25 or equivalent; permission of the instructor.* (JAPN 125 or 126 may be taken independently.)

JAPN 128. Advanced Writing and Conversational Japanese (4)
Concentrated study in composition and spoken Japanese based on reading materials selected from current magazines and newspapers. *Prerequisites: either JAPN 125, 126 or equivalent; permission of the instructor.*

JAPN 140. Modern Business Japanese (4)
In this course the students will become familiar with some of the basic, standardized forms of correspondence used in the daily conduct of Japanese business. They will learn useful terms and expressions in business which may also have wider application outside of this area. Through role-playing, the students will be encouraged to distinguish and utilize the different levels of Japanese according to the change of social situations and participants involved. The classroom materials will consist mainly of materials in Japanese related directly to business and industry in Japan. The historical and cultural background will be incorporated to promote the proper understanding and usage of Japanese in the world of business. *Prerequisite: four semesters of college Japanese, equivalent or permission of the instructor.*

JAPN 170. Japanese Literature in Translation (4)
A survey of Japanese literature from the 8th century to the present. The unique body of prose, poetry and drama that developed during this thousand-year epoch - mostly in relative isolation from the rest of the world - represents a brilliant literary heritage rarely matched anywhere in the world. Taught in English.

JAPN 172. Japanese Culture and Civilization (4)
A survey of the basic features of Japanese culture and civilization as seen through literature and the other creative arts from the earliest times to the present. Taught in English.

JAPN 174. Modern Japanese Theatre (4)
A survey of modern Japanese theatre, focusing especially on the years after 1945 when it gradually developed into one of the world's truly dynamic and original forms of contemporary performing art. We shall examine closely some of the major plays from the postwar period in order to appreciate more

fully the style and content identified with this new theatre movement, which started in the late 19th century as a reaction to the prevailing theatrical tradition of Japan. Readings will be done in Japanese. *Prerequisites: either JAPN 125, 126 or equivalent; permission of the instructor.*

JAPN 176. Meiji Literature (4)
A survey of the main developments in Japanese literature during the Meiji period (1868-1911): the study of its major authors and their representative works in prose, poetry and drama. An important theme of this course will be tradition versus change in Japan - a once feudal society rapidly turning into a modern, industrial nation - and how this fascinating process is reflected in the literature of the times. Readings will be in Japanese. *Prerequisites: either JAPN 125, 126 or equivalent; permission of the instructor.*

JAPN 180. Modern Japanese Fiction (4)
A study of Japanese fiction as a literary genre after 1867 and up to the present. This course will examine representative works by Natsume Soseki and Mori Ogai, the greatest figures among the early modern novelists, and will also deal with several leading authors of the post-war period including Mishima Yukio and Abe Kobo. Readings will be in Japanese. *Prerequisites: JAPN 125, 126 or equivalent; permission of the instructor.*

JAPN 191. Independent Study (2-4)
Ordinarily limited to majors in their senior year.

JAPN 193. Special Topics (4)
Prerequisite: four semesters of college Japanese or equivalent.

Portuguese

PORT 124. Intensive Portuguese (4)
The principal elements of grammar; intermediate level reading. *Prerequisite: the equivalent of two years of college Spanish or special permission.*

PORT 126. Reading and Discussion on Luso-Brazilian Culture (4)
Major or exclusive emphasis on Brazilian literature. *Prerequisite: PORT 124 or equivalent.*

Russian

RUSS 11a. First-Year Russian, First Semester (4)
Beginning training in the basic language skills of understanding, speaking, reading and writing at the first semester level. Cultural approach. Laboratory.

RUSS 11b. First-Year Russian, Second Semester (4)
Training in the basic language skills of understanding, speaking, reading and writing at the second semester level. Cultural approach. Laboratory. *Prerequisite: first semester Russian, equivalent or permission of the instructor.*

RUSS 23. Russian Through Culture, Third Semester (4)
Russian culture through readings, conversations, videos and discussions on daily life and culture of Russia and former Soviet Republics. Review of Russian language as a functioning system. *Prerequisite: second semester Russian, equivalent or permission of the instructor.*

RUSS 25. Russian Through Culture, Fourth Semester (4)
A continuation of the cultural themes begun in RUSS 23. Russian culture through readings and discussions on daily life in Russia and former Soviet Republics. Continued review of Russian language as a functioning system. *Prerequisite: third semester Russian, equivalent or permission of the instructor.*

RUSS 73. Russian Culture and Civilization (4)
A survey of major cultural and artistic developments in Russia from the founding of the Kievan state to the 20th century. Readings, lectures, discussions and student presentations on Russian literature and art. A survey of major literary works of the Golden Age of Russian literature. Extensive use of audiovisual aids. Taught in English.

RUSS 191. Independent Study (2-4)
May be used for advanced work in Russian reading, composition and conversation, or for work on other topics.

RUSS 193. Special Topics (4)

Spanish

SPAN 11a. First-Year Spanish, First Semester (4)
Beginning training in the basic language skills of understanding, speaking, reading and writing at the first semester level. Communicative approach. Laboratory. Students with previous experience in Spanish will be initially placed in classes in accordance with their linguistic proficiency. Placement is subject to continuing reevaluation.

SPAN 11b. First-Year Spanish, Second Semester (4)
Training in the basic language skills of understanding, speaking, reading and writing at the second semester level. Communicative approach. Laboratory. Placement is subject to continuing reevaluation. *Prerequisite: first semester Spanish, equivalent or permission of the instructor.*

SPAN 23. Spanish Through Culture, Third Semester (4)
Culture and civilization of the Hispanic world through readings, videos and conversations on daily life and culture in the Hispanic world. Rapid review of Spanish language as a functioning system. *Prerequisite: second semester Spanish, equivalent or permission of the instructor.*

SPAN 25. Spanish Through Culture, Fourth Semester (4)
A continuation of the cultural themes begun in SPAN 23. Culture and civilization of the Hispanic world through readings, videos and conversations on daily life and culture in the Hispanic world. Continued review of Spanish language as a functioning system. *Prerequisite: intermediate Spanish, third semester, equivalent or permission of the instructor.*

SPAN 27. Conversacion (2)
May be repeated once for credit. An advanced intermediate (fourth) semester level course to develop the social skills in an Hispanic context. Emphasis is directed to the practical interpersonal skills important to every day living as well as those cultural manifestations inherent in speaking Spanish among native speakers. Pass/No credit only. *Prerequisite: SPAN 23 or permission of the instructor.*

SPAN 29. Expresion Oral y Escrita (4)
Intensive grammar review and vocabulary building and their application to conversation and composition. A general intermediate level course designed to be taken immediately before or after Spanish SPAN 25.

SPAN 93. Special Topics (4)

SPAN 101a. Historia de la Literatura Española Hasta 1800 (3)
A study of the development of literature in Spain through works which are representative of the Early and Late Middle Ages, the Renaissance, the Baroque and Neoclassic periods. National and international political, social and economic influences on these periods form a necessary background for understanding these literary manifestations of Hispanic culture. *Prerequisite: SPAN 25, 29 or permission of the instructor.*

SPAN 101b. Historia de la Literatura Española Desde 1800 (3)
A study of the development of Peninsular Spanish Literature through representative

works of Spanish romanticism, novel of manners (costumbrismo), realism, naturalism, Generation of '98 and contemporary period. The effects of national and international political, social, scientific and economic events form a necessary framework for understanding these literary manifestations of Spanish culture. *Prerequisite: SPAN 25, 29 or permission of instructor.*

SPAN 103. Literatura Hispanoamericana Hasta el Siglo XX (3)
A broad view of Hispanic-American cultural and social developments as reflected in the literature from colonization and discovery through the political writings of independence and the latter 19th century. *Prerequisite: SPAN 25, 29 or equivalent.*

SPAN 105. Literatura Hispanoamericana: del Siglo XX (4)
An overview of the main literary trends in Hispanic-American literature of the 20th century and an analytical study of works of representative contemporary writers. *Prerequisites: SPAN 25, 29 or equivalent; permission of the instructor.*

SPAN 107. Civilización Hispanoamericana (3)
A systematic survey of Hispanic-American civilization including major national and regional historic political, philosophic, economic and cultural developments and their impact on Hispanic life. *Prerequisite: SPAN 25, 29 or permission of the instructor.*

The following courses presume cultural and linguistic background equal to the successful completion of at least one of the following: 101a, 101b, 103 or 105.

SPAN 108. Traducción y Composición (3)
Brief outline of basic written translation and composition techniques. Translation exercises and translation-composition assignments from English into Spanish. Special attention will be given to vocabulary and sentence structure. The purpose of this course is to train the student to interpret content and express it in the appropriate written form.

SPAN 111. Gramática Analítica (4)
A systematic analytical study of Spanish grammar with emphasis on syntax, semantics and usage. Special attention is given to composition and translation. Note: This course is not a continuation of Intermediate Spanish, but a capstone course for the major or minor. *Prerequisite: completion of at least one course above the 100 level or permission of the instructor. Not recommended for freshmen.*

SPAN 112. Literatura Mexicana Contemporanea (3)
The reading and analysis of contemporary Mexican literature. Special emphasis on cultural and societal aspects. *Prerequisite: one course in literature in Spanish or permission of the instructor.*

SPAN 122. Siglo de Oro (3)
A study of the work of the most representative Spanish writers of the 17th century. The preceding Renaissance literature will be outlined as an introduction to the study of literary genres such as poetry, drama and novel. The emphasis of the course, however, will be placed on the theatre of Lope de Vega and the novel of Miguel Cervantes.

SPAN 135. Español Comercial (3)
A course designed to develop oral and written communication ability in commercial Spanish. Emphasis is given to commercial correspondence, commercial practices and, not least, the vocabulary, phraseology and style associated with such activities. Preparation of daily assignments by computer is required.

SPAN 152. Literatura Española del Siglo XIX (3)
An overview of the primary literary movements of the 19th century and an in-depth study of representative works of the most important authors. The Romantic theatre, the Realist novel and the writings of the Generation of '98 are some of the areas of special interest.

SPAN 154. Literatura Española del Siglo XX (3)
An overview of the novel and theatre of twentieth century Spain with an in-depth study of the landmark works of the most important authors.

SPAN 191. Independent Study (2-4)

SPAN 193. Special Topics (3)

Philosophy

Professors: Heffernan (Chair), Hewitt
Assistant Professors: Matz, Wittrup
Department Phone: 209 946-2281
Website: www1.uop.edu/cop/philosophy

All human activities embody assumptions and principles that justify and govern them. Philosophers raise critical questions about these assumptions and principles. Some philosophers also engage in the construction of comprehensive systems which explain how all human activities fit together in a unified way. The study of philosophy develops students' abilities to think and to express their thoughts orally and in writing.

A Bachelor of Arts degree in philosophy provides a thorough grounding in skills applicable to a wide variety of occupations. Persons planning to attend graduate school or professional school in other academic areas frequently find philosophy a profitable second major. Philosophy helps the individual to place his/her professional life in a broader context while developing the skills of critical analysis. Persons preparing for law school or seminary should give this degree special attention because the subject matter is directly related to these professions. Students planning to attend graduate school in philosophy should declare a philosophy major as early as possible in their undergraduate careers so that a program which provides an intensive pre-professional and interdisciplinary education can be planned with assistance of a departmental adviser.

Students who elect a minor in Philosophy must successfully complete five courses for a minimum of 18 units. At least three courses must be completed in the department. The department reserves the right to judge the acceptability of any transfer units toward the minor. To start a minor a student should contact the department office, choose a departmental adviser, and work out a suitable sequence of five courses from the departmental offerings.

The Department of Philosophy offers courses of different kinds. Introductory courses deal with a broad range of issues in a general way. Historical courses survey the major periods in the history of philosophy. Specialized courses focus on activities such as art, politics or religion, and help students to understand these special activities. Systematic courses deal with problems that arise in relation to all human activities, such as the nature of reality, the experience of value and the activity of knowing.

The departmental offerings are grouped as follows:

A. Introductory Courses – Introduction to Philosophy; Fundamentals of Ethics.
B. Formal Reasoning Course – Introduction to Logic.
C. Historical Courses – History of Ancient and Medieval Philosophy; History of Modern Philosophy.
D. Specialized Courses – Dimensions of Freedom; Environmental Ethics; Philosopher in Depth; Philosophers in Conflict; The Meaning of Life; Moral Problems; Philosophy of Law; Philosophy of Religion; Political Philosophy; Special Topics.

E. Systematic Courses – Metaethics; Metaphysics; Theory of Knowledge.

Students seeking a Bachelor of Arts degree in philosophy must complete at least nine courses selected in consultation with their departmental adviser. Those nine courses must include one introductory course, one course in formal reasoning, two historical courses, three specialized courses and two systematic courses.

Typical First Year Program

During the freshman year a student interested in pursuing the philosophy major may take any course in the department that is open to freshmen, but they are especially encouraged to choose one or more courses from the following: either PHIL 11-Introduction to Philosophy or PHIL 23-Philosophy of Human Existence, PHIL 27-Fundamentals of Ethics, PHIL 37-Introduction to Logic, PHIL 47-Philosopher in Depth.

Course Offerings

PHIL 11. Introduction to Philosophy (4)
An overview of issues addressed by philosophers and the problems that recur in philosophical speculation in the Western world.

PHIL 21. Moral Problems (4)
Through an examination of the positions and arguments involved in controversial moral problems, this course will introduce the student to philosophy and philosophical methods. It will also emphasize the techniques of argumentation, critical thinking and written and oral expression.

PHIL 25. The Meaning of Life (4)
An investigation of views of the meaning of life ranging from ancient to contemporary philosophers.

PHIL 27. Fundamentals of Ethics (4)
An inquiry into the assumptions, arguments and implications of moral judgments and value systems.

PHIL 35. Environmental Ethics (4)
An investigation of various environmental problems and the ethical attitudes and principles required to address them properly.

PHIL 37. Introduction to Logic (4)
An introduction to the basic techniques of formal, especially symbolic, logic as a tool used in the analysis of ordinary language and arguments.

PHIL 39. Dimensions of Freedom (4)
Examination of arguments for and against freedom of the will and consideration of the meaning of being free in relation to some dimensions of human life, e.g., our relations to nature, society and God.

PHIL 47. Philosopher in Depth (4)
An in-depth investigation of the views of a single philosopher on epistomology, ethics, and metaphysics with special attention to how those views cohere (or fail to) into a single world view.

PHIL 53. Ancient & Medieval Philosophy (4)
An overview of the philosophical patterns of thought underlying the Western intellectual tradition from Thales to Occam including Plato, Aristotle, Augustine and Aquinas.

PHIL 55. History of Modern Philosophy (4)
An overview of the philosophical patterns of thought underlying the Western intellectual tradition from Descartes to Wittgenstein.

PHIL 93. Special Topics (4)

PHIL 101. Philosophers in Conflict (4)
The purpose of this course is to examine two philosophers who construct influential yet opposing views regarding the nature of knowledge, metaphysics, ethics and/or religion. Examples of philosophers in conflict are Kant and Mill or Aristotle and Hobbes.

PHIL 106. Philosophy of Law (4)
An analysis of the nature of law, legal reasoning, legal ethics and the roles of legislators, lawyers and judges in the pursuit of justice.

PHIL 124. Philosophy of Religion (4)
A discussion of problems related to the question of the existence and nature of God and the nature of religious meaning and truth.

PHIL 135. Political Philosophy (4)
An evaluation of bases of political power, forms of government and legal and judiciary systems.

PHIL 180. Metaphysics (4)
A study of basic problems concerning the nature of reality as they emerge in the writings of key figures in the history of philosophy. *At least one previous course in philosophy or permission of the instructor required.*

PHIL 182. Theory of Knowledge (4)
A study of the major issues of the scope and limits of human knowledge as they emerge in the writings of key figures in the history of philosophy. *At least one previous course in philosophy or permission of the instructor is required.*

PHIL 184. Metaethics (4)
A discussion of the questions: Are laws of morality a fact about the world like the laws of physics? Are human beings capable of morality?

PHIL 191. Independent Study (2-4)
Permission of the instructor required.

PHIL 193. Special Topics (4)

Physics

Associate Professors: Granik, Hetrick (Chair)
Assistant Professors: Alward, Harlow, Krysac
Department Phone: (209) 946-2220
Website: www1.uop.edu/cop/physics

Matter, energy, space and time obey a few general but precise laws, which are fundamental to the structure and behavior we see in our universe. The evolving understanding of this over the centuries has changed our minds, our lives, and our world profoundly.

The faculty and facilities of the Physics Department are here to help students understand and explore these natural relationships, their limitations, and their power. The study of physics includes mastering very broad fundamentals which apply to everything from atoms to galaxies, as well as topical specializations like the physics of solid state devices, electromagnetic fields, and astrophysics. Students are encouraged to participate in undergraduate research projects with faculty.

Degrees in Physics

The degree programs in Physics prepare students to think deeply through questions, to connect abstract relationships to new situations, and to academically confident and broadly knowledgeable scientists. Bachelor of Science degrees are offered in Physics, Engineering Physics and Geophysics. A Bachelor of Arts degree is also offered in Physics. The department also offers a Physics Minor, intended for students majoring in other disciplines who have a strong interest in Physics and the underlying principles of science.

Facilities

The offices, laboratories and classroom of the Physics Department occupy Olson Hall. Adequate space and special equipment are available for laboratory courses in optics, physics, solid state physics and advanced physics lab, as well as for the introductory physics, music, and astronomy courses. There are also several laboratories set aside for non-course related research projects. The department has two computer labs with PCs, and a UNIX (SunRay) computer lab for upper level students.

Recommended High School Preparation

Potential Physics majors should study enough mathematics in high school so that they are prepared to study calculus in their first semester in college. They should also take high school chemistry and physics as well as a good overall college preparatory program. Some experience with computer programming is desirable.

Academic Requirements

The list below which deals with degree requirements illustrates the portion of a student's program which is devoted to the courses needed to complete the major, as compared with the portion devoted to non-major coursework (i.e., general education and electives). Since some courses required by the major may "double-count" as general education courses, the actual number of G.E. courses taken outside the major may be less than the 12 required for College of the Pacific students. The flexibility gained by this "double-counting" is reflected in a slight increase in electives. The section below already reflects any adjustments. Please refer to the University General Education Program description for specific details regarding G.E.

Bachelor of Science - Physics

The Bachelor of Science in Physics degree program is the standard preparation for professional careers in physics and related physical sciences. Graduates may enter industrial and government positions directly at the B.S. level or may proceed to graduate study in preparation for higher level research positions. The B.S. degree requires students to complete eleven courses in physics, four courses in mathematics, two in chemistry and one course in electronics in the School of Engineering.

Degree Requirements

	Courses
General Education*	9
University Electives	5
Non-major Requirement	**14**
Physics	11
Chemistry	2
Mathematics	4
Electronics (School of Engineering)	1
Major Requirements	**18**
Graduation Total**	**32**

Major Requirements

		Units
Physics		
PHYS 53	Principles of Physics	5
PHYS 55	Principles of Physics	5
PHYS 57	Modern Physics	4
PHYS 101	Electricity and Magnetism	4
PHYS 102	Electrodynamics	4
PHYS 140	Quantum Mechanics	4
PHYS 151	Advanced Physics Lab	4
PHYS 181	Classical Mechanics	4
PHYS 197	Undergraduate Research	4
plus two electives with at least one from:		
PHYS 105	Optics	4
PHYS 161	Thermal Physics	4
PHYS 170	Solid State Physics	4
PHYS 183	Theoretical Physics	4
Total		**46**
Chemistry		
CHEM 25	General Chemistry	5
CHEM 27	General Chemistry	5
Total		**10**
Mathematics		
MATH 51	Calculus I	4
MATH 53	Calculus II	4
MATH 55	Calculus III	4
MATH 57	Ordinary Differential Equations	4
Total		**16**
Engineering		
Electronics Course**		4
Total		**4**
Major Total*		***76***

**Other courses which are recommended include Physics 41-Astronomy, Physics 105-Optics, and a computer programming course.*

***The specific electronics course will vary according to the student's background. Students with no electronics background will take ENGR 79-Electrical Science. More advanced students are encouraged to take ELEC 131-Electronic Circuits I.*

Bachelor of Science — Engineering Physics

The Bachelor of Science in Engineering Physics is a dual-degree offered jointly by the School of Engineering and the College of the Pacific. The proportions of courses taken in Physics and Engineering are roughly equal.

Today's engineer must be able to understand and apply new and changing technologies which arise from advancements in fundamental science. Techniques and ideas learned at the University may change completely within three years of graduation. Pacific engineering physics graduates have a firm understanding of the fundamental physics upon which modern scientific advancements are based. He or she is able to use powerful mathematical methods and problem solving techniques to relate new ideas and scientific developments to practical problems in engineering. By acquiring skills applicable for lifelong learning, the Pacific engineering physics graduate is well prepared for a competitive career.

Students who major in Engineering Physics are subject to all of the requirements for an engineering major. Among these requirements is a compulsory work experience component called the Cooperative Education Program. Engineering students must complete 50 units of full-time work experience in order to graduate. Students fulfill this requirement in two six-month periods and are placed in these positions by the School of Engineering. This major is therefore a five-year program.

Degree Requirements

	Courses
Engineering	12
Physics	7
Engineering or Physics Electives	2
Mathematics	5
Chemistry	1
Computer Science	1
Technical Writing	0
General Education	8
Total	**36**

Major Requirements

		Units
Physics		
PHYS 53	Principles of Physics	5
PHYS 55	Principles of Physics	5
PHYS 57	Modern Physics	4
PHYS 101	Electricity and Magnetism	4
PHYS 161	Thermal Physics	4
Upper-division physics electives		8
Total		**30**
Engineering		
ELEC 79	Electrical Circuits	3
ELEC 79L	Electrical Circuits Lab	1
ELEC 121	Systems	3
ELEC 131	Electronic Circuits	3
ELEC 131L	Electronic Circuits Lab	1
ELEC 195	Senior Project I	2
ELEC 196	Senior Project II	2
ENGR 5	Introduction to Engineering	2
ENGR 45	Materials Science	4
ENGR 120	Mechanics	3
ENGR 130	Fluid Mechanics	4
ENGR 181-2-3	Professional Practice	50
Upper-division engineering electives		8
Total		**86**
Mathematics		
MATH 39	Probability and Statistics	4

MATH 51	Calculus I	4
MATH 53	Calculus II	4
MATH 55	Calculus III	4
MATH 57	Ordinary Differential Equations	4
Total		**20**
Chemistry		
CHEM 25	General Chemistry	5
Total		**5**
Computer Science		
COMP 51	Introduction to Computer Science	4
Total		**4**
Electives		
Math/Science/Engineering Electives		8
Total		8
Major Total		***128-133***

plus 1 year co-op

Bachelor of Science - Geophysics

The Bachelor of Science degree in Geophysics is awarded for completion of an interdepartmental program offered by the Department of Physics and the Department of Geosciences. This major prepares students for graduate studies in geophysics or for a career in exploration geophysics. The major consists of six courses in physics, five in geology, five in mathematics, two in chemistry, a computer programming course and Fluid Mechanics (offered through the School of Engineering).

Degree Requirements

	Courses
General Education*	9
University Electives	3
Non-major Requirements	**12**
Physics 6	
Geology 5	
Mathematics	5
Chemistry 2	
Engineering/Other Science	2
Major Requirements	**20**
Graduation Total**	**32**

**See Degree Requirements paragraph.*

***Presumes an average of four units per course.*

Major Requirements

		Units
Physics		
PHYS 53	Principles of Physics	5
PHYS 55	Principles of Physics	5
PHYS 57	Modern Physics	4
PHYS 101	Electricity and Magnetism	4
PHYS 161	Thermal Physics	4
PHYS 181	Classical Mechanics	4
Total		**26**
Geology		
GEOS 051	Physical Geology	4
GEOS 100	Mineralogy	4
GEOS 110	Igneous and Metamorphic Petrology or GEOS 112 Sedimentary Petrology	4
GEOS 114	Structural Geology	4
GEOS 161	Geologic Field Methods	4
Total		**20**
Mathematics		
MATH 37	Probability and Statistics	4
MATH 51	Calculus I	4
MATH 53	Calculus II	4
MATH 55	Calculus III	4
MATH 57	Ordinary Differential Equations	4
Total		**20**
Chemistry		
CHEM 25	General Chemistry	5
CHEM 27	General Chemistry	5
Total		**10**
Engineering		
CIVL 130	Fluid Mechanics	4
Total		**4**
Computer Science		
Computer Programming Course		3
Total		**3**
Major Total		***83***

Bachelor of Arts - Physics

The Bachelor of Arts degree program requires fewer advanced courses in physics and mathematics than are required for the four Bachelor of Science programs. Students complete six courses in physics and three in mathematics. Thus it leaves time for a student to develop greater breadth in other areas such as is appropriate for high school science teaching.

Degree Requirements

	Courses
General Education*	9
University Electives	13
Non-major Requirements	**22**
Physics	6
Mathematics	3
Major Requirements	**9**
Graduation Total**	**31**

**See Degree Requirements paragraph.*

***Presumes an average of four units per course.*

Major Requirements

		Units
Mathematics		
MATH 51	Calculus I	4
MATH 53	Calculus II	4
MATH 55	Calculus III	4
Total		**12**
Physics		
PHYS 53	Principles of Physics	5
PHYS 55	Principles of Physics	5
PHYS 57	Modern Physics	4
PHYS 151	Advanced Physics Laboratory	4
PHYS 140	Quantum Mechanics	4 or
PHYS 161	Thermal Physics	4 or
PHYS 170	Solid State Physics	4 plus
one other elective		4
Total		**26**
Major Total		**38**

The Physics Minor

A minor in Physics provides the student of any discipline with a very strong understanding of the foundations of science and the workings of the physical world. The study of physics teaches abstract problem solving skills which are both of great benefit to the student, and impressive to prospective employers.

The Physics Minor consists of completing the following courses:

PHYS 53,55,57* (core requirements, 14 units)

3 upper division electives (courses numbered 100 and above, 12 units).

*Note that PHYS 57, Modern Physics, has been previously called PHYS 111 Atomic Physics.

The Physics Minor is not available to Engineering-Physics Majors.

Minor Requirements

		Units
Physics		
PHYS 53	Principles of Physics	5
PHYS 55	Principles of Physics	5
PHYS 57	Modern Physics (formerly called PHYS 111 Atomic Physics)	4
Plus three upper-level Physics electives selected from the following list:		
PHYS 101	Electricity and Magnetism	4
PHYS 102	Electrodynamics	4
PHYS 105	Optics	4
PHYS 140	Quantum Mechanics	4
PHYS 151	Advanced Physics Laboratory	4
PHYS 161	Thermal Physics	4
PHYS 170	Solid State Physics	4
PHYS 181	Classical Mechanics	4
PHYS 183	Theoretical Physics	4
PHYS 193	Astrophysics	4
Minor Total		**26**

Typical First-Year Program

Students planning to major in physics should contact the chairman of the Physics Department. An adviser from the department should be consulted before registering for their first semester. Some typical freshman year programs are listed below:

B.S. in Physics

Fall: Mentor Seminar I, Calculus I, General Chemistry, elective for general education

Spring: Principles of Physics, Calculus II, General Chemistry, Mentor Seminar II

B.S. in Engineering Physics

Fall: Calculus I, General Chemistry, Introduction to Engineering, Mentor Seminar I

Spring: Calculus II, Introduction to Computer Science, Principles of Physics, Mentor Seminar II

B.S. in Geophysics

Fall: Physical Geology, Calculus I, Mentor Seminar I, elective

Spring: Principles of Physics, Calculus II, Mentor Seminar II, elective

B.A. in Physics

Fall: Calculus I, General Chemistry, Astronomy, Mentor Seminar I

Spring: Calculus II, General Chemistry, Principles of Physics, Mentor Seminar II

Course Offerings

PHYS 17. Concepts of Physics (4)
This course is a descriptive, general education course for students who have not had high school physics. Topics include motion, heat, energy, light, sound and other wave phenomena, electricity and magnetism, and atomic structure. Practical applications are emphasized. The course includes laboratory work. *Only elementary algebraic mathematical skills are needed.*

PHYS 23, 25. General Physics (5, 5)
A one-year introduction for students who plan no further study in physics. Mechanics, heat, sound, electricity and magnetism, optics, atomic and nuclear physics. The course includes laboratory work. *Prerequisite for PHYS 23: MATH 41 or equivalent. Prerequisite for PHYS 25: PHYS 23.*

PHYS 39. Physics of Music (4)
A liberal arts lab-science course designed to enhance students' enjoyment and appreciation of music by developing an understanding of the basic physics which is involved. Major topics include: the physics of motion, vibration, waves and sound; some aspects of hearing, harmony and musical scales; the physical behavior of the various families of musical instruments; electronic sound systems; architectural acoustics. *No prerequisites. Only elementary algebraic mathematical skills are needed.*

PHYS 41. Astronomy (4)
A broad overview of modern astronomy, with emphasis on conceptual understanding. Topics include constellations, motions of stars and planets, the solar system, stellar evolution, pulsars, black holes, quasars, galaxies and cosmology. The course includes some outdoor observing activities and laboratory work. *Only elementary algebraic mathematical skills are needed.*

PHYS 53, 55. Principles of Physics (5, 5)
A two-semester calculus-based sequence for those planning further study in pure or applied physical science. The course includes laboratory work. First semester: kinematics, dynamics, oscillations, wave motion, fluids. Prerequisites: MATH 51 and high school physics or PHYS 23. Second semester: thermodynamics, electricity, magnetism, light and optics, atomic and nuclear physics, particle physics, cosmology. *Prerequisites: MATH 53 and PHYS 53.*

PHYS 57. Modern Physics (4)
Special relativity; quantization; wave/particle duality and the uncertainty principle; solution and interpretation of simple Schroedinger equations; atomic structure; introduction to nuclear and elementary particle physics. Laboratory. *Prerequisite: PHYS 55. Corequisite: MATH 57.*

PHYS 101. Electricity and Magnetism (4)
Theory of electrostatic and electromagnetic fields and their interaction with matter. Practical applications. Development of Maxwell's equations. *Prerequisites: PHYS 55, MATH 55.*

PHYS 102. Electrodynamics (4)
Maxwell's equations. Propagation of electromagnetic radiation. Transmission lines, wave guides, antennas. Applications. *Prerequisites: PHYS 101, MATH 151.*

PHYS 105. Optics (4)
An introduction to modern optics. Topics include geometrical optics, ray-tracing, the wave nature of light, polarization, diffraction, lasers and fiber-optics. The objective is to combine a firm theoretical foundation with hands-on experience in the laboratory to gain a basic understanding of modern optics and its applications. *Prerequisite: PHYS 55.*

PHYS 140. Quantum Mechanics (4)
The Schroedinger equation, the Pauli principle and their interpretation; the correspondence principle and theory of measurements; perturbation and variation methods; applications to a variety of problems.

PHYS 151. Advanced Physics Laboratory (4)
Experimental studies in modern physics, especially ones which require the design, construction and use of special apparatus. *Prerequisite: PHYS 111.*

PHYS 161. Thermal Physics (4)
The general laws of thermodynamics with applications to heat engines and thermal properties of solids. Introductory statistical mechanics with applications to molecules, solids, thermoelectric phenomena and radiation. *Prerequisites: PHYS 55, MATH 57.*

PHYS 170. Solid State Physics (4)
Crystal structure and the quantum-mechanical basis for the electronic structure of atoms, molecules and solids. A thorough study of the properties of semiconductors, including an extensive investigation of the physics of a number of crystalline and amorphous solid state devices, including junctions, transistors, charge-coupled devices, photovoltaic devices, microelectronic circuits, lasers and optical fibers. The course includes laboratory work. *Prerequisites: PHYS 53, 55.*

PHYS 181. Classical Mechanics (4)
Newtonian mechanics, Hamilton's principle, Lagrangian and Hamiltonian dynamics. Oscillations, central force motion, waves, nonlinear systems and chaos. *Prerequisites: PHYS 55, MATH 57 or equivalent and a knowledge of computer programming; junior standing.*

PHYS 183. Theoretical Mechanics (4)
Introduction to Lie groups and their representations. Partial differential equations and boundary value problems. The special functions of mathematical physics and their addition theorems. Topics from the theory of the translation, rotation, Euclidean and Lorentz groups. *Prerequisites: MATH 57.*

PHYS 191. Independent Study (2-4)

PHYS 193. Special Topics (4)

PHYS 197. Undergraduate Research (2-4)

Political Science

Professors: Benedetti, Hatch, Hewitt, C. Smith
Associate Professors: Kelly, Klunk (Chair), Ostberg
Department Phone: (209) 946-2524
Website: www3.uop.edu/polysci

Political Science seeks to understand, to explain, and - sometimes - to evaluate how humans live and work together in public ways. To do so, political scientists focus on what happens in and around government and politics, how humans cooperate with and how they fight against one another, why some nations succeed and others fail. They study voting and revolutions, the Supreme Court and the United Nations, the idea of justice and the nature of power, India and San Francisco, environmental policy, criminal law and gender roles - all in the pursuit of clearer knowledge about the characteristic ways humans interact in the public sphere.

Students majoring in Political Science, ought to gain from it a well-grounded liberal education focused on the knowledge and skills necessary to understand the public realities of their world. They will have looked in depth at the fundamental concepts and values that underlie human decision-making, have examined the social and political structures and processes through which such decisions are shaped and carried out, have learned to analyze complex organizational and legal phenomena, have surveyed the inventiveness of cultures in devising a variety of ways to provide government. They will also have become familiar with the contributions to their understanding that they can gain from closely-related social sciences, such as economics, history, anthropology, psychology and the like. In acquiring this knowledge, Political Science majors will be challenged to extend their analytical and research skills, to polish their talents for written and oral communication, and to sharpen their abilities for rigorous and independent judgment.

Career Opportunities

The skills and experiences developed through a Political Science program are central to a great variety of career fields, and our majors go on to work as journalists and lawyers, managers and teachers, politicians and administrators. One out of every six Americans now works for one level of public government or another, and Political Science majors can have a head start in such fields because of their understanding of how these systems work. Many of our graduates go on to law school, and Political Science serves as an ideal major for that training, as well as essential preparation for graduate study.

Political Science majors with an emphasis in Political Economy share most of the same career possibilities as general Political Science majors. In addition, they will be able to take advanced studies toward careers in government and business which require a background in economic analysis and policy formulation.

Internships and United Nations Program

Special opportunities are provided for internships in public agencies in Stockton, Sacramento, San Francisco and in Washington, D.C. (as well as abroad). Many of these opportunities have a legal focus. Course credit may be earned for these internships.

Pacific students who qualify may take a semester devoted to the study of the United Nations through a cooperative arrangement with Drew University. In this program students spend two days a week at U.N. Headquarters in New York for seminars, observations, and research.

Typical First-Year Program

A recommended pattern of courses for Political Science majors in their first year would include POLS 11-Intro. to Political Science and INTL 77-Contemporary World I in the fall semester, and POLS 41-U.S. Government and Politics in the spring. ECON 55-Intro. Macroeconomics should be taken either in the spring semester of the first year, or the fall semester of the second.

Academic Requirements Political Science

The Bachelor of Arts in Political Science requires 13 courses, six lower-division required core courses, a choice of six courses from approximately 35 upper-division offerings, and one required upper-division seminar. The required core courses are:

POLS 11 Introduction to Political Science
POLS 21 Introduction to Political Theory
POLS 41 U.S. Government and Politics
POLS 51 International Politics
ECON 55 Intro. Macroeconomics
INTL 77 Contemporary World I

Upper-division courses are organized into four areas of concentration, and a student must pass three courses in one of these areas, and one from each of the other three. The areas of concentration are:

I. Political Theory and Methodology
II. Comparative Politics
III. U.S. Government and Politics
IV. International Politics

In addition all majors must complete the Political Science Cap stone seminar, POLS 189.

Political Economy Emphasis

Students interested in an emphasis in Political Economy within the Political Science major should see the departmental adviser for Political Economy, Professor Hatch, about their programs.

Pre-Law Program

The Department of Political Science also offers a program and minor in Pre-Law. For a complete description of that program, please see the section on Cross-Disciplinary Majors and Programs.

Political Science Minor

The department also offers a minor in Political Science. Political Science minors take six courses for a minimum of 21 units, 10 of which must be taken at Pacific. Students taking a minor in Political Science must complete POLS 11, 21 and 51 (or their approved equivalents), and three additional courses in at least two of the four upper-division areas of concentration. The Political Science minor cannot be taken by COP or SIS students who are majoring in International Relations.

Students who wish to minor in Political Science should contact the Chair of Political Science in order to be assigned an adviser from the department for that purpose.

Course Offerings

Lower-Division

POLS 11. Introduction to Political Science (4)
An examination of the basic functions performed by a political system, comparison to the different organizations and procedures societies have developed for handling these functions, and analysis of recurring patterns of political behavior from the level of the individual to that of the nation/state.

POLS 21. Introduction to Political Theory (4)
Analysis of contemporary ideas and theories about the nature of politics and government, what forms of government are most desirable and how politics is best studied, with emphasis on democratic theory and alternatives.

POLS 31. American Democracy (3)
An introduction to American national government. Not open to students who have completed POLS 41 or equivalent. This course

satisfies the state requirement on the U.S. Constitution. It is designed for non-social science majors.

POLS 41. U.S. Government and Politics (4)
An analysis of the constitutional structure of the federal government and its functioning, including the political processes involved. Not open to students who have completed POLS 31 or equivalent. This course satisfies the state requirement on the U.S. Constitution.

POLS 51. International Politics (4)
An introduction to the major issues of international politics and the analytical approaches applied to their study. Included among the topics are: the causes of war, intervention, pursuit of economic prosperity and managing global resources.

POLS 61. Model United Nations I (3)
Background briefing and training on the practical functioning of the United Nations of the Far West. *Pass/No credit only.*

Upper-Division

U.S. Government and Politics

POLS 104. Urban Government (4)
The structure and operation of urban units of government with emphasis on inter-governmental relations in the United States. Problems of finance, adequacy of services and planning for future growth are included.

POLS 106. Calif. Government and Politics (4)
An overview of California governmental structures and selected political, economic and ecological conflicts, both historic and contemporary.

POLS 108. The Legislative Process (4)
Analysis of the legislative process, including powers and functions of Congress, participants in the legislative process, procedures, reorganization and reform.

POLS 110. The U.S. Presidency (4)
Study of the Constitutional foundations of the presidency, structure of the office, executive powers and functions and the presidency as compared with other chief executives.

POLS 114. Interest Group Politics (4)
Analysis of special interest groups (factions), their membership, leadership, goals and tactics in gaining access to authoritative decision makers and their influence in the policy making process.

POLS 118. The Policy Process (4)
Analysis of the public policy process in the United States, from agenda setting and policy formulation to implementation, primarily focusing on the national level of government. *Prerequisites: POLS 11 and 41.*

POLS 120. The Judicial Process (4)
The role, nature and sources of law, the courts and the adversary system; schools of jurisprudence and emphasis on contemporary problems such as reform, the jury system, selection of judges and selected problems.

POLS 122. Constitutional Law (4)
A study of the development of the American Constitutional System through court cases. Law school techniques and methods are stressed.

POLS 124. Constitutional Law: Civil Liberties (4)
The analysis of the rights and guarantees contained in the Bill of Rights and other constitutional and statutory provisions.

POLS 126. Criminal Law (4)
This course focuses on the concepts, principles and problems of substantive criminal law.

POLS 128. The Administrative State (4)
An examination of the administrative arm of government, including discussions on the proper role and organization of public administrative units and empirical explorations of the way administrative units actually operate.

Political Theory and Methodology

POLS 130. Western Political Theory (4)
The nature of political thought from Jewish antiquity to the nineteenth century.

POLS 132. Modern Political Theory (4)
Nineteenth- and 20th Century political theory in the Western developed world.

POLS 133. Quantitative Methods (4)
Quantitative methods and techniques most commonly used in political science and sociology; the use of computers in social research.

POLS 140. Politics and Markets (4)
A study of the role of the state in capitalist and developing societies.

Also:
POLS 160. Theories of International Politic

Comparative Politics

POLS 141. W. European Comparative Politics (4)
Comparative analysis of the political and economic forces that have shaped the advanced industrial states of Western Europe. Issues considered are: 1) state-building, nation-building and industrialization; 2) political and economic reconstruction of France, Great Britain and Germany; 3) contemporary problems facing the advanced capitalist states of Western Europe. *Prerequisite: POLS 11 or permission of the instructor.*

POLS 144. Comparative Politics: Eastern Europe (4)
Comparative analysis of the political systems and dynamics of Russia and the Eastern European countries. *Prerequisite: POLS 11 or permission of the instructor.*

POLS 146. Latin American Politics (4)
A study of the political processes and governmental structures of Latin American states, focusing on Mexico and Brazil, as well as certain other South and Central American countries. Selective attention will be given to the expanding regional and international relations of Latin America.

POLS 148. Politics of the Middle East (4)
Comparative study of contemporary politics in the Middle East, emphasizing the problems of development, and the background, issues and political forces involved in the Arab-Israeli conflict.

POLS 150. Political Development (4)
A general introduction to the problems and politics of post-colonial or lesser developed countries, including case studies from Asia, Africa and Latin America.

POLS 152. Politics of Asia (4)
A general political introduction to modern East, South-East and South Asia including a survey of geography, history and culture. Using selected case studies in all three areas, an exploration of problems of development and modernization, regional interaction and the relation of Asia to the West.

International Politics

POLS 160. Theories of International Politics (4)
Intensive study of the principal analytical and normative theories of international politics and behavior. *Prerequisite: POLS 51 or permission of the instructor.*

POLS 161. Model United Nations II (3)
An advanced leadership experience in the MUN program. *Prerequisite: POLS 61. Pass/No credit only.*

POLS 162. International Organization (4)
Examination of the role of international organization in the contemporary global political system. Major theories and approaches in the field will be studied in conjunction with topics such as interstate conflict and peacekeeping, arms control and

nonproliferation, human rights, economic relations between developed and developing countries, food and nutrition and management of the global commons. *Prerequisite: POLS 51 or permission of the instructor.*

POLS 164. International Political Economy (4)
An examination of the major analytical and substantive issues in the field of international political economy, exploring the political and economic problems generated by growing interdependence among advanced industrial states and the conflicts between industrialized and developing countries over the structure and functioning of the postwar international economic order. *Prerequisite: ECON 55 or permission of the instructor.*

POLS 166. International Conflict and Conflict Management (4)
A study of the sources and nature of conflict and methods of conflict management in the international arena, directed especially to identifying and understanding the kinds and functions of nonviolent conflict management now in use, including international law, international regimes, negotiation and arbitration. *Prerequisite: POLS 51 or permission of the instructor.*

POLS 168. Comparative Foreign Policy (4)
A comparative study of the formulation and execution of foreign policy in a variety of political systems, focusing especially on Russia, China, India, Britain, Japan, France, Germany and the United States. *Prior completion of a basic course in political science is recommended.*

POLS 170. U.S. Foreign Policy (4)
An examination of the major developments in American foreign policy and various analytical approaches to their study. Among the issues considered: isolationism; manifest destiny; the Cold War and containment; Vietnam and Central America; detente and arms control; foreign economic policy; and human rights. *Prerequisite: POLS 11 and 41.*

POLS 172. Inter-American Relations (4)
Regional principles, laws, treaties and agreements; foreign policy formulation; hemispheric organizations; and exploration and analysis of contemporary trends in Latin American international relations.

POLS 189. Capstone Seminar (4)
A seminar focused on recent and significant work in the major political science subfields: American Politics, Political Theory and Methodology, Comparative Politics, and International Politics. *Prerequisite: Open to majors in Political Science with senior standing only, or by permission of the instructor.*

POLS 191. Independent Study (2-4)
Open only to political science majors with a "B" average in their work in political science.

POLS 193. Special Topics (4)

Psychology

Professors: Beauchamp (Chair), Hannon, Howells, Katz, Matheson
Assistant Professors: Rashid, Wilder
Adjunct Professors: Davis, Dinwiddie, Gonzales, Hall, Heine, O'Brien
Department Phone: 209 946-2133
Website: www.uop.edu/cop/psychology

The programs of study offered by the Psychology Department are designed to help the student understand the behavior of human beings and other organisms. Whether it's a high school student trying to solve mathematics problems or a puppy learning to retrieve, behavior is a complicated subject. As a result, there are many ways to understand it. Behavioral variety is reflected in both the course offerings of our department and in the interests of the faculty. Students may study child-abusing parents, children learning moral concepts, high school students who are in love, anxious adults, and people who have disorders such as hypertension and chronic pain, all in one academic year.

This diversity of interests and activities is tied together by the faculty's commitment to scientific inquiry. Throughout their coursework, students learn how to answer questions about behavior through empirical research and theoretical analysis.

Several objectives can be met by studying psychology at the University, including increased understanding of behavior, career preparation and post-graduate studies preparation.

Increased Understanding of Your Own and Others' Behavior

Students interested in a liberal arts education may satisfy a desire for a better understanding of themselves and others through a major in psychology. The diversity of course, fieldwork and internship offerings provides the student with opportunities to study and have first-hand experience with a wide range of human behaviors and problems. Beyond personal development, the knowledge and skills acquired from this approach to the major have application to a wide variety of activities that students may find themselves engaged in following graduation, including business, sports, and the arts.

Career Preparation

The department is relatively unique in offering programs of study that provide the psychology major with psychology-related employment opportunities directly upon receiving the Bachelor's degree. This involves specialization in a) applied behavior analysis which provides the student with skills to work with a variety of disabled populations and interpersonal skill problems, or b) applications in business which provides the student, in cooperation with the School of Business, with skills in the use of psychological approaches such as behavior analysis in the personnel, training and performance management areas of business and government.

Graduate and Professional School Preparation

Students interested in entering Masters and Doctoral programs in psychology or professional schools such as law and medicine have the opportunity to pursue an intensive series of course, practicum and research experiences that can significantly improve their chances of admission and later achievement. The program provides the student with research and hands-on experience as early as the freshman year, so that by the time of graduation a student may have authored or co-authored research papers and worked with a wide range of applied problems.

Whatever objectives students may select, they will find that the department provides much more than traditional in-classroom instruction. There are opportunities for direct work with children and adults in a number of community agencies, institutions and businesses. Research experience is encouraged through one or more of the several ongoing research projects, and many courses have laboratory and fieldwork experiences associated with them. As a result, the student can become a part of the continuing work of psychology.

Core Curriculum

All students majoring in psychology must complete the following five courses:

PSYC 31	Introduction to Psychology
PSYC 53	Behavior Change I
PSYC 103	Statistical Inference in Behavioral Sciences or
MATH 35	Elementary Statistical Inference

PSYC 105 Experimental Psychology
PSYC 125 History and Systems of Psychology
Plus one laboratory research course to be chosen from the following:

PSYC 107 Psychology of Learning
PSYC 109 Physiological Psychology

Plus one field research course to be chosen from the following:

PSYC 129 Developmental Psychology
PSYC 169 Social Psychology
Plus three other courses counting toward the major and selected according to the interests of the student in consultation with an adviser in the department. Psychology majors are also strongly encouraged to take one course in PSYC 197-Independent Research, PSYC 87/187-Internship or PSYC 89/189-Practicum. In total, the Psychology major must take at least 10 letter-graded courses (40 units) in psychology. More psychology courses may be taken, up to a total of 60 units (including transferred courses), if the student so desires. Majors must accumulate at least a 2.0 GPA in all letter-graded University of the Pacific psychology courses.

Requirements for the Minor

A minor in psychology requires completion of PSYC 53, PSYC 103 or MATH 35, and three nontransferred upper-division courses (numbered 100 or above) selected in consultation with the minor adviser. Completion of a minimum of 20 units is required for the minor. Fieldwork, practicum, and internship courses do not count toward completion of the minor. Courses completed with grades below C- are not accepted toward completion of the minor. Students must maintain a 2.0 GPA in minor courses.

Typical First Year Program

Complete PSYC 31 and PSYC 53.

Complete the basic mathematics skills requirement (if not met by Mathematics Placement Test).

In selecting courses to meet GE requirements, try to choose from the Biology, Literature, Mathematics and Philosophy offerings.

Academic Structure

Increased Understanding of Your Own and Others' Behavior

In addition to the seven courses specified for the major, three other psychology courses are selected according to the interests of the student and in consultation with an adviser in the department. The liberal arts student may concentrate in such sub-fields of psychology as experimental, developmental, personality and social psychology.

Career Preparation - Applied Behavior Analysis

Students selecting the applied behavior analysis program are required to complete the courses specified for the major, plus advised to complete the following: PSYC 153-Behavior Change II, PSYC 158-Behavioral Assessment, and PSYC 160-Behavioral Analysis in Organizations. The behavior analysis program trains the student in four skill areas: a) academic mastery of the content of behavior analysis; b) learning how to apply behavioral techniques such as observation, reinforcement and data analysis; c) developing and implementing behavior analysis programs; and d) interacting effectively with community and social service agencies.

Career Preparation - Applications in Business

A student interested in the applications of psychology in business settings is required to complete all requirements for a psychology major. In addition, a selection of six courses in business is recommended. The specific courses should be selected in consultation with your adviser. Relevant courses from which to select include the following (see course listings under Eberhardt School of Business for prerequisites required for each course):

BUSI 31 Principles of Financial Accounting
BUSI 107 Marketing Management
BUSI 109 Management and Organizational Behavior
BUSI 134 Conflict Management
BUSI 141 Marketing Research
BUSI 147 Consumer Behavior
BUSI 170 Human Resources Management
BUSI 173 Designing Effective Organizations
BUSI 175 Leadership and Change
Students should also take PSYC 89-Internship or PSYC 87-Practicum courses in a business setting.

Graduate and Professional School Preparation

Students planning to do graduate study in psychology or to use psychology as a basis for advanced professional study would take the following sequence of courses in addition to the major requirements: PSYC 197-Independent Research, MATH 130-Topics in Applied Statistics and PSYC 183-Research Design. It is strongly recommended that major courses include a representation of the basic sub-fields of psychology as well as additional PSYC 197-Independent Research and PSYC 87-Practicum courses. Options including both psychology and other courses provide the student with coursework as well as research and applied experience appropriate to graduate study in all areas of psychology, as well as professional study in education, social work, medicine, law and dentistry. An advanced Clinical Intern program is open to qualified seniors which provides clinical experience in the Behavioral Medicine Clinic.

Course Offerings

PSYC 29. Child Development (4)

An introduction to and an overview of human structural and behavioral change from conception through adolescence. The emphasis is on normal processes and patterns of development, research-based information about these patterns and processes, associated theories of human development which emphasize infant and child behavior and the continuities between child and adult behaviors. Practical application of principles is stressed. Limited field observations of young children are required. *No prerequisites. Recommended for sophomores. Does not count toward major.*

PSYC 31. Introduction to Psychology (4)

An introduction to the following areas of psychology: 1) history and systems of psychology; 2) experimental methods in psychology; 3) psychology of learning; 4) verbal learning and memory; 5) child and developmental psychology; 6) motivation; 7) personality; 8) abnormal psychology; 9) perception and sensory psychology; 10) physiological psychology; and 11) behavioral medicine. *Required for psychology majors; recommended in freshman year.*

PSYC 53. Behavior Change I (4)

An introduction to behavior analysis and therapy. Stresses the application of behavior change principles to oneself and to a variety of problems and populations. Students will be taught to observe and measure behavior and to implement and evaluate behavior change interventions. Three hours per week in training settings are required in addition to class meetings. Supervision of undergraduate students will be provided by the instructor and graduate students. *No prerequisites. Required for psychology majors; recommended for freshmen.*

PSYC 66. Human Sexuality (4)

Study of the biological, psychological and cultural bases of human sexual behavior.

Topics will include female and male sexual anatomy and physiology; love and communication; sexual behavior patterns; homosexuality and bisexuality; contraception, pregnancy and childbirth; sexual difficulties and sex therapy; and sexually transmitted diseases. Reviews changes in sexual functioning throughout the life span. Explores the development of male and female gender roles and the effect of gender roles on various aspects of life. *No prerequisites. Open to freshmen. Does not count toward major.*

PSYC 87, 187. Internship (2 or 4, 2 or 4)
Experiences in a work setting, to be contracted on an individual basis. PSYC 187 represents advanced internship work involving increased independence and responsibility. Students may register for only one course listed below in any semester and may receive no more than four units of credit for any of these courses. *Pass/No Credit grading only.*

PSYC 87a, 187a. Business and Industrial Internship
Supervised experience in performance management and training in business and industrial settings.

PSYC 87b, 187b. Developmental Disabilities Internship
Supervised experience in agencies providing services to the developmentally disabled.

PSYC 87c, 187c. Educational/Training Internship
Supervised experience in educational and training institutions and agencies.

PSYC 87d, 187d. Human Development and Family Intervention Internship
Supervised experience in family, social welfare, educational or correctional settings concerned with the development of physically disabled young people, socially deviant young people and/or physically and socially normal young people.

PSYC 87e, 187e. Mental Disabilities Internship
Supervised experience in agencies providing services to the mentally disabled.

PSYC 87f, 187f. Autism Internship
Supervised experience working with autistic children. *Prerequisite: PSYC 53.*

PSYC 89, 189. Practicum (2 or 4, 2 or 4)
Non-classroom experiences in activities related to the curriculum under conditions determined by the appropriate faculty member. PSYC 189 represents advanced practicum work involving increased independence and responsibility. Students may register for only one course listed below in any semester and may receive no more than four units of credit for any of these courses. Pass/No credit grading only.

PSYC 89a, 189a. Applied Psychology Practicum
Students will acquire skills necessary to the application of principles of general psychology to solve personal, organizational and social problems while serving as assistants to faculty and professional psychologists.

PSYC 89b, 189b. Clinical Aide Practicum
Students will acquire skills necessary to work with clients in behavior change settings while assigned as assistants to clinical treatment professionals.

PSYC 89c, 189c. Laboratory Technology Practicum
Students will acquire skills in the use and design of laboratory instrumentation for psychological research while assigned as assistants to faculty conducting laboratory research.

PSYC 89d, 189d. Research Assistantship Practicum
Students will acquire skills in the design and implementation of psychological research while serving as assistants to faculty conducting research projects.

PSYC 89e, 189e. Teaching of Psychology Practicum
Students will acquire skills in the development and use of Personalized Systems of Instruction, discussion groups or laboratories while serving as assistants to faculty teaching departmental courses.

PSYC 103. Statistical Inference in Behavioral Sciences (4)
The applications and limitations of statistical methods of inference in behavioral research. Topics include measurement, data collection, parameter estimation and confidence intervals, hypothesis testing, Type I and Type II errors and power. Parametric and non-parametric data analysis techniques and graphic analysis will be studied, including chi square, t-test and analysis of variance. Students will learn how to use "eyeball" estimation procedures to facilitate understanding of statistical concepts, and how to use spread sheet and statistical computer programs for data analysis. *Prerequisite: MATH 3 or appropriate score on the Mathematics Placement Test. PSYC 103 (or MATH 35) required for psychology majors; recommended in sophomore year.*

PSYC 105. Experimental Psychology (5)
Introduction to research methodology in the field of psychology. The course covers experimental design and statistical analysis appropriate to various designs. Conducting reviews of research literature, writing research proposals and reports, and research ethics will be covered. All students will do word processing and statistical analysis using computer programs. All students complete an individual experimental research project. *Prerequisite PSYC 103 or MATH 35. Required for psychology majors; recommended in sophomore year; not open to freshmen.*

PSYC 107. Psychology of Learning (4)
Explanation and prediction of behavior change in humans and animals in terms of simple learning processes. Emphasis on theoretical interpretation of learning phenomena.

PSYC 109. Physiological Psychology (4)
Study of the relationship between behavior and the structure and functioning of the nervous system. Both theoretical research and clinical applications helpful in understanding human behavior are emphasized in lecture and in laboratory exercises. *Prerequisite: PSYC 105 or permission of the instructor.*

PSYC 110. Psychoactive Drugs and Behavior (4)
An intensive study of how drugs affect psychological processes and behavior, covering neuroanatomy, neuron physiology, basic psychopharmacological terminology, commonly used and recreational drugs, major psychotherapeutic drugs and the interaction between drug treatments and various psychotherapeutic and behavior change techniques. *Not open to freshmen.*

PSYC 111. Abnormal Psychology (4)
Study of the etiology, classification and treatment of abnormal behavior. *Not open to freshmen.*

PSYC 125. History and Systems of Psychology (4)
A survey of the history of the various systems and schools of psychology with emphasis upon the interaction of experimentation, observation (empirical contributions) and speculation (theory building) in the development of modern psychology. Required for psychology majors. *Prerequisite: junior standing and PSYC 105 or permission of the instructor.*

PSYC 129. Developmental Psychology (4)
Comparison of major models and specific theories of the development of behavior.

Overview of research methodology including those methods particularly appropriate to the study of developmental phenomena. Major emphasis on current empirical theory and data about child development. Completion of a child research study. *Prerequisite: PSYC 105 or equivalent.*

PSYC 131. Adolescence and Young Adulthood (4)
A psychosocial examination of the transition from childhood to adulthood. Topics include: conceptual issues and moral development, sexual and personality changes, role conflicts and problems unique to adolescence. Material has been selected to be of interest both to majors who plan to work with adolescents and to students who want to better understand their own life cycle phase or their future role as parents of adolescents. *Prerequisite: sophomore standing or above.*

PSYC 133. Adulthood and Aging (4)
This course provides an overview of developmental issues occurring in the adult and aging population. Topics covered include developmental theories, research techniques, and biological, psychological, and sociological aspects of aging. Some emphasis will be placed on providing psychological services to the aging population. Some field experiences in nursing homes will be part of the course. *Prerequisite: sophomore standing or above.*

PSYC 153. Behavior Change II (4)
A sequel to Behavior Change I that focuses on contemporary issues in behavioral research and treatment. A major goal of the class is to expand students' horizons regarding the range of applications of behavioral techniques. In addition, students will develop an in-depth knowledge in a specialty area of their choosing. Practicum work culminating in an applied research project is a requirement of the class. *Prerequisite: PSYC 53.*

PSYC 154/254. Child Mental Health (4)
A study of the causal factors related to the development of mental health problems in children, with an emphasis on the behavioral learning histories and cognitive behavioral patterns associated with specific disorders. Socio-cultural contributions to mental health are also stressed. Behavioral and cognitive behavioral techniques are presented that are used to treat disorders commonly diagnosed in childhood. Students also learn strategies for communicating with children. *Prerequisite: PSYC 53.*

PSYC 155/255. Marital and Family Therapy (4)
An introduction to marital and family therapy theory and practice. Cognitive behaviorism is used as the foundation, and students also learn a broad systems perspective. Students are familiarized with the predominant family therapy styles in current use, as well as numerous family therapy strategies. Students take part in frequent role-play activities, acting the parts of families and family therapists. *Prerequisite: PSYC 53.*

PSYC 156/256. Behavioral Medicine/Health Psychology (4)
A survey class on the overlapping fields of behavioral medicine and healthy psychology. Covers current applications of cognitive-behavioral treatments for a number of chronic diseases, among them chronic pain, cancer, heart disease, arthritis, AIDS, and obesity. Includes discussion of changing disease patterns, psycho-neuro-immunology, the stress-illness connection, the disease-prone personality, medical compliance, disease schemas, and the role of the doctor-patient relationship in achieving desired medical outcomes. *Prerequisite: PSYC 53.*

PSYC 158/258. Behavioral Assessment (4)
An overview of behavioral assessment techniques. Specific topics to be covered include data collection, inter-observer agreement, social validity, treatment integrity, functional assessment, stimulus preference assessment, indirect assessment techniques, and psychometric assessment procedures. *Prerequisite: PSYC 53.*

PSYC 160/260. Behavior Analysis in Organizations (4)
Covers the application of basic principles of behavior in business, industrial, and organizational settings. Student will learn to apply fundamental principles of behavior analysis to solve organizational problems such as training, safety, productivity, and quality deficits. In-depth examination of performance-based pay systems and participative/open-book management is also included. *Prerequisite: PSYC 53.*

PSYC 166. Psychology of Personality (4)
A survey of contemporary personality theories and research. Issues in personality assessment will also be covered. The course is for upper division psychology majors and will be taught as a seminar. *Prerequisites: PSYC 105 and 111.*

PSYC 167. Psychology and the Law (4)
An examination of the role of psychology and psychologists in the judicial system. Topics include the selection of jurors, accuracy and impact of eyewitness testimony, biases of investigative and identification methods, insanity and competency to stand trial, hypnosis and lie detection, expert psychological testimony, effects of post-traumatic stress, abuse, and neglect, and predictions of dangerousness. Students will regularly attend actual trials in lieu of discussion periods.

PSYC 169. Social Psychology (4)
A study of the interaction of social and psychological factors (how psychological factors affect group behavior and how social factors affect individual behavior). This course is primarily for psychology majors and is taught with an emphasis on research methods in social psychology. *Prerequisite: MATH 35 or PSYC 103 or equivalent.*

PSYC 175/275. Behavioral Medicine: Clinical Psychophysiology (4)
Current trends in clinical psychophysiology, emphasizing applications of biofeedback to behavioral medicine. Students complete: a) 15 hours of supervised training in the use of biofeedback and psychophysiology instrumentation including EMG, EKG, peripheral skin temperature, electrodermal response, respiration and EEG; b) 10 hours of personal biofeedback training with a certified supervisor; c) minimum of 30 hours of observation in a clinical experience utilizing clinic referrals with psychophysiological disorders; d) co-therapy (with instructor) clinical case studies using appropriate data-based clinical methods. *Prerequisite: PSYC 105 or permission of the instructor.*

PSYC 177. Psychological Stress (4)
An examination of the social and psychological factors that produce stress in individuals and the patterns of behavior which result. The major current theoretical and research areas are reviewed with an emphasis on cognitive models. Approaches to stress management are briefly reviewed. Students are made aware of how personality, thoughts, life style and other factors affect their ability to cope with stress and chronic disease patterns in later life.

PSYC 183/283. Research Design (4)
Design and analysis of research using single subjects and groups. *Prerequisites: PSYC 103 and 105, and permission of the instructor.*

PSYC 185A/185B. Psychology Clinic Internship (2)
Clinic internship experience in the Pacific Psychology Clinic. Undergraduate psychology majors selected competitively work alongside Psychology graduate students doing clinical services (therapy, psychology/forensic testing, biofeedback, and behavioral assessment and intervention) under intensive supervision, with children and adults. Students must commit to enrolling in both fall and spring semesters.

PSYC 191. Independent Study (2-4)

PSYC 193. Special Topics (4)

PSYC 195. Seminar (4)

PSYC 197. Independent Research (2 or 4)

PSYC 220. Clinical Neuropsychology (4)
This course focuses on the relationship between human brain functioning and behavioral/psychological functioning. The primary emphasis is on the diagnosis and treatment of brain dysfunction in humans. Methods of evaluating clients for the presence of various types of brain dysfunction using psychological testing are studied in depth, along with corresponding neuroanatomy and neuropathology. Research techniques for developing a clearer understanding of both normal and abnormal brain functioning is studied. *Prerequisite: PSYC 109 or permission of the instructor.*

PSYC 251. Behavioral Treatments/ Applications (4)
An overview of behavior therapy, behavior modification and cognitive social learning techniques for behavioral change and assessment. Interviewing skills, rapport building and ethical legal factors related to behavioral intervention are covered, as are current empirically validated treatments for various clinical disorders.

PSYC 285a. Clinical Internship I (2)
Clinical experience in the University of the Pacific Psychology Clinic. Introduction to ethics, malpractice issues and patient management. Familiarization and practice in the administration, scoring, and interpretation of basic psychological tests, including intelligence tests for children, achievement tests, psychiatric scales and various behavior rating scales. Interviewing and establishing therapeutic relationships with adults, adolescents, and children. Intern begins by observation of faculty and advanced graduate students, and progresses to interviewing and administering psychological tests under supervision. Students who have completed or are concurrently enrolled in PSYC 175/275 will also work on cases involving biofeedback. *Prerequisite: Open only to graduate students; by permission only.*

PSYC 285b. Clinical Internship II (2)
Clinical experience in the University of the Pacific Psychology Clinic. Familiarization and practice in the administration, scoring, and interpretation of basic psychological tests, including intelligence tests for adults and pre-schoolers, projective tests, language scales, psychiatric scales, personality inventories and various behavior rating scales. Interviewing and testing skills with adults, adolescents and children are practiced and refined. Intern assumes more responsibility in interviewing and administering psychological tests under supervision, and practices writing psychological evaluation reports. Interns are assigned psychotherapy cases under supervision. Students who have completed PSYC 175/275 will also work on cases involving biofeedback. *Prerequisite: Open only to graduate students; permission of the instructor.*

PSYC 291. Independent Graduate Study (2-4)

PSYC 293. Special Topics (4)

PSYC 295. Graduate Seminar in Psychology (4)

PSYC 297. Independent Graduate Research (2 or 4)

PSYC 299. Thesis (2 or 4)

Religious Studies

Professor: Schedler (Chair)
Associate Professor: Randels
Assistant Professor: Storch
Visiting Lecturer: Gwasdoff
Department Phone: (209) 946-2161

The Department of Religious Studies emphasizes the role of religion in human experience, thought, and action. Religion has been and continues to be a major factor in the development of cultures and institutions, and is significant to individuals as they examine ultimate questions and how they should live. Citizen-leaders thus need an understanding of religion. To this end, the department seeks to introduce students to the world's major religious traditions and to religious perspectives on cultural and ethical issues. A typical course in Religious Studies includes students from a variety of backgrounds and academic disciplines, thereby affording significant opportunity for interdisciplinary discussion of religious questions.

Career Opportunities

A major in Religious Studies provides groundwork for students to be citizen-leaders in various careers. These include ministry or a church-related vocation, teaching, journalism, publishing, film, law, government, business, non-profit organizations, social work, nursing, and medicine. A minor in Religious Studies can also provide groundwork for these careers while supplementing a student's major field of study.

Requirements for the Major in Religious Studies

The Religious Studies major can be earned through one of three tracks: Ethics and Society, Religion and Culture, and World Religions. All students majoring in Religious Studies would take nine courses appropriate to their track. In addition to the required course in Biblical Studies and the Religious Studies Seminar, students must take three courses in a particular track, one other elective course outside of their track, and two courses outside the department appropriate to their track. These latter two courses will be chosen in consultation with a faculty adviser. Students could earn credit toward a major or minor in another department while fulfilling the requirements for a Religious Studies major.

Minor in Religious Studies

A minor in Religious Studies requires five courses (a minimum of 20 units) in the department: Biblical Studies, World Religions, Social Ethics and two electives.

Note: No more than four units will be accepted as transfer units in completing the minor.

Course Offerings

Required for All Majors

RELI 23. Biblical Studies (4)
Introductory course in Biblical Studies. Content of course will vary depending on professor teaching the course. For example, may concentrate on Hebrew Bible or New Testament. Approaches also may vary: historical, critical, literary, or thematic (e.g. Prophets of Hebrew Bible or Epistles of Paul). Check with the department for focus during any specific semester.

RELI 34. Introduction to Religion (4)
What is religion? Is it a belief in God? Is it a realization of the limits of human powers? Is it a set of moral laws and regulations, or all of the above? But how about religions which do not have moral laws? How about religions where there is no God? Then, what is religion,

indeed? This course will explore the beginning of human activities associated with religion such as calendars and myths. Then, it will move on to its more pronounced forms such as rituals of birth, death, hunting and healing known in Neolithic cultures. It will then discuss the main world religions which have evolved from these initial religious impulses. Methods by which scholars study religions, impacts which religious beliefs had upon human societies and the future of human spirituality present another set of problems which will be dealt with in the progression of this course.

RELI 196. Religious Studies Seminar (4)
Capstone seminar for majors with all departmental faculty, usually under the supervision of the Department Chair. Focus of the study will vary from year to year according to interests of faculty and students (e.g. Medical Ethics or Protestant Reformation or Christian Church Fathers or Buddhism & Christianity).

Track I: Ethics and Society

RELI 43. Social Ethics (4)
This course will examine several contemporary problems in social ethics from the standpoint of religious traditions and philosophical perspectives. It will introduce ethical and religious concepts and consider such issues as affirmative action, pacifism and just war, civil disobedience, and capital punishment. We will discuss what selected thinkers say about such issues, and how they reach their conclusions in light of their theological, philosophical, and anthropological convictions.

RELI 44. Sex, Sin, and Salvation (4)
This course will explore and analyze sexuality and gender in terms of ethics and religion. The course will focus on historical and contemporary Christian perspectives, with some attention to other religious traditions and philosophical perspectives. Topics will include such issues as sexual ethics, homosexuality, sexuality and spirituality, gender roles and connections between gender and ethical perspectives.

RELI 140. Religion and Politics (4)
This course will explore the relationships between religious convictions and political thought and action. The course will concentrate on selected eastern or western religious traditions. Topics of discussion may include the state, individual liberty, economics, and war. Readings will introduce historical and contemporary religious and philosophical perspectives.

RELI 142. Ethics and Capitalism (4)
This course will critically examine some of the social, ethical, economic, and religious foundations of business activity, and consider some of the contemporary problems with, and possibilities for, business practice. Course topics may include: an historical analysis of the rise of capitalism; religious views of economics and responses to capitalism; the role of business in the larger society; the relationship between the individual and the organization; and the prospects for human community in a capitalist system.

RELI 145. Biomedical Ethics (4)
A study of the complex issues emerging from the revolutionary developments in biology and medicine, including human experimentation, abortion, genetic manipulation, in vitro fertilization, death and dying, health care delivery, and organ transplants.

RELI 146. Technology, Ethics, & Religion (4)
This course will offer historic, philosophical, and religious perspectives on science and technology. It will endeavor to help students understand the impact of science and technology on our moral and religious traditions and institutions, and how those traditions and institutions in turn impact science and technology. It will consider how technology addresses social problems, and the benefits, possibilities, and further problems that it produces.

Track II: Religion and Culture

RELI 70. Religion and American Culture (4)
An examination of the way in which religion has contributed to the shaping of American political, social and cultural life, and the way in which the American experience has in turn shaped religion. It will move from the colonial experience through the "great awakenings," to the emergence of new religions and cults, the revolutions of the sixties, the revival of conservative Christianity in the American political spectrum and ecology as the "new awakening."

RELI 74. Autobiography and Religion (4)
A reading course in autobiographies written by religious searchers in both the Western and Eastern traditions. Authors studied will include: Augustine, Mohandas Gandhi, Malcolm X, Paramahansa Yogananda, Nikos Kazantzakis, Alan Watts and Carl Gustav Jung. An attempt to assess the religious meaning in the life history of spiritual seekers from ancient times to the present, from India to England, from Crete to Harlem, U.S.A. Will include discussions of Christianity, Hinduism, Nation of Islam, religious archetypes, and the spiritual odyssey of "secular saints."

RELI 170. Religion and Modern Literature (4)
An analysis of religious questions and themes in contemporary European and American literature. Authors read will include D. H. Lawrence, Graham Greene, Friedrich Nietzsche, William Faulkner, Kurt Vonnegut, and Flannery O'Connor.

RELI 171. Religion and Cinema (4)
A study of the way religious ideas, institutions and figures are presented on film. The course involves screening and analyzing a variety of films. The scope of the course will be international and intercultural, but the majority of the images will inevitably be Western. The course intends to demonstrate the power of cinematic images to define, enrich and sometimes pervert the religious sensibility.

RELI 172. Biblical Themes in Literature (4)
A reading course in the Bible and the ways in which Biblical themes have informed representative texts in Western literature. A comparison of the Biblical world view with that of later ages by reading such authors as Dante, Camus, Hemingway, and John Updike.

RELI 174. Religious Images in Poetry (4)
The study of poetry written in English in the Western world from the Renaissance until the present whose primary images raise religious questions. Authors studied will include John Donne, George Herbert, William Blake, Gerald Manley Hopkins, T. S. Eliot, Wallace Stevens, Theodore Roethke, and other contemporary poets. An attempt to assess the images of affirmation and transcendence - with close attention to stylistic successes. We will read these authors in historical sequence and trace the various cultural, theological, and psychological changes evident in poetry during the past several centuries.

Track III: World Religions

RELI 27. Life and Teachings of Jesus (4)
An encounter with the life, teachings, and influence of Jesus of Nazareth as recorded in the Five Gospels (Mark, Matthew, Luke, John, plus Thomas). We will study Jesus as interpreted by cultic communities, imagined in literature and painting, dramatized in theater, celebrated in music, depicted in film, and downloaded off the Internet. This course will include work of the controversial Jesus Seminar and its conversative critics, and will

treat the Quest for the Historical Jesus (from Schweitzer to Dominic Crossan) as an adventure, not a heresy.

RELI 35. Judaism (4)
A basic introduction to Judaism covering its history, beliefs and customs with an emphasis on understanding the Jews of today. (Supported by grants from the Jewish Chautauqua Society and from Temple Israel.)

RELI 130. The Christian Tradition (4)
An historical and theological analysis of Christian thought from its origins in Greek and Hebrew culture through the Reformation Era and culminating in issues of theological reinterpretation for the 21st century.

RELI 134. World Religions (4)
An examination of fundamental religious questions as developed in major religions of the world including primal religious experiences in African, Australian and Native American traditions. Also special attention to Islam, in context with other Abrahamic traditions, as the fastest growing religion in the world. Some attention will be given to historical development and to major personalities, but attention will center on the religious questions as developed in each religious system.

RELI 135. Asian Religious Traditions (4)
A study of the traditional religions of India, China, Tibet and Japan, attempting to delineate the spirituality, beauty, and wisdom of these traditions. It will trace the rich historical and cultural heritages of Hinduism, Buddhism, and Confucianism, the Taoist ways of achieving harmony in the world, and the melding of nature and ritual life in Shinto. Each semester one or two of these religions will be studied in depth to investigate how they influence society, politics and culture in the countries where they spread. The academic approach is supplemented by practical learning of meditation, energy-regulations and ritual.

Special Areas

RELI 87. Internship

RELI 191. Independent Study

RELI 193. Special Topics

Sociology

Professors: Childs, Lewis (Chair), J. Phillips, H. Williams
Associate Professor: Darlington
Assistant Professor: B. West
Department Phone: (209) 946-2101
Website: jarl.cs.uop.edu/cop/sociology

Sociology offers students an understanding of social structure and interaction and an appreciation of the complexities of human societies, large and small. The program provides a groundwork for careers in areas as diverse as criminal justice, law, journalism, social services, urban planning, government, education and business. Specialized courses prepare students who seek a professional career in sociology to pursue graduate studies. Students are encouraged to work closely with the faculty in developing programs best suited to their career goals. Whatever their emphasis may be, all students of sociology should acquire an appreciation of the manifestations of the human spirit and its milieu.

Career Opportunities

Undergraduate study in sociology leads to employment in a very wide variety of careers. Many take positions in the social services or social work, education, governmental administration and planning, the criminal justice system or public health. Others have gone into the business world or international affairs. Study in sociology provides an excellent base for further study in law, business administration, government, public health, urban planning and similar fields.

Typical First-Year Program

Students majoring in Sociology should use their freshman year to build a strong liberal arts background. The major program has been developed so that it can be completed within a minimum period of two years. Students wanting to explore interests in a sociology major may want to take any of several sociology courses included in the General Education Program. First-year students in the major begin with SOCI 71, Foundations of Sociology and SOCI 79,Social Psychology. A typical first-year program in the major might look like this:

Fall: SOCI 71-Foundations of Sociology (4)
SOCI 79-Social Psychology (4)
General Education or Mentor Seminar I (4)
General Education (perhaps U.S. History, or History of Western Civilization) (4)

Spring: SOCI 175-Social Research Methods (4)
SOCI 177-Organizations and Social Structure (4)
General Education (perhaps MATH 35 or MATH 37) (4)
General Education (4)

Academic Requirements

The completion of a minimum of ten courses and 40 units is required for the major.

Core Curriculum

SOCI 71 Foundations of Sociology
SOCI 79 Social Psychology
SOCI 175 Social Research Methods
SOCI 177 Organizations and Social Structure
SOCI 173 Theories of Society and Culture

SOCI 71 and SOCI 79 are strongly recommended prior to SOCI 175 and SOCI 177. SOCI 173 is strongly recommended as the final course in the core sequence and should be taken no later than the fall semester of the senior year. Majors must also complete the major statistics requirement by taking SOCI 171-Quantitative Methods in the Social Sciences or POLS 133 or an approved course in statistics from another department. To complete the requirements for the major, students must take a minimum of four additional courses in sociology. In most cases, these additional courses form one of the following emphases (see further below):

Criminal Justice
Cultural Sociology
Social Services

Majors may elect to develop their own coherent emphasis program in consultation with their faculty adviser. Work toward the major will normally include no more than two courses transferred from another institution and no more than two introductory level non-required courses. Additional sociology courses may be taken for breadth or to meet other student aims, up to a total of 60 units (including transferred courses). Students majoring in sociology are strongly advised to take one or more courses, which build skills in writing, oral communication and computer use.

Criminal Justice Emphasis

The criminal justice emphasis provides students with an opportunity to examine thinking regarding the causation and control of crime as well as to observe directly the functioning of contemporary crime control agencies. This emphasis is intended for students interested in a career in the field, and for students who wish to concentrate their studies on a subject that has important policy implications and which represents much of the best that sociology has to offer. Students electing

the criminal justice emphasis will take:

SOCI 132 Corrections
SOCI 133 Criminology
SOCI 135 Deviant Behavior
SOCI 187 Fieldwork

Social Services Emphasis

The social services emphasis allows the student to gain an understanding of the sociological perspective as it applies to the organization, delivery and evaluation of social service programs. Students completing this emphasis will combine classroom work with field experience in agencies which deal with child abuse, care of the elderly, poverty, physical handicaps, drug abuse and other problem areas. This program is designed for all students who are interested in the helping professions. It may serve as preparation for entry level positions in social service agencies, or for students contemplating graduate work in social work. Students pursuing the social service emphasis will complete:

SOCI 81 Introduction to Social Services
SOCI 181 Delivery of Social Services
and two courses from among the following:
SOCI 61 Social Problems and Policy
SOCI 125 Health and Illness
SOCI 127 Family and Marriage
SOCI 187 Fieldwork

Cultural Sociology Emphasis

The cultural sociology emphasis focuses upon the cultural processes and meanings that are central to every sphere of contemporary life. Students choosing this emphasis will be exposed to the basic issues and frameworks used for understanding culture and to some of the significant research in the field. The emphasis has been designed to facilitate awareness, identification and analysis of cultural processes and meanings, in order to allow students to become more effective in the increasingly multi-cultural environments of contemporary world, whether these be in the areas of government, commerce or community service. Students electing the cultural sociology emphasis will choose one course in each of the three areas, and a fourth course from any of the three areas. The areas and courses are:

Macro Cultural Concerns
SOCI 114 Social and Cultural Change
SOCI 110 Religion and Society
ANTH 53 Cultural Anthropology Mass
Mediated Culture
SOCI 104 Sociology of Sport
SOCI 106 Culture and Society
Culture and Identity
SOCI 108 Food and Culture
SOCI 123 Sex and Gender

Requirements for the Minor

Minor in Sociology

The sociology minor consists of five courses (20 units). It is designed to provide a general introduction to the field and a broad overview of social interaction and structure. Students are required to work closely with a minor adviser in constructing a coherent course of study that includes:

SOCI 71 Foundations of Sociology
SOCI 175 Social Research Methods.
Additionally, students must take one course dealing with social structural analysis and another dealing with social psychological analysis selected with the approval of the minor adviser, and a fifth approved elective in sociology which complements the program of study.

Course Offerings

Introductory Courses

SOCI 51. Introduction to Sociology (4)
An introduction to the field of sociology with an emphasis upon study of the basic concepts of sociological analysis, their use in the understanding of major institutions and the trends and problems associated with the urban, industrial and political developments in contemporary society.

SOCI 61. Urban Society and Policy (4)
An issue oriented introduction to the study of cities and urban life emphasizing the evolution of cities in American society and consideration of issues related to social diversity, inequality, the quality of urban life, and selected urban problems. Exploration of the applicability of sociological concepts and theories in strengthening social institutions, developing neighborhoods and communities, and achieving social change. *No prerequisites; recommended for freshman.*

SOCI 81. Introduction to Social Services (4)
An introduction to the field of social services. Students will learn and utilize sociological methods to understand the ways in which societies attempt to deal with problems of individuals and groups in need of services, identification of client population, agency organization, competition, funding, program design and evaluation. This course combines classroom work with field-work in both public and private agencies.

SOCI 93. Special Topics (lower level) (4)

Other Offerings

SOCI 104. Sociology of Sport (4)
An examination of the institution of sport from a sociological perspective. Theories of sport and related empirical data are analyzed. Special attention will be devoted to the impact of sport on education, racial discrimination in sport and theories of play. *Prerequisite: a course in sociology.*

SOCI 106. Culture and Society (4)
An examination of cultural artifacts and their various linkages with contemporary social structure. Topics examined include: the cultural creator and social restraints; the development and forms of popular cultural industries; cultural diffusion and the differential consumption of cultural artifacts as viewed from the perspective of both social stratification and social differentiation; cross-cultural diffusion of culture.

SOCI 108. Food, Culture and Society (4)
A focus on the role of food in society, with an emphasis on understanding food in its social and cultural contexts. Topics covered include food and nutrition; problems of over- and under-eating; food fads; food sacrifices and taboos; food and social and ethnic identity; and the global politics of food. Although beginning with a look at American food ways, the course is highly cross-cultural and comparative in nature.

SOCI 110. Religion and Society (4)
Every society is engaged in the never-completed enterprise of building a humanly meaningful world. This course will examine the role of religion in that process of world building, approaching the topic both comparatively and in terms of the evolution of societies. We will examine religion in primitive societies, religion and modernization, the process of secularization, the religious dimensions of community, cult formation and the emergence of what is called "the new religious consciousness" in contemporary America.

SOCI 114. Social and Cultural Change (4)
An advanced examination of how societies have responded to a variety of pressures and undergone substantial changes. The effects of the agricultural, industrial and technological revolutions upon selected cultures from around the world will be detailed and related to such topics as population, rise of political bureaucracy, peasantry as a social class, colonialism, nationalism and the

consequences of technical modernization on religion and the family. *Prerequisite: SOCI 51 or permission of the instructor.*

SOCI 123. Sex and Gender (4)
A comparative analysis of the social construction of gender in a wide range of contemporary societies, both Western and Non-Western. The following topics will be addressed: gender as symbolic ordering, gender as culturally constructed identity, domains of power and authority, production and reproduction, colonialism and the underdevelopment of women and the Third World response to Western feminism.

SOCI 125. Health and Illness (4)
Using basic sociological concepts, the course explores the complexities of the contemporary health care system. Cross-cultural materials are employed to give international perspective. Areas studied include: definition of health and illness, patient-practitioner relationship, health professions, medical institutions and social epidemiology. *Prerequisite: sophomore status or above.*

SOCI 127. Family and Marriage (4)
Deals with the social dynamics of human intimacy and places the family in its broader societal context. The evolution of the family is studied both historically and comparatively. Special attention is given to the social meaning of sexuality; changing roles of men and women; intimacy, marriage and divorce; domestic violence; parenthood, childhood and aging; and the future of the nuclear family and alternative ways of living together.

SOCI 132. Corrections (4)
History and theories of and current practices in institutional and non-institutional programs addressed to the correctional treatment of juvenile and adult offenders.

SOCI 133. Criminology (4)
Analysis of the nature and distribution of crime; theories of crime causation and prevention; examination of the operation of police and judicial agencies.

SOCI 135. Deviant Behavior (4)
An examination of the various theoretical approaches to the study of deviant behavior. Special attention is given to the problem of defining deviance in the context of its culturally relative nature.

SOCI 171. Quantitative Methods in the Social Sciences (4)
Quantitative methods and techniques most commonly used in political science and sociology; the use of computers in social research (same as POLS 133).

SOCI 181. Delivery of Social Services (4)
Various facets of the role of the social service worker. The sociological perspective will be used to examine the relationship of the social service worker to the client, co-workers, the agency and the community. The emphasis will be on recognizing, analyzing and resolving problems which impede effective delivery. Weekly class sessions will be supplemented with a regular supervised field experience in a local social service agency. *Prerequisite: SOCI 81 or permission of the instructor.*

Core Courses

These courses must be taken to fulfill major requirements in sociology.

SOCI 71. Foundations of Sociology (4)
An exploration of fundamental concepts, theoretical approaches, empirical methods and fields of inquiry of concern to the professional sociologist. Examination of selected topics of concern to the discipline and strategies for applying sociological knowledge at individual, group and societal levels. Introduction to the fundamentals of data analysis. Exploration of the roles and contributions of the professional sociologist. Required as the first course in the core sequence for students intending to major or minor in sociology. *Prerequisite: completion or concurrent enrollment in at least one other course in sociology.*

SOCI 79. Social Psychology (4)
The study of the relationships between the individual and his/her social environment.

SOCI 173. Theories of Society and Culture (4)
This course traces the development of sociological theory with special attention to the relationship between ideas and social contexts. Key concepts such as community, authority and alienation will be examined in the work of major theorists in the field. The latter part of the course will relate social theory to contemporary research and the attempt to address critical social issues facing our society and world. *Prerequisite: one of the following: SOCI 51, 61 or permission of the instructor.*

SOCI 175. Social Research Methods (4)
The review and application of the various methods most used in social science research. *Prerequisite: one of the following: SOCI 51, 61 or permission of the instructor.*

SOCI 177. Organizations and Social Structure (4)
Analysis of the basic structures of human society. Explorations of relations between organizations, society and the individual. Case studies in industrial, political, educational and community organization. *Pre-requisite: one of the following: SOCI 51, 61 or permission of the instructor.*

Special Areas

SOCI 187a, b. Fieldwork (2 or 4, 2 or 4)
Supervised observation and experience in community and agency settings. Field work sites may be local or away from campus, and may be undertaken as part of a study abroad program. Eligibility to enroll presupposes familiarity with issues and problems in the field in which one is to work - most usually demonstrated by acceptable work in a related on-campus course. SOCI 187b can be either an experience in a second community or agency setting or a second experience in the same setting focused at a more advanced level than SOCI 187a. Specific responsibilities for each course will be set in conference with the instructor. Note: Only four units of SOCI 187 may count toward fulfilling major requirements. *Prerequisites: for SOCI 187a, permission of the instructor; for SOCI 187b, 187a and permission of the instructor.*

SOCI 191. Independent Study (2 or 4)
Available to majors with a "C" average in the major field by permission of the individual instructor.

SOCI 193. Special Topics (upper level) (4)

SOCI 197. Independent Research (2 or 4)
Permission of the instructor.

Sport Sciences

Professor: Ciccolella
Associate Professors: Beal, Boelter, Koehler (Chair), Snell
Assistant Professors: Lyman, VanNess, West, Wright
Instructors: Cernohous, Jensen, Pond
Department Phone: (209) 946-2209
Website: www.uop.edu/cop/sportscience

The mission of the University of the Pacific's Department of Sport Sciences is to provide a progressive, dynamic, cross-disciplinary curriculum in the liberal arts and sciences tradition. The program aims to attract and sustain students and faculty of diversity and quality. Students secure a foundation of knowledge in the sport sciences and are provided with varied opportunities for specialization and experiential learning. The program seeks to exemplify responsible and

meaningful community involvement as characterized by the citizen-leader concept for both faculty and students.

Degrees in Sports Science

The Department of Sport Sciences offers programs of study leading to both the Bachelor of Arts and Master of Arts degrees. The purpose of the Sport Sciences major is to educate and prepare students for a wide variety of careers in the field broadly defined as sport.

A set of required core courses provides majors with a common base of knowledge and understanding about the philosophical, sociological, psychological and scientific concepts within the discipline. In addition to the core, majors must successfully complete one of the following tracks: sport pedagogy, sports medicine, sport management or athletic training. Students seeking a physical education teaching credential may also earn an additional specialist credential in adapted physical education. All majors must also attain nationally recognized certification in First Aid and Cardiopulmonary Resuscitation (CPR).

Additional programs, which enjoy broad University participation, include a wide range of physical activity classes, informal recreational opportunities, intramural sports, club sports and intercollegiate sports.

Facilities

The Department of Sport Sciences has the following facilities for use in its programs: Baun Fitness Center, two human performance laboratories, two gymnasiums, eight tennis courts, the Olympic-size Kjeldsen Pool, numerous play fields and the Raney outdoor recreation area.

Core Curriculum

All majors must successfully complete the following core courses:

SPTS 125 Foundations of Sport Sciences
SPTS 127 Philosophy of Sport
SPTS 147 Exercise Physiology
SPTS 139 Sport Psychology or
SPTS 141 Sport in America

Academic Requirements

Sport Pedagogy Track

The Sport Pedagogy Track focuses on and provides an opportunity to study those aspects of human movement and human performance as a reflection of personal values and as an expression of an individual's physical, psychological and social nature. In addition to successfully completing the Sport Sciences Core, the sport pedagogy student must complete a series of courses that culminate with options to qualify for teaching and/or adapted specialist credentials, coaching certification, or advanced study. Degree requirements for this track also include the successful demonstration of a variety of motor skill proficiencies.

Students seeking a single-subject teaching credential are required to complete the following courses, in addition to courses required by the School of Education:

SPTS 121 Team Sports
SPTS 123 Individual Sports
SPTS 131 Assessment and Evaluation
SPTS 133 Kinesiology
SPTS 151 Elementary Physical Education
SPTS 153 Adapted Physical Education
SPTS 155 Motor Learning
SPTS 159 Sport Pedagogy
SPTS 161 Biomechanics
SPTS 189e Practicum: Sport Pedagogy

In addition, the Sport Pedagogy student must complete three (3) courses from the Department of Sport Sciences.

Motor Skill Proficiencies

Sport Sciences majors completing the Sport Pedagogy Track must also demonstrate 10 proficiencies over six areas: aquatics (1); gymnastics and tumbling (1); combatives and/or martial arts (1); dance (1); individual sports (3); and team sports (3). The ten proficiencies must include a minimum of two advanced, four intermediate and four beginning skills. Proficiencies may be met by successfully completing SPTS 121 and SPTS 123 and/or successfully completing appropriate activity classes.

Typical First-Year Program

Fall: SPTS 121-Team Sports
SPTS 125-Foundations of Sport Sciences
BIOL 11-Anatomy and Physiology
Mentor Seminar I
General Education

Spring: SPTS 123-Individual Sports
SPTS 127-Philosophy of Sport
Mentor Seminar II
General Education

Specialist Credential in Adapted Physical Education (Optional)

Students interested in pursuing a specialist Credential in Adapted Physical Education are also required to complete:

SPTS 253 Advanced Adapted Physical Education
SPED 123 The Exceptional Child
SPED 192w Laboratory Services: Learning Handicapped Pupils
SPED 192x Laboratory Services: Severely Handicapped Pupils

Coaching Concentration (Optional)

The coaching concentration is recommended for both Sport Sciences and other teaching majors who are interested in pursuing coaching careers. The additional courses required for majors in the Sport Pedagogy Track and courses required for non-majors are as follows:

Majors
SPTS 139 Sport Psychology
SPTS 189f,g Practicum: Coaching

Non-Majors
SPTS 41 Heart, Exercise and Nutrition
SPTS 139 Sport Psychology
SPTS 141 Sport in America
SPTS 143 Athletic Training
SPTS 189f,g Practicum: Coaching

Advanced Study (Optional)

Students preparing for advanced study in the physiological, sociological and/or psychological areas shall select, by advisement, additional cognate courses which will strengthen their preparation for research and/or graduate study.

Career Options for Sports Pedagogy

Completion of the Sport Pedagogy Track with an emphasis in teaching preparation allows the student to enter jobs in a variety of secondary education. This is true of the regular credential program in physical education as well as the more specialized programs in adaptive physical education and coaching. The coaching concentration is not only recommended for sport pedagogy majors but also for other teaching majors who may be interested in coaching. For all teaching credential candidates, the University of the Pacific Office of Career Services provides a personalized approach to teacher employment placement.

Sports Medicine Track

The Sports Medicine Track is specifically designed to provide the theoretical background and practical learning experiences requisite to therapy programs, advanced scientific study, and employment in agency, business and industrial fitness/wellness positions. Thus, students can apply their knowledge and scientific principles to the maintenance, enhancement or rehabilitation of human performance through the medium of exercise and/or sport.

In addition to completing the Sport Sciences Core, Sports Medicine students must successfully complete a series of courses within the Department and courses drawn from the life and physical sciences.

Department Courses

SPTS 131 Assessment and Evaluation
SPTS 133 Kinesiology
SPTS 147 Exercise Physiology
SPTS 157 Clinician in Sports Medicine

Life and Physical Science Courses

BIOL 51 Principles of Biology
BIOL 61 Principles of Biology
BIOL 71 Human Anatomy
BIOL 81 Human Physiology
CHEM 25 General Chemistry
PHYS 23 General Physics

In addition, the Sports Medicine student must complete three (3) additional courses from the Department of Sport Sciences.

Typical First-Year Program

Fall: BIOL 51-Principles of Biology
SPTS 125 -Foundations of Sport Sciences
Mentor Seminar I
General Education
Elective

Spring: BIOL 61-Principles of Biology
SPTS 127-Philosophy of Sport
Mentor Seminar II
General Education

Pre-Physical Therapy (Optional)

Students in the Sports Medicine track who are interested in pursuing graduate studies in Physical Therapy are advised to complete the following courses:

BIOL 145 Microbiology
CHEM 27 General Chemistry
CLAS 33 Bioscientific Terminology
COMP 25 Computers and Information Processing
PHYS 25 General Physics
PSYC 111 Abnormal Psychology
PSYC Psychology Elective
MATH 37 Probability and Statistics
Mentor Seminars I and II or two appropriate writing courses

Pre-Occupational Therapy (Optional)

Students who are interested in pursuing graduate studies in Occupational Therapy should see their advisor for any additional courses and also complete the following:

COMM 27 Public Speaking
ENGL Two writing courses or Mentor I & II
MATH 37 Probability and Statistics
PSYC 31 Intro to Psychology
PSYC 111 Abnormal Psychology
Two Social Science courses
A Studio Art course (Ceramics or Drawing)

Career Options for Sports Medicine

Employment opportunities following completion of the sports medicine track include fitness directorship, cardiac prevention-rehabilitation, work toward advanced degrees in areas related to sports medicine, physical therapy, and occupational therapy.

Sports Medicine is in part a self-contained program as curricular support for Pacific's's Physical Therapy Graduate program.

Sport Management Track

The Sport Management Track is designed to develop an understanding of sport and fitness from a managerial perspective. Through a unique combination of specialized courses within the Department of Sport Sciences and courses from related disciplines, students gain insights into both the theoretical and applied aspects of managing the sport or fitness enterprise.

In addition to completing the Sport Sciences Core, Sport Management students must successfully complete a series of courses within the Department and adjunct courses from liberal studies, business and computer science. Special attention is given to the behavioral dimensions of sport, management and organizational skills, economic and business concerns, and legal and ethical issues in sport.

Degree requirements also include completion of two separate internship experiences in selected sport or fitness settings. These include, but are not restricted to, professional sports, intercollegiate sports, campus sports/ intramurals, amateur sports, community recreation, private sport clubs, corporate fitness, hotel fitness and resorts, and sport retailing/merchandising. An international sport management option is also available.

Department Courses

SPTS 165 Sports Law
SPTS 167 Introduction to Sport Management
SPTS 169 Managing Sport Enterprises
SPTS 171 Sport Economics and Finance
SPTS 175 Problem Solving in Sport Management
SPTS 187a Internship: Sport Management
SPTS 187b Internship: Sport Management

Adjunct Courses

BUSI 31 Principles of Financial Accounting
BUSI 107 Marketing Management
COMM 43 Introduction to Interpersonal Communication or
COMM 27 Public Speaking
COMP 25 Computers and Information Processing
ECON 53 Introductory Microeconomics

Typical First-Year Program

Fall: SPTS 125-Foundations of Sport Sciences
SPTS 167-Introduction to Sport Management
BIOL 11-Anatomy and Physiology
Mentor Seminar I
General Education

Spring: COMM 43-Introduction to Interpersonal Communication or COMM 27-Public Speaking
SPTS 127-Philosophy of Sport
Mentor Seminar II
General Education

Career Options for Sport Management

Employment opportunities are available in community clubs, fitness/wellness centers, business and industrial employee services, recreation resorts, stadiums and arenas, pro and amateur sports and school and government programs.

Specialized employment opportunities that students can work toward include public relations, accounting and financial management, marketing and promotions, facility management and computer programming and statistics.

Athletic Training Track

The athletic training track is designed to prepare students in the art of applying scientific techniques to prevent, recognize, manage, and rehabilitate sports injuries. The program is specifically designed to provide the theoretical and practical learning experiences requisite to certification by the National Athletic Trainers' Association Board of Certification (NATABOC) or advanced scientific study.

In addition to completing the Sport Sciences Core, Athletic Training students must successfully complete a series of courses within the Department and adjunct courses from the natural and behavioral sciences. Athletic Training students must also complete entry-level athletic training proficiencies and at least four (4) semesters of clinical education. See Athletic Training Adviser for details.

Department Courses

SPTS 25 Advanced First Aid

SPTS 27 Introduction to Athletic Training
SPTS 89b Practicum: Athletic Training I
SPTS 89k Practicum: Athletic Training II
SPTS 133 Kinesiology
SPTS 135 Sports Nutrition
SPTS 139 Sport Psychology
SPTS 143 Athletic Training
SPTS 145 Therapeutic Modalities
SPTS 146 Health, Disease, and Pharmacology
SPTS 147 Exercise Physiology
SPTS 149 Advanced Athletic Training
SPTS 163 Therapeutic Exercise
SPTS 173 Administration of Athletic Training Programs
SPTS 189b Practicum: Athletic Training III
SPTS 189k Practicum: Athletic Training IV

Adjunct Courses

BIOL 61 Principles of Biology
BIOL 71 Human Anatomy
BIOL 81 Human Physiology

Although not required, it is recommended that students take courses in Chemistry, Physics and Statistics. Consult with an Athletic Training Adviser.

Typical First-Year Program

Fall: SPTS 125-Foundations of Sport Sciences
SPTS 127-Philosophy of Sport
Mentor Seminar I
General Education
General Education

Spring: BIOL 61-Principles of Biology
SPTS 27-Introduction to Athletic Training
SPTS 139-Sport Psychology
Mentor Seminar II
General Education

Career Options for Athletic Training

Employment opportunities following completion of the Athletic Training Track and passing the NATABOC Examination include athletic training at the secondary school and collegiate levels, professional athletic training, athletic training in clinical or industrial settings, and work toward advanced degrees in areas related to Athletic Training and Sports Medicine.

Minor in Sport Sciences

The Sport Sciences minor consists of seven (7) courses. Twelve (12) units must be earned in the Department of Sport Sciences, by successfully completing the following:

SPTS 125 Foundations of Sport Sciences (1)
SPTS 127 Philosophy of Sport (3)
SPTS 139 Sport Psychology (4) or
SPTS 141 Sport in America (4)
SPTS 147 Exercise Physiology (4)

In addition, the student would work closely with a minor adviser in selecting three (3) elective courses. These elective units would be selected on the basis of the specific area of Sport Sciences (e.g., Sport Psychology, Athletic Training, Sport Management, Coaching, Sport Pedagogy, Sports Medicine) in which the student is interested.

General Service (Activity) Classes

A variety of physical activity classes are available for all interested University students who wish to acquire new motor skills, maintain a routine of physical activity and continue or start an exercise or fitness program. The "how" and "why" of various activities are stressed. These classes vary in course credit from one to two units and students can enroll on a voluntary basis. Examples are swimming for health, scuba, bowling, running for health, volleyball, badminton, tennis, golf, basketball, weight training, aerobics, rhythmic workout, karate, yoga, aikido, kung fu, tae- kwon do, and self-defense for women.

Students on the Stockton campus can apply a combined total of eight units of SPTS 11-Activities, SPTS 12-Club Sports, SPTS 13-Intercollegiate Sports and THEA 13-Dance Activity toward graduation; however, no more than four of the eight units can be in intercollegiate sports or club sports. A one-unit activity class can be repeated only once; no two-unit activity class may be repeated for credit. All activity, club sports and intercollegiate sports classes will be evaluated on the pass/no credit basis.

Course Offerings

SPTS 11. General Activity Classes (1-2)
Open to entire University student body. Pass/No credit grading only. Activity fee required.

SPTS 12. Sport Clubs (1)
Clubs are designed for students who have attained an intermediate or advanced skill level in an activity and wish to continue participating in that activity in an organized recreational setting. Clubs have been established in men's lacrosse, women's lacrosse, and men's soccer. Open to all University undergraduate students. *May be repeated up to four unit maximum. Pass/No credit only.*

SPTS 13. Intercollegiate Sports (1)
The University is a member of the Big West Conference and participates in seven men's and nine women's sports; Men's: baseball, basketball, golf, swimming, tennis, volleyball, water polo; Women's: basketball, cross country, field hockey, soccer, softball, swimming, tennis, volleyball, and water polo. *Open to all University student-athletes. May be repeated up to four unit maximum. Pass/No credit only.*

SPTS 23. First Aid (1)
This course is designated to help the student achieve Red Cross certification in Standard First Aid and CPR. In addition to developing safety awareness, the student will obtain a body of knowledge and practice skills relating to proper medical emergency responses. *Lab fee required.*

SPTS 25. Advanced First Aid (2)
Advanced First Aid and Emergency Care reviews concepts and theories in Standard First Aid and includes more sophisticated skill development: triage, extrication, traction splinting and water rescue. Includes CPR instruction. *Standard First Aid is not a prerequisite although it is recommended that students have some basic first aid knowledge. Lab fee required.*

SPTS 27. Introduction to Athletic Training (1)
A course designed to give Sport Sciences majors an opportunity to explore and observe the field of athletic training. Instruction is focused on basic skills while being exposed to the concepts of the athletic training profession. Students are required to spend 3 hours of observation a week in an athletic training setting. *Pass/No credit only.*

SPTS 41. Heart, Exercise and Nutrition (4)
An in-depth exploration of the cardiovascular, musculoskeletal systems, and their dependence on proper nutrition in maintaining optimal efficiency. Individually prescribed aerobic and exercise programs are the focal issues in twice-weekly lab experiences, includes American Red Cross CPR instruction. *Lab fee required.*

SPTS 43. Health Education for Teachers (3)
This course examines objectives from the California Health Education Framework, the health status of youth, at-risk students, components of comprehensive school health education, the role of the teacher in school health services, and special health concerns of today's youth. It is designed to satisfy the Commission for Teacher Credentialing requirement for health education and includes mandated information on nutrition, alcohol, tobacco, and other drugs.

SPTS 45. Science of Nutrition (4)
Examination of the digestion, absorption, and utilization of nutrients. Overview of the biochemistry of the macronutrients: carbohydrate, lipid, protein, and water; and micronutrients: vitamins and minerals. Role of nutrients in disease processes such as obesity, cardiovascular disease, and aging. Additionally, diet planning, production of food, and control of energy balance will be covered. Students may not receive credit from both BIOL 45 and SPTS 45. *No prerequisites.*

SPTS 87. Fieldwork (2-4)
Laboratory work in school and community agencies. *Open to non-majors by permission of the instructor. Pass/No credit only.*

SPTS 89/189. Practicum (2, 1, 2, 2, 2, 2, 1)
Non-classroom experiences in activities related to Sports Sciences, under conditions determined by the appropriate faculty member. SPTS 189 represents advanced practicum work involving increased independence and responsibility. Enrollment is limited to six units maximum of 89/189a, b, c, d, h, j, k offerings and no category within a course may be repeated for credit. A list of specific courses follows.

SPTS 89a/189a. Practicum: Adapted Physical Education (2, 2)

SPTS 89b/189b. Practicum: Athletic Training I, III (1, 1)

SPTS 89c/189c. Practicum: Biomechanics (2, 2)

SPTS 89d/189d. Practicum: Exercise Physiology (2, 2)

SPTS 89h/189h. Practicum: Sports Law (2, 2)

SPTS 89j/189j. Practicum: Kinesiology (2, 2)

SPTS 89k/189k. Practicum: Athletic Training II, IV (1, 1)

SPTS 89b. Practicum: Athletic Training I (1)
A clinical education course in the field of athletic training. It will incorporate an experiential learning environment designed to prepare students for a career in athletic training. Basic skills are introduced within the daily operations of the athletic training room and in the care of athletes. Criteria for progression must be met before enrolling in subsequent practicum course. *Prerequisite: SPTS 27, admission to the athletic training clinical education program, or permission of the instructor.*

SPTS 89k. Practicum: Athletic Training II (1)
A clinical education course in the field of athletic training. It will incorporate an experiential learning environment designed to prepare students for a career in athletic training. Intermediate skills are introduced within the daily operations of the athletic training room and in the care of the athletes. Criteria for progression must be met before enrolling in subsequent practicum course. *Prerequisite: SPTS 89b.*

SPTS 121. Team Sports (3)
An applied motor learning approach to skill acquisition for team sports. In addition to personal skill development, students will learn how to prepare for the introduction, explanation and demonstration of sports skills; develop and maintain skill levels through practice and reinforcement; and use cognitive processes to improve performance. Eight to 12 different team sports will be presented and instruction time per sport will vary. *Prerequisite: Sport Sciences major and/or permission of the instructor. Lab fee required.*

SPTS 123. Individual Sports (3)
An applied motor learning approach to skill acquisition for individual sports. In addition to personal skill development, students will learn how to prepare for the introduction, explanation and demonstration of sports skills; develop and maintain skill levels through practice and reinforcement; and use cognitive processes to improve performance. Eight to 12 different individual sports will be presented and instruction time per sport will vary. *Prerequisite: Sport Sciences major and/or permission of the instructor. Lab fee required.*

SPTS 125. Foundations of Sport Sciences (1)
A survey of the academic programs, and career opportunities in the field of sport sciences focused on the basic concepts central to the study of sport and physical activity. *Pass/No credit only.*

SPTS 127. Philosophy of Sport (3)
A critical examination of the meaning in sport, fitness, recreation and physical education activities. Arguments from major classical and contemporary philosophical positions are used to address questions relative to the quality of human movement, ethics, aesthetics and the relationship of the mind and body. Leading theorists in the various fields of human movement studies are reviewed.

SPTS 129. Principles of Exercise (3)
A course designed to meet the broad needs of Sport Sciences majors, utilizing a practical approach based on underlying physiological principles as guidelines for exercise practices, as found in physical education, athletics, adult exercise prescription and other settings. Outside laboratory assignments (4) will be carried out for the purpose of demonstrating basic physiological responses and the resulting principles that are drawn from them for application in exercise and testing settings. Lab fee required. *Prerequisite: BIOL 51 or BIOL 11 or equivalent.*

SPTS 131. Assessment and Evaluation (4)
Development of competencies of Sport Sciences majors for the design and implementation of procedures to appropriately measure and evaluate students, clients and/or programs. Basic data acquisition methods and statistical analysis techniques are presented.

SPTS 133. Kinesiology (4)
A functional study of musculoskeletal anatomy and its relationship to human movement. *Prerequisite: BIOL 11 or 51 or 71 or permission of the instructor.*

SPTS 135. Sports Nutrition (3)
A thorough study of the principles of nutrition as they relate to health and participation in sports or physical activity. Includes calculating energy needs and expenditures, energy balance and the role of carbohydrates, fat, protein, vitamins, minerals, and water in sports nutrition.

SPTS 137. Psycho-Social Aspects of Sport (3)
A study of the psycho-social foundations of sport, from the perspective of participants and spectators, to enhance understanding and enjoyment of sport of every type and all levels of complexity. Topics include: aggression and violence; gender roles in sport; political, economic and religious implications; value of youth sports; performance enhancement; lifetime sports; learning sport skills.

SPTS 139. Sport Psychology (4)
An application of sport psychology theories specific to learning and performing sport skills. Topics include: coaching roles, emotional states, intervention techniques, self monitoring processes, transfer of training, goal setting, behavior observation and reinforcement.

SPTS 141. Sport in America (4)
The passions and politics of American sport are a significant theme in our society. This course uses a sociological perspective to provide an appreciation of sport as an integral part of our cultural dynamics. The relationship of sport and other social institutions such as media, economy, politics, and education will be covered, as well as the relationship of sport and social stratification such as gender, race, and class.

SPTS 143. Athletic Training (3)
This course provides an overview of the field of

athletic training, it's organization, and the responsibilities of a certified athletic trainer (ATC). Instruction will emphasize athletic training competencies including the prevention, recognition, and immediate care of injuries and illnesses associated with physical activity. *Lab fee required.*

SPTS 145. Therapeutic Modalities (3)
A lecture and laboratory experience designed to expose the student to the theory, principles, techniques and application of therapeutic modalities pertaining to the treatment of athletic or activity related injuries. Included will be discussions of the physiological effects, indications, contra indications, dosage and maintenance of each modality. *Prerequisite: SPTS 143.*

SPTS 146. Health, Disease, and Pharmacology (4)
An in-depth exploration of physical, mental, and social health with specific emphasis on recognizing the signs, symptoms, and predisposing conditions associated with the progression of specific illnesses and diseases as they relate to the physically active individual. Students will also develop an awareness of the indications, contraindications, precautions, and interactions of medications used to treat those illnesses and diseases.

SPTS 147. Exercise Physiology (4)
An in-depth study of human physiological responses and adaptations resulting from muscular activity. Topics of study will expand beyond physical education and athletic settings and will include a variety of recreational, work and environmental situations, as well as touch on the aging and special populations. A laboratory experience will be provided for the demonstration and measurement of basic physiological responses that occur with exercise, as well as more complex interactions and biological systems integration. *Prerequisite: BIOL 81. Lab fee required.*

SPTS 149. Advanced Athletic Training (3)
This course provides advanced material in the field of athletic training to physical education teachers, coaches, and pre-physical therapy and athletic training students. The course presents an in-depth study of anatomy and evaluation of injuries and illnesses associated with physical activity. *Prerequisites: SPTS 143. Lab fee required.*

SPTS 151. Elementary Physical Education (3)
Lecture/laboratory experiences in elementary school physical education programs. Curriculum development, classroom techniques and procedures are studied.

SPTS 153. Adapted Physical Education (4)
A broad-based examination of the physical education needs of disabled children and adults. Components of course focus on physiological profiles of disabled individuals, federal and state legislative mandates, assessment and design of individual educational programs, and instructional and evaluative techniques in adapted and special physical education. *Prerequisite: sophomore standing or above. Lab fee required.*

SPTS 155. Motor Learning (3)
This course examines aspects of skilled performance and motor learning from a developmental perspective. It is concerned with the major principles of human performance and skill learning, the progressive development of a conceptual model of human actions and the development of skill through training and practice. Topics covered will include: human information processing, decision-making and movement planning; perceptual processes relevant to human movement; production of movement skills, measurement of learning; practice design, preparation, organization, and scheduling; use of feedback; and the application of motor learning principles to sport, physical education, industrial and physical therapy settings.

SPTS 157. Clinician in Sports Medicine (4)
An advanced internship experience in sports medicine combining theoretical analysis with community-based clinical and non-clinical opportunities. *Prerequisite: junior standing or permission of the instructor.*

SPTS 159. Sport Pedagogy (3)
This course is the last in a series of professional courses and is to be taken by Physical Education Track students just prior to their directed teaching experience. Class work will be fieldwork-based. The units of material to be covered include: classroom management, interpersonal relations, planning for instruction (unit and daily plans), execution of instruction, assessment of instruction, school policies and professional role development. *Prerequisite: SPTS 151 or permission of the instructor.*

SPTS 161. Biomechanics of Human Movement (4)
An introduction to the biomechanics of human movement and the analytic procedures and techniques for subsequent application in the sport sciences and related fields. Included is a review of basic functional/mechanical human anatomy and kinesiology. Outcome objectives are an understanding of mechanical principles governing human movement, skill in use of a variety of measurement techniques commonly applied in biomechanics, an ability to analyze motor skill performance via cinematographic/computer methodologies and skill in prescriptively communicating results of analysis. *Prerequisite: BIOL 11 or 71 or permission of the instructor. Lab fee required.*

SPTS 163. Therapeutic Exercise (3)
An application of the theory and principles associated with therapeutic exercise and the application of various rehabilitation techniques and procedures during the course of an athlete's rehabilitation to attain normal range of motion, strength, flexibility, and endurance. *Prerequisite: SPTS 143.*

SPTS 165. Sports Law (4)
This course addresses legal issues and responsibilities relevant to professionals in the areas of sports medicine, sport management, sport pedagogy and athletics. General legal principles supported by case law in such areas as negligence, contract law, constitutional law, antitrust laws and unlawful discrimination are offered. *Prerequisite: junior standing or permission of the instructor.*

SPTS 167. Introduction to Sport Management (4)
An introductory course for Sport Management Track students and students interested in sport business. Study will include career opportunities in sport enterprises, agencies and facilities, basic management functions, scope of sport managers responsibilities and a survey of relevant literature.

SPTS 169. Managing Sport Enterprises (4)
The application of theory and concepts to agency management. Study areas include: management theories and formal organization relevant to organizational goals, legal concerns and policy development, decision-making, marketing, time management, budgeting and financial management, personnel management and communication, motivation, crisis management, productive training and evaluation. An essential part of the course lies in the development of individual management skills. *Prerequisite: SPTS 167 or permission of the instructor.*

SPTS 171. Sport Economics and Finance (4)
This course is designed to address the relationship between sport and economics and

finance. Both theoretical and practical aspects will be explored. Students will analyze sport as big business and will examine the role of sport within the economic structure, nationally and locally. Further, students will examine and utilize financial principles as they apply to the sport or fitness enterprises. *Prerequisites: ECON 53 and BUSI 31 and junior standing.*

SPTS 172. Case Analysis in Sport and Fitness Management (4)
This course addresses the principles and practices pertinent to the development and operation of the private and commercial sport or fitness enterprise. The case study method will be used to focus on designing and implementing the prospectus, feasibility studies, and the analysis of organizational effectiveness. Topics of special interest may include the planning and controlling of resources, facility operations, and strategies for production and operations management.

SPTS 173. Administration of Athletic Training Programs (3)
An in-depth study of the theory and practices in the organization and administration of athletic training programs as related to finances, facilities, equipment, program development, organizational structures, medical/insurance records, risk management, human relations, legal aspects, and personnel. *Prerequisite: SPTS 149.*

SPTS 175. Problem Solving in Sport Management (4)
An advanced course of study providing breadth and depth of understanding of the field of sport management. Study of selected topics will include pertinent applications of theory and principles essential to managing sport enterprises and/or facilities. Focus is on event management, fundraising, and the marketing/promotion of or through sport. *Prerequisites: BUSI 107, SPTS 169, junior or senior standing or permission of the instructor.*

SPTS 179. Introduction to Research (4)
Rationale for and status of professional research; research designs and their applicability to students' disciplines, review, critique and synthesis of selected literature; development of research proposal and pretest of instrument.

SPTS 187a, b. Internship: Sport Management (4, 4)
Pre-professional agency leadership experience for upper division majors who have successfully completed the majority of theory courses. Registration is limited to one four-unit course per semester or session and an overall maximum of eight units. Pass/No credit grading only. *Prerequisite: SPTS 175 and permission of the instructor.*

SPTS 189a, c, d, h, j. Practicum (2, 2, 2, 2, 2)
Advanced practicum work in Sports Medicine. See SPTS 89 for subcategories and enrollment limitations.

SPTS 189b. Practicum: Athletic Training III (1)
A clinical education course in the field of athletic training. It will incorporate an experiential learning environment designed to prepare students for a career in athletic training. Advanced skills are introduced within the daily operations of the athletic training room and in the care of the athletes. Criteria for progression must be met before enrolling in subsequent practicum course. *Prerequisite: SPTS 89k.*

SPTS 189e. Practicum: Sport Pedagogy (2)
A supervised leadership experience in the elementary or secondary school setting. The student will be working as a physical education specialist developing and conducting appropriate physical activity programs. *Prerequisites: SPTS 151 or 159 and permission of the instructor.*

SPTS 189f, g. Practicum: Coaching (2, 2)
Students will be assigned to an intercollegiate or interscholastic sports team for the semester and will participate in practice sessions throughout the specific sport season. Written guidelines will be developed cooperatively by the supervisor, coach and student. *Prerequisites: SPTS 139 and 155.*

SPTS 189k. Practicum: Athletic Training IV (1)
A clinical education course in the field of athletic training. It will incorporate an experiential learning environment designed to prepare students for a career in athletic training. The focus of this course is mastery of all entry-level skills encountered within the daily operations of the athletic training room and in the care of the athletes. Students will go through final preparations for the NATABOC examination. *Prerequisite: SPTS 189b.*

SPTS 191. Independent Study (2-4)

SPTS 193. Special Topics (1-4)

SPTS 195. Senior Seminar (2)
This course is designed around the critical analysis and synthesis of knowledge and issues within the sport sciences. Focus will be on new directions with the disciplinary tracks, current trends in the professions and their potential implications. *Prerequisite: senior standing or permission of the instructor.*

SPTS 233. Advanced Kinesiology (4)
A musculoskeletal based analysis of human movement, posture, and exercise prescription. *Prerequisite: SPTS 133, graduate standing or permission of the instructor.*

SPTS 237. Advanced Sport Psychology (4)
A graduate seminar designed for advanced students exploring theoretical concepts of psychology as they relate to individual and group behavior in the sport environment. *Prerequisites: SPTS 137 or equivalent and permission of the instructor.*

SPTS 239. Advanced Applied Sport Psychology (4)
A graduate seminar dealing with the application of psychological theories to sport environments. There will be specific focus on coaching methods and self-monitoring processes for individual athletes. *Prerequisites: SPTS 139 or equivalent and permission of the instructor.*

SPTS 241. Advanced Sociology of Sport (4)
A graduate seminar dealing with theoretical concepts of sociology related to the American sport environment. This course uses a sociological perspective to provide an appreciation of sport as an integral part of our cultural dynamics. The relationship of sport and other social institutions such as media, economy, politics, and education will be covered, as well as the relationship of sport and social stratification such as gender, race, and class.

SPTS 247. Advanced Exercise Physiology (4)
Advanced study of physiological responses to exercise with heavy emphasis on laboratory methods and procedure for testing and demonstrating these responses for research application. *Prerequisites: SPTS 147 or equivalent, and permission of the instructor. Lab fee required.*

SPTS 253. Advanced Adapted Physical Education (4)
This course provides the culminating learning experience for those teaching credential candidates who are completing the waiver program with an emphasis in adapted physical education. *Lab fee required.*

SPTS 255. Advanced Motor Learning (4)
This graduate course examines both the information processing and dynamical systems approaches to the study of human motor behavior and skill acquisition. Content is theoretically and research based with a behavioral emphasis. Topics covered will include: variability and motor control; visual

control of action; the role of reflexes; task interference; limitations in information processing, effects of stress on performance, and the Schema theory. It is intended to provide students with an advanced understanding of the conceptual, functional properties of the motor system and human motor performance and their application to teaching, coaching, industrial and therapeutic settings.

SPTS 261. Advanced Biomechanics of Sport (4)
Advanced study of mechanical principles which influence human movement; both non-cinematographic and cinematographic techniques are used to analyze and evaluate motor skills and errors in performance; critical evaluation of current research findings in biomechanics. *Prerequisite: undergraduate course in kinesiology or biomechanics or permission of the instructor. Lab fee required.*

SPTS 265. Advanced Sports Law (4)
This course addresses legal issues and responsibilities relevant to professionals in the areas of sports medicine, sport management, sport pedagogy and athletics. General legal principles supported by case law in such areas as negligence, contract law, constitutional law, antitrust laws and unlawful discrimination are offered.

SPTS 269. Advanced Management of Sport Enterprises (4)
A graduate seminar designed to provide for gaining breadth and depth of knowledge about the application of theory and concepts to program and/or agency management not included in the introductory level course.

SPTS 272. Advanced Case Analysis in Sport and Fitness Management (4)
A graduate seminar designed to provide breadth and depth of topical knowledge beyond that covered in the introductory course.

SPTS 275. Advanced Sport Management (4)
A seminar designed for advanced students providing in-depth examination/research of problems unique to sport management, technological developments and trends. *Prerequisite: SPTS 175 or permission of the instructor.*

SPTS 279. Research Methods in Sport Sciences (4)
An in-depth evaluation of the various methods used in the disciplines of the sport sciences, including experimental, descriptive, qualitative and historical; means of selecting a research problem and planning its solution; important considerations regarding review of the literature; overview of proper form and style in research writing. Student must complete a fully developed Research Proposal as part of this course. *Prerequisites: graduate standing and completion of a course in statistics.*

SPTS 287a, b. Advanced Internship: Sport Management (4, 4)
Professional leadership experience for graduate students. Agency placement is based on student goals and professional leadership background.

SPTS 287c. Advanced Clinician in Sports Medicine (4)
An advanced internship experience in sports medicine combining theoretical analysis with community-based clinical and non-clinical opportunities. *Prerequisite: permission of the instructor.*

SPTS 289a. Advanced Practicum: Sport Management (4)
This course is designed to provide students with a practical experience in the application of administrative theory. *Prerequisite: SPTS 169/269 or equivalent.*

SPTS 289b. Advanced Practicum: Coaching (2-4)

SPTS 291. Independent Study (2-4)

SPTS 293. Special Topics (3, 4)
Prerequisite: graduate standing or permission of the instructor.

SPTS 297. Independent Research (1-4)

SPTS 299. Thesis (4)

Theatre Arts

Professors: Lach (Chair), Wolak
Department Phone: (209) 946-2116
Website: www1.uop.edu/cop/theatrearts

The Theatre Arts Department supports the mission of both the University and the College of the Pacific to offer our students:

1. Courses that serve the General Education program by exploring the nature of the human condition by studying the lively art of theatre.
2. Undergraduate, creative research opportunities through the study of theatre arts and the exploration and presentation of original and established plays and musicals.
3. A vital experience in the arts and crafts of the theatre so that faculty and students learn together and enrich themselves and connect the University with our immediate and wider community through theatre productions of high quality.
4. A Theatre Arts major within a well-rounded education in the liberal arts.
5. An opportunity to develop and exercise the skills of the "citizen leader" through applied learning experiences in our production program.

Specifically, the students and faculty of the Theatre Arts Department commit themselves to the following goals:

1. To develop an atmosphere where our creative efforts help us to appreciate our past and prepare for the future.
2. To inspire and challenge ourselves and our audience into a richer and deeper experience of life through theatrical presentations.
3. To study the traditions and encourage innovation in the theatrical arts as we provide a worthy training program for our students.
4. To offer opportunities for actors, directors, designers and technicians to collaborate to provide our public excellent presentations of the dramatic and musical stage.
5. To encourage experiments and innovations with the integration of the lively arts of drama, dance and the musical theatre.
6. To strive for the highest standards of training and production that our talent and resources allow.
7. To help our students to fulfill their vocational or avocational interests in the various arts and crafts of theatre.

Degrees in Theater Arts

The Theatre Arts Department maintains a balance between theoretical and practical learning in all its programs. Students earn Bachelor of Arts degrees in Theatre Arts by completing the minimal 124 units, required General Education program, 49-unit major, and participation in departmental shows. Liberal Studies majors may elect a 20-unit concentration in Theatre Arts specially designed by the students to meet a particular need. Liberal Studies majors or students interested in the minor in Theatre Arts should contact the chair of the department for further details.

Teaching Credential Track

Students seeking a Single Subject Credential in English may do so by completing the Theatre Arts major, and an approved core of five English and several education courses. Specific requirements for this option are detailed in the School of Education section of this catalog. Students interested in secondary education may obtain a supplemental

teaching credential in theatre by combining a major in a certified teaching area, such as English or Psychology, with a selected core of Theatre Arts courses.

University Productions

In line with our academic mission, the department maintains a schedule of theatrical productions ranging from plays to musicals to dance concerts. We present plays of varying historical periods and dramatic styles as a co-curricular aspect of our program. All students, staff and faculty of the University may audition for departmental productions. Performances are given on the proscenium stage of the Long Theatre, the intimate black-box DeMarcus Brown Studio Theatre (in the Drama Building) and the Dance Studio. All our facilities are located on the south campus in close proximity.

Our academic program features training in on-stage and backstage aspects of theatre. Courses range from acting and directing, to scenery, costume and makeup, to dramatic literature, theatre history and business management. We also provide dance instruction in ballet, modern, jazz, tap and musical theatre.

Academic Requirements

Academic regulations limit to 20 the number of credit units that can be applied toward graduation in certain experiential courses such as internships, activity classes and practicum courses (THEA 189a and 189b). Students are limited to no more than 8 units of SPTS 11, 13 and THEA 7.

Theatre Arts Major (47-48 units)

Fundamental Component (21 units)

THEA 10 Introduction to Theatre (3)
THEA 14a Survey of Dance I (2)
THEA 14a Survey of Dance II (2)
THEA 103 Theatre Heritage I (4)
THEA 105 Theatre Heritage II (4)
THEA 163 The Biz of Show Biz (4)
THEA 197 Senior Research (2)

On Stage Component (9-10 units)

THEA 17 Beginning Acting (3)
THEA 61 Script Analysis (3)
Options: (One of the following)
THEA 107 Intermediate Acting (3)
THEA 161 Directing (4)

Backstage Component (8 units)

THEA 40 Theatre Crafts (4)
Options: (Two of the following)
THEA 141a Theatre Art: Scenery (2)
THEA 141b Theatre Art: Lights and Sound (2)
THEA 141c Theatre Art: Stage Management (2)
THEA 143a Theatre Art: Costuming (2)

Experiential Component (9 units)

Practicum: (One of the following)
THEA 189a Performance (2)
THEA 189b Production (2), and
THEA 5 On Stage and Backstage (3-7)

Freshman majors must complete 7 units.
Transfer majors must complete 3 units.

Theatre Arts Minor (24 units)

Core Courses (7)

THEA 10 Introduction to Theatre (3)
THEA 14a Survey of Dance I (2)
THEA 14b Survey of Dance II (2)

Selective Courses (13)

Thirteen additional units from among departmental courses chosen in consultation with a departmental faculty member and approved by the department. If an incoming student has had courses equivalent to the Core Courses, other courses may be substituted. In any event, 24 units of approved courses are required for the minor.

Experiential Component (4)

Minors must complete 4 units of THEA 5-On Stage and Backstage (1)

N.B. At least one of the THEA 5 units must be a backstage assignment.

If the State of California approves a certified teaching specialty in theatre, the Theatre Arts minor is likely to qualify as meeting the training requirements. We will develop a training program to satisfy state requirements, should that need arise.

Recommended Freshman Year Curriculum

First Semester (17-18):
THEA 5 On Stage and Backstage (1)
THEA 10 Introduction to Theatre (3)
THEA 14a Survey of Dance I (2)
MENT 1 Mentor Seminar I (4)
GE Courses (7-8)

Second Semester (16-17):
THEA 5 On Stage and Backstage (1)
THEA 14b Survey of Dance II (2)
THEA 17 Beginning Acting (3)
MENT 2 Mentor Seminar II (4)
GE Courses or Electives (4-6)

Course Offerings

THEA 5. On Stage and Backstage (1)
Open to all students, this course provides a unit of credit for full participation as a cast or crew member on departmental productions during a semester. No more than eight units may be counted toward graduation. *No prerequisites.*

THEA 7. Dance Team (1)
To offer the student an opportunity to gain credit for rehearsal and performance with the University of the Pacific Dance Team. Pass/No Credit only. May be repeated for up to eight units.

THEA 10. Introduction to the Theatre (3)
An introduction to general theories and practices in the various areas of theatre: technical, historical, costuming, performance and production. Students will attend available theatre productions and participate in theatre laboratories to measure theory against practice and to experience the theatre in action.

THEA 12. Expressive Movement (3)
Designed for dance and drama majors and non-majors alike, this course introduces the students to several theoretical approaches to the implications of movement in education, therapy and aesthetic expression. Students will explore basic Laban-analysis components and creative-movement elements. Students will be assigned a variety of out-of-class observations, class presentations and written assignments.

THEA 14a. Survey of Dance I (2)
Students study the theory and application of several dance forms to acquire some basic technique and a cursory historical perspective on how dance relates to Theatre Arts. The dance forms to be surveyed in this course include: ballet, jazz, modern, tap, and some ethnic dances. Students will also learn a few basic partnering techniques. Letter grade. *No prerequisites.*

THEA 14b. Survey of Dance II (2)
This course focuses on modern, ballroom dances such as the polka, waltz, Charleston, Lindy, fox-trot, tango, etc. Also, students will gain a cursory historical perspective and acquire the basic techniques of such pre modern dance forms as jigs, reels, minuet, gavotte, etc. Letter grade. *No prerequisites.*

THEA 17. Beginning Acting (3)
An introduction to the theories and techniques of acting. Fundamental skills of acting will be explored through exercises, character analysis, scene study and improvisation.

THEA 26. Narrative Expression (3)
Students will be taught the art and skills of effective and expressive oral communication of narrative texts. Selections of prose and poetry will be analyzed and prepared into an original format for some form of solo or ensemble presentation. Assignments may

include public performance. Written analyses will be required for some of the assignments. *Prerequisites: THEA 17, 21, or permission of the instructor.*

THEA 30. Voice and Movement (3)
An experiential course based on an holistic integration of physical and vocal aspects of expression involving the processes of centering, flexibility and control. Specific explorations of such areas as vocal tone, mime, stage diction and kinesthetic awareness are included. Assignments may include monologues in prose and verse, mime vignettes, songs and work in dialects.

THEA 40. Theatre Crafts (4)
In this lecture and demonstration course, students study the theory and application of the fundamental principles of theatre design, light and pigment color theory, mechanical drawing in the areas of scenery, costuming and lighting. Play analysis from the designer's viewpoint, basic skills of rendering, and use of scenic models are covered through design projects. Students learn the use and care of the technical equipment in various shops. Lab hours are assigned. *Prerequisite: THEA 10 or permission of the instructor.*

THEA 51. Dance Technique (1)
Training in various dance techniques such as ballet, jazz, modern, tap and musical theatre. Training in each technique is at various skill levels. Students are evaluated when first enrolled and assigned a skill level between one and eight. Skill levels one through four are equivalent to beginning level, five and six are equivalent to intermediate level, and seven and eight are equivalent to advanced level. Students are expected to demonstrate increased proficiency in order to advance to a successive level. Students may repeat each technique through level eight.

THEA 51a. Ballet (1)
Instruction in ballet, including terminology, technique, style, musicality, placement and strength. Students will be required to demonstrate increased proficiency in order to advance to a successive level.

THEA 51b. Jazz (1)
Instruction in jazz technique including style, line, rhythm, isolations, flexibility, strength and percussion. Students will be required to demonstrate increased proficiency in order to advance to a successive level.

THEA 51c. Modern Dance (1)
Instruction in modern dance, including technique, style, musicality, alignment, centering, flexibility and strength. Students will be required to demonstrate increased proficiency in order to advance to a successive level.

THEA 51d. Tap (1)
Instruction in tap including technique, terminology, time steps, rhythms and combinations. Students will be required to demonstrate increased proficiency in order to advance to a successive level. *Tap shoes are required.*

THEA 51e. Musical Theatre Dance (1)
Designed for students interested in learning something about dancing in musical comedy, musical theatre and operetta. Dance forms are surveyed in relation to the needs of movement and choreographic dance variations from selected examples of musical theatre. Students will be required to demonstrate increased proficiency in order to advance to a successive level.

THEA 55. Puppetry (3)
The study of various puppet forms, with practical experience in constructing and maintaining puppets and staging puppet presentations. Particular attention will be paid to the creative uses of puppetry (in conjunction with music, art, story telling, drama and movement) in education, therapy, and recreation. Students will develop presentations to demonstrate some particular application of the art and craft of puppetry.

THEA 61. Script Analysis (3)
Script analysis for the director, actor, or designer through lecture and discussion. In addition to script analysis, emphasis is given to the basic skills of character analysis, casting, staging, production concept, and production requirements (scenery, lighting, costumes and sound) and in the production-audience relationship. *Prerequisite THEA 10 or equivalent.*

THEA 95. Theatre Tour (2)
Attendance of theatre in a major center of theatre activity like New York, Ashland, OR, or London. On site seminars, lectures and tours will be included. Written journals and plan reviews are required.

THEA 103. Theatre Heritage I (4)
This course studies theatre history and dramatic literature from the Classical era to the latter Renaissance. Students study the development of the physical theatre, genres and styles of drama and their relationships to historical and cultural contexts. This is a lecture and discussion course in which students will prepare scholarly papers. *Prerequisite: THEA 10, 105 or equivalent courses, or permission of the instructor.*

THEA 105. Theatre Heritage II (4)
The course studies theatre history and dramatic literature from the Neoclassic to the modern era. Students study the development of the physical theatre, genres and styles of drama and their relationships to historical and cultural contexts. This lecture and discussion course requires scholarly papers. *Prerequisites: THEA 10, 103 or equivalent courses, or permission of the instructor.*

THEA 107. Intermediate Acting (3)
An in-depth characterization and scene-study class that will explore acting theory. Student actors critique acting assignments, prepare scene analyses, define character objectives and intentions and perform a series of scenes and audition pieces. Contemporary and some classical dramatic literature will be explored. Final projects will include formal written analyses, solo and ensemble presentations. *Prerequisite: THEA 17 and/or permission of the instructor.*

THEA 111a. Advanced Acting: Scene Study (3)
Further exploration for the serious acting student. Actors will continue to develop skills in emotional and physical approaches to character. Acting methods of Constatine Stanislavsky, Sanford Meisner and Michael Chekhov will be explored. Text from 20th century playwrights will be used as the primary sources for the actor. *Prerequisite: THEA 21.*

THEA 111b. Advanced Acting: Classical Styles (3)
An intensive course designed to prepare the actor for classical works. Period styles, and classical text will be approached through movement, dance, textual analysis, and performance. Elizabethan, Baroque, Restoration, and Edwardian playwrights will be explored. *Prerequisite: THEA 21.*

THEA 111c. Advanced Acting: Actors' Repertoire (3)
The actor will create a portfolio of work consisting of classical and contemporary monologues and songs. Performance ready material will help facilitate the actor's transition from academic theatre to professional theatre. *Prerequisite: THEA 21.*

THEA 115. Career Workshop (1)
In this team taught course, Theatre Arts students are guided to transition into a competitive environment in a variety of theatre related opportunities such as: acting auditions, graduate schools, professional training programs, commercial interviews, etc. Projects may include: acting auditions, design portfolios, interview simulations for technicians, theatre management

prospectuses, etc. Repeatable for credit once.

THEA 121. Dance Improv. and Choreography (2)
The course combines elements of dance composition with improvisation techniques. Students apply the principles of space, shape, space, time, weight, flow and theme in performance projects. Students are responsible for a research project and the presentation of an original choreographic work based on improvisation. *Prerequisites: THEA 125, and four units of dance technique including a THEA 51 at level 4, or permission of the instructor.*

THEA 127. Storytelling/Creative Drama (3)
Principles and practice in selecting, preparing and telling stories for children to stimulate exploration and discovery through creative dramatic experiences.

THEA 125. Principles of Choreography (2)
Study and practice of fundamental elements of dance composition, including the use of space, time, dynamics, shape and various choreographic forms. Students will be responsible for research in choreography, the completion of choreographic assignments and of a final choreographic work. *Prerequisite: THEA 12 or 14a or 14b, or permission of the instructor.*

THEA 129. Advanced Choreography (2)
This advanced course involves the use of various types of sound and musical accompaniment to stimulate the choreographic imagination. Students are expected to present original pieces demonstrating their abilities and prepare rationales for their choreographic designs. *Prerequisites: THEA 125 plus six units of dance technique including THEA 51 at level 5 and permission of the instructor.*

THEA 141a. Theatre Art: Scenery (2)
Students will be trained in the application of the principles of stagecraft to the creation of scenic environments for the live theatre. This is a lecture-demonstration class with in-class training and limited out-of-class lab hours related to current productions. It is intended for majors and minors but is suitable for interested general students. *Prerequisite: THEA 40 or permission of the instructor.*

THEA 141b. Theatre Art: Lights and Sound (2)
Students will be trained in the application of the principles of stagecraft to the creation of the lighting and sound environments for the live theatre. Modern lighting and sound equipment and technologies will be studied. This is a lecture-demonstration class with in-class training and limited out-of-class lab hours related to current productions. It is intended for majors and minors but is suitable for interested general students. *Prerequisite: THEA 40 or permission of the instructor.*

THEA 141c. Theatre Art: Stage Management (2)
An introductory course in the theories, techniques and practices of stage-managing a production from its initial stages to the conclusion of the run. Plays, musicals, opera, dance and touring productions will be examined from the perspective of the stage manager. Working with directors, choreographers and other members of the production team will be examined. Approaches to "calling the show" will be reviewed. Field trips to selected professional theatres may be arranged and will include discussions by their production stage managers. *Prerequisite: THEA 40.*

THEA 143a. Theatre Art: Costuming (2)
Students will be taught how to create appropriate costumes for the live theatre. This class covers costume design, fabrics, construction, accessorising, wardrobe management, etc. This is a lecture-demonstration class with in-class training and limited out-of-class lab hours related to current productions. It is intended for majors and minors but is suitable for interested general students. *Prerequisite: THEA 40 or permission of the instructor.*

THEA 143b. Theatre Art: Makeup (2)
Essentials of makeup for the stage, including basics of makeup application, color theory, corrective makeup, and modeling with makeup. Projects will also include three-dimensional makeup assignments, hair application, non-realistic, and experimental makeups. Students will apply makeup on themselves and also learn how to apply makeup on others. Play analysis for purposes of makeup will also be featured.

THEA 161. Directing (4)
A study of the theories, principles and practice of directing for the stage through directing projects for classroom presentation. *Prerequisites: THEA 10, 17, 40, junior status and permission of the instructor.*

THEA 163. The Biz of Show Biz (4)
Theory and practice of theatre operations, organization and administration: stage management, production coordination, box office, promotional and touring procedures. Students will be expected to complete laboratory hours in management or administrative assignments related to current productions in the Theatre Arts Department. *Prerequisites: THEA 10 or its equivalent and permission of the instructor.*

THEA 172. Playwriting (3)
A course in the composition of dramatic scripts intended for the stage. Dramatic structure and theatrical techniques of playwriting will be studied. Students will read the text, keep a writer's log, complete preliminary playwriting exercises and submit a full-length play or set of related short plays to constitute a full evening of theatre. *Prerequisites: Samples of creative writing, verification of adequate theatrical experience, or completion of ENGL 175. Permission of the instructor is required.*

THEA 189. Practicum in Theatre (2)
Opportunities for students to make practical application of their knowledge and skills under supervised conditions in the areas designated below. Only one practicum may be taken per semester, and each practicum may be taken only once for credit. No more than eight units of practicum may be counted toward graduation. Pass/No credit grading only. *Permission of the instructor is required before registration.*

THEA 189a. Theatre Practicum: Performance (2)
Students who are assigned or selected for a performance task which is judged to be of suitable scope or difficulty will be enrolled in this course. Assignments may include a role or multiple roles, dance or combat choreography, musical or vocal coaching, dance captain in musicals, etc. *Prerequisites: THEA 10, 17, or equivalent, or permission of the instructor.*

THEA 189b. Theatre Practicum: Production (2)
Students who are assigned or selected for a production task which is judged to be of suitable scope or difficulty will be enrolled in this course. Students with extensive background have the opportunity to assume staff-like responsibilities. Assignments may include: director, assistant director, production stage manager, designer (scenery, lights, costumes, sound), etc. *Prerequisites: THEA 10, 40, or equivalent, or permission of the instructor.*

THEA 191. Independent Study (2-4)

THEA 193. Special Topics (2-4)

THEA 197. Ind. Research: Senior Project (2)
An upper-division, student-developed learning experience that requires the student to plan and complete an independent research project

for a minimum of two units. The project may involve scholarly research in critical, historical, production or creative aspects of the drama and/or the dance. All majors shall design projects which demonstrate a synthesis of the training received in the major and originality of perspective. Each project will be under the guidance of a faculty member and the project will be reviewed by a faculty committee. *Prerequisites: Senior status, within 12 units of completion of the major and approval of the faculty.*

Cross-Disciplinary Majors and Programs

The College of the Pacific offers a variety of cross-disciplinary majors in which two areas of study are combined. The College also offers multi-disciplinary majors such as liberal studies which draw upon the resources of several departments and programs. The cross-disciplinary programs are directed by faculty members from the cooperating departments. Students interested in one of the following programs should contact the directors of the program listed below for specific information.

Cross-Disciplinary Bachelor of Science

Students may enroll in a properly designated cross-disciplinary Bachelor of Science degree program involving the Departments of Biological Sciences, Chemistry, Geology and Geography, Mathematics and Physics. This program permits the student to develop an integrated major from courses in any of the two cooperating departments. Under this program, students plan their own major program with the departmental adviser to include courses in that department and in another department. The chairperson or an appointed faculty member in the second department serves as an adviser to students in the design of their programs.

Environmental Studies Major (B.A.)

Advisers: James Heffernan (Philosophy), William Herrin (Economics), J. Curtis Kramer (Geology)

The environmental studies major is a liberal arts degree program that provides a multi-disciplinary approach to the environmental issues and concerns that are a hallmark of the late 20th century. It may be especially useful to students who are already pursuing a major in one of the contribution fields, but it may also appeal to students who simply wish to consider the environment and its problems from a variety of perspectives.

The major will normally consist of an 11-course distribution requirement plus a five-course concentration in one of the contributing fields, for example, biology, geology or economics. This concentration must be approved by the student's adviser. Depending on the field chosen, the concentration may add three or four courses to the major, which would bring the total to 14 or 15 courses. Instead of a concentration, the student may pursue a second major in one of the contributing fields. The 11-course distribution requirement is as follows:

Area I: Natural Sciences

One course in chemistry: CHEM 23 (4) or CHEM 25 (5).

Two courses in biological sciences from the following:

BIOL 31-Animal Societies (4)
BIOL 35-Environment: Concepts and Issues
BIOL 39-Introduction to Botany (4)
BIOL 41-Introduction to Biology (4)
BIOL 51-Principles of Biology (4)
BIOL 61-Principles of Biology (4)
BIOL 79-California Flora (4)

Two courses in earth sciences from the following:

GEOS 41-Environmental Geology (3) *(was GEOL 84)*
GEOS 43-The Changing Environment (3) *(was GEOL 85)*
GEOS 51-Physical Geology (4) *(was GEOL 83)*
GEOS 53-Geologic Evolution of the Earth (4) *(was GEOL 95)*
GEOS 55-Physical Geography (4) *(was GEOG 99)*
GEOS 61-Geology of California (4) *(was GEOL 103)*
GEOS 144-Geomorphology (4) *(was GEOL 121)*
GEOS 145-Engineering Geology (4) *(was GEOL 145)*

Area II: Social Sciences

Three courses from the following:

CIVL 171 Water and Environmental Policy (3)
ECON 51 Economic Principles and Problems (3)
ECON 53 Introductory Microeconomics (4)
ECON 55 Introductory Macroeconomics (4)
ECON 157 Environmental and Natural Resource Economics (requires ECON 53) (4)
ECON 171 Political Economy (requires ECON 51 or 55) (4)
INTL 166 Global Environmental Policy (4)

Area III: Humanities

Two courses from the following:

HIST 174 John Muir and the American Environment (3)
PHIL 35 Environmental Ethics (4)

Area IV: Practicum

An internship with a company or agency dealing with environmental affairs or a senior research paper to be arranged in conjunction with a committee of environmental studies advisers (4).

The best approach for students who wish to pursue this major during their freshman year is to choose, in conjunction with an environmental studies adviser, one or two courses from the 11-course distribution requirement and one or two courses from a field in which they might wish to take a concentration or a second major.

Environmental Studies - Minor

Students seeking a minor in environmental studies must complete five courses from the following listing:

Area I: Natural Science

Two courses which are not part of one's major, select4ed from the following. At least one of the courses needs to be a lab course (L): GEOS 41, GEOS 43, GEOS 61(L), BIOL 35, BIOL 79(L), CHEM 23(L), or CHEM 25(L).

Area II: Social Sciences

Two courses from the following: ECON 157, GEOS 55, INTI 66, CIVL 171.

Area III: Humanities

One of the following: PHIL 35, HIST 174

Chemistry - Biology Major

Directors: Paul Richmond (Biology), Celestia Pryor (Chemistry)

The Departments of Biological Sciences and Chemistry offer an interdepartmental program leading to the Bachelor of Science degree. This major is recommended for students interested in graduate work in cellular and molecular biology and biological chemistry. It is also tailored to meet the needs of students considering a career in biomedical research.

The major consists of seven courses in biology, seven courses in chemistry, a year of physics and a year of calculus.

Area I: Biological Sciences (seven courses)

BIOL 51 Principles of Biology
BIOL 61 Principles of Biology
BIOL 101 Genetics
BIOL 175 Ecology or
BIOL 179 Evolution
Three approved electives, excluding BIOL 191 and BIOL 197.

Area II: Chemistry (seven courses)

CHEM 25 General Chemistry
CHEM 27 General Chemistry
CHEM 121 Organic Chemistry
CHEM 123 Organic Chemistry
CHEM 161 Physical Chemistry I or
CHEM 169 Elements of Physical Chemistry
Two approved electives, excluding CHEM 191 and CHEM 197.

Area III: Physics (one year of course work)

PHYS 23 and 25-General Physics or PHYS 53 and 55-Principles of Physics

Area IV: Mathematics (one year of course work in calculus, MATH 51 and 53).

Area V: Research experience in biology or chemistry is also recommended.

For students pursuing this major during their freshman year, it is recommended that they take basic courses in biology, chemistry and mathematics as well as General Education Mentor courses.

Gender Studies

Gender Studies is an interdisciplinary program which helps students to understand the changing expectations and roles of gender and, consequently, to develop a better understanding of society. While Gender Studies grew out of Women's Studies, it includes a much broader range of concerns, including the rapidly expanding field of Men's Studies. Almost every major discipline in the Social Sciences and the Humanities, and some in the Natural Sciences, has a significant component dedicated to issues surrounding gender. Moreover, Gender Studies draws on a host of diverse methodological approaches, including but not limited to psychoanalytic theory, deconstruction and Marxism. Gender Studies may be useful to students pursuing graduate study or careers in social work, anthropology or history. The program is also an active sponsor of films, workshops, lectures and conferences focusing on gender.

Gender Studies includes a minor which is comprised of five courses (20 units). The student must take the core course, GEND 11-Introduction to Gender, and two of the following six courses: SOCI 123-Sex and Gender, ENGL 25-Desire/Power/Gender, PSYC 66-Human Sexuality, ARTH 124-Sex, Gender and the Arts, EADM 132-Gender Issues: Cross-Cultural Perspective, or HIST 65-Women in Time and Place. The program of courses, chosen in consultation with a Gender Studies adviser, requires that at least one course be taken in at least three different divisions of the program. A Gender Studies adviser may be reached through the Office of the Dean of the College of the Pacific.

Currently, Gender Studies courses include the following:

GEND 93. Introduction to Gender.
This course explores the social construction of masculinity and femininity in history and in the contemporary world. The differences between sex and gender, the relationship of gender to power, and the ways gender is inscribed in various cultural discourses and practices will be explored. Faculty representatives from Political Science, Anthropology, English, Art History, Education, Film and Economics will elucidate gender issues in their respective fields.

Please see the appropriate departments for course descriptions of the following:

ARTH 112 19th Century European Art
ARTH 124 Sex, Gender, and the Arts
CLAS 120 Sexuality in Greek Society
CLAS 122 Sexuality in Roman Society
EADM 132 Gender Issues: Cross-Cultural Perspective
ENGL 25 Desire/Power/Gender
ENGL 125 Critical Colloquium
ENGL 170 Contemporary Critical Issues
GEND 191 Independent Study
HIST 66 Women in Time and Place
HIST 182 Women in United States History
PSYC 66 Human Sexuality
SOCI 123 Sex and Gender
SOCI 127 Family and Marriage
SPTS 141 Sports in America
RELI 44 Sex, Sin, and Salvation
There are special topics courses, frequently offered, which may be included toward the minor requirement.

Geophysics Major

Directors: James Hetrick, Curtis Kramer

The Department of Physics and the Department of Geology and Geography offer an interdepartmental program in solid earth geophysics leading to the Bachelor of Science degree. This major prepares students for graduate studies in geophysics or for a career in exploration geophysics.

The major consists of six courses in physics, five courses in geology, as well as course work in mathematics, chemistry, civil engineering and computer science.

Area I: Physics (six courses)

PHYS 53 Principles of Physics
PHYS 55 Principles of Physics
PHYS 101 Electricity and Magnetism
PHYS 111 Atomic Physics
PHYS 161 Thermal Physics
PHYS 181 Theoretical Mechanics

Area II: Geology (five courses)

GEOL 83 Physical Geology
GEOL 101 Mineralogy
GEOL 110 Igneous and Metamorphic Petrology, or
GEOL 112 Sedimentary Petrology
GEOL 140 Structural Geology
GEOL 161 Geologic Field Methods

Area III: Additional required course work

CHEM 25 General Chemistry
CHEM 27 General Chemistry
CIVL 130 Fluid Mechanics
MATH 37 Probability and Statistics
MATH 51 Calculus I
MATH 53 Calculus II
MATH 55 Calculus III
MATH 57 Ordinary Differential Equations
One semester of course work of computer programming

For students pursuing this major during their freshman year, it is recommended that they take GEOL 83, calculus courses, general chemistry and Mentor Seminars I and II.

Liberal Studies Major

Director: Martha Bowsky

The Department of Classics offers the Liberal Studies major, which is designed for students seeking a diversified major program, and includes a breadth requirement and a disciplinary or interdisciplinary concentration.

There is no typical first-year program, but all freshmen who are eligible must take Mentor Seminars I and II.

The Liberal Studies major requires a minimum of twenty-three courses and eighty-two units. Contact the Director for information on courses which meet the following requirements.

Area I: Language Arts (five courses, minimum 18 units)

1. A course in composition or Mentor Seminar I
2. A course in literary analysis
3. A course in language and language acquisition

4. A course in communication
5. A language arts elective

Area II: Mathematics/Science (four courses, minimum 16 units)

6. A course in college mathematics
7. A course in life science
8. A course in physical science
9. A mathematics/science elective

Area III: Humanities/Social Studies (seven courses, minimum 23 units)

10. A course in the development of civilization
11. A course in American history and institutions
12. A course in global/intercultural studies or Mentor Seminar II
13. A course in multicultural/ethnic/gender studies
14. A humanities elective or course in intercultural/international studies
15. A course in individual/interpersonal behavior
16. A humanities/social science elective

Area IV: Performing Arts (three courses, minimum 11 units)

17. A course in visual arts
18. A course in music
19. A course in performing arts

Area V: Mentor Seminar (one course, minimum 3 units)

20. Mentor Seminar III

Area VI: Concentration (three or more courses, minimum 11 units)

Concentrations are currently available in: Art (History), Art (Studio), Anthropology, Classics, Communication, Computer Science, French, General Science, German, Health Science, History, Japanese, Language Arts, Life Science, Literature, Mathematics, Philosophy, Physical Science, Religious Studies, Social Science, Sociology, Spanish, Theatre Arts.

B.S. Chemistry, Emphasis in Medicinal Chemistry

Director: Patrick Jones

The Bachelor of Science in Medicinal Chemistry is offered with the cooperation and support of the School of Pharmacy and Health Sciences and is designed to prepare the student for employment in the pharmaceutical industry or for graduate studies in health science and related fields.

Required are two semesters each of calculus, physics (preferably calculus-based), general chemistry, organic chemistry, general biology, physiology, pharmacology and medicinal chemistry and one semester each of biochemistry, analytical chemistry, physical chemistry and microbiology. Additional physical chemistry courses are suggested. Students are required to take the two semesters each of physiology, pharmacology-toxicology and medicinal chemistry in the School of Pharmacy and Health Sciences. Transfer students are reminded that both the COP general education requirements and departmental requirement of a minimum of four COP chemistry courses must be met for all COP chemistry degrees.

Pre-Law Program

Director: Cynthia Ostberg

The Political Science Department offers a Pre-Law Program to assist students preparing for law school. The program includes a Pre-Law minor, meetings and programs to provide information about applying to law schools and the Law School Admissions Test, and an adviser for all students preparing for law school. Since law schools prefer that students major in a regular field, the Pre-Law minor is designed to complement the student's major with coursework that helps prepare for the law school admissions testing, and which also strengthens students' skills in areas they will need in law school. The Pre-Law minor is expected to complete six courses for a minimum of 21 units, of which 12 must be taken at Pacific. Required courses for the Pre-Law minor are listed below.

Area I: Law (two courses required from the following)

BUSI 53 The Legal and Ethical Environment of Business
POLS 122 Constitutional Law
POLS 124 Constitutional Law: American Civil Liberties
POLS 126 Criminal Law

Area II: Communications (one course required from the following)

COMM 27 Public Speaking
COMM 29 Introduction to Argumentation

Area III: Philosophy (one course required from the following)

PHIL 27 Fundamentals of Ethics
PHIL 37 Introduction to Logic
PHIL 106 Philosophy of Law

Area IV: Business Administration/ Statistics (one course required from the following)

BUSI 31 Principles of Financial Accounting
MATH 35 Elementary Statistical Inference
SOCI 171/POLS 133 Quantitative Methods in Social Science

Area V: Social Sciences (one course required from the following)

BUSI 157 Commercial Law
POLS 41 U.S. Government and Politics
PSYC 31 Introduction to Psychology
PSYC 111 Abnormal Psychology
PSYC 167 Psychology and the Law
SOCI 132 Corrections
SOCI 133 Criminology
SOCI 135 Deviant Behavior

For further information about the Pre-Law Program, the Pre-Law minor, or Law School in general, please feel free to contact Professor Cynthia Ostberg.

Major Programs for Students Seeking a Teaching Credential

A student in the College of the Pacific seeking a Single Subject (SS) preliminary credential through the University of the Pacific must complete: a major program leading to a baccalaureate degree; subject matter credential requirements specified by the University (i.e., a Commission on Teacher Credentialing approved subject matter program) or passage of a state examination; a course or successful test on the Constitution of the United States; and specified professional preparation courses offered by the School of Education. Recent California law requires passing the California Basic Educational Skills Test (CBEST) before receipt of the first teaching credential. Additionally, CBEST must be passed before a candidate may student teach. See the section on the School of Education in this catalog for information on CBEST. Students seeking entry into Teacher Education Credential Candidacy need a minimum GPA of 2.5 in the subject matter program, the Univeersity of the Pacific GPA, and cumulative GPA.

A COP student seeking a credential may complete any major program. However, the College offers specified baccalaureate degree programs which fulfill the degree requirements and the subject matter credential requirements simultaneously. They are described as "Major Programs for the Single Subject Credential."

Required professional coursework and its prerequisites are:

1. Prerequisites
   CURR 87 Fieldwork (2)
   EADM 105 Foundations for Teaching (3)
2. Professional Coursework
   Multiple Subjects
   EPSY 121 Learning and the Learner (3)

CURR 131 Curriculum and Instruction Social Studies (MS) (3)
CURR 133 Curriculum and Instruction Math, Science (MS) (3)
CURR 135 Reading/Language Art Development (MS) (3)
CURR 158 Directed Teaching (MS) (14)
CURR 195b Seminar: Directed Teaching (2)
Single Subject
EPSY 121 Learning and the Learner (3)
CURR 171 Curriculum and Instruction Organization, Planning and Evaluation (SS) (3)
CURR 173 Curriculum and Instruction: Instructional Methodology (SS) (3)
CURR 175 Reading/Language Arts Development (SS) (3)
CURR 178 Directed Teaching (SS) (14)
CURR 195b Seminar: Directed Teaching (2)

See the section on the School of Education in this catalog for additional details on these courses and the subject matter credential requirements specified by the University.

The following major programs in the College of the Pacific are recommended for students seeking a teaching credential. Some programs are in the process of obtaining approval from the CTC for their subject matter programs. Please check with the School of Education Curriculum and Instruction Department for current information on subject matter programs.

Major Programs for Single Subject Credential

Details of credential programs may be obtained from the Department of Curriculum and Instruction in the School of Education.

Single Subject Area Recommended Major Program

English	English (B.A.)
	Theatre Arts (B.A.)
	Communication(B.A.)
Foreign Languages	Spanish (B.A.)
Mathematics	Mathematics (B.S.)
Music	Music Education(B.M.) in the Conservatory
Physical Education	Physical Education (B.A.)
Sciences	Biological Sciences (B.S.)
	Chemistry (B.A.)
	Geology (B.S.)
	Physics (B.A.)
Social Science	Social Science (B.A.)
	History (B.A.)

The department major programs recommended for the Single Subject areas are described in the departmental sections of this catalog. The cross-disciplinary programs recommended for the Single Subject credential areas are described below.

Social Sciences Major (B.A.)
Adviser: W. Brennan

A minimum of 48 semester units, distributed as follows. History: six courses, including one course in California history, two courses in the history of Western Civilization, two courses in U.S. history and one course in the history of a non-U.S., non-European country or region. Political Science: three courses, including one course in U.S. national government, one course in U.S. state and local government and one course dealing with either a) comparative politics and government, b) politics and government of a foreign country or c) international relations. Sociology: two courses, including one course dealing with the basic concepts of Sociology and one course dealing with either a) structural analysis, b) social psychological analysis or c) cultural anthropology. Economics: one introductory course. Geography: one course in world geography. Quantitative methods: one course, selected with the approval of the Social Science adviser. Please see the College of the Pacific Social Science adviser for a list of specific course recommendations for all courses required for the major.

Programs in the Pre-Health Professions*
P. Richmond (Biology), Chair
Pre-Health Professions Committee

Pre-medical, pre-dental, pre-physical therapy, pre-nursing and medical technology students may major in any academic subject they prefer as long as they also fulfill the entrance requirements for the medical, dental, nursing schools, or physical therapy programs, or medical technology to which they plan to apply.

The University does not list a premedical, pre-dental, pre-physical therapy or pre-nursing major. A student in any of these programs must declare an academic major prior to graduation in order to be a candidate for a baccalaureate degree in the College of the Pacific.

Details of these and other majors appear in this catalog under the section describing the departmental majors and cross-disciplinary majors of the College of the Pacific.

Pre-Medical Program*
Advisers: C. Pryor (Chemistry), P. Richmond (Biology), C. Vierra (Biology)

The following courses are suggested as only a minimum preparation for medical school: one year of general chemistry; one year of organic chemistry; one year of beginning biology plus an additional three to five courses in biology; one year of physics; one semester each of calculus and statistics; and additional coursework in English (one year), behavioral and social sciences and humanities.

Pre-Dental Program*
Advisers: G. Jongeward (Biology), L. Spreer (Chemistry), E. Thomas (Biology)

The following courses are suggested as only a minimum preparation for most dental schools: one year of general chemistry; one year of organic chemistry; one year of general biology; one year of general physics; and one year of English, including one course in composition.

Pre-Nursing Program
Adviser: Desmond Maxwell (Biology)

The following courses are suggested as only a minimum preparation for nursing school: one year of general chemistry; organic chemistry (required by a few nursing schools); one semester of animal biology; microbiology; nutrition; human anatomy; human physiology; two semesters of psychology; one course each in English composition and literature; and two sociology courses.

Pre-Physical Therapy Program
Advisers: Desmond Maxwell (Biology), Margaret Ciccolella (Sport Sciences), Gary Howells (Psychology)

The following courses are suggested as only a minimum preparation for a physical therapist professional education program: one year of general chemistry; a one-semester or one-year sequence in general biology; one year of general physics; one semester each of human anatomy, human physiology, abnormal psychology and one year of English including composition. Areas which are required or strongly recommended for admission to some physical therapy programs include organic chemistry; sociology; statistics; oral communication; an introduction to computer science; microbiology; and an additional course in psychology. The latter three courses are required for the University of the Pacific master's program. All courses in the physical and life sciences must include laboratories.

Medical Technology Program
Adviser: Desmond Maxwell (Biology)

The following courses are suggested for students planning to enter a training program in medical technology: one year of general biology and the following biology courses:

human physiology, genetics, animal histology, microbiology, medical microbiology, parasitology, immunology and serology and a course in hematology; one year of general chemistry; one year of organic chemistry; one semester of analytical chemistry; one semester of biochemistry; one year of physics and a course in mathematics, preferably statistics.

Publications on Admissions Requirements

Medical School Requirements, USA and Canada, Association of American Medical Schools, One Dupont Circle NW, Washington, D.C. 20036. Admission Requirements of U.S. and Canadian Dental Schools, American Association of Dental Schools, 1625 Massachusetts Avenue, N.W., Washington, D.C. 20036-2212.

* *Correspondence regarding the Pre-Dental Program should be directed to L. Christianson, Department of Biological Sciences. Correspondence regarding the Pre-Medical Program should be directed to P. Richmond, Department of Biological Sciences. Correspondence regarding the other programs in the Pre-Health Professions should be directed to F. M. Nahhas, Department of Biological Sciences.*

College of the Pacific Faculty

Art

Lucinda Kasser, 1995, Associate Professor, B.A., Humboldt State University, 1979; M.A., California State University, Sacramento, 1989.

S. Brett DeBoer, 1999, Associate Professor, BFA, University of Northern Colorado, 1977; M.S., Parsons School of Design, 1985; MFA, Rochester Institute of Technology, 1989.

Barbara Flaherty, 1988, Associate Professor and Chair, B.A., Hamline University, 1962; M.A., University of California, Davis, 1966.

Daniel Kasser, 1984, Professor, B.A., Humboldt State University, 1980; MFA, University of New Mexico, 1991.

Merrill Schleier, 1982, Professor, B.A., The City College of New York, 1973; M.A., University of California, Berkeley, 1976; Ph.D., 1983.

George Wenzel, 1991, Associate Professor, B.A., University of Florida, 1978; MFA, Rochester Institute of Technology, 1989.

Biological Sciences

Paul A. Richmond, 1979, Professor and Chair, B.A., University of Minnesota, 1966; Ph.D., University of Pennsylvania, 1977.

Steven C. Anderson, 1970, Professor Emeritus, B.A., University of California, Riverside, 1957; M.A., San Francisco State College, 1961; Ph.D., Stanford University, 1966.

Lee Christianson, 1967, Professor, B.S., University of North Dakota, 1963; M.A., Southern Illinois University, 1965; Ph.D., University of Arizona, 1967.

Alice S. Hunter, 1970, Professor Emeritus, B.S., Queens College, New York, 1944; M.S., Columbia University, 1946; Ph.D., 1951.

Gregg D. Jongeward, 1996, Assistant Professor, B.S., University of Minnesota, 1986; Ph.D., California Institute of Technology, 1993.

Geoffrey Lin Cereghino, 2000, Assistant Professor, B.S., University of California, Davis, 1989; Ph.D., University of California, San Diego, 1995.

Joan Lin Cereghino, 2000, Assistant Professor, A.B., Princeton University, 1987; Ph.D., University of California, San Diego, 1992.

W. Desmond Maxwell, 1999, Assistant Professor, B.Sc., The Queen's University of Belfast, 1986; Ph.D., 1991.

Dale W. McNeal, 1969, Professor, B.A., Colorado College, 1962; M.S., New York State College of Forestry at Syracuse University, 1964; Ph.D., Washington State University, 1969.

Anne M. F. Moore, 1998, Assistant Professor, B.S., Bates College, 1984; Ph.D., Duke University, 1990.

Richard Tenaza, 1975, Professor, B.A., San Francisco State College, 1964; Ph.D., University of California, Davis, 1974.

Eric O. Thomas, 1993, Associate Professor, B.S., University of California, Riverside, 1984; M.A., 1987; Ph.D., University of California, Berkeley, 1991.

Craig A. Vierra, 1995, Associate Professor, B.S., University of California, Davis, 1990; Ph.D., University of California, Riverside, 1994.

Black Studies

Mamie Darlington, 1992, Associate Professor, B.A., Spelman College; MSW, Atlanta University, 1960; Ph.D., Georgia State University, 1986.

Chemistry

Patrick R. Jones, 1974, Professor and Chair, B.A., University of Texas, 1966; B.S., 1966; Ph.D., Stanford University, 1971.

Elizabeth F. Day, 2000, Assistant Professor, B.S., Seattle Pacific University, 1992; Ph.D., Indiana University, 1997.

C. Michael McCallum, 1994, Associate Professor, B.S., Michigan State University, 1988; Ph.D., University of California, Berkeley, 1993.

Michael J. Minch, 1974, Professor, B.S., Oregon State University, 1965; Ph.D., University of Washington, 1970.

Celestia Lynn Pryor, 1996, Assistant Professor, B.S., Dalhousie University, 1979; Ph.D., State University of New York, Binghamton, 1984.

Silvio Rodriguez, 1978, Professor, M.S., University of California, Santa Barbara, 1970; Ph.D., 1978.

Larry O. Spreer, 1970, Professor, B.S., University of Kansas, 1965; Ph.D., University of Colorado, 1969.

Donald K. Wedegaertner, 1963, Professor, B.S., University of California, Berkeley, 1958; Ph.D., University of Illinois, 1962.

Classics

Melvin D. Thomas, 1995, Associate Professor and Chair, B.A., University of Alberta, 1974; M.A., 1983; Ph.D., University of Washington, 1992.

Martha W. Bowsky, 1984, Professor, B.A., University of North Carolina, 1972; M.A., 1974; Ph.D., University of Michigan, 1983.

Lynn Kraynak, 1987, Associate Professor, B.A., University of California, Berkeley, 1973; M.A., 1976; Ph.D., 1984.

Communication

Qingwen Dong, 1996, Assistant Professor and Chair, B.A., Beijing Second Foreign Language Institute, 1983; M.A., University of Missouri-Columbia, 1990; Ph.D., Washington State University, 1995.

Shawn D. Batt, 1999, Assistant Professor, B.A., Pomona College, 1992; M.A., University of Southern California, Los Angeles, 1996; Ph.D., 1999.

Kenneth D. Day, 1987, Professor and Associate Dean, College of the Pacific, B.S., Indiana University, 1970; M.A., 1975; M.S., 1976; Ph.D., 1980.

Carol Ann Hackley, 1985, Associate Professor, B.A., California State University, Sacramento, 1961; M.A., The Ohio State University, 1984; Ph.D., 1985.

Keith O. Hilton, 1998, Assistant Professor, B.S., East Tennessee State University, 1975; M.S., Illinois State University, 1977; M.A., 1995; Ph.D., Claremont Graduate University 1996.

Randall J. Koper, 1985, Professor, B.A., Michigan State University, 1974; M.A., 1984; Ph.D. 1985.

Jon F. Schamber, 1980, Professor, B.A., University of the Pacific, 1974; M.A., 1975; Ph.D., University of Oregon, 1982.

R. Alan Ray, 1987, Assistant Professor, B.S., Memphis State University, 1977; M.A., 1980; Ph.D., University of Missouri, 1986.

Linda L. Williams, 1985, Associate Professor, B.A., The Ohio State University, 1980; M.A., 1982; Ph.D., 1985.

Computer Science

Doug Smith, 1970, Professor and Chair, B.S., University of Washington, 1964; MAT, Harvard University, 1965; Ph.D., University of Washington, 1970.

Michael Doherty, 1998, Assistant Professor, B.S., University of Florida, 1983; M.S., University of Rhode Island, 1992; Ph.D., University of Colorado at Boulder, 1998.

William H. Ford, 1974, Professor, B.S., Massachusetts Institute of Technology, 1967; Ph.D., University of Illinois, 1972.

David A. Lundy, 1983, Senior Lecturer, B.S., University of Oregon, 1975; MBA, California State College, Stanislaus, 1987.

Charles E. Neilsen, 1986, Assistant Professor, B.S., University of the Pacific, 1982; M.S.S.M., University of Southern California, 1985.

Cathy Schuler, 1993, Senior Lecturer, B.A., University of California, Santa Barbara, 1974; MSW, California State University, Sacramento, 1976.

William R. Topp, 1970, Professor, B.A., St. Louis University, 1963; M.A., 1964; M.S., University of Washington, 1967; Ph.D., 1968.

Thomas Wrensch, 2001, Assistant Professor, B.S. Computer Science, University of Wisconsin, Parkside, 1986; Ph.D., University of Colorado, Boulder, 2001.

Economics

William E. Herrin, 1985, Associate Professor and Chair, B.S., Wilkes College, 1980; M.A., State University of New York, Binghamton, 1982; Ph.D., 1985.

Benjamin N. Dennis, 1996, Assistant Professor, B.A., Michigan State University, 1990; Ph.D., Harvard University, 1996.

Dennis O. Flynn, 1979, Professor, B.S., University of Nevada, 1968; M.S., 1972; Ph.D., University of Utah, 1977.

David E. Keefe, 1978, Associate Professor, B.S., Cornell University, 1965; Ph.D., University of California, Berkeley, 1980.

Sharmila K. King, 2001. Assistant Professor, B.A., University of York, England, 1992; M.A., San Francisco State University, 1996; Ph,D., University of California, Davis, 2001.

Peter J. Meyer, 1985, Associate Professor, A.B., Harvard University, 1972; Ph.D., University of California, Berkeley, 1979.

J. Farley Ordovensky-Staniec, 1993, Associate Professor, B.S., University of Delaware, 1986; M.A., Duke University, 1988; Ph.D., Duke University, 1992.

Lori D. Warner, 1987, Associate Professor, B.S., University of Nevada, Reno, 1975; Ph.D., University of Utah, 1986.

English

Robert S. Cox, 1971, Professor and Chair, B.A., Northern Arizona University, 1959: Ph.D., Indiana University, 1965.

Diane M. Borden, 1971, Professor,B.A., Lone Mountain College, 1964; M.A., San Francisco State College, 1966; Ph.D., University of California, Santa Cruz, 1971.

Gregg Camfield, 1996, Associate Professor, A.B., Brown University, 1980; Ph.D., University of California, Berkeley, 1989.

Cynthia Dobbs, 1998, Assistant Professor, B.A., Pomona College, 1987; Ph.D., University of California, Berkeley, 1998.

Arturo A. Heredia, 1999, Assistant Professor, B.A., University of California, Berkeley, 1987; M.A., Northwestern University, 1990; Ph.D., Stanford University, 1996.

Courtney Lehmann, 1998, Assistant Professor, B.A., University of North Carolina at Chapel Hill, 1991; M.A., Indiana University, 1994; Ph.D., 1998.

Reinhart Lutz, 1991, Associate Professor, B.A., Free University of Berlin, 1983; M.A., University of California, Santa Barbara, 1985; Ph.D., University of California, Santa Barbara, 1991.

Maurice L. McCullen, 1970, Professor, B.S., Iowa State University, 1957; M.A., Purdue University, 1961; Ph.D., University of Colorado, 1966.

Camille Norton, 1994, Associate Professor, B.A., University of Massachusetts, 1983; A.M., Harvard University, 1987; Ph.D., 1992.

Gilbert W. Schedler, 1967, Professor, B.A., Concordia College, 1957; B.D., Concordia Seminar, 1960; M.A., Washington University, 1963; Ph.D., University of Chicago, 1970.

Eric A. Sonstroem, Assistant Professor, B.A., Westeyan University, 1988; M.A., Indiana University, 1990; Ph.D., 1999.

Amy Elizabeth Smith, 1999, Assistant Professor, B.A., West Virginia University, 1986; M.A., The Pennsylvania State University, 1991; Ph.D., 1998.

Douglas Tedards, 1982, Associate Professor, B.A., Vanderbilt University, 1966; M.A., University of Florida, 1968; D.A., University of the Pacific, 1976.

Film Studies

Diane M. Borden, 1971, Professor and Chair, B.A., Lone Mountain College, 1964; M.A., San Francisco State University, 1966; Ph.D., University of California, Santa Cruz, 1971.

Katherine Golsan, 1994, Associate Professor and Chair, B.A., Colgate University, 1976; M.A., University of North Carolina, 1980; Ph.D. University of Michigan, 1988.

Courtney Lehmann, 1998, Assistant Professor, B.A., University of North Carolina at Chapel Hill, 1991; M.A., Indiana University, 1994; Ph.D., 1998.

Jie Lu, 1996, Assistant Professor of Chinese, B.A., Beijing Second Foreign Language Institute, Beijing, 1982; M.A. in English and American Literature, University of Massachusetts, Amherst, 1990; Ph.D. in Chinese Literature, Stanford University, 1996.

Reinhart Lutz, 1991, Associate Professor, B.A., Free University of Berlin, 1983; M.A., University of California, Santa Barbara, 1985; Ph.D., 1991.

Merrill Schleier, 1982, Professor, B.A., The City College of New York, 1973; M.A., University of California, Berkeley, 1976; Ph.D., 1983.

Geosciences

Lydia K. Fox, 1990, Associate Professor and Chair, BSE, Princeton University, 1981; Ph.D., University of California, Santa Barbara, 1989.

J. Curtis Kramer, 1975, Professor, B.S., University of California, Davis, 1968; Ph.D., 1976.

Eugene Pearson, 1971, Professor, B.A., Pomona College, 1967; Ph.D., University of Wyoming, 1972.

Tanja N. Williamson, 1999, Assistant Professor, B.S., The Pennsylvania State University, 1992; M.S., University of California, Riverside, 1995; Ph.D., University of California, 1999.

History

Kenneth Albala, 1994, Associate Professor, B.A., George Washington University, 1986; M.A., Yale University, 1987; M. Phil., Columbia University, 1990; Ph.D., 1993.

William H. Brennan, 1976, Associate Professor, B.A., California State University, Chico, 1966; M.A., University of California, Santa Barbara, 1967. Ph.D., University of Oregon, 1971.

Caroline H. Cox, 1998, Assistant Professor, B.A., University of California, Berkeley, 1990; M.A., 1993, Ph.D., 1997.

Gesine Gerhard, 1999, Assistant Professor, B.A., Free University of Berlin, 1991; M.A., Technical University of Berlin, 1994; Ph.D., University of Iowa, 1999.

Gregg Rohlf, Assistant Professor, 2001, B.A. Luther college, 1988; M.A., University of Michigan, 1993; Ph.D., University of Iowa, 1999.

Suzanne B. Pasztor, 1996, Assistant Professor, B.A., Adams State College, 1986; M.A., Texas Christian University, 1988; Ph.D., University of New Mexico, 1994.

Edith E. Sparks, 1999, Assistant Professor, B.A., University of California, Berkeley, 1991; M.A., University of California, Los Angeles, 1996; Ph.D., 1999.

William Swaggerty, 2001, Associate Professor, B.A., The Colorado College, 1973; Ph.D., University of California at Santa Barbara, 1981.

Mathematics

Deann J. Christianson, 1967, Professor and Chair, B.A., University of North Dakota, 1963; M.S., University of Arizona, 1967; Ed.D., University of the Pacific, 1983.

Mouchumi Bhattacharyya, 2000, Assistant Professor, B.S., Cotton College, 1988; M.S., Delhi University, 1990; M.Phil., 1992; Ph.D., University of Wisconsin, Milwaukee, 1999.

Sarah Merz, 1995, Assistant Professor, B.A., Whitman College, 1991, M.S., University of Colorado at Denver, 1994; Ph.D., 1995.

Vincent D. Panico, 1984, Associate Professor, B.S., University of Illinois, 1969; Ph.D., Northwestern University, 1978.

Dennis K. Parker, 1985, Associate Professor, BSE, University of Oklahoma, 1974; MNS, 1978; Ph.D., 1985.

Keith E. Whittington, 1987, Professor, B.S., University of California, Riverside, 1975; Ph.D., University of Texas, 1980.

Walter S. Zimmermann, 1970, Professor, B.A., University of California, Los Angeles, 1960; Ph.D., University of California, Berkeley, 1966.

Modern Language and Literature

Katherine Golsan, 1994, Associate Professor and Chair, B.A., Colgate University, 1976; M.A., University of North Carolina, 1980; Ph.D. University of Michigan, 1988.

Zeljko Cipris, 2000, Assistant Professor, M.A., Columbia University, 1987; M.Phil., 1987; Ph.D., 1994.

Juan Jose Casillas, 2001, B.A., California State University, Fresno, 1982.

Arturo Giraldez, 1990, Professor, B.A., Universidad Complutense de Madrid, 1976; M.A., 1979; Ph.D., University of California, Santa Barbara, 1990.

Susan C. Giraldez, 1994, Associate Professor, B.A., University of the Pacific, 1980; M.A., Middlebury College, 1982; Ph.D., University of California, Santa Barbara, 1992.

Jie Lu, 1996, Assistant Professor of Chinese, B.A., Beijing Second Foreign Language Institute, Beijing, 1982; M.A. in English and American Literature, University of Massachusetts, Amherst, 1990; Ph.D. in Chinese Literature, Stanford University, 1996.

Barbara Sayles, 1962, Associate Professor, B.A., MacMurray College, 1952; M.A., University of California, Los Angeles, 1956; Ph.D., 1960.

Francis M. Sharp, 1979, Professor, B.A., University of Missouri, 1964; M.A., University of California, Berkeley, 1969; Ph.D., 1974.

Catherine Triantaphilides, 1979, Assistant Professor, B.A., Hunter College, 1968; M.A., 1970; Ph.D., City University of New York, 1977.

Philosophy

James D. Heffernan, 1972, Professor and Chair, B.A., Fordham University, 1964; M.A., 1967; Ph.D., University of Notre Dame, 1976.

Gerald J. Hewitt, 1969, Professor, B.A., University of Notre Dame, 1963; M.A., University of Chicago, 1966; Ph.D., 1973.

Lou J. Matz, 1999, Assistant Professor, B.A., University of the Redlands, 1984; M.A., University of California, San Diego, 1987; Ph.D., 1992.

Eleanor E. Wittrup, 1996, Assistant Professor, B.A., Wellesley College, 1986; MTS, Harvard University Divinity School, 1989; Ph.D., University of California, San Diego, 1994.

Physics

James E. Hetrick, 1997, Assistant Professor and Chair, B.S., Case Western Reserve University, 1982; Ph.D., University of Minnesota, 1990.

Joseph F. Alward, 1979, Assistant Professor, B.A., Sacramento State College, 1968; M.A., University of California, Davis, 1973; Ph.D., 1976.

Alex T. Granik, 1982, Associate Professor, M.S., Odessa Institute of Technology (USSR), 1961; Ph.D., University of Odessa (USSR), 1967.

Jason J. B. Harlow, 1999, Assistant Professor, B.Sc., University of Toronto, 1993; Ph.D., The Pennsylvania State University, 2000.

L. Cindy Krysac, 1998, Assistant Professor, B.S., University of Toronto, 1983; M.S., 1986; Ph.D., 1994.

Political Science

Brian E. Klunk, 1987, Associate Professor and Chair, B.A., Pennsylvania State University, 1977; M.A., University of Virginia, 1980; Ph.D., 1985.

Robert R. Benedetti, 1989, Professor and Dean, College of the Pacific, B.A., Amherst College, 1964; M.A., University of Pennsylvania, 1967; Ph.D., 1975.

Michael T. Hatch, 1985, Professor, B.A., Utah State University, 1970; M.A., Johns Hopkins University, 1973; Ph.D., University of California, Berkeley, 1983.

Gerald J. Hewitt, 1969, Professor, B.A., University of Notre Dame, 1963; M.A., University of Chicago, 1966; Ph.D., 1973.

Marisa J. Kelly, 1994, Associate Professor, B.A., California State University, Sacramento, 1986; M.A., San Francisco State University, 1989; Ph.D., University of Kansas, 1994.

Cynthia Ostberg, 1994, Associate Professor, B.A., University of California, Berkeley, 1985; M.A., Northern Illinois University, 1991; Ph.D., 1995.

Cortlandt B. Smith, 1970, Professor, B.A., University of California, Berkeley, 1968; M.A., 1969; Ph.D., 1975.

Psychology

Kenneth L. Beauchamp and Chair, 1969, Professor, B.A., Whitman College, 1962; M.A., Claremont Graduate School, 1965; Ph.D., 1968.

Roseann Hannon, 1970, Professor, B.S., Frostburg State College, 1965; M.S., Pennsylvania State University, 1967; Ph.D., University of South Dakota, 1970.

Gary N. Howells, 1971, Professor, B.A., Oregon State University, 1964; M.A., University of Utah, 1970; Ph.D., 1971.

Roger C. Katz, 1974, Professor, B.A., University of California, Berkeley, 1967; M.A., University of Utah, 1970; Ph.D., 1971.

Douglas W. Matheson, 1968, Professor, B.A., Whitman College, 1961; M.A., Claremont Graduate School, 1966; Ph.D., 1967.

David A. Wilder, 1999, Assistant Professor, B.A., Stetson University, 1992; M.A., Florida Atlantic University, 1995; Ph.D., University of Nevada, 1998.

Religious Studies

Gilbert W. Schedler, 1967, Professor and Chair, B.A., Concordia College, 1957; B.D., Concordia Seminary, 1960; M.A., Washington University, 1963; Ph.D., University of Chicago, 1970.

George Randels, Jr., 1996, Assistant Professor, B.A., University of Iowa, 1984; MAR, Yale University, 1987; Ph.D., University of Virginia, 1994.

Tanya Storch, 2000, Assistant Professor, B.A., M.A., University of St. Petersburg, 1988; Ph.D., University of Pennsylvania, 1995.

Sociology

John C. Phillips, 1976, Professor and Chair, B.A., San Jose State College, 1963; M.A., 1965; Ph.D., University of Oregon, 1974.

Roy Childs, 1973, Professor, B.S., University of Denver, 1963; MBA, 1964; M.A., Stanford University, 1970; Ph.D., 1973.

Mamie Darlington, 1992, Associate Professor, B.A., Spelman College; MSW, Atlanta University, 1960; Ph.D., Georgia State University, 1986.

George H. Lewis, 1970, Professor, B.A., Bowdoin College, 1965; M.A., University of Oregon, 1968; Ph.D., 1970.

Barbara West, 1995, Assistant Professor, B.A., Colgate University, 1989; M.A., University of Rochester, 1992; Ph.D., 1995.

Harvey R. Williams, 1977, Professor, B.A., University of California, Berkeley, 1963; M.A., Vanderbilt University, 1970; Ph.D., 1977.

Sport Sciences

Linda Koehler, 1989, Associate Professor and Chair, B.A., Purdue University, 1971; M.S., University of New Mexico, 1975; Ph.D., University of Illinois, 1982.

Becky Beal, 1995, Associate Professor, B.A., Pomona College, 1985; M.A., University of Northern Colorado, 1987; Ed.D., 1992.

John G. Boelter, 1989, Associate Professor, B.A., University of Southern California, 1969; Ph.D., 1974.

Margaret E. Ciccolella, 1985, Professor, B.S., University of Colorado, 1970; M.S., Brigham Young University, 1972; Ed.D., 1978; J.D., Humphreys College of Law, 1993.

Stacey Jensen, 1996, Instructor, B.A., California State University, Long Beach, 1991; M.S., California State University, Fullerton, 1996.

Linda D. Lyman, 2000, Assistant Professor, B.A., University of California, San Diego, 1985; M.A., Michigan State University, 1991; Ph.D., 1996.

Chris Pond, 1990, Instructor, B.S., Utah Sate, 1988; M.S., University of Arizona, 1990.

Christopher Snell, 1990, Associate Professor, B.A., Bedford College, England, 1987; M.S., University of Oregon, 1990.; Ph.D., 1993.

J. Mark VanNess, 1999, Assistant Professor, B.S., Wheaton College, 1990; M.S., California State University, Sacramento, 1993; Ph.D., Florida State University, 1997.

Sharon A. West, 1998, Assistant Professor, B.A., Fresno State, 1992; M.A., University of the Pacific, 1994; Ph.D., University of Miami, 1999.

Michael T. Wright, 2000, Assistant Professor, B.A., California State University, Chico, 1992, M.A., 1997; Ph.D., Oregon State University, 2000.

Theatre Arts

Peter Lach, 1995, Professor and Chair, B.A., DePauw University, 1966; M.A., 1968; MFA, University of Iowa, 1973.

William J. Wolak, 1975, Professor, B.S., Central Connecticut State College, 1959; M.A., St. Louis University, 1961; Ph.D., Tulane University, 1967.

conservatory of music

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Music Composition
Music Education
Music History
Music Management
Music Performance
Music Therapy

A professional school educating and training musicians for the highest levels of artistic performance, creative endeavor, and intellectual inquiry.

Mission

The Conservatory of Music is the oldest accredited professional school of music in the western United States. Its mission is to educate and train musicians for the highest levels of artistic performance, creative endeavor, and intellectual inquiry. The Conservatory is an integral component of the University and serves as a center of excellence for the cultural development of the community, state and western region, utilizing regional, national and international resources. It offers a comprehensive program of instruction for students to become professional performers, composers, scholars, educators, therapists and music business executives. The Conservatory achieves its mission by providing a nurturing environment reflecting a high regard for the musical legacies of the past, the realities of the present, and the challenges of the future.

The Vision

Advances in technology and the increasing diversity of California's population provide opportunities for the Conservatory to play a distinctive role in educating musicians for leadership in today's society. Music programs noted for exceptional quality, internships and interdisciplinary opportunities will be expanded to include innovative advances that prepare graduates for their chosen careers.

Degrees Offered

The Conservatory of Music offers the following degrees and majors: Bachelor of Music in performance, music education, music therapy, music composition, music history and music management; Bachelor of Arts in music; Master of Arts in music therapy; and Master of Music in music education. A minor in Music Theory is offered to music majors. A minor in music is available to University students in other majors.

The Master of Arts in Teaching with a concentration in music education is offered through the Gladys L. Benerd School of Education and the Graduate School.

Bachelor of Music

Six areas of professional study are available in the Bachelor of Music degree.

Performance Studies provide students a foundation for pursuing careers as instrumentalists in symphony orchestras, singers in opera and musical theatre, solo recitalists, accompanists, conductors, private and college teachers and church musicians.

Music Education prepares musicians for careers as music teachers at all levels in public and private schools.

Music Therapy combines the study of music with study in the behavioral sciences, and builds skills for careers as music therapists in hospitals, special education programs, mental health and rehabilitation centers, convalescent homes, correctional facilities, development centers and in the community on contract as specialists in music therapy.

Music Composition provides students with both a strong understanding and a working knowledge of the creative and technical aspects of music. Composition majors go on to careers in composing, conducting, and teaching at the college/university level. The Bachelor of Music in Composition usually leads to graduate study in composition or a related area.

Music History is an academic major within the Conservatory of Music. It has a strong core in the humanities and languages combined with intensive Conservatory training. Students are exposed to a wide range of courses in music history, music theory and the liberal arts. Graduates often go on to graduate school to pursue master's and doctoral degrees which enable them to teach at the university level. Other career options include using a music history specialty as preparation for study as a

conductor or music critic; combining music history with performance skills to make a career in the performance of early music; or combining music history with librarianship.

Music Management prepares qualified students for a wide array of career options in recording production and promotion, music publishing, arts management and administration, business and legal relationships in the entertainment media and a host of other interests in the music industry.

Degrees in Music

Bachelor of Arts in Music

The Bachelor of Arts in Music is a degree designed with an emphasis in the study of music within a liberal arts curriculum. As compared to the Bachelor of Music degree with approximately 65% of the courses in music, the Bachelor of Arts degree requires approximately 40% of the courses to be in music. This provides an opportunity for students to enroll in a broader spectrum of courses selected from academic areas throughout the University. The Bachelor of Arts in Music degree prepares students for many opportunities including graduate study and various careers in music.

Bachelor of Science in Business Administration with an Emphasis in Arts and Entertainment Management

In addition to and in cooperation with the Conservatory of Music, the Eberhardt School of Business offers options for students interested in careers in a management position in the arts and entertainment industry. Students selecting one of these options study toward a Bachelor of Science degree in Business Administration with a concentration in Arts and Entertainment Management. Within this concentration students focus their interests on entertainment management, visual arts management or theatre arts management. Curricula in these options include courses of study in General Education, Business Administration, and Arts and Entertainment Management.

Music Theory Minor for Music Majors

The minor in music theory is available only to music majors. The intent is to offer a significant study in music theory as a secondary area for a student already involved in the study of music. It can be combined with any music area except composition, but is particularly useful for majors in performance who are interested in extending their knowledge of music theory to support their performance activities or in expanding their compositional interests. It consists of seven courses including upper division study in music analysis, counterpoint, orchestration and computer music.

Music Minor

The Conservatory of Music offers a Music Minor to University students with an interest and ability in music. Students applying for admission to the Music Minor program are required to take a placement audition in an instrument or voice. Students admitted to the Music Minor program will be assigned a faculty adviser to direct their courses of study. Applications are available at the Office of Student Services, Room 301, Conservatory Building.

Graduate Study

The Conservatory of Music, through the Graduate School of University of the Pacific, offers the Master of Music in Music Education and the Master of Arts degree in Music Therapy. It also cooperates with the Benerd School of Education and the Graduate School in offering the Master of Arts in Teaching. Complete information on these degrees is available in the Graduate School Catalog and from the Conservatory of Music.

Pacific Music Camp

Pacific Music Camp is a summer program of musical study and performance for junior and senior high school musicians. Daily activities include concert band, orchestra and chorus along with master classes, electives and chamber ensembles. Students have the opportunity to work with top regional music educators, professional musicians and Conservatory faculty. One-week sessions are offered in the summer for Junior High band and Orchestra, Senior High band and Orchestra and Senior High Chorus. Each week concludes with public performances in the Faye Spanos Concert Hall. For more information contact the Pacific Camp Office, Conservatory of Music, University of the Pacific, 3601 Pacific Ave., Stockton, CA 95211. (209) 946-2416. www.uop.edu/conservatory.

Accreditation

The Conservatory is accredited by the National Association of Schools of Music and the American Music Therapy Association. Music education programs are accredited by the National Council for the Accreditation of Teacher Education and the California Commission on Teacher Credentialing through the University's Benerd School of Education.

Facilities and Equipment

The Conservatory of Music occupies a complex of five buildings. The landmark Conservatory Building, renovated in 1987, houses the 1,000-seat Faye Spanos Concert Hall, the Opera Department, faculty studios, student practice rooms, and the Conservatory of Music administration offices. The Recital Hall, constructed in 1986, seats 120 and is specifically designed for student recitals, master classes and workshops. The Rehearsal Center, dedicated in 1986, houses an instrumental rehearsal hall, a choral rehearsal hall, performance music library and performance ensemble offices. The Frank and Eva Buck Hall, completed in 1991, is the center for Conservatory classrooms and faculty teaching studios and offices, a conference room, student commons and study areas. Owen Hall houses additional classrooms, teaching laboratories, chamber ensemble rehearsal studios and 30 student practice rooms.

The Conservatory Computer Studio for Music Composition features a fully digital environment for the composition of music using computers and new technology. Centered around a digital audio workstation running SonicStudio from Sonic Solutions, the facility includes modular digital multi-track recording, extensive software sound design, detailed audio editing capabilities, fully digital automated mixing, and CD mastering/burning.

The Instructional Media Library is integrated with the William Knox Holt Memorial Library adjacent to the Conservatory complex. It houses state-of-the-art audiovisual equipment for students, faculty and community use. Materials in the library include music books, scores, video tapes and recordings.

Conservatory instruments include Steinway, Bosendorfer, Baldwin, Yamaha and Kawai pianos; a four manual concert pipe organ, a 1991 J. W. Walker tracker-action pipe organ, a Wm. Dowd Harpsichord; and a collection of wind, percussion and orchestral string instruments for student use.

Baccalaureate Degrees

General Requirements

(Also see Core Curriculum in Music on p.130)

1. All baccalaureate degrees require a minimum of 124 units with the exception of Music Management (128).
2. All music majors except those in the Bachelor of Arts program are required to

satisfy a piano proficiency level for graduation. Conservatory departments or applied areas may elect to waive the examination requirement by substituting four semesters of applied music keyboard or completion of the Freshman Piano Examination.

3. Lessons in applied music (principal instrument or voice) must be taken each semester of residence according to the major field specifications. Literature and technical requirements for various levels of instruction are noted in the courses of study in the applied music handbook, on file in the Conservatory office and in the music library.
4. All students are required to participate for credit in one major ensemble each semester of residence. In addition, instrumentalists are required to participate in a major choral ensemble for two semesters.
5. All undergraduate music majors must enroll in Solo Class and remain enrolled throughout each semester of full-time residency.

Academic Structure

The Conservatory of Music is a professional school within the total academic structure of the University of the Pacific. As well as providing instruction for professional preparation, the Conservatory of Music offers specific courses as part of the liberal learning component of the University's General Education Program. The Bachelor of Science with a concentration in Arts and Entertainment Management is awarded by the Eberhardt School of Business. A Music Education degree (M.Ed.) is offered in conjunction with the Gladys L. Benerd School of Education.

Admission Requirements

In addition to the academic requirements for admission to the University, Conservatory applicants must perform an audition in their principal performing medium, and composition applicants must submit original compositions. Academic departments may ask prospective students to appear for an interview as part of the admissions process when such an interview appears appropriate and would assist in determining the applicant's qualifications for admission. Auditions are held throughout the academic year. Students unable to appear in person may substitute a recorded audition. Audition information and arrangements should be requested from the Conservatory Office of Student Services.

General Education Requirement

Conservatory of Music students must complete the requirements of the University-wide General Education program. Entering freshmen must take Mentor Seminars I, II and III. All students must meet the path requirement. Path courses are chosen by the student and approved by her or his faculty advisor. Please see the General Education section of this catalog for complete details.

Core Curriculum in Music

All music majors are required to complete a basic core of music courses, studies and activities. This core curriculum educates the musician in the art form. It strives to improve music literacy, develop artistic sensitivity and provide a broad artistic experience for all music students. Further, it is designed to raise the quality of music-making in each student regardless of individual professional goals. The core is required of all music majors in the Conservatory:

Courses		Units
MCOM 10	Music Theory and Aural Perception I	4
MCOM 11	Music Theory and Aural Perception II	4
MCOM 12	Music Theory III: Chromaticism	2
MCOM 13	Aural Perception III	1
MCOM 14	Introduction to Orchestration	2
MCOM 15	Music Theory IV: 20th Century	2
MCOM 16	Aural Perception IV	1
MCOM 17	Form and Process in Music	2
MHIS 11	Survey of Music History I	3
MHIS 12	Survey of Music History II	3
MHIS 13	Survey of Music History III	3
MPER 151	Principles of Conducting	2
MAPP	Applied Music: Principal Instrument	8-24
MAPP	Applied Music: Piano	4-8
MPER 50	Solo Class (required each semester)	0
MPER 70-84	Major Ensemble (required each semester)	8
MPER 80-84	Choral Ensemble/Instrumentalists	2

The Conservatory Academic Regulations Committee must approve any waiver, challenge, substitute or other deviation regarding any core curriculum taken as a requirement for Conservatory of Music degrees. Once a student has matriculated at the University, she or he may not take a core music history or theory course for credit at a junior college.

The number of times a student may take a music theory or music history core course is limited to two. Should a student fail to pass a core course after a second attempt, disqualification from the Conservatory will result. (Core music theory courses are defined as MCOM 10-17 inclusive. Core music history courses are defined as MHIS 11-13 inclusive.) Independent studies in the music history and music theory core curriculum are not permitted.

Instrumentalists are required to enroll in two semesters of a Major Choral Ensemble.

Placement Examinations on Entrance

Music majors with a concentration in piano or voice must perform a teacher placement audition. This will also determine the applied level of study. A placement examination will be given to all transfer students, and coursework in other areas of music will be evaluated by the appropriate department for articulation to Conservatory degree programs.

Course Numbering

Courses numbered from 1 through 99 are lower-division undergraduate music courses normally taken by first- and second-year students. Some of these courses are prerequisite to a number of upper-division courses.

Courses numbered from 101 through 199 are upper-division undergraduate courses.

Courses numbered from 201 through 299 are graduate courses.

Course numbers separated by a comma imply that the first is prerequisite to the second; numbers separated by a semicolon imply that either course may be taken independently of the other.

Grade System in the Conservatory

The Conservatory adheres to the "letter" grading system as described elsewhere in this catalog with the following exceptions:

1. Pass/Fail (P/F) is used only in MPER 50 and MEDU 113.
2. The pass/no credit system is not used in the Conservatory courses for Bachelor of Music degree students but is a grading option in Conservatory courses MCOM 2, MHIS 5, MMGT 198 and MEDU 100, which are not available to Bachelor of Music or Bachelor of Arts in Music degree students.
3. A maximum of three non-Conservatory courses may be taken by music majors on a pass/no credit basis.

Class Attendance

Students are expected to attend all classes, rehearsals, lessons and other specified assignments. The instructor of each class in the Conservatory of Music will explain what is expected of students in each course and ensemble as far as attendance is concerned. In some classes (ensembles, etc.) attendance is an important factor in the formulation of grades.

Bachelor of Arts Degree

All candidates for the Bachelor of Arts degree with a major in music must complete a minimum of 48 units in music. The total number of music units counted toward the Bachelor of Arts may not exceed 60 units. Bachelor of Arts students must complete eight units in applied music and eight units in ensembles. The Bachelor of Arts advisor in the Conservatory of Music must approve all course lists for registration. The core music course in the Bachelor of Arts degree are as follows:

Courses		Units
MCOM 10	Music Theory and Aural Perception I	4
MCOM 11	Music Theory and Aural Perception II	4
MCOM 12	Music Theory III: Chromaticism	2
MCOM 13	Aural Perception III	1
MCOM 14	Introduction to Orchestration	2
MCOM 15	Music Theory IV: 20th Century	2
MCOM 16	Aural Perception IV	1
MCOM 17	Form and Process in Music	2
MHIS 11	Survey of Music History I	3
MHIS 12	Survey of Music History II	3
MHIS 13	Survey of Music History III	3
MAPP 10	Applied Music Principal Instrument	8
MPER 50	Solo Class (required each semester)	0
MPER 70-84	Major Ensemble	8
MPER 80-84	Choral Ensemble/ Instrumentalists	2
MCOM or MHIS Electives		3
Total Units		**46-48**

Bachelor of Music Degree

The University of the Pacific confers the Bachelor of Music degree upon students who satisfactorily complete the core courses in music, courses within the major and the General Education program. All baccalaureate degrees require a minimum of 124 units with the exception of Music Management (128). Major fields are performance (Brass, Guitar, Harp, Organ, Percussion, Piano, Strings, Voice, Woodwinds), music composition, music education, music history, music management and music therapy.

Major in Performance - Piano

MAPP 12	Applied Piano	8
MAPP 112	Advanced Applied Piano	16
MHIS 142	Chamber Music Literature	3
MHIS 143a	Keyboard Literature I	3
MHIS 143b	Keyboard Literature II	3
MPER 60	Chamber Ensemble	4
MPER 70-84	Major Ensemble	8
MPER 130	Accompanying	4
MPER 140	Pedagogy of Piano	2
MPER 152	or MPER 153 Choral or Instrumental Conducting	2
MCOM	or MHIS Electives	6
MPER 80-84	Choral Ensemble/Instrumentalists	2

A half recital in the junior year and a full recital in the senior year are required.

Major in Performance - Piano with Concentration in Accompanying, Vocal Emphasis

MAPP 12	Applied Piano	8
MAPP 112	Advanced Applied Piano	14
MHIS 141	Pedagogy of Voice or	
MHIS 144	Opera Literature or Vocal Literature	3
MHIS 142	Chamber Music Literature	3
MHIS 143a	Keyboard Literature I	3
MHIS 143b	Keyboard Literature II	3
MPER 20, 21	Introduction to Lyric Diction	4
MPER 120, 121	Lyric Diction	4
MPER 60	Chamber Ensemble	4
MPER 70-84	Major Ensemble	8
MPER 130	Accompanying	14
MPER 152	Principles of Conducting or	
MPER 153	Instrumental Conducting	2
MCOM	or MHIS Electives	6

During the junior and senior years, the student will accompany a total of six full recitals. At least four of these should be vocal recitals. In the senior year a half-solo recital is also required.

Major in Performance - Voice

MAPP 1 or MAPP 5 Piano*		4-8
MAPP 12	Applied Voice	8
MAPP 112	Advanced Applied Voice	12
MPER 141	Pedagogy of Voice	3
MHIS 144	Vocal Literature	3
MPER 20, 21	Introduction to Lyric Diction	4
MPER 120, 121	Lyric Diction	4
MPER 152	Choral Conducting	2
MPER 80-84	Major Ensemble	8
MCOM	or MHIS Electives	6
THEA	Theatre Arts Elective	3
FREN	Language Requirement	8
GERM	Language Requirement	8

** All voice performance majors are required to study piano for a minimum of four semesters unless they pass a freshman concentration examination. After four semesters of study, or passing of the freshman examination, voice majors will be required to continue piano study each semester until the piano skills have been completed as set forth in the Applied Music Handbook.*

During junior and senior years, each voice major must have one year of Opera Production or Opera Workshop.

Voice Performance Majors must perform a half junior recital and a full senior recital. A senior examination during the final year is also required, as set forth in the Applied Music Handbook.

Major in Performance - Strings

MAPP 1 or MAPP 5 Piano		4
MAPP 12	Applied Music	8
MAPP 112	Applied Music	16
MCOM 108	Counterpoint	3
MCOM 113	Advanced Analysis	3
MHIS 140	Symphonic Literature	3
MHIS 142	Chamber Music Literature	3
MHIS 150-154	(from period courses)	3
MPER 60	Chamber Ensemble	8
MPER 70	University Symphony Orchestra	8
MPER 82-84	Choral Ensemble/ Instrumentalists	2

A half recital in the junior year and a full recital in the senior year are required.

Major in Performance – Woodwinds, Brass or Percussion

MAPP 1 or MAPP 5 Piano		4
MAPP 12	Applied Music	8
MAPP 112	Applied Music	16
MCOM 108	Counterpoint	3
MCOM 113	Advanced Analysis	3
MHIS 140	Symphonic Literature	3
MHIS 142	Chamber Music Literature	3
MHIS 150-154	(from period courses)	3
MPER 60	Chamber Ensemble	8
MPER 70-73	Major Ensemble	8
MPER 82-84	Choral Ensemble/Instrumentalists	2

A half recital in the junior year and a full recital in the senior year are required.

Major in Music Composition

MAPP 1 or MAPP 5 Piano*		4
MAPP 10	Applied Music	8
MCOM 19	Music and Computer Technology	3
MCOM 24	Composition, Lower Division	8
MCOM 25	Composition Seminar, Lower Division	2
MCOM 108	Counterpoint	3
MCOM 109	Advanced Orchestration	3
MCOM 113	Advanced Analysis	3
MCOM 111	20th Century Techniques	3
MCOM 124	Composition, Upper Division	8

MCOM 125	Composition Seminar, Lower Division	4
MPER 70-84	Major Ensemble	8
MPER 82-84	Choral Ensemble/Instrumentalists	2
MHIS 6	Music of the World's People	3
Music Electives from MHIS, MPER 152 or 153, or MCOM 121 Jazz Scoring		3
PHYS 39	Physics of Music	4
ARTH 144	or ARTH 148 Art in the 20th Century	4

**Piano concentration students may elect other course in music.*

An end of the year advisory portfolio review is required of all composition majors. Admission to the upper division is based on a review of the student's work at the end of the second year. A senior composition project and a half-recital of the student's compositions are required in the senior year.

Major in Music History

MAPP 1 or MAPP 5	Piano*	4
MAPP 10	Applied Music	8
MCOM 108	Counterpoint	3
MCOM 113	Advanced Analysis	3
MHIS 140-154	Electives in Music History**	18
MHIS 180	Research in Music History	4
MPER 152	or MPER 153 Conducting	2
FREN	Language Requirement	8
GERM	Language Requirement	16
MPER 70-84	Major Ensemble	8
MPER 82-84	Choral Ensemble/Instrumentalists	2

**Piano concentration students may elect another course in music.*

*** Special Topics courses may be substituted with departmental permission.*

Major in Management

MAPP 1 or MAPP 5	Piano	4
MAPP 10	Applied Music	12
MMGT 11	Music, Entertainment in U.S. Society	3
MMGT 11L	Music, Entertainment in U.S. Society Seminar	1
MMGT 96	Music in the Recording Studio	3
MMGT 153	Entertainment Law	4
MMGT 195	Music Industry Analysis	4
MMGT 198	Music Management Internship or Business Elective*	4
MPER 70-84	Major Ensemble	8
MPER 82-84	Choral Ensemble/Instrumentalists	2
BUSI 31	Principles of Financial Accounting	4
BUSI 53	The Legal and Ethical Environment of Business	4
BUSI 107	Marketing Management	4
BUSI 109	Management and Organizational Behavior	4
MATH 35	Elemental Statistical Inference	4

**Students are strongly encouraged to pursue an internship in the music business. Those who do not are required to take a business elective.*

Major in Music Education

The Conservatory of Music offers two-degree plans for a major in Music Education, one with a concentration in instrumental music, the other with a choral concentration. The Bachelor of Music degree is normally awarded at the completion of a four-year program. Several directed teaching programs are offered at the University of the Pacific leading to the California Single Subject Teaching Credential with a Major in Music:

1. A plan which requires one semester of student teaching (eight units plus two of seminar) during the fourth year plus a summer course of Video-Microrehearsal and field teaching (six units).
2. A Video-Microrehearsal/Internship plan in which selected students participate in the summer Video-Microrehearsal/field teaching program and then teach under contract in neighboring school districts during the fifth year.
3. A plan which requires one full-time semester of student teaching.

All music education majors must pass a minimum proficiency examination in piano and in functional guitar. They must also demonstrate basic vocal proficiency. One hundred hours of laboratory teaching/observation in elementary and secondary schools are required. Courses in Music Education and professional education that are part of the Music Education major must be passed with at least a C grade, and courses in music must receive an average of C within each music discipline.

Instrumental Concentration

MAPP 1	Functional Guitar	1
MAPP 1 or MAPP 5	Piano or Voice*	4
MAPP 11	Applied Music Principal Instrument	8
MAPP 111	Applied Music Principal Instrument	8
MCOM 121	Jazz Scoring	2
MEDU 101-108	Instrumental Methods	6
MEDU 110	or MEDU 112 Band or Orchestra Development	2
MEDU 111	Choral Development	2
MEDU 113	Lab Ensemble	2
MEDU 114	Music in Elementary School	2
MEDU 115	Music Experiences, K-6	2
MEDU 116	Music in Secondary School	2
MEDU 117	Music Experiences, 7-12	2
MHIS 6	Music of the World's Peoples	3
MPER 153	Instrumental Conducting	2
MPER 70-73	Major Ensemble	8
CURR 173	Curriculum and Instruction: Instructional Strategies	3
CURR 135	or CURR 175 Reading/Language Arts Development: Multiple Subjects or Reading/Language Arts Development Single Subject	3
CURR 178	Directed Teaching: Single Subject	14
CURR 195b	Seminar: Directed Teaching	2
EADM 105	Foundations for Teaching	3
EPSY 121	Learning and Learner	3

Choral Concentration

MAPP 1	Functional Guitar	1
MAPP 1 or MAPP 5	Piano or Voice*	4
MAPP 11	Applied Music Principal Instrument	8
MAPP 111	Applied Music Principal Instrument	8
MCOM 121	Jazz Scoring	2
MEDU 101-108	Instrumental Methods	5
MEDU 111	Choral Development	2
MEDU 113	Lab Ensemble	2
MEDU 114	Music in Elementary School	2
MEDU 115	Music Experiences, K-6	2
MEDU 116	Music in Secondary School	2
MEDU 117	Music Experiences, 7-12	2
MHIS 6	Music of the World's Peoples	3
MPER 20, 21	Introduction to Lyric Diction	4
MPER 152	Choral Conducting	2
MPER 169	Opera Workshop	1
MPER 80-84	Major Ensemble	8
CURR 173	Curriculum and Instruction: Instructional Strategies	3
CURR 135	or CURR 175 Reading/Language Arts Development: Multiple Subjects or Reading/Language Arts Development Single Subject	3
CURR 178	Directed Teaching: Single Subject	14
CURR 195b	Seminar: Directed Teaching	2
EADM 105	Foundations for Teaching	3
EPSY 121	Learning and Learner	3

**Students with keyboard as principal instrument are required to take four semesters of applied voice. Students with other principal instruments are required to enroll in piano until the piano proficiency examination for Music Education, as defined in the Applied Music Handbook, is passed.*

Music Education majors must present a half recital in their senior year.

Music Education majors with voice as a principal instrument are required to complete a senior examination during the final undergraduate year as defined in the Applied Music Handbook.

Teaching Credential candidates must demonstrate an understanding of the U.S. Constitution through coursework or examination. They must demonstrate competency in reading, writing and math by passing the CBEST Examination.

Music Education majors not working toward a teaching credential may substitute free elective courses to complete the required 124 units for the Bachelor of Music degree.

Students who become interns may substitute electives for the student teaching in the fourth year.

Major Ensembles must relate to the student's proposed teaching area as specified by advisers.

Residency requirements in Solo Class, Major Ensemble and Lab Ensemble may be waived when in conflict with student teaching.

Major in Music Therapy

MAPP 1	Applied Class Voice	1
MAPP 1	Functional Guitar	1
MAPP 1	or MAPP 5 Piano	4-8
MAPP 10	Principal Instrument	8
MEDU 101-108	Instrumental Methods	2
MPER 152	or MPER 153 Conducting	2
MTHR 11	Introduction to Creative Arts Therapy	3
MTHR 18	Basic Skills in Music for Special Education	3
MTHR 135	Music Therapy Techniques with Children	4
MTHR 140	Psychology of Music	4
MTHR 141a	Influence of Music on Behavior: Adults I	4
MTHR 141b	Music in Therapy: Adults II	4
MPER 70-84	Major Ensemble	8
MPER 82-84	Choral Ensemble/Instrumentalists	2
BIOL 11	Human Anatomy and Physiology	4
PSYC 111	Abnormal Psychology	4
SPED 123	The Exceptional Child	3

The Music Therapy program is approved by the American Music Therapy Association. The Bachelor of Music degree is earned at the completion of four years of coursework. One is eligible for the Board Certification Examination upon the completion of a six-month internship at an approved clinical facility. A Board Certification Examination follows registration.

In order to complete the Music Therapy degree, students must obtain a grade of B- or better in Music Therapy courses and demonstrate personal and professional skills appropriate to the clinical profession as evaluated by the Music Therapy Department.

A student receiving a grade of less than B- in either MTHR 11 or MTHR 18 may not enroll in upper-division Music Therapy core courses until a B- grade or better is obtained in each of these lower-division courses.

Each core course (MTHR 11-141b) must be passed with at least a B- grade. If a student does not receive such a grade following the second attempt through a particular course, the student will be disqualified from the Music Therapy major.

All Music Therapy majors are required to demonstrate guitar proficiency.

Music Theory Minor for Music Majors

The minor in music theory is available only to music majors. The intent is to offer a significant study in music theory as a secondary area for a student already involved in the study of music. It can be combined with any music area except composition, but is particularly useful for majors in performance who are interested in extending their knowledge of music theory to support their performance activities or in expanding their compositional interests.

Music Theory Minor

MCOM 19	Music and Computer Technology	3
MCOM 108*	Counterpoint	3
MCOM 109*	Advanced Orchestration	3
MCOM 111*	Advanced Computer Music	3
MCOM 113*	Advanced Analysis	3
MHIS 150-154*	One Music History Course	3
PHYS 39	Physics of Music	4
Total Units		**22**

**Must be taken at University of the Pacific.*

Music Minor

The Conservatory of Music offers a Music Minor to University students with an interest and ability in music. Students applying for admission to the Music Minor program are required to take an audition in an instrument or voice and a placement test in Music Theory. Students admitted to the Music Minor program will be assigned a faculty adviser to direct each individual's course of study. Applications are available in the Office of Student Services, Conservatory Room 301.

Music Minor Course of Study

(Minimum of 21 units)

A. Core curriculum

MCOM 10	Music Theory and Aural Perception I	4
MHIS 5	Music Appreciation	4

Select one course from the following:

a. MCOM 11 Music Theory and Aural Perception II 4

b. MHIS 11 or 12 or 13 Music History Survey 3

B. Applied Music, Instrument or Voice

MAPP 10. The minimum requirement is two semesters of study 2

ENSEMBLE. The minimum requirement is two semesters of participation in any ensemble 1-2

MPER 50-SOLO CLASS. The minimum requirement is two semesters of enrollment 0

C. Electives**

With the approval of the Music Minor faculty adviser, students will select five to seven units of music courses to complete a minimum of 21 units 5-7

** A qualified student may pass out of MCOM 10/11, then elect to take MCOM 12/13 or one semester of MHIS 11 or 12 or 13.*

***MCOM 2-Fundamental Structures of Music is not an eligible elective course for the Music Minor program.*

Course Offerings

Music Composition Department

MCOM 2. Fundamental Structures, Section 1 (3)
Music fundamentals, music reading and harmonization of simple melodies.

MCOM 10. Music Theory and Aural Perception I (4)
Primary concepts of music: rhythm, meter, pitch, scale degree, triads, seventh chords and their inversions, tonal function, and diatonic chord progression through harmonic expansions accomplished through the development of aural and sight singing skills, and the completion of written exercises.

MCOM 11. Music Theory and Aural Perception II (4)
Diatonic and chromatic harmony covering non-harmonic tones, tonicization, modulation, cadence, phrase structure and simple forms accomplished through the development of aural and sight singing skills, the completion of written exercises, and the analysis of musical scores. *Prerequisite: MCOM 10 or equivalent.*

MCOM 12. Music Theory III: Chromaticism (2)
The study of chromatic harmony and its use through written and analytical exercises encompassing secondary dominants,

modulation, borrowed chords, chords of the augmented 6th, the Neapolitan 6th, and extended chromaticism through enharmonic reinterpretation. *Corequisites: MCOM 13 and 14. Prerequisite: MCOM 11 or equivalent.*

MCOM 13. Aural Perception III (1)
The training of musicianship skills related to the chromatic harmony studied in MCOM 12. Includes the development of expertise through the dictation of 3 part exercises, harmonic progressions, and extended rhythmic lines. *Corequisite: MCOM 12. Prerequisite: MCOM 11 or equivalent.*

MCOM 14. Introduction to Orchestration (2)
Fundamentals of orchestration: characteristics of instruments, transposition, score layout. Orchestral analysis with definition of material in terms of Foreground-Middleground-Background. *Prerequisite: MCOM 11 or equivalent.*

MCOM 15. Music Theory IV: Twentieth Century (2)
The study of twentieth century music through the analysis and composition of a variety of theoretical approaches including Impressionism, Expressionism, 12-tone composition, the rhythmic developments of Stravinsky, Carter, and Messiaen, durational structures and indeterminancy of John Cage, modality and spectral music, minimalism, and computer music. *Corequisite: MCOM 17 or equivalent. Prerequisites: MCOM 12 and 14 or equivalent.*

MCOM 16. Aural Perception IV (1)
The training of musicianship skills related to the further study of chromatic harmony. Includes the development of expertise through the dictation of 4 part exercises, harmonic progressions, and extended rhythmic exercises. *Prerequisite: MCOM 13 or equivalent.*

MCOM 17. Form and Process in Music (2)
A study of how music moves through time. Exploration of structural levels from motive to macro-rhythm, components of design, basic forms and concepts of analysis. Corequisite: MCOM 15 or equivalent. *Prerequisites: MCOM 12 and 14 or equivalent.*

MCOM 19. Music and Computer Technology (3)
Introductory studies and exercises applying computer technology with music. Primary focus is on the use of microcomputers and synthesizers using a MIDI interface. *Prerequisite: MCOM 2 or equivalent knowledge of music theory.*

MCOM 24. Composition, Lower-Division (2)
Free composition for students below junior standing. May be repeated for credit. *Corequisite: MCOM 25 (non-music majors require permission of the instructor).*

MCOM 25. Composition Seminar, Lower-Division (1)
The study of special topics pertinent to composing in the late 20th/early 21st Century. These topics cycle through a six semester sequence and include: New Pitch Materials, New Rhythmic Materials, Perception and Psychoacoustics, New Formal Structures, Non-Western Compositional Resources, and Experimental Music and Improvisation. *Corequisite for composition majors only: MCOM 24.*

MCOM 108. Counterpoint (3)
Study of Palestrina's and Lassus' contrapuntal tecniques accomplished through written exercises and analysis. *Prerequisites: MCOM 10-17 or equivalent.*

MCOM 109. Advanced Orchestration (3)
Focus on orchestration techniques from the first half of the 20th Century, and new performance practices. This study is accomplished through orchestra analysis and writing exercises including a reading session with the orchestra. *Prerequisites: MCOM 10-17 or equivalent.*

MCOM 111. Advanced Computer Music (3)
A course taught in the Conservatory Computer Studio for Music Composition which focuses on the use of sampling/sound design, digital audio recording and editing, automated mixing, and computer manipulation as resources for music composition. *Prerequisites: MCOM 10-19 or equivalent.*

MCOM 112. Composition - Computer Music (2)
Private composition study in computer music within the Conservatory Computer Studio for Music Composition. *Prerequisites: MCOM 111 Advanced Computer Music.*

MCOM 113. Advanced Analysis (3)
Advanced topics in music analysis including extensive study of Schenkerian analysis. *Prerequisites: MCOM 10-17 or equivalent.*

MCOM 119. Jazz Writing and Improvisation Techniques (1)
Study and writing of jazz melody and chord relationships. Orchestration and improvisation in major jazz styles. *Prerequisite: MCOM 120.*

MCOM 120. The Styles and History of American Jazz (1)
Study of jazz ensemble instrumentation and arrangements, interpretation of jazz style and study of chord progressions. Music Education students will be given preference for space.

MCOM 121. Jazz Scoring (2)
Prerequisites: MCOM 10-17 or equivalent.

MCOM 124. Composition, Upper-Division (2)
Free composition for experienced students. May be repeated for credit. Admission to upper division based on review of student's work at end of second year. *Corequisite: MCOM 125.*

MCOM 125. Composition Seminar, Upper-Division (1)
The study of special topics pertinent to composing in the late 20th/early 21st Century. These topics cycle through a six-semester sequence and include: New Pitch Materials, New Rhythmic Materials, Perception and Psychoacoustics, New Formal Structures, Non-Western Compositional Resources, and Experimental Music and Improvisation.

MCOM 191. Independent Study (1-2)

MCOM 193. Special Topics (1-2)

MCOM 208. Counterpoint (3)
Study of Palestrina's and Lassus' contrapuntal techniques accomplished through written exercises and analysis. *Prerequisites: MCOM 10-17 or equivalent.*

MCOM 209. Advanced Orchestration (2)
Focus on orchestration techniques from the first half of the 20th Century, and new performance practices. This study is accomplished through orchestral analysis and writing exercises including a reading session with the orchestra. *Prerequisites: MCOM 10-17 or equivalent.*

MCOM 211. Advanced Computer Music (3)
A course taught in the Conservatory Computer Studio for Music Composition whtich focuses on the use of sampling/sound design, digital audio recording and editing, automated mixing, and computer manipulation as resources for music composition. An additional project will be assigned for those wishing graduate credit. *Prerequisites: MCOM 10-19 or equivalent.*

MCOM 212. Composition-Computer Music (2)
Private composition study in computer music within the Conservatory Computer Studio for Music Composition. *Prerequisites: MCOM 211.*

MCOM 213. Advanced Analysis (3)
Advanced topics in music analysis including

the extensive study of Schenkerian analysis. An additional project will be assigned for those wishing graduate credit. *Prerequisites: MCOM 10-17 or equivalent.*

MCOM 291. Independent Study (1-4)

MCOM 293. Special Topics (1-2)

MCOM 299. Thesis (3)

Music Education Department

MEDU 100. Music for Children (2)
Music resources, concepts and activities for the pre-adolescent child. Open to non-music majors only. Required for multiple subjects credential candidates. *Prerequisite: MCOM 2 or equivalent.*

MEDU 101. Woodwind Instruments (1)
Study of flute and clarinet.

MEDU 102. Woodwind Instruments (1)
Study of oboe, bassoon and saxophone.

MEDU 103. Brass Instruments (1)
Principles for teaching and playing brass instruments.

MEDU 104. Brass Instruments (1)
Advanced principles of brass instrument teaching.

MEDU 105. Percussion Instruments (1)
Pedagogical principles related to playing percussion instruments.

MEDU 107. String Instruments (1)
Introductory study of string playing and teaching techniques.

MEDU 108. String Instruments (1)
Advanced string technique and pedagogy.

MEDU 110. Band Development (2)
Study of teacher's role in bands, including concert, marching, and jazz bands in public schools.

MEDU 111. Choral Development (2)
Concepts and techniques for choral ensembles. Includes choral field observation.

MEDU 112. Orchestra Development (2)
Study of teacher's role in orchestras in public schools.

MEDU 113. Laboratory Ensemble (.5)
Laboratory practice of rehearsal teaching skills, secondary instruments and vocal ensemble techniques.

MEDU 114. Music in Elementary School (2)
Role of music investigated within the elementary school and its environment. Includes 50 hours of laboratory observation/teaching in the elementary schools. Must be taken with EADM 105 and MEDU 115.

MEDU 115. Music Experiences, K-6 (2)
Music specialist approach to materials and techniques for developing music experiences for elementary school children. Must be taken with MEDU 114. Open to music majors only.

MEDU 116. Music in Secondary School (2)
Role of school music, grades 7-12. Includes 50 hours of laboratory observation/teaching. Must be taken in conjunction with MEDU117. Open to music majors only.

MEDU 117. Music Experiences, 7-12 (2)
Music specialist approach to materials and techniques for developing music experiences in secondary school. Must be taken with MEDU 116. Open to music majors only.

MEDU 118. Advanced Teaching Practicum (1-3)
Supervised practical observation/teaching experiences in both public and private schools. *Prerequisites: MEDU 114 and 116, or equivalent.*

MEDU 191. Independent Study (1-2)

MEDU 193. Special Topics (1-2)

MEDU 200. Video Microrehearsal for Music Teaching Candidates (3)
Microrehearsals, seminars, individual and group viewing sessions to define and develop rehearsal-teaching techniques with video recording as basic tool. *Prerequisites: Bachelor's degree in music, approval by Music Education faculty.*

MEDU 201. Video Microrehearsal for Experienced Music Teachers (1-4)
Restructuring of music teaching techniques using video recording techniques; microrehearsals, seminars, individual and group viewing sessions; field application of new procedures. *Prerequisites: Bachelor's degree in music, two years of full-time music teaching in public schools, permission of the instructor.*

MEDU 202. Fieldwork in Music Education (3)
Advanced work in schools. May include music drama, small ensembles, unique curriculum design as well as large ensembles and class instruction.

MEDU 210. Seminar in Music Education (2)
Discussion, research and writing related to music education.

MEDU 220. Instrumental Organization, Conducting and Literature (3)

MEDU 221. Choral Organization, Conducting and Literature (3)

MEDU 222. Issues in Elementary Music Education (3)

MEDU 291. Independent Study (1-4)

MEDU 293. Special Topics (1-2)

MEDU 299. Thesis (3)

MEDU 301. Video Microrehearsal for Experienced Music Teachers (4)
Restructuring of music teaching techniques using video recording techniques: microrehearsals, seminars, individual and group viewing sessions; field application of new procedures. *Prerequisites: Bachelor's degree in music, two years of full-time music teaching in public schools, permission of the instructor.* Research component is required.

MEDU 310. Seminar in Music Education (2)
Discussion, research and writing related to music education.

MEDU 312, 313. Graduate Research in Music Education (1-3, 1-3)

MEDU 322. Issues in Elementary Music Teaching (3)

MEDU 391. Independent Graduate Study (1-3)

MEDU 393. Special Topics (1-2)

General Music

MUSC 202. Introduction to Research in Music (3)
Designed for the graduate level student in developing music research skills.

MUSC 203. Contemporary Issues in Music Education and Music Therapy (3)
Graduate students will research, analyze, and reflect on current values, philosophical issues, and contemporary trends in the professions of music education and music therapy.

Music History Department

MHIS 5. Music Appreciation (4)
A study of the basic elements of music, musical instruments, form and the important styles in music history. Open to non-music majors only. No prerequisites.

MHIS 6. Music of the World's Peoples (3)
Survey of folk, primitive, popular, and classical traditions of Asia, Africa, Europe and North and South America. Open to all students. *No prerequisites.*

MHIS 11. Survey of Music History I (3)
Survey of music history and style from Greek music through music of the Renaissance. *Prerequisites: MCOM 10.*

MHIS 12. Survey of Music History II (3)
Survey of music history and style from the Baroque era through Beethoven. *Prerequisite: MHIS 11.*

MHIS 13. Survey of Music History III (3)
Survey of music history and style of the Romantic and Modern eras. *Prerequisites: MHIS 11 and 12.*

MHIS 140. Symphonic Literature (3)
History of the symphony from Baroque antecedents to contemporary examples. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13 or equivalent or permission of the instructor.*

MHIS 141. Opera Literature (3)
Survey of the development of opera from 1600 to the present day, with special emphasis on major operatic works. Analysis of scores. Relationship of opera to world history. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13 or equivalent or permission of the instructor.*

MHIS 142. Chamber Music Literature (3)
Formal and stylistic study of chamber music literature. Analysis of specific works. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13 or equivalent or permission of the instructor.*

MHIS 143a. Keyboard Literature I (3)
Historical, formal and stylistic study of keyboard literature from 1450 through 1825. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13 or equivalent or permission of the instructor.*

MHIS 143b. Keyboard Literature II (3)
Keyboard music from 1825 to present. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13 or equivalent or permission of the instructor.*

MHIS 144. Vocal Literature (3)
Survey of vocal compositions of major composers with emphasis on 19th and 20th century French and German repertoire. The relationship of poetry and music in the melodie and Lied is stressed. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13, or equivalent or permission of the instructor.*

MHIS 150. Medieval Music (3)
Topics in music history to c. 1450. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13, or equivalent or permission of the instructor.*

MHIS 151. Music in the Renaissance (3)
Topics in the history of the music of the 15th and 16th centuries. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13, or equivalent or permission of the instructor.*

MHIS 152. Music in the Baroque (3)
Topics in music history from c. 1580 to c. 1750. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13, or equivalent or permission of the instructor.*

MHIS 153. Classical Studies (3)
Study of music from c. 1750-1810 with stress on evolution of style and historical factors which relate to this evolution. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13, or equivalent or permission of the instructor.*

MHIS 154. Romantic Studies (3)
Study of music of the 19th century and its relationship to other art forms and historical developments. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13, or equivalent or permission of the instructor.*

MHIS 180. Research in Music History (2-4)
Research culminating in a senior paper, designed to acquaint music history majors with research skills which can be used at the graduate level. *Prerequisite: Senior standing as a music history major.*

MHIS 191. Independent Study (3)

MHIS 193. Special Topics (3)

MHIS 250. Medieval Music (3)
Topics in music history to c. 1450. Emphasis will be on research methodology. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13, or equivalent or permission of the instructor.*

MHIS 251. Music in the Renaissance (3)
Topics in the history of the music of the 15th and 16th centuries. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13, or equivalent or permission of the instructor.*

MHIS 252. Music in the Baroque (3)
Topics in music history from c. 1580-1750. *Prerequisites: MHIS 11, 12, 13, equivalent or permission of the instructor.*

MHIS 253. Classical Studies (3)
Study of music from c. 1750-1810 with stress on evolution of style and historical factors which relate to this evolution. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13, or equivalent or permission of the instructor.*

MHIS 254. Romantic Studies (3)
Study of music of the 19th century and its relationship to other art forms and historical developments. Emphasis will be on research methodology. *Prerequisites: MCOM 11-16, MHIS 11, 12, 13, or equivalent or permission of the instructor.*

MHIS 260. Special Studies in Music Literature (2)
Historical studies in music literature. May be repeated for a maximum accumulation of six units.

MHIS 263. Musicology Seminar (2)
Studies pertinent research problems and methods, dealing with theory, form and music history.

Music Management Department

MMGT 11. Music, Entertainment in U.S. Society (3)
An introduction to the roles that the business and legal considerations play in the music to which our society listens. Examines records, films, television, video and "live" concerts as each of them contribute to and are affected by business in music and entertainment.

MMGT 11L. Music, Entertainment in U.S. Society Seminar (1)
Concurrent registration with MMGT 11. Open to majors only.

MMGT 96. Commercial Music i n the Recording Studio (3)
An overview of the history and process of audio recording. Students will become familiar with studio technology through in-class lecture-discussions and hands-on studio sessions (one time lab fee $70).

MMGT 97. Performing Arts Administration (3)
A practical approach to management and business issues affecting primarily non-profit arts organizations, including program planning, budget development, fund-raising, community relationships and concert promotion.

MMGT 153. Entertainment Law (4)
All aspects of legal relationships and rights problems in films, television, music and records. Entertainment Law may only be taken immediately preceeding the student's internship and/or graduation. *Prerequisites: MMGT 11 and BUSI 53.*

MMGT 191. Independent Study (1-2)

MMGT 193. Special Topics (1-2)

MMGT 195. Music Industry Analysis (4)
An in-depth analysis of the music industry, beginning with the business of creating music, tracing its path through the music publisher, to the recorded performance, and finally to the consumer. Emphasis on contractual relationships and business problem-solving. *Prerequisite: MMGT 11.*

MMGT 198. Music Management Internship (2-4)
An opportunity for qualifying students to spend a semester working in an area of the music business industry which interests them.

Coordinated in conjunction with the Pacific Office of Cooperative Education.

Music Performance Department: Applied

MAPP 1. Applied Music, Class Lessons (1)
Enrollment in applied music classes requires an applied music fee per unit.

MAPP 5. Applied Music (1-2)
Applied Music for non-music majors or for music majors in a non-principal applied medium. Enrollment in applied music classes requires an applied music fee per unit.

MAPP 10. Applied Music (1-2)
For music majors in music composition, music history, music therapy and music management in their principal applied media, Bachelor of Arts students with a major in music and music minors. Enrollment in applied music classes requires an applied music fee per unit.

MAPP 11. Applied Music (1-2)
For music education majors in their principal applied media. Enrollment in applied music requires an applied music fee per unit.

MAPP 12. Applied Music (1-2)
For performance majors. Voice, piano, harp, organ, harpsichord, violin, viola, cello, double bass, flute, oboe, clarinet, bassoon, French horn, trumpet, trombone, baritone horn, saxophone, tuba, percussion and guitar. Enrollment in applied music requires an applied music fee per unit.

MAPP 111. Advanced Applied Music for Music Education Majors (1-2)
For upper division music majors who have passed sophomore concentration examination in their principal instrument or voice. Required for music education majors. Enrollment in applied music requires an applied music fee per unit.

MAPP 112. Advanced Applied Music for Performance Majors (1-4)
For upper division music majors who have passed the sophomore applied major examination in their principal instrument or voice. Required for performance majors. Enrollment in applied music requires an applied music fee per unit.

MAPP 121. Vocal Coaching (1)
Preparation of songs and arias for public performance. Emphasis on musical and dramatic style and interpretation. Private and group lessons. Carries applied music fee. *Prerequisite: permission of the instructor.*

MAPP 191. Independent Study (1-2)

MAPP 210. Graduate Applied Music for Non-performance Majors (1-2) By audition only.

Music Performance Department: Ensembles

Courses MPER 60-84 are performance ensembles with membership open to all students by audition and/or permission of the instructor.

MPER 60. Chamber Ensemble (1)
Enrollment by permission of the instructor.

MPER 66. Jazz Ensemble (1)
Open to all students by audition.

MPER 67. Jazz Combo (1)
Study and performance of music designed for the small jazz combo. Emphasis placed on jazz improvisation, and performance of a wide variety of styles for this medium. *Prerequisite: permission of the instructor.*

MPER 69. Opera Theatre Workshop (1)

MPER 70. University Symphony Orchestra (1)
Open to all students by audition. Major ensemble.

MPER 72. Symphonic Wind Ensemble (1)
Open to all students by audition. Major ensemble.

MPER 73. Concert Band (1)
Open to all students by audition. Major ensemble.

MPER 80. Opera Production (1)
Major ensemble.

MPER 82. The Oriana Choir (Women's Chorus) (1)
Open to all students by audition. Major ensemble.

MPER 83. University Chorus (1)
Open to all students by audition. Major ensemble.

MPER 84. Pacific Singers (1)
Open to all students by audition. Major ensemble.

MPER 169. Advanced Opera Theatre Workshop (1)

MPER 180. Advanced Opera Production (1)
Major ensemble.

Music Performance Department: Supportive Courses

MPER 20, 21. Introduction to Lyric Diction (2, 2)
Fundamentals in technique of articulation and pronunciation; drills in acquiring maximum activity, fluency and flexibility of speech organs involved in diction; the study of the International Phonetic Alphabet; rules of pronunciation in English, Italian, German and French. 20 is prerequisite to 21.

MPER 50. Solo Class (0)
Weekly performance recital for all music majors.

MPER 69. Opera Workshop (1)
The purpose of this course is to explore acting techniques (Yakim, Chekhov) that will address the demands unique to the performance preparation of the singing actor. By exercising the basic tools of acting - the body and the imagination - training for work on the stage begins.

MPER 80. Opera Production (1)
This course allows students to receive credit for applied work on the main stage opera (rehearsal and performance) or in the Opera Studio; participation is by audition only.

MPER 120, 121. Lyric Diction (2, 2)
Theory and practice of singing Italian, German, English and French. Translation and declamation of texts. *Prerequisites: MPER 20, 21.*

MPER 130. Accompanying (1)
Practical training in vocal and instrumental piano accompaniments. (Two units by instructor's permission).

MPER 131. Studio and Recital Accompanying (1)
Practicum in accompanying. Open to piano performance majors only, for major ensemble credit, for a maximum of two years.

MPER 140. Pedagogy of Piano (2)
Study of teaching methods and materials for elementary, intermediate and advanced piano students. *Prerequisite: permission of the instructor.*

MPER 141. Pedagogy of Voice (2)
Overview of the anatomy and physiology of the singing voice with an emphasis on respiration, phonation, resonation and articulation. Examination of various methods of the teaching of singing based on current scientific discoveries as well as important classical treatises. *Prerequisite: permission of the instructor.*

MPER 151. Principles of Conducting (2)
Techniques of the baton, score reading and interpretation. *Prerequisite: MCOM 11-14.*

MPER 152. Choral Conducting (2)
Principles of conducting applied to choral rehearsals and repertoire. *Prerequisite: MPER 151.*

MPER 153. Instrumental Conducting (2)
Principles of conducting applied to band and orchestra rehearsal and repertoire.
Prerequisite: MPER 151.

MPER 169. Advanced Opera Workshop (1)
This course affords singers the opportunity to practice performance techniques learned in Opera Workshop. The first term is dedicated to repertoire and audition technique (Craig), while the second term focuses on scene study (Meisner, Felsenstein).

MPER 180. Opera Production (1)
This course allows students to receive credit for applied work on the main stage opera (rehearsal and performance) or in the Opera Studio; participation is by audition only.

Music Therapy Department

MTHR 11. Introduction to Creative Arts Therapy (3)
Overview of music, dance, art and drama therapy. Visitations to clinical settings, lectures by therapists in each of the arts, and videotapes/films comprise the course format. Goals, objectives and creative arts therapy techniques are discussed in relation to exceptional children and adults seeking therapy.

MTHR 18. Basic Skills in Music for Special Education (3)
A course in developing specific competencies in recreational instruments (guitar, autoharp, recorder, etc.) and basic leadership skills for group management with special populations. Open to non-majors.

MTHR 135. Music Therapy Techniques with Children (4)
Study of various disorders and treatment methods of children and adolescents in music therapy. Role playing of methods and clinical practicum with developmentally and multi-disabled children. Small group and individualized clinical supervision.

MTHR 140. Psychology of Music (4)
Psychological foundations of music including the study of acoustics, examination of current research in music therapy and applied research methodology. Lab included. *No prerequisites; open to non-majors at least junior standing. For music therapy majors only, a clinical practicum with learning disabled children is included.*

MTHR 141a. Influence of Music on Behavior: Adults I (4)
Study of disorders and various counseling and psychotherapeutic techniques. Clinical practicum with geriatric or adults with psychogenic disorders. Majors only.

MTHR 141b. Music in Therapy: Adults II (4)
Study of psychotherapeutic and counseling techniques with adults, emphasizing creative arts therapies. Clinical practicum with adult psychiatric or community mental health facilities. Majors only.

MTHR 142. Supervisory Techniques (0-2)
Techniques in the supervision of clinical practica. Course open to majors by permission of the instructor only.

MTHR 191. Independent Study (1-2)

MTHR 193. Special Topics (1-2)

MTHR 235. Music in Special Settings (3)
Music learning with special populations in the inclusive classroom. Students will learn to set appropriate music objectives and design teaching strategies utilizing music for the disabled child in the public school. Open to non-majors.

MTHR 242. Contemporary Issues in Music Therapy (3)
Current ethical and legal problems in the health field. Study of the theoretical and research foundations of music therapy.

MTHR 244. Community Approaches to Music Therapy (3)
Exploration of changing mental health practice, private practice, specialization, community health centers and the team approach.

MTHR 245. Clinical Clerkship in Music Therapy (1-4)
As an alternate requirement for Thesis, Clinical Clerkship is designed for students who may want to focus on clinical skills and knowledge. Student completes a major project related to an applied therapeutic or educational setting.

MTHR 291. Independent Study (1-4)

MTHR 293. Special Topics (1-2)

MTHR 299. Thesis (1-4)
Option A: an original monograph embodying original research. Option B: approved clinical clerkship in lieu of written thesis.

Conservatory of Music Faculty

Stephen C. Anderson, Dean, Conservatory of Music, Professor of Music, 2000, B.M., Southwestern College (KS), 1967; M.S., Louisiana State University, 1968; D.M.A., University of Oklahoma, 1977.

Derrill Bodley, Lecturer in Music Composition, B.M., Eastman School of Music (University of Rochester), 1967; M.M., Eastman School of Music (University of Rochester), 1975.

Ruth V. Brittin, Associate Professor of Music Education, Chair, Department of Music Education, 1997, Ph.D., Florida State University, 1989; M.M.E., Texas Tech University, 1985; B.M.E., Texas Tech University, 1983. Editorial board of the Journal of Research in Music Education and College Music Symposium, publishes and presents research for the International Society for Music Education, Music Educators National Conference, and state music education organizations. Active music education clinician, brass adjudicator, and performer on French horn. Division representative for California Music Educators Association. Former Chair of Music Education at Syracuse University, 1989-1997.

J. David Brock, Associate Professor of Applied Music-Voice and Opera Coach/Conductor, 1997, B.A., Abiline Christian University; M.M., New England Conservatory. Has performed in Carnegie Hall, Kennedy Center, Meterson Center (Dallas), Germany, Poland, Italy, Czech Republic, South Korea. Previously onfaculty of Boston Conservatory of Music, Abiline Christian University, International Summer Music Academy in Altenburg, Germany, and the Boris Goldovsky Summer Vocal Music Institute.

K. Allen Brown,* Assistant Professor of Percussion, 1981, B.M., University of Oregon, 1969; M.M., Western Michigan University, 1972; Doctoral study at the University of Illinois. Percussion student of David Shrader, Robert Tilles and Thomas Siwe. Wide range of experience in all areas of percussion performance. Author of articles in professional journals and composer of several published percussion works.

Edward Cetto, Assistant Professor of Music, Director of Choral Activities, 1994, M.M., Boston Conservatory of Music, 1992; B.Mus. Ed., Hart School of Music (U. of Hartford), 1981; Certificate, Kold‡ly Musical Training Institute (Hungary), 1980.

David Chase, Assistant Dean, Lecturer in Music Management, 2001, B.M., Trumpet Performance, University of the Pacific, 1994, M.A. 2001.

Thomas Chen, Lecturer in Music with an Emphasis in Music Management, 1984, M.D., Johns Hopkins University, 1957; B.A., DePauw University, 1953. President of C'ductions Productions Advertising and Recording Studio, Stockton, California. Member of Audio Engineering Society and the National Academy of Recording Arts and Sciences.

Robert Coburn, Associate Professor of Music Composition and Theory, Artistic Director, Ensemble 20/21, Chair, Department of Composition, 1993, Ph.D., University of Victoria (Canada), 1995; M.A., University of California, Berkeley, 1974; B.M., University of the Pacific, 1972. Selected Commissions and Performances: Sunriver Music Festival, San Francisco New Music Ensemble; Royal Conservatory of Music (Stockholm, Sweden), Victoria International Festival (Victoria, B.C., Canada), Electronic Music Plus Festival (N.C.), Roulette Festival of New Music (N.Y.). Permanent Sound Environment Installations: 39 Bells (Philadelphia), 1996; Bell Circles II (Oregon Convention Center, Oregon Public Art Program), 1991.

Rex Cooper,* Professor of Piano, 1973, B.M., Oberlin College Conservatory of Music, 1969; M.S., Juilliard School of Music, 1970; Mus.D., Indiana University, 1987; Student of

Adele Marcus, Konrad Wolff, Leon Fleisher, Howard Aibel (Accademia Chigiana, Siena), Gyorgy Sebok and Vlado Perlemuter (Paris). Former member, American Symphony Orchestra; concert tours, Japan; recordings CRI; London debut recital, 1977; New Era International Artists Management.

Joan Coulter, Lecturer in Piano, 1971, B.M., University of the Pacific, 1953. Professional accompanist and ensemble performer. Performer with the Bodley-Coulter Piano Duo since 1989. Student of Edward Shadbolt and Lillian Steuber.

Dotti Cummins, Lecturer in Piano, 1992, M.S., Juilliard School of Music; B.M., Northwestern University; Student of Irwin Freundlich.

Donald DaGrade,* Professor of Bassoon and Saxophone, 1970, B.S., Brigham Young University, 1959; M.M., Indiana University, 1965; Mus.D., 1969; Student of Leonard Sharrow, Simon Kovar, Eugene Rousseau, Earl Bates, Harry Houdeshel; Member, Pacific Arts Woodwind Quintet; Principal bassoon with the Stockton Symphony; Former principal bassoon with the Sacramento Symphony and Indiana University Philharmonic Orchestra. Bassoon coach for the Asian Youth Orchestra.

John David DeHaan,* Associate Professor of Applied Music-Voice, 1997, B.M., Union College; M.M., University of Nebraska. Previously on faculty of Southern Methodist University and the University of Nebraska. Has performed leading roles at Deutsche Oper Berlin, Mannheim Opera, San Francisco Opera, Netherlands Opera, Greater Miami Opera, Santa Fe Opera and many others. Concert soloist with the Detroit Symphony, Louisiana Philharmonic, Montreal Symphony, San Francisco Symphony, National Symphony Orchestra, Concertgebouw Orchestra (Amsterdam), and Kirstiansand Orchestra (Norway).

Thomas Derthick, Lecturer in Double Bass, B.M., California State University, Sacramento. Graduate study, California State University, Long Beach. Studied with Murray Grodner, Stuart Sankey and Abe Luboff. Principal Bass with the Sacramento Symphony and Chamber Orchestra.

J.B. Dyas, Executive Director of the Brubeck Institute; B.F.A. in Music Education, Florida Atlantic University, 1980; M.M. in Jazz Pedagogy, University of Miami, 1985; doctoral study in music education, Indiana University, present. Formerly, Director of Education and Curriculum Development - Thelonious Monk Institute of Jazz, University of Southern California.

Nina Flyer, Lecturer in Cello, 1997, B.M., University of Southern California, 1973. Principal cellist, Women's Philharmonic and Classical Philharmonic. Has performed with San Diego Symphony, San Francisco Symphony, Jerusalem Symphony, Iceland Symphony. Recordings: cello/piano and cello/harp suites by Lou Harrison, to be released in 1998; Cello concerto by Shulamit Ran with ECO, on KOCH International, 1995 (nominated for 2 Grammys).

Eric Hammer, Assistant Professor of Music, Director of Band Activities, Professor of Music Education, 1993; B.M., University of the Pacific, 1973; M.M., University of Oregon, 1990; D.M.A., University of Oregon, 1994.

Keith N. Hatschek, Assistant Professor of Music Management; Chair, Department of Music Management. B.A. University of California - Berkeley, 1973; Certificate in Marketing, University of California - Berkeley, 1993. Principal and founder of Keith Hatschek & Associates, specialists in marketing and public relations serving entertainment, recording technology, and media industries.

William Douglas Hunt, Lecturer in Tuba, 1989, B.M., University of the Pacific, 1966; M.A., 1991. Studied with Arnold Jacobs and William Bell. Public school teacher, instructor, San Joaquin Delta College. Former tubist with U.S. Naval Academy Band, Annapolis Symphony and currently with the Tower Brass Quintet and the Stockton Symphony.

Mathew T. Krejci, Lecturer in Flute, 1989, M.M., Indiana University, 1978; B.M.Ed., Indiana University, 1973. Principal Flutist in the Festival Orchestra, 1978-83. Presently performs as a member of the Sacramento Symphony Orchestra.

George L. Nemeth,* Professor of Horn, Chair, Department of Music History, 1970, B.M., Eastman School of Music (University of Rochester), 1965; Performer's Certificate, 1965; M.A., 1967; Ph.D., Stanford University, 1977. Former member of Rochester Philharmonic; Student of Verne Reynolds, Charles Warren Fox, William Mahrt; Member, Pacific Arts Woodwind Quintet. Regional Clinician, Yamaha Corporation.

Thomas F. Nugent, Lecturer in Oboe, 1990, B.M., San Francisco Conservatory of Music, 1984. Student of Marc Lifschey. Attended Tanglewood, Spoleto and Colorado Philharmonic Music Festivals. Has performed with San Francisco Symphony, Opera and Ballet Orchestras. Also performs with the California Symphony, San Francisco Contemporary Music Players, Sierra Chamber Society and Sonus Imaginorem. Member, Pacific Arts Woodwind Quintet.

Audree O'Connell, Associate Professor of Music Therapy, 1981, B.A., Northern State College, 1954; M.A., University of the Pacific, 1984. Eberhardt Teacher-Scholar Award; Outstanding Alumni Award; frequent presenter at national conferences; frequent vocal soloist in opera, musical theater and jazz performances. Registered and certified Music Therapist. Student of Jennie Tourel and Nadia Boulanger.

Leonard Ott, Lecturer in Trumpet, 1998, B.A. in Music, California State University, Hayward, 1987. Advanced study at California State University, Northridge. Principal Trumpet with the Oakland Ballet Orchestra, the Sacramento Symphony, Modesto Symphony and the European Tour of "A Chorus Line." Private trumpet instructor in orchestra, band, and jazz.

Stephen Perdicaris, Lecturer in Trombone/Euphonium, Director of Brass Ensembles, 1993, B.M., University of North Texas, 1981, Associate with Honors, Royal College of Music, London, 1990. Numerous recordings with Simon Rattle and the City of Birmingham Symphony Orchestra (England) on EMI. Currently a member of the Sacramento Symphony Orchestra.

Jean Purnell, Dean of Libraries, Master of Science in Library Science, University of North Carolina at Chapel Hill, 1980; Master of Arts in Musicology, University of North Carolina at Chapel Hill, 1980; B.A., Wake Forest University, Winston-Salem, N.C., 1976.

François Rose, Assistant Professor of Composition and Theory, 1997, B.M., McGill University, 1986; M.M., 1991; Certificat from the Institut de Recherche et de Coordination Acoustique et Musique (IRCAM), 1991; Ph.D., University of California San Diego, 1997. Instructor at McGill University and at the University of San Diego. Guest lecturer at the Conservatoire Suprieur de Musique de Paris, Institute de Recherche et de Coordination Acoustique et Musique (IRCAM), Warsaw Music Academy, Darmstdt Summer Course for New Music. Award winner in the 3rd International Composers' Competition "Kazimieri Serocki" in Poland, 1990; and in the SDE/PRO Canada Composers' Competition in 1986, 1987 and 1988.

Patricia Shands,* Assistant Professor of Clarinet, 1995, B.M., Peabody Conservatory of Music, 1981; M.M., University of Southern California, 1985. Student of David Shifrin, Mitchell Lurie, David Peck. Member of the American Sinfonietta and the Pacific Arts Woodwind Quintet. Former member of the Block Ensemble, the Portland (ME) Symphony, Vermont Symphony, Festival Ballet of Rhode Island, and Orquesta Filarmonic de Bogota. Guest artist with such groups as the Colorado, Concord and Franciscan String Quartets. Former faculty member of Dartmouth College and University of New Hampshire.

Carol Hayes Tucker, Lecturer in Piano, 1975, B.M., University of the Pacific, 1970; M.M., 1971; Student of Ruth Hayes, Edward Shadbolt; Soloist with Sacramento Symphony, Stockton Symphony.

Frank H. Wiens,* Professor of Piano, 1976, B.M., University of Michigan, 1970; M.M., 1970; Student of Benning Dexter, Gyorgy Sandor, Harald Logan and John Perry. New York recitals at Carnegie Recital Hall in 1984 and 1991; London recital at Purcell Room, 1986; soloist with Atlanta, Denver and Detroit Symphonies and Yaroslavl Philharmonic in Soviet Union; concert tours in Asia and Europe, and annually in the United States; compact disc recording of Rachmaninoff Third Piano Concerto with Slovakia National Orchestra released in 1995 on Fanfare-Intersound label.

Nicholas Waldvogel, Associate Professor of Orchestra; Director - University Symphony Orchestra. B.A. in Music, Harvard, 1989; M.A. in Music, Harvard, 1989; M.M. in Conducting, Peabody Conservatory of Music, 1993; Graduate Performance Diploma in Conducting, Peabody Conservatory, 1994; Ph.D. in Music History, Yale University, 1992. Formerly with the Orchestre de la Suisse-Romande (Switzerland), and the State Philhormonic "Dinu Lipatti" (Romania).

Lynelle Frankforter Wiens, Professor of Voice, 1978, B.M., University of Nebraska, 1975 (Phi Beta Kappa, Mortar Board); M.M. (with Distinction), 1978; Mus.D. (with High Distinction), Indiana University, 1988. Student of Eileen Farrell, Margaret Harshaw, Martial Singher. MTNA National Winner, 1971. Van L. Lawrence Fellow (awarded by National NATS), 1993. Served as a faculty member at the Symposium on the Care of the Professional Voice (Philadelphia) and the Pacific Voice Conference (San Francisco). Eberhardt Teacher-Scholar Award, Faculty Research-Lecturer Award, Distinguished Faculty Award.

David E. Wolfe, Professor of Music Therapy, Chair, Department of Music Therapy, Coordinator of Graduate Studies, Conservatory, 1987, B.M., Florida State University, 1968; R.M.T., 1969; M.A., University of Minnesota, 1976; Behavior Analyst Certification, 1976; Ph.D., Florida State University, 1979. Listed among the 25 most eminent music researchers in the United States, past Editor of the Journal of Music Therapy, Eberhardt Teacher-Scholar Award, recipient of the American Music Therapy Association Publications Award, serves on the Scientific Committee, Revista Espanola de Musicoterapia, and Scientific Committee for the World Congress of Music Therapy. Frequent presenter at national and international conferences, symposia, workshops, and seminars.

Eric Wood, Lecturer in Music Composition and Theory, 1998, D.M.A., Boston University, 1994; M.M., University of Oregon, 1986; B.M., 1984. Numerous commissions and performances, several published articles and lectures. Studied with Lukas Foss, Monte Tubb, Charles Fussell and Derek Healey.

*Members of Resident Artist Series

eberhardt school of business

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A professional school which offers graduate and undergraduate education providing the educational breadth and depth tomorrow's leaders will need.

Mission

The Eberhardt School of Business's mission is to prepare students for successful careers as leaders of business, government, and not-for-profit organizations by integrating a broad-based educational foundation with business principles in a personalized learning environment that emphasizes small classes and opportunities for extensive interaction between students, faculty and practitioners. To support this mission, the school is committed to the continued professional growth of faculty and staff through scholarship and other professional development, and to the integration of the school into the broader community. For its students the school strives to:

- Develop skills in leadership and innovation;
- Develop technical and analytical competence;
- Develop an understanding of the global business environment;
- Instill concern for issues of ethics and social responsibility;
- Encourage community service.

The degree programs in business administration are designed to fulfill this mission and to provide the educational breadth and depth tomorrow's leaders will need.

The Eberhardt School of Business was established in 1977 to fulfill the need for small, high quality management programs that could nurture the personal, professional and overall intellectual growth and development of talented men and women. The school currently has 28 full-time faculty and an enrollment of over 600 graduate and undergraduate students.

Small classes and excellent instructional facilities reinforce a highly personalized learning environment that encourages one-on-one interactions between students and faculty. Faculty and administrators are committed to making teaching the most important activity in the school. Outside the classroom, students choose from a wide variety of activities, including internships, student clubs and societies to further develop their leadership skills. The success of this approach to business and management education is reflected in the excellent job placement record of graduates.

For most business students, a major objective of their college education is to prepare for a successful career. Surveys of successful executives suggest that in order to meet the challenges and opportunities of the future, tomorrow's managers will need a strong educational foundation. Today's executives strongly recommend that students of business and management seek a broad-based education that combines the acquisition of business skills in such areas as marketing, finance, human resource management and accounting, with a solid foundation in mathematics, language and the arts and sciences. In particular, business leaders emphasize the importance of acquiring people skills, especially the ability to communicate effectively. The academic programs of the Eberhardt School of Business have been designed to address these objectives.

Degrees in Business Administration

The School of Business offers the Master of Business Administration, Bachelor of Science degree in Business Administration, and a Minor in Management.

Accreditation

The School is accredited by the AACSB International - The Association to Advance Collegiate Schools of Business.

General Education Requirements

The University requires that all students have coursework in liberal learning and basic skills in quantitative methods and expository writing. As specifically applied to business majors, it means that students entering as freshmen take Mentor Seminar I, II and III, as well as courses in categories I-A (Individual and Interpersonal Behavior), I-B (Society and Culture in the United States), II-A (Literature, Letters and Language), II-B (Fundamental Human Concerns), II-C (Practice and Perspective in the Visual and Performing Arts), III-A (Life and Physical Laboratory Science), and III-B (Formal Systems of Thought). Transfer students are required to complete the General Education Program by taking at least one course in each of the nine categories. Any student failing any Mentor Seminar must take an additional II-B course as a graduation requirement.

The Eberhardt School of Business follows the philosophy that tomorrow's leaders should have a broad background in general education. To insure a broadly based preprofessional education, no courses taught within the School of Business can be used by business administration students to fulfill the General Education requirements.

General Academic Regulations for B.S. in Business Administration

Graduation Requirements

1. Complete at least 128 units, including the University's general education requirements and the specific requirements of the major program.
2. Achieve a minimum grade point average of 2.0 in the major program as well as their cumulative GPA.
3. Fulfill the minimum residency requirement of 32 out of the last 40 semester units of registration at UOP just prior to receiving the degree.
4. Fulfill the ESB minimum residency requirement of at least 32 units taken in the School.
5. Complete at least 64 units in courses that are not BUSI courses or transferred business courses.

Academic Honors

Upon the recommendation of the faculty, honors at graduation are awarded to students achieving the following cumulative UOP grade point average: honors, 3.50; high honors, 3.70; highest honors, 3.90. Each semester students earning a grade point average of 3.50 or higher in 12 or more letter graded units are placed on the Dean's List.

Grading Policies

All courses required of all business administration majors must be taken for letter grade. ESB courses taken beyond those noted above may be taken on a P/NC basis subject to the instructor's approval. The Deans' Seminar will be offered P/NC only.

Students receiving a "P" in required courses taken before becoming a major in the ESB must petition to the Academic Standards Committee for these courses to be applied toward graduation requirements.

Scholastic Actions

1. If a student has a balance point deficiency up to -8 in the major or -10 in the University GPA, he or she is on probation.
2. If a student has a balance point deficiency larger than -8 in the major and/or -10 in the University GPA, he or she is subject to being disqualified. Disqualification decisions usually will be made at the end of the Spring semester, but a student who begins the Fall semester already on probation with a balance point deficiency of -8 or -10 or more may be disqualified at the end of the Fall semester if still at -8 or -10 or more at the end of that semester.

The Academic Regulations and Standards Handbook of the ESB contains further clarification of these policies.

Transfer Students

Transfer courses must have a credit value of at least three semester units if they are to be applied to general education, breadth or major requirements. Courses from institutions on the quarter system must have a credit value of at least four quarter-units to be applied to the above categories.

Junior or community college students who plan to complete upper-division work in business at University of the Pacific should complete one year of introductory economics, one year of introductory accounting, a semester each of calculus and statistics, and a semester of business law. Students should also complete courses in expository writing, computer science, public speaking and the humanities. It is strongly advised that students who do plan to transfer contact ESB with specific questions regarding transfer credit.

Admissions Information

Additional information and specific admissions requirements can be found in the section of this catalog entitled Admission Requirements or by contacting the Associate Dean for Student Affairs, Eberhardt School of Business, University of the Pacific, Stockton, California 95211, telephone (209) 946-2640, www.uop.edu/esb.

Degree Requirements

Bachelor of Science in Business Administration

The four-year undergraduate degree program requires the completion of 128 total units. The program has three segments: preprofessional skills requirements; core courses of technical subjects in business and management; and an area of concentration. The specific requirements are outlined below.

Five-Year Bachelor/MBA

The School of Business offers qualified students an unusual opportunity to complete a Master of Business Administration degree in one year of additional study beyond their undergraduate degree, rather than the usual two years. This option is available to business majors and also to non-business majors who complete eight specified core courses in the undergraduate business curriculum with a grade of B or better (BUSI 31, 33, 53, 100, 104, 105, 107, 109). Students who have taken these classes and fulfill the admissions requirements for the MBA will be eligible to waive the MBA introductory courses and enter into the advanced phase of this uniquely designed graduate program. For further information contact the MBA Program Director or the Associate Dean for Student Affairs in the School of Business.

Minor in Management

A minor in Management can be earned by non-ESB students by fulfilling the requirement described later in this section.

Master of Business Administration

A brief description of the MBA program is provided in this catalog following the information on the undergraduate program. For additional information on the MBA, contact the MBA Program Director, Eberhardt School of Business, University of the Pacific, Stockton, CA 95211, telephone (209) 946-2629, www.uop.edu/esb/mba.

Preprofessional Skills

Skills in writing, communications, quantitative methods, computers, and economics are basic to a professional education in business administration. The exact sequence of these courses taken by students depends upon the results of placement tests in mathematics and writing. All ESB students must consult with their faculty advisers before registering. The following preprofessional skills courses are required:

1. Advanced Writing: ENGL 25-Reader, Writer, Text*.
2. Public Speaking: COMM 27-Public Speaking*.
3. Mathematics: MATH 45-Introduction to Finite Mathematics and Calculus* and MATH 37-Probability and Statistics*.
4. Computer Literacy: COMP 25-Computers and Information Processing*.
5. Economics: ECON 53-Microeconomics* and ECON 55-Macroeconomics*.

**These courses are also part of the UOP General Education Program, and can be counted toward the University General Education requirements.*

Business Administration Core Requirements

The core requirements for the Business Administration degree consist of the Deans' Seminar (required only for entering freshmen) and nine other courses that deal with specific functions of business. Included are BUSI 31-Financial Accounting; BUSI 33-Managerial Accounting, BUSI 53-Legal and Ethical Environment of Business; BUSI 100-Management Information Systems; BUSI 104-Operations Management; BUSI 105-Financial Management; BUSI 107-Marketing Management; BUSI 109-Management and Organizational Behavior; and BUSI 181-Strategic Management and Policy.

Business Administration Concentrations

The Bachelor of Science in Business Administration offers concentrations in a wide variety of areas including Accounting, Finance, Business Law, Management Information Systems, Marketing, International Business, Real Estate, Management & Human Resources, Industrial Labor Relations, Entrepreneurship, Arts and Entertainment Management, Economics, and General Business. A student is required to take at least four concentration courses, one of which must be an international concentration course. A number of concentrations require more than four courses. Students concentrating in Economics must take at least one International Economics course.

Core Area Concentrations

Accounting

BUSI 113a and b-Intermediate Accounting I and II; BUSI 113c-Advanced Accounting; BUSI 115-Tax Accounting; BUSI 117-Cost Accounting; BUSI 119-Auditing; BUSI 163-International Financial Management and BUSI 167-International Business Law.

Economics

ECON 101-Intermediate Microeconomic Analysis; ECON 190-Econometrics; one course from the following: ECON 121-International Trade, ECON 123-International Finance, ECON 125-Economic Development, ECON 126-Comparative Economic Systems; plus two other upper division economics courses.

Finance

BUSI 121-Financial Markets; BUSI 123-Investment Analysis and BUSI 163-International Financial Management; plus one course from the following: BUSI 124-Entrepreneurial Finance; BUSI 125-Intermediate Financial Management; BUSI 126-Topics in Finance; BUSI 128-Real Estate Valuation and Investment; and BUSI 129-Real Estate Finance.

International Business

BUSI 163-International Financial Management; BUSI 165-International Marketing; BUSI 167-International Business Law; INTL 77-Contemporary World Issues; and one of the following: BUSI 168-Global Strategic Management or BUSI 169-Comparative Management. Student must meet language requirements of Levels 11a and 11b of a modern language other than English; or placement by exam into Level 23 or higher in a modern language other than English. Also, each student concentrating in international business is strongly advised to study and/or internship abroad for a semester or summer.

Marketing

BUSI 141-Marketing Research; BUSI 165-International Marketing and any two courses from the following: BUSI 143-Product Innovation; BUSI 145-Retailing and Channels; BUSI 147-Consumer Behavior; and BUSI 149-Strategic Marketing.

Management Information Systems

BUSI 136-Business Programming; BUSI 137-Database Management Systems; BUSI 138-Networking and Telecommunications Management; BUSI 139-Electronic Commerce Project; and one international concentration course from: BUSI 163-International Financial Management; BUSI 165-International Marketing, BUSI 167-International Business Law, BUSI 169-Comparative Management. MIS students are strongly encouraged to purchase an up-to-date laptop computer for use in MIS classes.

Management and Human Resources

BUSI 169-Comparative Management; BUSI 170-Human Resources Management, and any two of the following courses: BUSI 134-Conflict Management; BUSI 153-Labor Management Relations; BUSI 159-Employment Law; and BUSI 175-Leadership and Change.

General Business

Any four ESB concentration-level courses including at least one of the following: BUSI 163-International Financial Management; BUSI 165-International Marketing; BUSI 167-International Business Law; or BUSI 169-Comparative Management.

Specialty Area Concentrations

Students may also develop concentrations in a number of specialty areas, each of which focus on a particular industry or very focused career track. Following is a listing of the requirements for concentrations in several specialty areas. Specialty concentrations are possible subject to the availability of the courses listed. Some of these courses may not be offered every year. Additional specializations not listed below are also possible and can be self-designed by a student with the approval of his or her faculty adviser and the Dean's Office.

Entrepreneurship

BUSI 172-Entrepreneurship and any two of the following courses: BUSI 124-Entrepreneurial Finance; BUSI 143-Product Innovation; or BUSI 176-Managing Small Business. Students

must also take one of the following international courses: BUSI 163-International Financial Management; BUSI 165-International Marketing; BUSI 167-International Business Law; or BUSI 169-Comparative Management. The following course is highly recommended but not required: BUSI 183-Administrative Internship.

Real Estate

BUSI 127-Legal Aspects of Real Estate; BUSI 128-Real Estate Valuation and Investment; BUSI 129-Real Estate Finance, and any one of the following international courses: BUSI 163-International Financial Management; BUSI 165-International Marketing; BUSI 167-International Business Law; or BUSI 169-Comparative Management.

Industrial Labor Relations

Any three courses from: BUSI 153-Labor-Management Relations; BUSI 155-Bargaining and Negotiation Processes; BUSI 159-Employment Law; ECON 180-Labor Economics, and any one of the following international courses: BUSI 163-International Financial Management; BUSI 165-International Marketing; BUSI 167-International Business Law; or BUSI 169-Comparative Management.

Business Law

BUSI 157-Commercial Law; BUSI 167-International Business Law and any two of the following courses: BUSI 115-Tax Accounting; BUSI 127-Legal Aspects of Real Estate; BUSI 159-Employment Law.

Arts and Entertainment Management

Three options are available within this specialty. Each requires seven courses for the concentration, three of which must be upper-division business concentration courses including one of the following international business courses: BUSI 163-International Financial Management; BUSI 165-International Marketing; BUSI 167-International Business Law; or BUSI 169-Comparative Management. The remaining four courses in each of the categories are:

Music

*MHIS 5-Music Appreciation; *MMGT 11 and 11L-Music, Entertainment in U.S. Society; MMGT 153-Entertainment Law; MMGT 195-Music Industry Analysis. Suggested: MMGT 96-Commercial Music in the Recording Studio.

Visual Arts

*ARTH 9-Western Art After 1400; *ARTH 116-Contemporary Art; *ARTS 31-Design and Color or *ARTS 3-Visual Arts Exploration; ARTS 136-Visual Arts Management.

Theatre Arts

THEA 10*-Introduction to the Theatre; THEA 103*-Theatre Heritage I; THEA 17*-Beginning Acting; THEA 163-The Biz of Show Biz.

** Can be counted toward General Education requirements.*

Sample Schedule of Classes for the B.S. in Business Administration

The following outline is an example of how an entering freshman may proceed through the program in one of the four course concentrations.

Freshman Year Fall Semester

BUSI 10 Deans' Seminar
ECON 53 Microeconomics
MATH 45 Introduction to Finite Mathematics and Calculus
Mentor Seminar I
General Education Course

Freshman Year Spring Semester

BUSI 53 Legal and Ethical Environment of Business
ECON 55 Macroeconomics
ENGL 25 Reader, Writer, Text
Mentor Seminar II

Sophomore Year Fall Semester

COMP 25 Computers and Information Processing
COMM 27 Public Speaking
BUSI 31 Principles of Financial Accounting
General Education Course

Sophomore Year Spring Semester

BUSI 33 Principles of Managerial Accounting
MATH 37 Probability and Statistics
BUSI 100 Management Information Systems
General Education Course

Junior Year Fall Semester

BUSI 105 Financial Management
BUSI 107 Marketing Management
Free Elective
Free Elective

Junior Year Spring Semester

BUSI 104 Operations Management
BUSI 109 Management and Organizational Behavior
Free Elective
Free Elective

Senior Year Fall Semester

Business Administration Concentration Course
Business Administration Concentration Course
Mentor Seminar III
Free Elective

Senior Year Spring Semester

Business Administration Concentration Course
Business Administration Concentration Course (International)
BUSI 181 Strategic Management and Policy
Free Elective

Notes

1. Most of the courses listed for fall or spring may be taken either semester.
2. The Deans' Seminar is required of all entering ESB freshmen.
3. All prerequisites must be met before students may enroll in any course.
4. Students taking any course numbered above BUSI 100 must have junior class standing (56 units).
5. Students in the Accounting, Economics or in Arts and Entertainment Management concentrations begin their concentration courses earlier.

Minor in Management

The Minor in Management is intended to provide an exposure to general management principles and some functional area technical skills for students majoring in disciplines outside of ESB. The minor is not intended as a substitute for the broad in-depth coverage found in the business degree. Non-ESB students can obtain a Minor in Management by fulfilling the following requirements:

1. BUSI 31-Principles of Financial Accounting
2. BUSI 109-Management and Organizational Behavior; and
3. Any three other courses offered by the School of Business, excluding the Deans' Seminar, most special topics or independent studies.

All courses taken for the Minor in Management must be taken at ESB for a letter grade, and students must attain a minimum 2.0 grade point average in these courses. Students minoring in Management must fulfill all prerequisites and junior class standing requirements for ESB courses. These students must also exercise caution in not violating the University's restriction, which allows only 30 units of BUSI courses to be credited toward the degree requirements of non-ESB majors.

Master of Business Administration

The Pacific MBA Program is designed to train the managers of the 21st century. The rigorous and intellectually challenging coursework goes beyond the traditional business school curriculum to emphasize important managerial skills like leadership, innovation, communication and a global perspective. The curriculum is divided into two phases, each consisting of one full-time academic year. Students with sufficient prior coursework in business may be able to waive some or all of the Phase I courses.

Program Prerequisites:

All students are expected to have completed prerequisite courses in subjects necessary for success in MBA coursework prior to beginning the MBA. These include six hours of Introductory Macroeconomics and Microeconomics (or three hours of Managerial Economics), three hours of computer coursework, three hours of Probability and Statistics, and three hours of College Math and/or Calculus.

These courses may have been taken at either the undergraduate or graduate level. Students may enroll in prerequisite courses simultaneously with certain Phase I MBA courses. Students should discuss this possibility with the Program Director.

Phase I - Foundation Courses:

Phase I includes eight courses covering basic business skills. All of these Foundation courses can be waived by students who have successfully completed similar courses at the undergraduate or graduate level with a grade of "B" or better. Students who waive all of the Foundation courses will be able to complete the MBA Program in one year.

BUSI 200 Management Information Systems
BUSI 201 Financial Accounting
BUSI 202 Managerial Accounting
BUSI 203 Legal Environment of Business
BUSI 204 Operations Management
BUSI 205 Financial Management
BUSI 207 Marketing Management
BUSI 209 Organizational Behavior

Phase II - Innovative and Integrative Courses:

Phase II embodies the heart of the UOP MBA. In Phase II students can choose either the General Management Track or the Entrepreneurship Track. Both tracks emphasize leadership and innovation skills, and take an integrative approach to studying business administration. In addition to required classes, both tracks offer a choice of elective courses, which allow students to explore areas of particular interest to them.

General Management Track

BUSI 210 Business and Public Policy
BUSI 268 Global Business Competition
BUSI 274 Managing Quality and Productivity
BUSI 275 Technology and Innovation
BUSI 279 Leadership and Change
BUSI 281 Strategic Management
Plus four elective courses

Entrepreneurship Track

BUSI 210 Business and Public Policy
BUSI 221 Entrepreneurial Finance
BUSI 268 Global Business Competition
BUSI 272 Entrepreneurship
BUSI 274 Managing Quality and Productivity
BUSI 275 Technology and Innovation
BUSI 279 Leadership and Change
BUSI 282 Small Business Strategy
Plus two elective courses

All students must complete at least 30 hours of graduate coursework to qualify for the MBA. Students who waive BUSI 205 must take BUSI 220 or BUSI 221 as an elective. Students who waive BUSI 207 must take an advanced marketing elective.

Internship/Mentorship Program:

Full-time students with limited prior work experience should participate in an internship, generally during the summer between Phase I and Phase II of the MBA Program. In addition, each full-time student may be teamed with a senior manager from the private or public sector who will serve as the student's mentor and help guide him/her through the MBA Program. The MBA Program Director will arrange these internships and mentorships based on student interests and needs.

Applied Research/Consulting Projects:

All students will participate in field projects through their MBA courses. Students desiring additional field experience can apply for internships or research/consulting projects through the MBA Program Office.

Waiver and Transfer Policy

Waivers

All of the Foundation courses in Phase I can be waived. Applicants who have successfully completed similar courses at Pacific or another university are not required to repeat the courses in the MBA Program. Applicants may request waivers for BUSI 200, 201, 202, 203, 204, 205, 207 and 209 if they have completed these courses for credit with a grade of B or better in an AACSB accredited graduate or undergraduate program within the past seven years.

Transfers

In addition to Phase I courses waived, students may transfer credit for up to two Phase II courses based on previous graduate coursework. Because many of the Phase II courses are unique and may not be available at other universities, course credit transferred to the MBA will generally be in the elective area. A grade of "B" or better is required to transfer graduate credit. Students should note that a minimum of 24 units of MBA coursework must be successfully completed at Pacific to meet graduation requirements.

Students interested in receiving waiver or transfer credit should complete a Waiver/Transfer Request Form, available from the MBA Program Office, and submit it with their application.

Special MBA Programs

One Year Accelerated MBA

Students who are able to waive all or most of the Phase I Foundation courses in the MBA may be eligible to complete the program in ten months of accelerated study. This special program includes several unique components including a three-week intensive course in Global Business Competition which is taught in a foreign country (e.g. Singapore, Chile, Korea, and Spain in recent years), and a three week intensive and highly experiential course in Leadership and Change.

Joint MBA/JD

The joint MBA/JD Program allows students to complete their three-year law degree at Pacific's McGeorge School of Law and the two-year MBA Program in only four years. To combine the two programs, students can count up to 24 units of course credit toward both degrees. Students interested in the joint MBA/JD Program must be accepted by both the MBA Program and the Law Program separately.

Peace Corps Masters International Program

Masters Internationalist students complete a portion of their studies on campus prior to entering the Peace Corps. Students will then leave for a Peace Corps assignment, including language, technical and cross-cultural training. After completing a Peace Corps assignment, students will return to campus to

complete their degree. Students are eligible for financial aid upon returning to the U.S.

Admission to the MBA Program

Admission to the Pacific MBA Program is competitive and based on criteria which indicates a high promise of success. Performance in prior coursework and standardized test scores (GMAT) are considered in the admission decision. A bachelor's degree or its equivalent is required for admission. Although the faculty gives equal consideration to all undergraduate majors in the admissions process, a solid preparation in English, mathematics, economics and the social sciences is recommended. Foreign language competency is considered an asset.

MBA admission decisions are made on a rolling basis. Applicants are notified immediately when decisions have been made. The completed application packet must be submitted before the Admissions Committee can render a final decision. The required materials include:

- The completed application form.
- Transcripts from all undergraduate, graduate and professional schools attended.
- Three letters of recommendation written by people knowledgeable of the applicant's qualifications for graduate work.
- A score on the Graduate Management Admissions Test (GMAT). For GMAT information, call the Eberhardt School of Business at (209) 946-2629, www.uop.edu, or contact the Educational Testing Service at P.O. Box 6103, Princeton, NJ 08541-6103. These scores must be less than five years old.

Applicants may prepare for the GMAT by obtaining review material and sample questions published specially for this purpose. A small effort may result in marked improvement in scores.

Course Descriptions

B.S. in Business Administration Courses

BUSI 10. Deans' Seminar (1)
A general survey of the programs and methodologies of the Eberhardt School of Business, including but not limited to educational requirements, professional orientation, career opportunities and School and University regulations. Required of all ESB freshmen.

BUS 31. Principles of Financial Accounting (4)
Analysis, recording and reporting of business transactions; analysis and use of financial statements; and the use of accounting information in management decision-making.

BUSI 33. Principles of Managerial Accounting (4)
Use and analysis of accounting information for management decision-making in planning, production, evaluation and control decisions. *Prerequisite: BUSI 31.*

BUSI 53. The Legal and Ethical Environment of Business (4)
Introduction to Law: court systems and jurisdiction; litigation and other methods of resolving disputes; ethical decision-making; the Constitution and business; lawmaking and regulation by administrative agencies; international law; business organizations; antitrust law; consumer protection; employment law, contract law; and product liability.

BUSI 86. Introduction to International Business (4)
This course provides the non-business major with an introduction to the micro and macro challenges facing international business enterprises. The enterprise level of analysis examines cross-border strategic planning, operational structure, and managerial functions. The macro level of analysis considers cultural, political, economic, legal, and institutional dimensions of globalization and their impact upon the enterprise. Guidelines for decision-making with different types of risk and for obtaining access to potential sources of information complement each section of the course. Not open to ESB majors.

BUSI 100. Management Information Systems (4)
An introduction to the concepts and skills needed to utilize information systems resources. The focus is the role of information systems in management function. An emphasis is made on end-user computing, including the role of users in information system planning and design. Topics will include information systems technology, applications and development. Students will gain experience with spreadsheet, data base and network applications. *Prerequisite: COMP 25 or 51.*

BUSI 104. Operations Management (4)
Analysis of production and operations systems in the organization; application of quantitative methods in solution of production and operations problems with major emphasis on managerial and economic implications. *Prerequisites: BUSI 31, 33; ECON 53, 55; MATH 37, 45; an acceptable computer course; junior standing.*

BUSI 105. Financial Management (4)
This course introduces financial instruments and institutions from the perspective of the financial management of the firm. Tools of financial analysis and planning as well as principles of short-term and long-term financing are developed as they relate to profitability and liquidity. *Prerequisites: BUSI 31; ECON 53, 55; MATH 37, 45; junior standing.*

BUSI 107. Marketing Management (4)
An introduction to the institutions, techniques, policies and procedures utilized in the planning and performance of the activities which direct the flow of goods from producers to consumers. Emphasis is placed on the managerial process of decision-making in the setting of marketing strategy. *Prerequisites: ECON 53; junior standing.*

BUSI 109. Management and Organizational Behavior (4)
The applications of the concepts of organizational behavior and structure theories to the managerial processes, with emphasis on organizational efficiency and effectiveness, are developed. *Prerequisite: junior standing.*

BUSI 113a. Intermediate Accounting I (4)
Primarily a study of income measurement and asset valuation under generally accepted accounting principles. The course emphasizes current procedures, form and content of financial statements and critical evaluation of alternative accounting practices. *Prerequisites: BUSI 31; junior standing.*

BUSI 113b. Intermediate Accounting II (4)
A continuation of the study of generally accepted accounting principles. Topics studied include owners' equity, dilutive securities, pensions, leases, income taxes, statement of cash flows and inflation accounting. *Prerequisites: BUSI 113a; junior standing.*

BUSI 113c. Advanced Accounting (4)
A study of advanced accounting theory and practice which includes accounting for inter-corporate investments, partnerships, foreign currency transactions, government and nonprofit organizations and current topics. *Prerequisites: BUSI 113b; junior standing.*

BUSI 115. Tax Accounting (4)
A course designed to develop proficiency in the application of federal income tax law as it applies to individuals. *Prerequisites: BUSI 31; junior standing.*

BUSI 117. Cost Accounting (4)
This course emphasizes skills used by management accountants or other decision-makers within an organization for planning and control. Topics include analysis of cost structures, profit planning, product cost systems, cost estimation, budgeting, and the behavioral implications of management accounting systems. *Prerequisites: BUSI 31, 33; MATH 37; junior standing.*

BUSI 119. Auditing (4)
A capstone course in accounting studying the integration of financial and management accounting systems. Topics include the attest function and ethics, generally accepted auditing standards, systems of internal control, evidence and audit reports. *Prerequisites: BUSI 113a; junior standing.*

BUSI 121. Financial Markets (4)
An examination of the monetary transmission mechanism with emphasis on its implications for financial management of the individual firm. Topics include the institutions of money and credit creation, the flow-of-funds accounts and financial market subsection interconnection. *Prerequisites: BUSI 105; junior standing.*

BUSI 123. Investment Analysis (4)
The nature of securities markets and the characteristics of various types of securities for institutional and personal investment are examined. Sources of investment information, security valuation and investment planning are introduced. *Prerequisites: BUSI 105, 121; junior standing.*

BUSI 124. Entrepreneurial Finance (4)
Financing Entrepreneurship discusses the financial issues facing a business start-up and those of a growing enterprise. Specific attention is paid to the acquisition of financing for new ventures, financial management of new and growing businesses, and the harvest of the entrepreneurial venture. *Prerequisites: BUSI 105; junior standing.*

BUSI 125. Intermediate Financial Management (4)
A second course in business finance with emphasis on problem solving. Selected problems in the management of long-term and short-term assets are examined in depth and techniques for optimizing the goals of the firm are developed. *Prerequisites: BUSI 105; junior standing.*

BUSI 126. Topics in Finance (4)
This course will examine in-depth special topics of current interest in the field of finance. Students and faculty together will explore empirical and theoretical issues in such areas of finance as investment analysis, financial management, financial markets and other related areas. *Prerequisites: BUSI 105, 121; junior standing.*

BUSI 127. Legal Aspects of Real Estate (4)
A study of the legal aspects concerning real estate and real estate transactions including deeds, listing agreements, title insurance, real estate contracts, closing, property taxation, land use regulations and landlord-tenant relationships. *Prerequisites: BUSI 53; junior standing.*

BUSI 128. Real Estate Valuation and Investment (4)
An analysis of real estate valuation techniques and investment decisions, including the market, tax and financial environments within which real estate decisions are made. Risk and return characteristics of income-producing properties and the contribution of real estate to the investment portfolio are examined. The discounted cash flow model for valuation and investment decisions is emphasized. *Prerequisites: BUSI 105; junior standing.*

BUSI 129. Real Estate Finance (4)
An examination of the theory and practice of real estate finance, including such topics as the sources of mortgage funds, types of financing instruments, cost of borrowing, and secondary mortgage markets. Emphasis is placed on using financial analysis techniques to structure and evaluate financing alternatives. *Prerequisites: BUSI 105; junior standing.*

BUSI 134. Conflict Management (4)
Conflict is inevitable in organizational, inter-organizational and international settings. This course deals with conflict in concept and in practice and is designed to provide insights into its causes and its productive and destructive consequences. It also focuses on providing tools for managing conflict productively, emphasizing negotiation in particular. *Prerequisites: BUSI 109; junior standing.*

BUSI 136. Business Programming (4)
Introduction to programming logic and design. Visual Basic is used to emphasize the development of business applications. Introduction to Windows design elements, forms, and events.

BUSI 137. Database Management Systems (4)
Development of database management systems to design and build business applications. The course teaches database design (normalization), queries (SQL), development of business applications using forms and reports, and an introduction to database administration. *Prerequisites: junior standing.*

BUSI 138. Networking and Telecommunications Management (4)
Design, implementation, and management of local area networks. Design issues in wide area networks and telecommunications with emphasis on Internet connectivity. Network server setup and administration, including Web site administration. *Prerequisites: junior standing.*

BUSI 139. Electronic Commerce Project (4)
Designing and building applications for electronic commerce. Uses databases and programming to build interactive Web sites. *Prerequisites: junior standing.*

BUSI 140. Business Systems Analysis (4)
Systems development life cycle; methods and tools for systems analysis and design; human factors, user interface, and systems integration issues. *Prerequisites: junior standing.*

BUSI 141. Marketing Research (4)
A study of the concepts and techniques useful in the solution of marketing problems and in the identification of marketing opportunities. Emphasis is given to the design of information acquisition and to the evaluation and interpretation of research findings. *Prerequisites: BUSI 107; MATH 37; junior standing.*

BUSI 143. Product Innovation (4)
Maintaining competitiveness in the contemporary marketplace requires that companies focus increasingly on the management of product and service innovation. This course will address the innovation process - technology-based and otherwise - from the identification of new ideas through the development of innovations and eventual introduction of novel products to consumers. Topics which will be addressed include sources of innovation, identification and screening of product innovations, business planning for new products, technological forecasting, integrating innovation with business objectives and organizational models for fostering innovation. *Prerequisites: BUSI 107; junior standing.*

BUSI 145. Retailing and Channels (4)
Consideration in depth of the distribution structure and strategies available to a firm, with emphasis on conceptual as well as decision-making aspects. Special attention will be given to the structure and management of retailing. *Prerequisites: BUSI 107; junior standing.*

BUSI 147. Consumer Behavior (4)
A study of the bases for consumer behavior,

including relevant information from social psychology, sociology and cultural anthropology. The application of analysis of consumers' behavior and attitudes to marketing management decisions. Among the management decision areas included are advertising, product policy, product development, marketing research and pricing. *Prerequisites: BUSI 107; junior standing.*

BUSI 149. Strategic Marketing (4)
Students will be introduced to the strategic marketing process, including the analysis of marketing situations, identification of problems, determination of solutions, implementation of corrective action, and planning strategy. *Prerequisites: BUSI 105; BUSI 107.*

BUSI 153. Labor-Management Relations (4)
A study of labor movements and their impact on organizations and the economy. *Prerequisites: ECON 53, 55; junior standing.*

BUSI 155. Bargaining and Negotiation Processes (4)
The study of economic, institutional and behavioral aspects of conflict resolution in the organization, with special emphasis upon the collective bargaining process in both the public and private sectors. *Prerequisites: ECON 53; junior standing.*

BUSI 157. Commercial Law (4)
Basic principles of commercial and trade law; business organizations including agency, partnership and corporations; contracts and the Uniform Commercial Code, real and personal property; securities regulation, secured transactions; bankruptcy; professional liability and negotiable instruments. *Prerequisites: BUSI 53; junior standing.*

BUSI 159. Employment Law (4)
Consideration of major labor-management relations legislation and its interpretation and treatment by administrative agencies and the courts. Primary emphasis will be on the National Labor Relations Act as amended, but attention will also be given to law concerning public sector labor relations, employment discrimination and other related law. *Prerequisites: BUSI 53; junior standing.*

BUSI 163. International Financial Management (4)
An analysis of management problems arising in an international financial environment. Specific consideration given to financial risk(s), risk management and international financial markets. *Prerequisites: BUSI 105; junior standing.*

BUSI 165. International Marketing (4)
Examination of the environment for marketing across borders. Consideration of marketing practice, policies and strategies in the multinational setting. Students complete a global screening of countries and draw up a marketing plan and strategy for a given product. *Prerequisites: BUSI 107; junior standing.*

BUSI 167. International Business Law (4)
This course will provide students with the opportunity to study international sales and commercial transactions, international and domestic laws which directly affect global trade and events which affect international trade such as environmental standards, privatization and intellectual property protection. The emphasis of the course will be on the recognition of legal problems and the discovery and application of appropriate principles of international and domestic law which may assist in the resolution of these problems. *Prerequisites: BUSI 53; junior standing.*

BUSI 168. Global Strategic Management (4)
This course develops an understanding of the major strategic problems facing multinational corporations. Particular emphasis is on skills in analyzing competitive forces in global industries and in understanding the basis for successful international strategies and managerial systems. *Prerequisite: junior standing.*

BUSI 169. Comparative Management (4)
Consideration of management theory and practice in different cultures. Deals with the particular dilemmas and opportunities faced by firms and students as they function in multicultural settings. The course seeks to deepen both knowledge and skills. Methods used include lectures, readings, films, simulations, cases and written papers. *Prerequisites: BUSI 109; junior standing.*

BUSI 170. Human Resources Management (4)
This course introduces the P/HR management area with its core of activities which include job analysis, performance evaluation, employee acquisition, employee and management development, and compensation and benefits. The influences of the equal employment and civil rights laws, wage and hour laws, labor law and labor unions in organizational operations are studied. *Prerequisites: BUSI 109 or concurrent enrollment; junior standing.*

BUSI 172. Entrepreneurship (4)
Coverage of the new venture creation process from the venture idea phase to the capital search and acquisition, through the new venture start-up and operations. Theories and techniques are applied to the planning and development of an actual new enterprise. New ventures can include the traditional small business or a high growth venture; the forming of a new business entity or a new venture within an existing organization. *Prerequisites: BUSI 31, 33, 107; junior standing.*

BUSI 173. Designing Effective Organizations (4)
This course focuses on relationships among organizational subsystems and the organization and its environment. The topics of technological determination and environmental determinism are investigated, and an ecology model of organizational effectiveness is developed. *Prerequisites: BUSI 109; junior standing.*

BUSI 175. Leadership and Change (4)
The processes of deliberate organizational change as adaptations to both internal and external developments. Criteria for and of effective change programs, strategic variables affected in change (e.g., power, communication, conflict) and technologies for producing change (e.g., consulting, training, research). *Prerequisite: BUSI 109, or junior standing in psychology or sociology.*

BUSI 176. Managing Small Businesses (4)
The focus of the course is on the decisions owner-managers make in choosing opportunities, allocating resources, motivating employees and maintaining control while not stifling entrepreneurial activities that cause a business to grow. Topics included are managing under adversity, management of the family business, professionalizing the growing business, corporate entrepreneurship, financial planning, control, accountability and the changing role of the board of directors. A field study and a research paper involving the applications of the concepts in a specific firm are required. *Prerequisites: BUSI 31, 109; junior standing.*

BUSI 181. Strategic Management and Policy (4)
An integrated analysis of the administrative processes of the various functional areas of an enterprise, viewed primarily from the upper levels of management. The formulation of goals and objectives and selection of strategies under conditions of uncertainty as they relate to planning, organizing, directing, controlling and evaluating the policies in each of the functional areas separately and jointly to achieve corporate objectives. *Prerequisites: BUSI 31, 33, 53, 100, 104, 105, 107, 109.*

BUSI 183. Administrative Internship (4)
The internship affords students the opportunity to combine administrative practice and classroom theory. Interns are placed with private, public or third sector agencies for a period of 16 to 20 hours a week for one semester. Interested students should contact Patrice Sheffer-Birkedahl, Director of ESB Career Services (209) 946-2646 or e-mail: psheffer@uop.edu.

BUSI 191. Independent Study (2-4)
Primarily for advanced majors in business administration. An independent study proposal must be submitted to and approved by the student's faculty adviser, the instructor and the ESB Academic Standards Committee. Independent study is to be construed as self-directed study by the student.

BUSI 193. Special Topics (4)
Special topic courses offered by the School of Business will be of three types:

– Advanced subjects studied in the concentration program.

– General courses open to all students other than freshmen.

– Special courses introducing new approaches to subjects studied previously, or presenting new subjects which require preparation in disciplines other than business administration.

MBA Courses

(see MBA Catalog for course descriptions)

BUSI 200 Management Information Systems
BUSI 201 Financial Accounting
BUSI 202 Managerial Accounting
BUSI 203 Legal Environment of Business
BUSI 204 Operations Management
BUSI 205 Financial Management
BUSI 207 Marketing Management
BUSI 209 Organizational Behavior
BUSI 210 Business and Public Policy
BUSI 220 Corporate Finance
BUSI 221 Entrepreneurial Finance
BUSI 223 Investment and Portfolio Analysis
BUSI 227 Real Estate Law
BUSI 229 Real Estate Finance and Investments
BUSI 236 Business Programming
BUSI 241 Marketing Research
BUSI 242 E-Commerce Marketing
BUSI 247 Customer Behavior
BUSI 249 Strategic Marketing
BUSI 253 Industrial Relations
BUSI 259 Employment Law
BUSI 263 International Financial Management
BUSI 265 Global Marketing
BUSI 267 International Business Law
BUSI 268 Global Business Competition
BUSI 269 Comparative Management
BUSI 270 Human Resource Management
BUSI 272 Entrepreneurship
BUSI 273 Organizational Analysis and Design
BUSI 274 Managing Quality and Productivity
BUSI 275 Technology and Innovation
BUSI 279 Leadership and Change
BUSI 281 Strategic Management
BUSI 282 Small Business Strategies
BUSI 291 Independent Study (1-3)
BUSI 293 Special Topics

Eberhardt School of Business Faculty

Mark S. Plovnick, 1989, Dean, Professor, B.A., Union College, 1968; B.S., 1968; S.M., Massachusetts Institute of Technology, 1970; Ph.D., 1975.

Michael H. Ballot, 1971, Professor, B.M.E., Cornell University, 1962; M.B.A., University of Santa Clara, 1965; M.A., Stanford University, 1968; Ph.D., 1973.

Thomas E. Brierton, 1989, Associate Professor, B.B.A., University of Wisconsin, 1978; J.D., Northern Illinois University, College of Law, 1983.

Donald W. Bryan, 1974, Associate Professor, B.A., Linfield College, 1962; M.A., Syracuse University, 1964; Ph.D., 1974.

Lucien J. Dhooge, 1996, Assistant Professor, B.A., University of Colorado, 1980; J.D., University of Denver College of Law, 1983; LL.M., Georgetown University Law Center, 1995.

Cynthia Eakin, 1996, Associate Professor, B.S., Florida State University, 1986; M.A., 1988; Ph.D., 1993.

Joel Herche, 1994, Associate Professor, B.A., Central Washington University, 1979; M.B.A., Golden Gate University, 1986; Ph.D., University of Oregon, 1989.

Ronald Hoverstad, 1990, Associate Professor, B.A., Augsburg College, 1974; M.B.A., St. Cloud State University, 1981; Ph.D., University of Minnesota, 1986.

Hsinchih Huang, 1998, Associate Professor, B.S., National Chiao-Tung University, (Taiwan), 1986; M.B.A., Rochester Institute of Technology, 1990; Ph.D., University of North Texas, 1996.

John R. Knight, 1995, Associate Professor, B.A., Tulane University, 1969; M.B.A., Louisiana State University, 1978; Ph.D., 1990.

Georgine M. Kryda, 1998, Assistant Professor, B.A., Knox College, 1983; M.I.M., American Graduate School of International Management, 1984; M.B.A., North Central College, 1990; Ph.D., University of Illinois, 1997.

W. Anthony Kulisch, 1981, Associate Professor, B.B.A., California State University, San Jose, 1966; M.B.A., University of Santa Clara, 1971; D.B.A., University of Colorado, 1977.

Unro Lee, 1990, Professor, B.A., University of Southern California, 1977; M.A., Indiana University, 1981; Ph.D., Purdue University, 1986.

Jeffrey A. Miles, 1996, Assistant Professor, B.A., Ohio State University, 1984; M.P.S., Cornell University, 1986; M.L.H.R., Ohio State University, 1992; Ph.D., 1993.

Stefanie E. Naumann, 1999, Assistant Professor, B.S., Tulane University, 1993; Ph.D., Louisiana State, 1998.

Newman S. Peery, Jr., 1982, Professor, B.A., University of New Mexico, 1962; M.B.A., 1969; Ph.D., University of Washington, 1974.

John F. Pfaff, 2001, Professor, B.A., Brown University, 1976; M.B.A., New York University, 1972; Ph.D., University of Washington, 1976.

Gerald V. Post, 1999, Professor, B.A., University of Wisconsin-Eau Claire, 1978; Ph.D., Iowa State University, 1983.

Willard T. Price, 1980, Professor, B.S., University of California, Berkeley, 1961; M.P.W.A., University of Pittsburgh, 1969; Ph.D., 1973.

Robert P. Singh, 1999, Assistant Professor, B.S., University of Virginia, 1991; M.B.A., Illinois Institute of Technology, 1992; Ph.D., University of Illinois at Chicago, 1998.

Ray Sylvester, 1972, Associate Dean, Professor, B.A. Gettysburg College, 1962; M.B.A., University of Michigan, 1963; Ph.D., 1972.

Paul Tatsch, 1980, Associate Professor, B.A., Houghton College, 1968; M.A., State University of New York, Binghamton, 1974; Ph.D., 1977.

Eric W. Typpo, 1998, Assistant Professor, B.S., University of Missouri, 1986; M.A., 1990; Ph.D., Florida State University, 1994.

Richard J. Vargo, 1981, Professor, B.S., Marietta College, 1963; M.B.A., Ohio University, 1965; Ph.D., University of Washington, 1969.

Cynthia K. Wagner Weick, 1990, Associate Professor, B.S., Ohio State University, 1979; M.S., 1980; Ph.D., University of Pennsylvania, 1986.

Suzanne B. Walchli, 2000, Assistant Professor, B.A., Duke University, 1975; M.B.A., Wharton Graduate Division, University of Pennsylvania, 1978; Ph.D., Northwestern University, 1996.

Stephen W. Wheeler, 1994, Professor, B.A., California State University, Sacramento, 1976; M.S., 1982; Ph.D., Arizona State University, 1988.

gladys l. benerd school of education

Dean
John M. Nagle

Department Telephone
209.946.2556

Website
www.uop.edu/education

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Diversified Major (Liberal Studies)
Pedagogy Major
English
Mathematics
Music Education
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Social Science
Cross-Cultural Language & Academic Development Certificate (CLAD)
Special Education

Single Subject Credentials, offered in conjunction with other Univeersity academic units.

A professional school of University of the Pacific offering degree programs for Bachelor of Arts, Master's, Educational Specialist, and Doctor of Education.

The Mission of the School of Education

The mission of the Gladys L. Benerd School of Education is to prepare thoughtful, reflective, caring, and collaborative professionals for service to diverse populations. The School of Education directs its efforts toward researching the present and future needs of schools and the community, fostering intellectual and ethical growth, and developing compassion and collegiality through personalized learning experiences. Undergraduate, graduate degree, and professional preparation programs are developed in accordance with state and national accreditation standards and guidelines to ensure that students completing these programs will represent the best professional practice in their positions of future leadership in schools and the community.

Core Values of the School of Education

The core values of the School of Education include scholarship, integrity and ethical conduct, diversity, social and community responsibility, collegiality, and teaching and learning.

The History of the School of Education

The School of Education was organized at University of the Pacific in 1923 and officially recognized by the California State Department of Education on January 10, 1924. Its goals are to prepare competent personnel for service in public and private pre-elementary, elementary, secondary, and post-secondary schools; to provide programs for the inservice growth of experienced school personnel, so that they may update and upgrade their understanding, knowledge, and skills in a rapidly changing educational enterprise; to provide educational leadership in cooperation with all those agencies engaged in and interested in schools; and to engage in and promote research leading to better public education.

Accreditation

The University of the Pacific is the only university in California whose professional education programs are fully approved by both the California Commission on Teacher Credentialing (CCTC) and the National Council for Accreditation of Teacher Education (NCATE) from bachelor's through doctoral levels, thus permitting its professional education program graduates to be licensed upon request in 38 other states. All professional education programs at University of the Pacific are offered and coordinated through the Gladys L. Benerd School of Education.

Programs in the School of Education

The School of Education collaborates with other schools and colleges of the University in making teacher education an all-University responsibility. At the undergraduate level, programs are offered to prepare classroom teachers; at the graduate level, programs are offered to prepare instructional specialists, school psychologists, supervisors, principals, superintendents, and central office personnel. The School of Education is selective in its admission requirements, offers a diversity of programs suited to the needs of the times, is discerning in the appointment of faculty, and strives to fulfill the concepts of service to both the community and the education profession. The School sponsors several special experimental and innovative programs on campus and in the public schools and communities that the University serves.

The School of Education provides programs whereby any student in any unit of the Stockton campus can prepare for a teaching career. The School is committed to a philosophy of combining professional theory with practical fieldwork and utilizes the

unique diversity of Stockton area schools as laboratories for teacher preparation. While the School imposes no quota upon students entering teacher preparation, it does insist that students meet qualitative criteria. They must be strong academically, respect and relate well to children and other students, be of fine character, and be recommended by persons who know of their capabilities. In particular, they must demonstrate that they are fully committed to achieving excellence in teaching.

So that students can assess themselves, their relationships with children in groups, and their willingness to commit to excellence in teacher preparation, any sophomore or higher level student willing to meet course demands is encouraged to enroll in the first two courses leading to a teaching credential. A fieldwork course (CURR 87) is a prerequisite or corequisite to Foundation for Teaching (EADM 105). In addition, Microcomputers in Education (CURR 161) is also a prerequisite to enrollment in other professional education courses, and beginning in January 2002, it must be completed prior to a student's Credential Candidacy Review. Before students can take other professional preparation courses, they must make formal application and be admitted to credential candidacy. A fee of $30 is required to open a credential file.

In addition to those students who are candidates for a degree or credential, other students may wish to consider specialized courses in the School of Education, such as multicultural education, literacy development, and instructional approaches for working with children who have learning disabilities or severe disabilities.

An All-University Council on Basic Teacher Preparation (CBTP), with membership broadly representative throughout the University, participates with the School of Education in establishing basic credential and degree programs. Representation on the Council includes faculty from the College of the Pacific, the School of Education, and the Conservatory of Music. Two teacher education students are also members. This group promotes coordination and cooperation regarding teacher education within the University, advises the Dean and the faculty of the School of Education concerning programs and activities, and assists in evaluating results.

Student Organizations

Student organizations in the School of Education include the School of Education Student Association (SESA), which is also the student chapter of the Association for Supervision and Curriculum Development; a student chapter of the Council for Exceptional Children (CEC); a student chapter of Phi Delta Kappa (PDK); and the Music Education Student Association (MESA).

Presidents of these associations serve as officers of the School of Education Student Association (SESA). The SESA Board of Directors is composed of a president, a vice president, a secretary, a treasurer, a commissioner of publicity, and two representatives to the Associated Students of University of the Pacific (ASUOP) Senate. These commissioners meet twice a month in open meetings to discuss proposals and to plan activities for the benefit of students in the School of Education. Through participation in the organization, students gain insights into the profession of teaching and the importance of their involvement in decision-making.

Membership in these student organizations is open to all undergraduate students who are enrolled in the School of Education and all graduate students who are working toward a credential or an advanced degree offered through the School of Education and who have paid the ASUOP student body fees.

Facilities and Support Services

The University Library contains comprehensive resources for students in education in its collections of books, professional periodicals, pamphlets, microfilms, and other reference materials.

The Dewey Chambers Children's Library and Art Gallery and the Learning Resources Center in the School of Education supplement the main library holdings with collections of elementary and secondary school textbooks, curriculum guides, courses of study, reference books, and other instructional materials, many of which have been contributed by public schools. The School of Education also has a Mac Lab in the Learning Resources Center.

The University Audiovisual Services Center has films, recordings, tapes, and other appropriate materials and the equipment for their use. Videotape cameras and projection equipment can be used to enable students in professional education programs to see themselves in action as student teachers and to receive personal and individual assistance from their University supervisors.

The Clinical Services Testing Office is an officially designated national testing center for standardized tests, including the Graduate Record Examination, Miller's Analogies Test, College-Level Examination Program, ACT, Multiple Subject Assessment for Teachers, CBEST, and RICA. In addition, the Office maintains a collection of restricted tests and educational and vocational counseling materials for use by faculty and approved advanced students.

The Speech, Hearing and Language Center in the School of Pharmacy and Health Sciences provides a program for children and adults who need individual or group therapy for such challenges as stuttering, cleft palate, aphasia, cerebral palsy, articulation, and delayed speech, and it provides speech reading for the hard of hearing. Comprehensive audiological assessment is also available for children and adults.

Earning a Credential to Teach

The current credentials or licenses for teaching in California schools offered through the University include the Single Subject Credential, the Multiple Subject Credential, the Multiple Subject with CLAD Credential, and the Multiple Subject with BCLAD Credential. These credentials may be secured at the preliminary level upon graduation, if a student decides early and plans carefully. The Pacific four-year guarantee applies to the B.A. degree only and is available only to entering freshmen. (The guarantee program is not available to transfer students.) A year of postgraduate study within five years is currently required by the state of California to earn a clear credential. The Mild/Moderate and Moderate/Severe Disabilities Credentials are initial Specialist Credentials that can be started as an undergraduate and completed during a fifth year.

The Single Subject Credential authorizes its holder to teach that subject at any level between kindergarten and grade 12. The Multiple Subject Credential authorizes its holder to teach in any classroom in which the students remain with the teacher. Multiple Subject candidates interested in teaching in a Spanish/English bilingual classroom earn a Bilingual Emphasis Cross-Cultural Language Development (BCLAD) Credential. A Multiple Subject Credential with Cross-Cultural and Language Development (CLAD) certification enables candidates to teach in areas of

language acquisition, linguistics, ESL theory and practice, bilingual programs, language study, and cultural studies.

The state's two Special Education Specialist Credentials in Mild/Moderate and Moderate/Severe Disabilities are now initial teaching credentials. These credentials allow the holder to provide specialized teaching and assessment for students with exceptional needs.

Internships

Students who have completed a baccalaureate degree and who demonstrate maturity, work experience, and professional experience are eligible for a state-approved internship as an alternative to student teaching. Students typically seek internships from a list of districts available in the Office of Student Teaching and Internships. Students must be approved by the teacher education program in order to seek an internship with a cooperating district. Internships must be within a 50-mile radius of the campus.

Interns are paid employees of a school district for a full school year. Placement in an internship through Pacific will only be made for candidates who complete a minimum of 9 units of professional coursework in the School of Education (which must include CURR 131 and 133 or CURR 171 and 173) prior to accepting an internship with a school district. All requirements for a preliminary credential must be completed before accepting an internship, and a GPA of 3.0 in professional education course work must be maintained. Exceptions must be approved by the Chair of the Department of Curriculum and Instruction upon recommendation of the Director of Student Teaching and Internships. Once an approved internship has been arranged, candidates apply for a California Internship Credential in the School of Education Credentials Office. A memorandum of understanding is also required between the district and Pacific's teacher education program.

Requirements for a Teaching Credential

There are five major requirements for any teaching credential. One is the acquisition of a baccalaureate degree or higher. The first degree offered by any Pacific school or college is a qualifying degree. A second requirement is completion of a program of professional preparation. A third requirement is demonstration of adequate subject matter knowledge for the credential sought, by either successfully completing an approved subject matter program or by passing a state approved examination in the candidate's teaching field. A fourth requirement is a passing score on the California Basic Educational Skills Test (CBEST), which should be taken before full admission to teacher education and about which information is available in the testing office of the School of Education. The fifth requirement is completion of a course or passing a state test on the Constitution of the United States. Either POLS 31, POLS 41, or both HIST 61 and HIST 63 can be completed to fulfill this state requirement. Finally, the sixth requirement is a passing score on the state's Reading Instruction Competency Assessment (RICA), which is required for a preliminary credential in Multiple Subject, Multiple Subject with CLAD, Multiple Subject with BCLAD, and Special Education.

Professional Preparation

Four courses, totaling at least 12 units, and a full semester of student teaching or a full year of internship comprise the professional course work required for a preliminary teaching credential. Students begin with fieldwork in the instructional programs of recognized public schools in a non-specialized classroom of pre-school through 12th grade level. Students must take CURR 87-Fieldwork in Public Schools. This two-unit course is offered to sophomores and higher in fall and spring semesters, and during Summer Sessions I and II.

Another prerequisite to the professional education sequence is EADM 105-Foundations for Teaching, three units. It is offered in the fall, spring and summer. EPSY 121-Learning and Learner, three units, is offered each fall, spring and summer and is a required prerequisite course. CURR 161, Microcomputers in Education (3 units) is a prerequisite for Credential Candidacy beginning January 2002 and thereafter. The course is offered each fall, spring and summer. Students who matriculated Fall 1999 and thereafter should take CURR 161 prior to Credential Candidacy.

Before taking further professional courses, the student must complete Admission to Credential Candidacy. To apply for credential candidacy, the student - a junior or higher - secures and processes application and reference forms from the credential secretary, submits fingerprints and an application for State clearance, files CBEST scores, and shows both a cumulative and a Pacific GPA of 2.5 as well as a GPA of 2.5 on all professional coursework taken. No grade in a professional course below a 2.0 will be accepted. Also, a GPA of 2.5 is required in the diversified major, the state-approved subject matter program. Candidates for a Single Subject Credential must have a 2.5 GPA in all coursework taken for their single subject matter program and a Pacific GPA and a cumulative GPA of 2.5. They must provide a subject matter form from the single subject advisor in an approved content field. Approximately 80% of the subject matter program must be completed with a 2.5 GPA in the program. Credential candidacy may be suspended if later GPAs fall below 2.5.

When all required forms are on file, the credential secretary will arrange an interview with a faculty panel of the Credential Committee which will determine if the applicant meets criteria for further teacher preparation coursework. Students who have not passed the CBEST may be deferred and asked to provide additional evidence of work to improve their test scores. Only after interview and admission can the student register for Reading/Language Arts Development (CURR 135 for multiple subject classrooms or CURR 175 for single subject classrooms), which is required for all credential candidates, including music education applicants. CURR 135 is offered in fall, spring and summer for three units and combines on-campus instruction with fieldwork. CURR 175 is typically offered fall and summer.

In order to meet new CCTC standards regarding the teaching of reading and to better prepare students for taking the Reading Instruction Competence Assessment (RICA), all Multiple Subjects Credential candidates who have not been admitted to credential candidacy as of July 1, 1999, will be required to enroll in CURR 195d-Reading Assessment, three units. This course has a prerequisite or corequisite of CURR 135, three units.

Usually in the semester before student teaching, CURR 131-Curriculum and Instruction: Social Studies, MS and CURR 133-Curriculum and Instruction: Math/Science, MS or CURR 171-Curriculum and Instruction: Organization, Planning and Evaluation, SS and CURR 173-Curriculum and Instruction: Instructional Strategies, SS, are taken. They include additional fieldwork. CURR 131 and 133 prepare specifically for multiple subjects classrooms, and CURR 171 and 173 prepare specifically for single subject classrooms. CURR 131 and CURR 133 are offered each fall, spring and summer. CURR

135-Reading/Language Arts Development: Multiple Subjects, and CURR 195d-Reading Assessment must be completed prior to student teaching in the Multiple Subjects Credential Program. CURR 175 Reading/Language Arts Development: Single Subject must be completed prior to student teaching/directed teaching in the Single Subject Credential Program. CURR 171 and CURR 173 are typically offered fall and summer. Students preparing for both credentials must take an additional course in the second credential and complete reading coursework requirements for the second credential field. Independent study in the additional course may be arranged if necessary.

When the student has completed the required courses above, has made application, has displayed sufficient subject matter knowledge (an approved subject matter program or a passing score on the appropriate state-approved exams) and has passed the state-required examination in basic skills (CBEST), entry into the semester of student teaching, Directed Teaching, may be made. A petition process is available for students who have not passed the CBEST examination. The petition is available in the Department of Curriculum and Instruction. Music applicants may divide this requirement over two semesters, but other students do not take other coursework concurrently with Directed Teaching except for CURR 195b. Student teaching is not ordinarily offered in the summer. No more than three years may pass between completion of the last Methods course and placement into Directed Teaching. The department will review the records and petition information for individuals who delay Directed Teaching more than three years. The department may request the individual to repeat Methods courses and pay tuition for these courses.

Students who have completed a bachelor's degree, satisfy a 3.0 GPA requirement and can demonstrate sufficient classroom experience and maturity may be reviewed for an internship in a public school in the Stockton area. The internship meets the student's directed teaching requirement. Students must register for directed teaching units in each of two semesters. Those students who secure an internship register for CURR 195b, Seminar: Directed Teaching, during the first semester of the internship. Group meetings of interns continue over the two semesters of the internship. Students must obtain a Memorandum of Understanding and a contract from the district and apply for a State Internship Credential. They must contact the Credential Analyst for procedures for application. The Director of Student Teaching and Internships must be contacted about approval for an internship and student teaching.

Subject Matter Knowledge

Subject matter knowledge may be demonstrated by passing a state-designated examination or by completing a state-approved program of coursework. Information and application forms related to current subject matter tests can be obtained in the Credentials Office, the Testing Office, or the Department of Curriculum and Instruction in the School of Education. Test scores are usable for five years only.

Requirements for the Multiple Subject (liberal studies) program have been approved by the California Commission on Teacher Credentialing.

This program, which involves a Diversified Major, includes a minimum of 25 courses and 87 semester units organized as follows:

Language Arts (minimum five courses)

6. Mentor Seminar I or college composition
7. a course in literary analysis
8. a course in language and language acquisition
9. a course in communication
10. a language arts elective

Math/Science (minimum five courses)

6. a course in math
7. a course in math concepts (requires a grade of C- or better)
8. a course in life science
9. a course in physical science
10. a course in earth/enviromental science

Humanities/Social Studies (minimum six courses)

11. a course in the development of civilization
12. a course in American history and institutions
13. a course in global/intercultural studies or Mentor Seminar II
14. a course in multicultural/ethnic gender perspectives
15. a humanities elective
16. a humanities/social studies elective

Visual and Performing Arts (minimum three courses)

17. a course in visual arts
18. a course in music (requires prerequisite course)
19. a course in performing arts

Physical Education (minimum one course)

20. a course in physical education

Human Development (minimum one course)

21. a course in human development

Concentration (minimum of three or four courses, minimum 12 units)

22-24. three or four additional approved courses in a single area (such as Language Arts, Math, Science, Humanities, Social Studies, Visual and Performing Arts, Physical Education, Human Development or Cross-cultural Language Acquisition Academic Development) and

25. a pedagogical seminar (CURR 195a) that fulfills Mentor Seminar III (3 units)

Specific required coursework in each of the above areas will be supplied by the student's faculty adviser in advising booklets available in the Curriculum and Instruction Department.

CLAD Program

Approved by the Commission on Teacher Credentialing, a Multiple Subjects Credential with Cross-cultural Language Acquisition and Academic Development (CLAD) credential program is available to students. Details about this program and requirements are available from the Curriculum and Instruction Department or the CLAD and BCLAD adviser.

Bilingual Program—BCLAD

For those students desiring to teach in Spanish/English bilingual classrooms, completion of a bilingual/cross-cultural concentration is required prior to student teaching, and candidates are assigned to a bilingual classroom for one-half of their student teaching. In addition, to be recommended for the Multiple Subjects Credential with a Bilingual Emphasis or BCLAD, the candidate must pass examinations in Spanish and the culture of the target population. Details about this program and requirements are available from the Curriculum and Instruction Department or the CLAD and BCLAD adviser.

Single Subject Programs

The University offers subject matter programs for the following Single Subject Credentials: Social Sciences, English, Mathematics, Music, Physical Education and Sciences (Biology, Chemistry, Physics, and Geosciences). A program in Spanish may be available pending

approval by CCTC. Subject matter programs are subject to approval by the Commission on Teacher Credentialing. Please consult with the Chair of the Curriculum and Instruction Department for current information on subject matter programs available at the University. No subject matter programs exist at Pacific for agriculture, business, home economics, industrial arts, or for history or government, the latter two being subsumed under social science. In lieu of a subject matter program, there are state-approved examinations. Information on current designated subject matter exams is available from the credential analyst, the testing office or the Department of Curriculum and Instruction.

Subject Matter Programs from Other Institutions

An approved program taken at another university will usually be accepted. Students must submit verification of the completion of a CCTC approved program from the authorized director from their university.

Graduate students who completed a portion of acceptable teacher preparation coursework from another institution must be admitted through the Research and Graduate Studies Office. Placement for student teaching or approval for internships through Pacific will only be made for candidates completing a minimum of nine units of professional coursework in the School of Education (must include CURR 131 and CURR 133 or CURR 171 and CURR 173) prior to a placement. CURR 135 and CURR 195d are required for Multiple Subjects candidates.

Other Requirements for the Basic Teaching Credential

The statutory requirement for a course or examination on "principles and provisions of the Constitution of the United States" may be met by a course of at least two units in a community college, at Pacific or another college, or by arranging with the Political Science Department in Wendell Phillips Center to take an examination. At Pacific, POLS 31 or 41, or HIST 61 and 63 will satisfy the course requirement.

Postgraduate Requirements for the Teaching Credential

A student who has not finished the postgraduate year of study, known as the Fifth-Year Requirement, but has finished all other requirements for degree, professional preparation, subject matter knowledge, approval of competencies and CBEST, is eligible for a Preliminary Credential good for five years but not renewable. When the fifth-year requirement has been met, a "clear" or "professional" credential is available upon application to the State Commission on Teacher Credentialing, typically through the Credential Office at the University.

Three specific requirements must be met in the postgraduate year if not completed sooner. One is a course in Health Education (including alcohol and drug education and nutrition); Pacific will recognize such a course even if taken in a community college. Courses at Pacific which meet the requirement are SPTS 43-Health Education for Teachers or EXTN 186-Health Education for Teachers. There is a mandatory CPR requirement. The second is specified special education skills which can be met at Pacific by SPED 123-The Exceptional Child. The third is computer education coursework which can be met at Pacific by CURR 161/261-Microcomputers in Education or CURR 165/265-Microcomputers and Curriculum Design (permission of the instructor required).

The Clear Credential

The School of Education recommends a student for the clear credential when the above requirements have been met and the student has completed 26 postgraduate units at Pacific (or 30 elsewhere, not counting extension courses and including a minimum of 12 units at Pacific) in an approved program. The teacher candidate is asked to declare a fifth year during student teaching. The declared program may be a master's degree in education or a teaching field, any work on a basic or advanced credential or a supplemental authorization, or a plan for professional development that is submitted and approved. Admission to the Research and Graduate Studies Office (Graduate School) is required for completion of fifth year requirements for a recommendation for the Clear Credential.

Services for Out-of-State Teachers

Teachers who have been prepared in other states should apply directly to the Commission on Teacher Credentialing, 1900 Capitol Avenue, Sacramento, CA 95814-4213. If a clear credential is not granted, such teachers may enter Pacific for the purposes of clearing a credential. A credential file should be opened, with the credential secretary being given copies of credential documents. Application to Pacific's Graduate School is also necessary. The School of Education will recommend for the clear credential when California requirements are met if the necessary study is completed at this institution. A fee of $30 is required to open a credential file.

Services for Prospective Transfer Students

Students who contemplate transferring as undergraduates to qualify for a teaching credential may write to the School of Education or phone (209) 946-2558 to confer about course selection. They should also contact the University's Office of Admissions for transfer admission requirements, (209) 946-2211. Graduating University seniors should write the Graduate School for information and application but may also write or confer with the School of Education. If the GPA for junior/senior years is above 3.0, they can inquire about the Master of Education degree which includes credential preparation.

Opportunities in Postgraduate Teacher Preparation

Graduates of Pacific and other universities may apply to the Graduate School for admission to prepare for teaching. The Department of Curriculum and Instruction offers programs for the Single and Multiple Subject Credentials and the Education Specialist Credentials in Special Education. Strong academic performance in junior/senior years is necessary. Those who have a 3.0 GPA may consider applying for a Master of Education (M.Ed.) degree. Those applying for the M.Ed. must take the Graduate Record Examination (General Test only) and provide the recommendation forms used for all graduate degree programs. About two-thirds of the master's studies is complete when the teaching credential is obtained. Those applying for the M.Ed. in Music Education must take the Graduate Record Examination, General Test. Further details about admission to graduate programs in Music are available from the Chair of the Music Education Department.

Specialist Instruction Credential Programs

At Pacific, a student, whether undergraduate or graduate, may begin work on a specialist credential while a candidate for a basic teaching credential (usually the Multiple Subjects Credential). Postgraduate students with good academic records are encouraged to

combine a specialist program with a graduate degree. Students who begin specialized work as undergraduates may be able to near completion of both specialist and master's programs in the required fifth year. The adviser for each specialist program should be consulted as early as possible.

The State Commission on Teacher Credentialing approved the Special Education Specialist Credential (Level I and II) Programs allowing students to earn the Special Education Credential (Mild/Moderate or Moderate/Severe Disabilities) as the first credential. While students will be encouraged to earn both a regular credential and a Special Education Credential, the Special Education Credential can be the initial or first credential. Students must complete Level I and Level II requirements. Please obtain information from the Special Education Program or Curriculum and Instruction Department about program requirements. Freshmen and sophomores may choose the Special Education Credential Program as the first credential. Prospective graduate students must apply for admission at the Research and Graduate Studies Office, 209 946-2261.

Programs in English as a Second Language

The School of Education offers an undergraduate program for foreign students who wish to become teachers of ESL (English as a Second Language) or EFL (English as a Foreign Language). At the graduate level, students may choose to enter the Cross-cultural Language and Academic Development (CLAD) Certificate Program toward a master's program. At the undergraduate level, foreign students may choose the Pedagogy Major with a specialization in either Language and Culture or Second Language Pedagogy. American students may wish to begin work on the CLAD program. (See description under Degrees in the School of Education for specific courses required for the Pedagogy Major.)

CLAD Certificate Program

A student may submit transcripts to the Commission on Teacher Credentialing for coursework in a designated CLAD Certificate program. A student must satisfy a requirement for experience in learning a second language, and a minimum of 12 units of coursework in three domains. Students must consult with the Department of Curriculum and Instruction for coursework that is acceptable to complete the CLAD Certificate. There is a state-approved examination program and language requirement for individuals who do not take coursework in a CLAD Certificate program.

Undergraduate Degrees in the School of Education

The School of Education offers the Bachelor of Arts in Liberal Studies degree, which requires a total of 124 semester units. It includes two majors:

a. A Diversified Major, which leads to a preliminary credential to teach in California

b. A Pedagogy Major, which is designed for undergraduate students from other countries who wish to teach in their home countries

Course Requirements for the Diversified Major

Undergraduate students who plan to teach in self-contained classrooms, typically grades K-6, can qualify for candidacy for the Multiple Subjects Teaching Credential upon graduation by choosing a Diversified Major. The coursework for this major is the coursework required in the University's Multiple Subjects waiver program. Specific courses in each category are listed in advising materials located in the Department of Curriculum and Instruction. These specific courses must be completed for approval of the major and the state-approved subject matter (waiver) program. A 2.5 GPA is required for credentialing. The following categories are required:

Language Arts (minimum five courses)

1. Mentor Seminar I or college composition
2. a course in literary analysis
3. a course in language and language acquisition
4. a course in communication
5. a language arts elective

Math/Science (minimum five courses)

6. a course in math
7. a course in math concepts (requires a grade of C- or better for the credential program)
8. a course in life science
9. a course in physical science
10. a course in earth/environmental science

Humanities/Social Studies (minimum six courses)

11. a course in the development of civilization
12. a course in American history and institutions
13. a course in global/intercultural studies or Mentor Seminar II
14. a course in multicultural/ethnic/gender perspectives
15. a humanities elective
16. a humanities/social studies elective

Visual and Performing Arts (minimum three courses)

17. a course in visual arts
18. a course in music (requires prerequisite)
19. a course in performing arts

Physical Education (minimum one course)

20. a course in physical education

Human Development (minimum one course)

21. a course in human development

Concentration (minimum three or four courses, minimum 12 units)

22-24. three or four additional approved courses in a single area such as language arts, math, science, humanities, social studies, visual and performing arts, physical education, human development or cross-cultural language acquisition academic development, and

25. a pedagogical seminar (CURR 195a) that fulfills Mentor Seminar III (3 units)

Professional Education (minimum four courses, minimum 11 units)

26. CURR 87, Fieldwork in Public Schools
27. a course in Foundations of Education (EADM 105); requires prerequisite of CURR 87-Fieldwork in Public Schools
28. a course in Educational Psychology (EPSY 121)
29. Microcomputers in Education (CURR 161)

Completion of the Diversified Major automatically satisfies the University General Education requirements. Please consult the Department of Curriculum and Instruction for specific courses for each course category.

Typical First-Year Program in the Diversified Major

A freshman is encouraged to register for 15-17 units per semester. The following are examples of courses that might be taken during the first year:

Fall:	COMM 43	Introduction to Interpersonal Communication (3) or
	GEOL 95	(4) or GEOG 99 (4) or
	CURR 161	Microcomputers in Education (3)
	THEA 12	Expressive Movement (3) or
	THEA 10	Introduction to Theatre (3)
	MENT 1	Mentor Seminar I (4)

HIST 51 History of Western Civilization I(4) or modern language course (4)
CURR 10 Deans' Seminar (1)
Spring: ENGL 25 English 25 (4)
MENT 2 Mentor Seminar II (3)
POLS 41 U.S. National Government(4)
PSYC 29 Child Development (4) or a modern language course(4) or
BIOL 41 Introduction to Biology (4)
MCOM 2 Fundamental Structures of Music (3)

Course Requirements for the Pedagogy Major

1. University General Education requirements with emphasis on selecting courses for intercultural understanding (30 units). Only three General Education courses may be taken on a pass/no credit basis, and not more than one course in each of the three main categories may be taken on a pass/no credit basis. Students must complete Mentor Seminars I, II and III (CURR 195a may be taken or Mentor Seminar III) and two courses in each of the three main categories in General Education. If a Mentor Seminar I or II course is waived, a course from an appropriate category for General Education is required.
2. Development of proficiency in the English language through intensive English programs, as needed, to pass proficiency examinations (24 units or equivalent).
3. Professional education - (24 units minimum):
   Required courses (20 units):
   CURR 161 Microcomputers in Education(3)
   EPSY 121 Learning and Learner (3)
   EPSY 115 Tests and Measurements (3)
   EADM 105 Foundations for Teaching (3)
   CURR 87 Fieldwork in Public Schools (2)

   Students must select either an elementary or secondary focus and complete the courses for the focus area:

   The courses for an elementary focus include:
   CURR 131 Curriculum and Instruction: Social Studies (MS) (3)
   CURR 133 Curriculum and Instruction: Math/Science (MS) (3)
   CURR 135 Reading/Language Arts Development: (MS) (3)
   CURR 195d Reading Assessment (3)

   The courses for a secondary focus include:
   CURR 171 Curriculum and Instruction: Planning, Organizing, and Evaluation (SS) (3)
   CURR 173 Curriculum and Instruction: Instructional Methodologies (SS) (3)
   CURR 175 Reading/Language Arts Development: (SS) (3)

   All Students in both an elementary and secondary focus must take the following course:
   CURR 195a Pedagogical Seminar (3) or Mentor Seminar III (2)
   Electives (3 units minimum)
   CURR 165 Microcomputers and Curriculum Design (3)
   (need permission of instructor)
   EPSY 165 Introduction to Counseling (3)
   SPED 123 The Exceptional Child (3)
   See adviser for other elective choices.
4. Concentration Area in one of the following options: (24 units)
   a. Second Language Pedagogy (for foreign students who are preparing to teach English as a foreign language): courses in language structure, language development and second language acquisition.
   b. Language and Culture Pedagogy (for foreign students who are preparing to teach the language and culture of the United States): courses in literature of the English language, expository writing, reading and English instructional techniques, and courses providing special understanding of American culture.
   c. Technical Pedagogy (for foreign students preparing to teach classes in technical subjects): courses selected from science, mathematics, computer subjects, engineering, health and physical education, educational technology and instructional methods.
   d. Special Pedagogy (for foreign students preparing to teach in a specialized learning field): teaching the physically and psychologically handicapped.
5. Elective courses to meet degree requirements of 124 units.
6. A grade point average of 2.0 must be maintained in all professional education and concentration area courses. None of the courses in these two areas can be taken on a pass/no credit basis.

Graduate Degrees

The School of Education in cooperation with the Graduate School offers four advanced degrees: Master of Education, Master of Arts with a major in Education, Educational Specialist, and Doctor of Education (Ed.D.). Detailed requirements for these degrees can be found in the Graduate School Catalog.

Course Offerings

Curriculum and Instruction Department
Professors: Longmire, Morrow
Associate Professors: Arnold, Brittin, Draheim (Chair), Eskridge, Langer
Assistant Professors: Gonsier-Gerdin, Nelson, Posey, Sadao, Snyder, Wright
Instructors: Evans, Houck, Schwartz

CURR 10. Dean's Seminar: Introduction to the Teaching Profession (1)
A basic introduction to the career of teaching and the programs and methodologies of the School of Education including educational requirements, professional orientation, career opportunities and school and university regulations.

CURR 21. Introduction to Education Computing (1)
This course introduces the student to the basic concepts and applications related to the use of microcomputers in education. Students will learn basic operations involved in using Macintosh computers, word processing, the World Wide Web, the University e-mail system, file transfer and conversion, and presentation systems. The course is a half-semester course.

CURR 87. Fieldwork in Public Schools (2)
Supervised field experience in public schools, in grades K-12. *Prerequisite: sophomore standing or higher.*

CURR 115. Introduction to Language (3)
An introduction to the structure and role of language, including not only an examination of the basic components - syntax, morphology, semantics and pragmatics - but also such issues as social roles and language use, diglossia, language and prejudice, social and regional language variation, language variation and change, nonverbal communication, languages in contact, language planning, pidgins and Creoles, and societal attitudes toward language use.

CURR 119. Phonetics and Phonology (3)
Linguistic analysis of speech sounds, mechanisms of their production and

structuring of sounds in representative languages, with some emphasis on phonological interference in second-language learning. Course includes: intensive practice in the oral production of representative sounds and the transcription of sounds using the International Phonetic Alphabet. Three hours in class plus one laboratory session each week.

CURR 121. Second Language Acquisition (3)
Using first language acquisition for comparison, this course focuses on second language acquisition and includes such topics as: inter-language, over-generalization, transfer, error analysis, fossilization, monitoring, memory and language acquisition, affective factors in second language acquisition, acquisition and learning, the role of the caretaker, individual attitudes and motivations.

CURR 123. Introduction to Syntax and Semantics (3)
An introduction to the study of meaning and language structure, including morphological, lexical, syntactic, pragmatic and discourse structures, an examination of tense and aspect, contrast between spoken and written language, and grammatical, notional and functional syllabi.

CURR 127. ESL Theory and Practice (3)
This course is designed to provide a link between theory and practice in the teaching of ESL. Aspects of language learning will be discussed, and concomitant instruction and curriculum will be analyzed while developing a working model for the development of curriculum which will be appropriate for the teaching situation.

CURR 129. Introduction to Bilingual Education (3)
This course provides an overview of the developing field of bilingual education which is designed to meet the needs of students who are new to the field.

CURR 131. Curriculum and Instruction: Social Studies (MS) (3)
Methods and curriculum for teaching social studies in a self-contained classroom. Topics include: essential social studies themes, concepts and skills; instructional planning; diverse and appropriate teaching strategies; meeting the needs of a diverse student population including mainstreamed and culturally and linguistically diverse students; and principles and practices of evaluation. Fieldwork required. *Prerequisite: admission to credential candidacy. Recommended for the semester before directed teaching.*

CURR 133. Curriculum and Instruction: Math/Science (MS) (3)
Methods and curriculum for teaching math and science in a self-contained classroom. Topics include: essential science and math themes, concepts and skills; instructional planning; diverse and appropriate teaching strategies; meeting the needs of diverse student populations; and principles and practices of evaluation. Fieldwork required. *Prerequisite: admission to credential candidacy. Recommended for the semester before directed teaching.*

CURR 135. Reading/Language Arts Development: Multiple Subjects (3)
Introduction to the teaching of reading/language arts in the elementary (K-6) classroom. The course focuses on understanding the processes of reading and language arts and how to design appropriate teaching strategies to encourage growth. An emphasis will be placed on the integration of reading and language arts throughout the curriculum. Meets credential requirements. *Prerequisite: admission to credential candidacy. Recommended for the semester before directed teaching.*

CURR 141. Children's Literature (3)
A survey of quality literature for children from preschool through eighth grade. The various genres of children's literature are examined. Emphasis will be placed on how books may affect the growing child and on ways to develop children's appreciation and comprehension of stories and extend their subject matter knowledge.

CURR 158a. Directed Teaching: Multiple Subjects (14)
All-day student teaching in multiple subjects, self-contained classrooms, usually of preschool and elementary school children. *Prerequisites: CURR 87, 131, 133, 135, 195d, EPSY 121, EADM 105, credential candidacy, CBEST success, and previous sign-ups and clearance for student teaching. No other coursework permitted other than CURR 195b and weekend and vacation workshops, except that a candidate may petition in advance to the Curriculum and Instruction Department for a concurrent course. Corequisite: CURR 195b.*

CURR 158b. Directed Teaching: Multiple Subjects Special Assignment (2-14)
Student teaching of specially specified duration or nature. *Prerequisites: as for CURR 158a. Corequisite: CURR 195b.*

CURR 158c. Directed Teaching: Multiple Subjects: BCLAD (2-14)
Prerequisites: as for CURR 158a. Must qualify for bilingual student teaching. Corequisite: CURR 195b.

CURR 158d. Directed Teaching: Multiple Subjects: CLAD (2-14)
Prerequisites: as for CURR 158a. Must qualify for CLAD credential student teaching. Corequisite: CURR 195b.

CURR 158j. Directed Teaching: Multiple and Single Subject (14)
Prerequisites: as for CURR 158a. Corequisite: CURR 195b.

CURR 161. Microcomputers in Education (3)
This course introduces the student to the major concepts and applications related to the use of microcomputers in education. Students will learn basic operations, terminology and capabilities of microcomputers within an educational context. Key issues related to the use of instructional technology will be discussed. Application and evaluation of software for classroom instruction and management will be investigated.

CURR 165. Microcomputers and Curriculum Design (3)
Issues related to the educational application of instructional technology and its impact on education will be investigated. Students will do in-depth analyses of software applications and their validity in relation to learning models and the current curriculum. Students will evaluate how new technologies may effect change in curriculum. Various projects related to evaluation of software, teaching strategies and research in new technologies will be required. *Prerequisite: CURR 161 or permission of the instructor.*

CURR 171. Curriculum and Instruction: Organization, Planning and Evaluation (SS) (3)
Curriculum and techniques for organizing, planning and evaluating an instructional program in a single subject classroom. Topics include: essential themes and content in the discipline, state frameworks, identifying learner outcomes, analysis of instructional materials, lesson planning, specially designed academic instruction in English, multicultural education, and principles of tests and measurements. Fieldwork required. *Prerequisite: admission to credential candidacy. Recommended for the semester prior to directed teaching.*

CURR 173. Curriculum and Instruction: Instructional Strategies (SS) (3)
Methods of teaching in the single subject classroom. Topics include: grouping practices, questioning strategies, critical thinking, values and decision-making, techniques for working with discipline problems, conferencing and reporting pupil progress, writing across the curriculum, and modifying instruction to meet the needs of a diverse student population including mainstreamed and culturally and linguistically different. Fieldwork required. *Prerequisite: admission to credential candidacy. Recommended for the semester prior to directed teaching.*

CURR 175. Reading/Language Arts Development: Single Subject (3)
Introduction to the teaching of reading and language in the content areas. The course focuses on understanding the processes of reading and language and how to design appropriate teaching strategies to encourage growth in learning from text. An emphasis will be placed on the integration of reading and language throughout the curriculum. Meets credential requirements. *Prerequisite: admission to credential candidacy. Recommended for the semester prior to directed teaching.*

CURR 177. Practicum (2-4)

CURR 178. Directed Teaching: Single Subject (14)
All-day student teaching in a subject-matter classroom, usually in a secondary school. *Prerequisites: CURR 87, EADM 105, EPSY 121, CURR 171, 173, 175, credential candidacy or credential, CBEST success, and previous sign-ups and clearance for directed teaching. No other coursework permitted except for CURR 195b and weekend and vacation workshops or by petition as in CURR 158a. Corequisite: CURR 195b.*

CURR 178a. Directed Teaching: Single Subject Music (3-14)
Student teaching. *Prerequisites: credential candidacy, EADM 105, EPSY 121, CURR 171, 173, CURR 135 or 175, CBEST success, clearance of Music Education Department, previous sign-ups and clearance for student teaching. Corequisite: CURR 195b.*

CURR 178b. Directed Teaching: Single Subject Special Assignment (2-14)
Part-time student teaching of specially authorized duration and nature. Additional practicum work. *Prerequisites: same as CURR 178. Corequisite: CURR 195b.*

CURR 191. Independent Study (1-3)
Primarily library study. *Prerequisite: Consent of the department chair.*

CURR 192. Preliminary Fieldwork (1-3)
Prerequisite: Consent of the department chair.

192a. Elementary Education
192b. Secondary Education
192d. Early Childhood Education
192e. Reading
192f. Bilingual Education
192g. Cross-cultural Education
192h. Special Project

CURR 193. Special Projects (2-4)
Prerequisite: Consent of the instructor.

CURR 195a. Pedagogical Seminar (3)
Investigation of the role that subject matter knowledge and its representations play in teaching. Emphasis on self-assessment of subject matter knowledge. Focus on moral and ethical dimensions of teaching and learning. *Prerequisite: completion of a minimum of 8 units in a concentration for the diversified major or multiple subjects waiver program. Senior status or second semester junior status required.*

CURR 195b. Seminar: Directed Teaching (2)
Reflection upon and integration of the Directed Teaching experience in large and small group settings. Topics include: multicultural education, child abuse, school law, interpreting standardized test scores, professional associations and negotiations, discipline plans, lesson planning and conferencing skills. *Corequisite: CURR 158, 178, 258 or 278.*

CURR 195d. Reading Assessment (3)
Uses of ongoing instructional strategies in reading and language arts that guide teaching and assessment, early intervention techniques appropriate for a classroom setting and guided practice on those techniques. (Required of all Multiple Subjects Credential candidates who have not been approved for credential candidacy before July 1, 1999.) *Prerequisite: admission to credential candidacy. Prerequisite or corequisite: CURR 135.*

CURR 197. Research in Education (1-3)
Primarily field investigation. *Prerequisite: Consent of the department chair.*

CURR 209. Curriculum Theory (3)
An examination of curriculum from various philosophical and learning theory points of view. Models and rationales of curriculum will be explored. Historical perspectives and specialized areas of the curriculum will be examined in terms of present and future societal needs. Methods of curriculum dissemination will be delineated.

CURR 212. Instructional Strategies and Classroom Processes (3)
Use of a variety of instructional strategies to achieve course objectives. Includes a review of research on effective teaching skills related to motivation, expectations, modeling, questioning, grouping, direct instruction, cooperative learning and classroom management. Knowledge of contemporary lines of inquiry with regard to classroom processes.

CURR 214. Supervision of Instruction (3)
Review of models of supervision and processes that support effective descriptions of classroom practices, analysis and feedback regarding those data and the provision of instructional support for continuing classroom improvement. Includes a practicum component.

CURR 219. Phonetics and Phonology (3)
Linguistic analysis of speech sounds, mechanisms of their production and structuring of sounds in representative languages, with some emphasis on phonological interference in second-language learning. Course includes intensive practice in the oral production of representative sounds and the transcription of sounds using the International Phonetic Alphabet. Three hours in class plus one laboratory session each week.

CURR 221. Second Language Acquisition (3)
Using first language acquisition for comparison, this course focuses on second language acquisition and includes such topics as: inter-language, over-generalization, transfer, error analysis, fossilization, monitoring, memory and language acquisition, affective factors in second language acquisition, acquisition and learning, the role of the caretaker, individual attitudes and motivations.

CURR 225. Psychology of Reading (3)
An exploration of current theory and research findings related to the psychological processes involved in literacy acquisition and development. Emphasis on a cognitive and psycholinguistic approach to understanding the processes of reading. Implications for instruction.

CURR 227. ESL Theory and Practice (3)
This course is designed to provide a link between theory and practice in the teaching of ESL. Aspects of language learning will be discussed, and concomitant instruction and

curriculum will be analyzed while developing a working model for the development of curriculum which will be appropriate for the teaching situation.

CURR 229. Introduction to Bilingual Education (3)
This course provides an overview of the developing field of bilingual education which is designed to meet the needs of students who are new to the field.

CURR 252. Teaching the Creative, Talented and Gifted Child (3)
A review of the major writings and research dealing with the creative learner and his classroom needs. Will present opportunities to develop curriculum plans and methods and approaches that can successfully be applied in an on-going educational program to assist the creative student in reaching his full potential.

CURR 258a. Directed Teaching: Multiple Subjects (10)
Involves all-day work in the classroom and action research. *Prerequisites: CURR 87, EADM 105, EPSY 121, CURR 131, 133, 135 and 195d, CBEST success, credential candidacy, and sign-ups and clearance for directed teaching. Open only to M.Ed. degree candidates. Corequisite: CURR 195b.*

CURR 258b. Directed Teaching: Multiple and Single Subjects (10)
Open only to students in M.Ed. program.

CURR 258c. Directed Teaching: Multiple Subjects: BCLAD (2-10)
Prerequisites: as for CURR 258a. Must qualify for BCLAD credential. Corequisite: CURR 195b.

CURR 258d. Directed Teaching: Multiple Subjects: CLAD (2-10)
Prerequisites: as for CURR 258a. Must qualify for the CLAD credential. Corequisite: CURR 195b.

CURR 258j. Directed Teaching: Multiple Subjects Special Assignment (2-10)
Open only to students in M.Ed. program.

CURR 261. Microcomputers in Education (3)
This course introduces the student to the major concepts and applications related to the use of microcomputers in education. Students will learn basic operations, terminology and capabilities of microcomputers within an educational context. Key issues related to the use of instructional technology will be discussed. Application and evaluation of software for classroom instruction and management will be investigated.

CURR 262. Advanced Methods in Bilingual Education (3)
This course provides a critical interpretation of current practice in bilingual education, based on theory and research.

CURR 265. Microcomputers and Curriculum Design (3)
Issues related to the educational application of instructional technology and its impact on education will be investigated. Students will do in-depth analyses of software applications and their validity in relation to learning models and the current curriculum. Students will evaluate how new technologies may affect change in curriculum. Various projects related to evaluation of software, teaching strategies and research in new technologies will be required. *Prerequisite: CURR 261 or permission of the instructor.*

CURR 277. Practicum (2-4)

CURR 278. Directed Teaching: Single Subject (10)
Involves all-day work in the classroom and action research. *Prerequisites: CURR 87, EADM 105, EPSY 121, CURR 171, 173, 175, CBEST success, credential candidacy, and sign-ups and clearance for directed teaching. Open only to M.Ed. degree candidates. Corequisite: CURR 195b.*

CURR 278a. Directed Teaching: Single Subject Music (3-10)
Directed teaching with action research. *Prerequisites: EADM 105, EPSY 121, CURR 173, 175 or 135, CBEST success, credential candidacy, and sign-ups and clearance for directed teaching. Open only to M.Ed. degree candidates. Corequisite: CURR 195b.*

CURR 278b. Directed Teaching: Single Subject Special Assignment (2-10)
Part-time student teaching of specially authorized duration and nature. Additional practicum work. *Prerequisites: CURR 87 or equivalent in Music Education program, EADM 105, EPSY 121, CURR 171, 173, 175, CBEST success, credential candidacy, and sign-ups and clearance for student teaching. Open only to M.Ed. degree candidates. Corequisite: CURR 195b.*

CURR 280. Modern Trends in Early Childhood Education (3)
Acquaintance with current trends in the education of children from birth through third grade.

CURR 282. Advanced Curriculum and Theory in Early Childhood Programs (3)
Involvement with curriculum design, analysis and evaluation.

CURR 291. Independent Graduate Study (1-3)
Graduate students may enroll in library research with consent of the department chair.

CURR 292. Advanced Fieldwork (1-6)
Prerequisite: Consent of the department chair.

292a. Elementary Education

292b. Secondary Education

292d. Early Childhood Education

292f. Reading

292h. Special Projects

292i. Advanced Fieldwork in Bilingual Education (1-6)

CURR 293. Special Topics (2-4)
Prerequisite: Consent of the department chair.

CURR 295a. Seminar: Middle School Curriculum (3)
Review of curricular issues in middle schools in the United States, including an analysis of curricular concepts and the social, economic and political forces, that may shape forthcoming curricular design. Specific content includes historical and philosophical foundation; curriculum trends, alternative approaches; and curriculum materials analysis.

CURR 295b. Seminar: Secondary Curriculum (3)
Review of the curriculum issues in middle and secondary schools in the United States, including an analysis of curriculum concepts and the social, economic and political forces that may shape forthcoming curricular design. Specific content includes historical and philosophical foundations, curriculum trends, alternative approaches, curriculum materials, analysis and issues that relate to adolescence.

CURR 295e. Seminar: Teaching Reading and Writing (3)
Examines current theory, research, trends, and issues in the teaching of reading and writing. Students will translate theory and research in practice through observation of and participation with children in reading and writing activities. *Prerequisites: graduate standing and previous coursework in one of the following: reading, writing, language development.*

CURR 295g. Seminar: Elementary Curriculum (3)
Review of curricular issues in elementary schools in the United States, including an analysis of curricular concepts and the social, economic, and political forces, that may shape forthcoming curricular design. Specific content includes historical and philosophical foundation; curriculum trends; alternative approaches; and curriculum materials analysis.

CURR 295h. Seminar in Language Teaching (3)
A seminar in ESL methods, materials, theories and current research. *Prerequisite: CURR 127 or 227 or concurrent enrollment.*

CURR 297. Graduate Research in Education (1-3)
Graduate students may enroll in some field investigation with consent of the department chair.

CURR 299. Master's Thesis (4)

CURR 302. Issues in Teacher Education (3)
Review and analysis of current curricular topics related to pre-service and in-service teacher preparation.

CURR 304. Program Evaluation (3)
Selection design and use of formal and informal devices for the purpose of making diagnosis of learner strengths and weaknesses, measuring learner progress and making summative evaluations of learner achievement, both on an individual and larger scale basis.

CURR 306. Curriculum Materials Development (3)
Design and development of appropriate curriculum materials for achieving program and course objectives.

CURR 308. Issues in Curriculum and Instruction (3)
Exploration of crucial issues and trends in curriculum and instruction: their historical origins, current manifestations and implications for teaching and learning in effective schools.

CURR 391. Independent Graduate Study (1-3)
Doctoral students may enroll in directed library research with consent of the department chair.

CURR 392. Curriculum Practicum (2-4)

CURR 393. Special Topics (2-4)
Prerequisite: Consent of the instructor.

CURR 395b. Qualitative Research Design and Methods (3)
This course focuses on methods of designing and conducting qualitative research in education. Topics include: characteristics of qualitative research, data collection and analysis, determining validity and reliability, and ethical issues related to qualitative research. Students will engage in qualitative research at off-campus field sites. This course is a component in the set of research courses required for all Ed.D. students. *Prerequisites: completion of a graduate level course which surveys various types of educational research, and introduces methodological concepts and techniques, such as EPSY 201, with a letter grade of B or better, and EPSY 214.*

CURR 397. Graduate Research in Education (1-3)

CURR 399. Doctoral Dissertation (1-15)

Curriculum and Instruction: Special Education Program

SPED 123. The Exceptional Child (3)
Description of the characteristics and needs of children and youth with disabilities. Exploration of the etiology, treatment, educational strategies, social and vocational opportunities for individuals with disabilities. Ten hours of field experience will be required as part of the course content. This course satisfies the requirements for clearing a preliminary multiple and single subject credential as specified by the California Commission on Teacher Credentialing (CTCC).

SPED 166. Building Family-Professional Partnerships (3)
This course will provide practical strategies for professional educators to effectively communicate and collaborate with families in order to enhance the capacity of families to support an advocate for children with special needs in the home, school, and community. The emotional and social needs of children with disabilities and their families, education laws and policies regarding parental/family rights, historical and current trends in family advocacy, and professional ethics will also be examined. Ten hours of field experience will be required as part of the course content.

SPED 191p. Independent Study (1-3)
Consent of the department chair.

SPED 193. Special Projects (1-3)

SPED 224. Assessment of Special Education Students (3)
The role of assessment in teaching students with disabilities will be explored. In addition, teacher made tests, curriculum based assessment, portfolio assessment, and commonly used standardized tests will be examined. This course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Preliminary Level One Credential for Educational Specialist: Mild/Moderate and Moderate/Severe Disabilities. *Prerequisites: SPED 123, SPED 166.*

SPED 228m. Advanced Programming for Students with Mild/Moderate Disabilities (3)
Theoretical and applied information pertaining to the characteristics and educational needs of students with mild to moderate disabilities will be presented. The course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Preliminary Level One Credential for Educational Specialist: Mild/Moderate Disabilities. *Prerequisites: SPED 123, SPED 166.*

SPED 228s. Advanced Programming for Students with Moderate/Severe Disabilities (3)
Presentation of theoretical and applied information pertaining to specialized health care and sensory needs as well as educational characteristics for students with moderate/severe disabilities. This course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Preliminary Level One Credential for Educational Specialist: Moderate/Severe Disabilities. *Prerequisites: SPED 123, SPED 166.*

SPED 242m. Curriculum and Instruction for Students with Mild/Moderate Disabilities (3)
Presentation of theoretical and applied information pertaining to methods of curriculum and instruction for students with mild to moderate disabilities. This course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Preliminary Level One Credential for Educational Specialist: Mild/Moderate Disabilities. *Prerequisites: SPED 123, S PED 166.*

SPED 242s. Curriculum and Instruction for Students with Moderate/Severe Disabilities (3)
This course will present theoretical and applied information pertaining to methods of curriculum and instruction for students with moderate to severe disabilities. This course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Preliminary Level One Credential for Educational Specialist: Moderate/Severe Disabilities. *Prerequisites: SPED 123, SPED 166.*

SPED 250. Introduction to Induction Plan (2)
The purpose of this practicum-based course is two fold: to introduce the student to the induction plan process, and provide an opportunity for candidates enrolled in the Mild/Moderate or Moderate/Severe Level II Educational Specialist Credential Program to

identify their particular professional needs, set goals and objectives for their continued teacher development and apply theoretical understandings to the classroom. The course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Level II Professional Development Educational Specialist Mild/Moderate and Moderate/Severe Clear Credential. *Prerequisite: Completion of the Preliminary Level I Educational Specialist Credential Program in Mild/Moderate and/or Moderate/Severe.*

SPED 252. Portfolio Assessment (2)
This is the last class in the 16-unit course sequence for the Level II phase of the Educational Specialist credential program. The course provides an opportunity for candidates enrolled in the Mild/Moderate or Moderate/Severe Credential Program to apply theoretical understandings to the classroom, and demonstrate professional competencies, through a series of evaluation processes. Students enrolled in this course are expected to log 40 contact hours in the field. This course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Level II Professional Development Educational Specialist Mild/Moderate and/or Moderate/Severe Clear Credential. *Prerequisites: SPED 250, SPED 295a, EPSY 288, and other electives as specified in the Professional Induction Plan.*

SPED 291. Independent Graduate Study (1-3)

SPED 293. Special Project (1-3)
Prerequisite: Consent of the department chair.

SPED 295a. Seminar: Crucial Issues in Special Education (3)
Provides a methodology and format for advanced special education students and other related disciplines to explore crucial issues and trends and their historical origin. Attention to research and the development of positions on trends, issues and current law.

SPED 295e. Positive Behavioral Support in the Classroom (3)
Theoretical and applied information pertaining to methods of providing positive behavioral support to students with and without disabilities in educational settings will be examined. This course will comply with the requirements for the California Commission on Teacher Credentialing (CCTC) Preliminary Level One Credential for Educational Specialist: Mild/Moderate/Severe Disabilities. *Prerequisites: SPED 123, SPED 166.*

SPED 297. Graduate Research (1-3)

SPED 298m. Advanced Fieldwork: Mild/Moderate (6-10)
This fieldwork experience provides an opportunity for candidates in the mild/moderate credential program to apply theoretical knowledge and acquired skills to the classroom in a student teaching experience. *Prerequisites: All prerequisite and required courses must be completed to enroll in Advanced Fieldwork and permission of the Director of Special Education.*

SPED 298s. Advanced Fieldwork: Moderate/Severe (6-10)
This fieldwork experience provides an opportunity for candidates in the moderate/severe credential program to apply theoretical knowledge and acquired skills to the classroom in a student teaching experience. *Prerequisites: all prerequisite and required courses must be completed to enroll in Advanced Fieldwork and permission of the Director of Special Education.*

SPED 298im. Internship: Mild/Moderate (5)
This internship experience provides an opportunity for candidates in the mild/moderate credential program to apply theoretical knowledge and acquire skills to the classroom in a student teaching experience. *Students must register for five units for each of two semesters for a total of ten units. All prerequisite and required courses must be completed to enroll in an Internship and permission must be obtained from the Director of Special Education.*

SPED 298is. Internship: Moderate/Severe (5)
This internship experience provides an opportunity for candidates in the moderate/severe credential program to apply theoretical knowledge and acquire skills to the classroom in a student teaching experience. *Students must register for five units for each of two semesters for a total of ten units. All prerequisite and required courses must be completed to enroll in an Internship and permission must be obtained from the Director of Special Education.*

SPED 299. Master's Thesis (4)

SPED 391. Independent Graduate Study - Special Education

SPED 393. Special Project (1-3)
Prerequisite: Consent of the department chair.

SPED 395a. Seminar: Crucial Issues in Special Education (3)
Provision of a methodology and format for advanced special education students and other related disciplines to explore crucial issues and trends and their historical origin. Attention to research and the development of positions on trends, issues and current law.

SPED 395e. Positive Behavioral Support in the Classroom (3)
Theoretical and applied information pertaining to methods of providing positive behavioral support to students with and without disabilities in educational settings will be examined. This course will comply with the requirements for the California Commission on Teacher Credentialing (CCTC) Preliminary Level One Credential for Educational Specialist: Mild/Moderate/Severe Disabilities.

SPED 399. Doctoral Dissertation (1-15)

Educational Administration and Foundations Department

Professors: Muskal, Nagle
Associate Professor: Brennan (Chair), Davis
Assistant Professor: Hensley

EADM 105. Foundations for Teaching (3)
This course covers classroom communication, multicultural education, and various historical, philosophical, sociological and legal foundations of teaching. *Prerequisites: CURR 87or concurrent enrollment, sophomore or higher standing.*

EADM 130. Seminar: Cultural Basis of Conflict in Education (3)
Analysis of cultural diversity in American classrooms. Not open to doctoral students.

EADM 152. The Mexican-American in Contemporary Society (3)
The main objective of this course is to provide the student with an overview of the historical, social, economic and cultural factors which influence the condition of Mexican-Americans in this country.

EADM 191. Independent Study (1-3)
Primarily library study. *Admission only by consent of the department chair.*

EADM 193. Special Projects (2-4)
Prerequisite: Consent of the instructor.

EADM 197. Research in Education (1-3)
Primarily field study. *Prerequisite: Consent of the department chair.*

EADM 202. Educational Perspectives Past and Present (3)
An examination of major trends in education through the application of historical methodology. Educational philosophies will be investigated as to how each impinges on major educational trends.

EADM 204. Pluralism in American Education (3)
A multi-disciplinary examination of the effects of cultural and social pluralism on educational policy, philosophy, classroom instruction and professional ethics in American public education, both historically and as contemporary issues.

EADM 206/306. Comparative Education (3)
Educational principles, practices and organizational structure and school administration in the United States and other societies.

EADM 207/307. Sociology of Education (3)
Study of sociology of education and the classroom.

EADM 210. Seminar in American Educational Thought (3)
A philosophical treatment of American education.

EADM 220. Seminar: Social Class Effects in Education (3)
Explores the nature of social class and its effects on learning in the classroom.

EADM 230. Seminar: Cultural Basis of Conflict in Education (3)
Analysis of cultural diversity in American classrooms. Not open to doctoral students.

EADM 231. Seminar: Educational Anthropology (3)
Analysis of culture, language and values in education.

EADM 232. Gender Issues: Cross-cultural Perspectives (3)
An examination of social, economic and political forces which foster and perpetuate gender stratification and related issues. Trends/movements regarding gender roles/status are investigated from the perspective of economic and political systems in the context of Eastern and Western societies.

EADM 233. Seminar: Multicultural Education (3)
Analysis of the theoretical and philosophical foundations of cultural pluralism, acquire an understanding of strategies for implementation of cross-cultural education, and the development of units of instruction for use in cross-cultural education.

EADM 234. Seminar: Asian Cultures (3)
This course provides knowledge of East and Southeast Asian value systems. By studying Eastern philosophies and Eastern ways and life the student will gain a deeper understanding of cross-culturalism and its implications for American education and society.

EADM 276. Seminar: Educational Planning, Delivery, and Assessment (3)
The role of the administrator as the instructional leader is the focus. Facets of the instructional program include curriculum planning, programmatic issues, delivery systems and assessment and evaluation.

EADM 277. Diversity and Constituency in Educational Administration (3)
Explores the values and concerns of the many diverse communities that constitute a school community. Effective ways to involve various communities in the participation of school life are presented.

EADM 278. Public School Organization and Administration (3)
Organization, administration and functioning of state, county and local school systems and their interrelations with the federal government in matters of education; organizational patterns of public schools; principles of school administrative process and competencies for administration and instructional leadership; current problems and trends in public education; educational policy development; group dynamics; handling conflict situations and controversial issues; budgeting and financial procedures; modern management tools.

EADM 280. School Law and Legal Processes (3)
Laws, legal principles, interpretations and practices governing federal, state, county and local school organization and administration; laws relating to youth; contracts, liability and tort; effect of federal and state laws on education.

EADM 283. School Finance and Business Administration (3)
Public schools as economic institutions; the roles of the federal, state and local governmental agencies related to school finance; public school revenues and expenditures; budget development and administration; operational finance of funds and services.

EADM 286. Administration of Human Resources (3)
Skills and techniques of employee selection, orientation, administration, supervision and evaluation; staff development activities; determining personnel need; employee organizations.

EADM 289. Educational Leadership (3)
Functions, responsibilities and relationships of the school principal. Emphasis given to instructional leadership, leadership styles, human relations skills, working with school-community task groups and forces, public relations, needs assessment, decision-making analysis and computers as a management tool.

EADM 290. Seminar: Computers in Educational Administration (3)
Techniques of computer utilization as a management tool in school site and central office administration.

EADM 291. Independent Graduate Study (1-3)
Graduate students may enroll in library research with consent of the department chair.

EADM 292. Field Experience in Administration and Supervision (1-4)
Experience in practical on-the-job administrative and supervisory functions at a school site. One unit over each of three semesters is required. Open only to administrative credential candidates at the University. *Prerequisite: Consent of the department adviser.*

EADM 293. Special Topics (1-3)
Prerequisite: Consent of the instructor.

EADM 350. Seminar: Social Scientific Thinking (3)
A doctoral core course that provides a meaningful theoretical context within which various methodologies and research designs may be better understood.

EADM 360. Seminar: Trends, Issues, and the Dynamics of Change (3)
Examines current issues and the impact of change in administration of educational programs.

EADM 361. Seminar: Ethics, Law, and Finance (3)
An examination of the relationships between ethics, law, and finance as each impacts upon administrating decision-making in educational institutions.

EADM 362. Seminar: Administration of Instructional Programs (3)
Instructional leadership, staff development, educational program planning/evaluation, curriculum designs and instructional delivery strategies, monitoring and evaluating student progress, use of instructional time and resources.

EADM 363. Seminar: Personnel Issues (3)
Personnel management, resource allocations, employee evaluation, collective bargaining, staffing, staff development, conflict mediation.

EADM 364. Seminar: Educational Policy-Making and Politics (3)
Issues and techniques relative to policy formulation and implementation are examined. The political, social and economic forces that impact policy decisions are emphasized.

EADM 365. Seminar: Administration of Higher Education (3)
A study of administrative, educational and personnel problems and issues in community colleges and four-year institutions.

EADM 366. Seminar: Communications and Public Relations in Education (3)
Techniques of effective communications in educational organizations are presented. Developing and maintaining positive public relations and public support for educational problems are emphasized.

EADM 367. Seminar: Cultural Diversity and Educational Administration (3)
Techniques for working with culturally diverse student, community and faculty populations.

EADM 368. Seminar: Administering Complex Educational Organizations (3)
An in-depth examination of the theories, issues, trends, and challenges of administering complex educational organizations.

EADM 369. Seminar: District Office Administration (3)
To provide an in-depth examination of the structure, functions, politics, and purpose of school district administration.

EADM 370. Professional Induction Planning (2)
Development of a collaborative professional induction plan to meet the requirements for the Professional Administrative Services Credential.

EADM 371. Professional Assessment (2)
A formal assessment of candidates for the Professional Administrative Services Credential.

EADM 391. Graduate Independent Study (1-3)

EADM 392. Internship and Advanced Field Experience in Administration (1-4)
Prerequisite: Consent of the department chair.

EADM 397. Graduate Research in Education (1-3)
Doctoral students may enroll in field investigation with consent of the department chair.

EADM 399. Doctoral Dissertation (1-15)

Educational and Counseling Psychology Department

Professor: Van Hoorn
Associate Professors: Hackett, Webster (Chair)

EPSY 115. Tests and Measurements (3)
Elementary measurement theory and techniques of group assessment. Major focus on the validity and reliability of measurement instruments. Emphasis on group achievement test batteries and group intelligence tests as well as item construction and analysis, and criterion referenced tests and their development, uses and limitations.

EPSY 121. Learning and Learner (3)
General overview of human development; learning theory; objectives, motivation, evaluation; and individual differences. *Prerequisite: sophomore standing.*

EPSY 165. Introduction to Counseling (3)
An introductory course designed for undergraduate students considering a career in the helping professions.

EPSY 173. Language Testing (3)
This course will enable teachers to improve their own classroom tests and to make sound assessments of standardized tests which they will be asked to select, administer and interpret.

EPSY 191. Independent Study (1-3)
Prerequisite: Consent of the department chair.

EPSY 192d. Counseling and Behavior Lab (1)
Supervised observation and experiences for undergraduates, paraprofessionals or graduate students with little or no previous professional training or appropriate field experience relating to the behavioral sciences. *Prerequisite: EPSY 165 or concurrent enrollment.*

EPSY 201. Techniques of Research (3)
Study of the various research methodologies including qualitative, descriptive, causal-comparative, survey, correlational and experimental quasi-experimental. Emphasis on learning to read and comprehend research writing in professional journals. The course also includes material dealing with test theory and statistics.

EPSY 214. Intermediate Statistics (3)
Not intended to be a first course in statistics. Review of descriptive statistics including correlation and probability; introduction to applied inferential statistics including t-test for means, tests for proportions, tests for correlations and ANOVA utilizing statistical computing software. Emphasis is placed on conceptual understanding to ensure students recognize the power as well as the limitations of statistical techniques.

EPSY 215. Individual Assessment (3)
Course emphasizes study of various theories/definitions of intelligence, academic achievement and personality as well as the methodological and societal factors related to the assessment of these constructs and learning-related behavior. Focus is on development of skills in recognizing when assessment is warranted and on the ability to be the critical recipient of assessment data. Not a practicum course.

EPSY 220. Nature and Conditions of Learning (3)
Study of both cognitive and traditional learning theories, their applications to instruction and the development of effective teaching strategies. In addition, information processing models are explored and their implications for instruction are addressed. *Prerequisite: EPSY 121 or equivalent or consent of the instructor.*

EPSY 263. Personality Dynamics in Counseling Across Cultures (3)
Development of multicultural competencies which are needed to provide mental health services to diverse clientele. Focus on cultural factors which influence personality development and manifestations of psychological disturbance. Culture-bound syndromes described in the DSM-IV are examined. *Prerequisite: EPSY 265 or concurrent enrollment or consent of the instructor.*

EPSY 265. Counseling Theory (3)
Intensive study of current counseling theories, including concepts related to personality development and psychopathology, therapeutic roles and interventions. Not a practicum course.

EPSY 266. Organization and Administration of Pupil Personnel Services (3)
Principles of modern systems perspective applied to the delivery of pupil personnel services within the public school system. Course content includes history of PPS disciplines and introduces students to PPS program development and evaluation. Course is appropriate for persons anticipating educational administrative assignments as well as for departmental majors.

EPSY 267. Career Counseling (3)
Vocational theory, information, interest, testing and counseling applications. Social-psychological perspectives on work, vocational decisions, careers and labor force trends. Practice in administration, interpretation and counseling use of SCII and CAI with teenagers. Utilization of computer information systems. *Prerequisite: EPSY 292d or concurrent enrollment.*

EPSY 268. Consultation Methods (3)
Various consultation methodologies will be studied with applications appropriate for a variety of organizational needs. *Prerequisite: EPSY 265 or consent of the instructor.*

EPSY 269. California Law and Professional Ethics (3)
Designed for students in credential and licensing graduate programs in human services. Students will study approaches to

ethical decision-making in addition to learning relevant law and regulation and existing ethical codes of behavior.

EPSY 272. Life Span Development Issues (3)
This course covers developmental issues from infancy to old age and their effects on individuals, couples and families. The impact of societal changes and culture-related issues on development and relationships will be emphasized.

EPSY 273. Language Testing (3)
This course will enable language teachers to improve their own classroom tests and to make sound assessments of standardized tests which they may be asked to select, administer and interpret.

EPSY 275. Theories of Marriage, Family, and Child Counseling (3)
Course provides students with an opportunity to develop a theoretical and operational understanding of the field of family therapy. Addresses systems, normal family developmental issues, major theoretical schools, and the DSM-IV as it is applied to family therapy. *Prerequisite: EPSY 265.*

EPSY 277. Psychotherapeutic Diagnostic Intervention in Marriage and Family Counseling (3)
Provides an opportunity for the student of family counseling to develop a systematic format for assessing the nature of dysfunction in a family as well as skills in developing hypotheses, treatment plans and techniques for therapy. *Prerequisites: EPSY 275 and EPSY 292d.*

EPSY 285. Alcohol and Drug Dependency Counseling (1)
Course focuses on the etiology and treatment of substance abuse disorders. Emphasis is on theoretical consideration of causes and basis of treatment as related to theory. Topics will include an overview of rehabilitation and the dynamics of recovery. Emphasis is on the counselor's role in treatment, working with families, relapse prevention and adjunctive resources.

EPSY 286. Child Abuse Counseling Issues (1)
Provides students of family therapy with an understanding of the nature of child abuse/molest and the dynamic implications for victims and perpetrators, reporting procedures and the law, as well as discussion of the manifestations of abuse in adulthood.

EPSY 287. Human Sexuality and Sexual Counseling (1)
This course provides the student of family therapy a focus on the study of the biological, social, cultural, personal and relational aspects of human sexuality. Course emphasis is on sexual dysfunctions and therapy, current research on sexuality, varieties of sexual behavior and preference, and gender identity and gender role. *Prerequisite: admission to the MFCC program or doctoral program in Counseling Psychology or consent of the instructor.*

EPSY 288. Behavioral Intervention Strategies (2)
Designed primarily for graduate students enrolled in the Pupil Personnel Services credential programs in School Counseling and School Psychology. Course was designed to meet the CCTC required competencies for the PPS credential in School Counseling and School Psychology, but is appropriate for teachers.

EPSY 291. Independent Graduate Study (1-3)
Prerequisite: Consent of the department chair.

EPSY 292a. Counseling Psychology Practicum (3)
Supervised experience with clients. Prerequisite for advanced counseling field experiences. *Prerequisites: EPSY 265 and 292d and permission of the instructor.*

EPSY 292b. Psychometric Cognitive Assessment (3)
Supervised practicum in the administration of individual psychological tests which measure cognitive functioning. The course includes basic test interpretation with report writing experience. *Prerequisites: EPSY 215 and consent of the instructor.*

EPSY 292c. School Counseling Field Experience (1-3)
Exploratory field experiences in elementary, middle and high schools, one unit at each level. *Prerequisite: consent of the instructor, CCTC Certificate of Clearance, and passage of CBEST.*

EPSY 292d. Counseling Skills (3)
Focus is on the development of generic interviewing and counseling skills including analysis of the client's personality functioning, interpersonal process, defensive style, and conflicts. Emphasis is also on case formulation and psychological report-writing. *Prerequisites: EPSY 265 and consent of the instructor.*

EPSY 292f. Non-psychometric Assessment (2)
Designed primarily for graduate students enrolled in the Pupil Personnel Services credential program in School Counseling and School Psychology. Course was designed to meet the CCTC required competencies for the PPS School Psychology credential. *Prerequisite: EPSY 215 or consent of the instructor.*

EPSY 293. Special Project (1-3)
Prerequisite: Consent of the department chair.

EPSY 294a. Counseling Psychology Fieldwork (1-2)
Supervised field experience for non-PPS credential and non-MFCC M.A. students. Settings chosen in keeping with graduate students' career/educational goals. To be taken in final semester(s) of degree program. *Prerequisite: Consent of the instructor.*

EPSY 294b. Educational and Counseling Psychology Fieldwork II (1-4)
Supervised advanced field experience for Educational and Counseling MA program students. Settings chosen in keeping with graduate students' career/educational goals. Course does not meet fieldwork requirements of PPS Credential or MFCC program. To be taken in the final semester(s) of degree program. *Prerequisite: EPSY 294a or permission of instructor.*

EPSY 294e. MFCC Counseling Psychology Fieldwork (1-4)
Supervised field experience for students in final semester(s) of MFCC M.A. program. *Prerequisite: EPSY 292a, consent of the instructor and field site supervisor required for enrollment.*

EPSY 295a. Seminar: Emotional Disturbance in Children (3)
Exploration of theories and research related to the etiology and treatment of psychological disorders in children. Specific attention to family dysfunction, developmental processes, and child abuse as they relate to emotional adjustment and psychopathology in children. Discussion of the DSM-IV Childhood Disorders included.

EPSY 295i. Child Development Across Cultures (3)
Graduate level course in child development with emphasis on the inter-relationships among physical, psychosocial, and cognitive growth patterns showing similarities and differences that are attributable to different cultures. The readings and discussions will concentrate on those aspects of child development that are school-related. *Prerequisite: EPSY 121 or consent of the instructor.*

EPSY 296a. Seminar: Group Counseling (3)
Seminar and practicum in the theories and techniques of group counseling. *Prerequisite: EPSY 292d or concurrent enrollment.*

EPSY 297. Graduate Research (1-3)
Graduate students with consent of the department chair.

EPSY 298c. School Counseling Internship (1-2)
Students will perform duties of a school counselor in multicultural school settings at a minimum of two school levels under the direct supervision of credentialed school counselors. *Prerequisites: EPSY 292c, consent of the instructor, and passage of CBEST.*

EPSY 299. Master's Thesis (4)

EPSY 391. Independent Graduate Study (1-3)
Doctoral students with consent of the department chair.

EPSY 392a. Counseling Psychology Practicum (3)
Advanced pre-internship supervised experience with clients. *Prerequisites: EPSY 292a, 395b or concurrent enrollment, admission to doctoral program in Counseling Psychology and consent of the instructor.*

EPSY 392b. School Psychology Practicum (1)
Supervised practicum in assessment. *Prerequisites: EPSY 292a, 292b, 392g recommended; consent of the instructor.*

EPSY 392g. Personality Assessment and Diagnosis (3)
The course will address theoretical issues and methodologies used in the diagnostic process. Students will receive practice in administering, scoring and interpreting individually administered personality instruments. In addition, students will acquire knowledge base in both Axis I and Axis II Psychiatric Disorders as outlined in DSM-IV. *Prerequisites: EPSY 292b and permission of the instructor; EPSY 263 is recommended.*

EPSY 393. Special Topics (1-3)

EPSY 394b. School Psychology Fieldwork (1-2)
Advanced supervised field placement in preschool and/or K-12 setting(s). Instructor consent required for selection field site/supervisor. *Prerequisites: EPSY 392b, consent of the instructor and CCTC Certificate of Clearance.*

EPSY 395a. Seminar: Emotional Disturbance in Children (3)
Exploration of theories and research related to the etiology and treatment of psychological disorders in children. Specific attention to family dysfunction, developmental processes, and child abuse as they relate to emotional adjustment and psychopathology in children. Discussion of the DSM-IV Childhood Disorders included.

EPSY 395b. Seminar: Advanced Counseling Theory and Practice (3)
Focus is on current counseling trends and innovative practices. *Prerequisite: EPSY 292a or consent of the instructor.*

EPSY 395c. Quantitative Research Design and Methods (3)
This course exposes students to and develops their ability to conceptualize a broader range of research questions dealing with (a) significance of group differences; (b) degree of relationship among variables; (c) prediction of group membership; and/or (d) structure that quantitative design and analysis strategies might inform than those typically introduced in a first course (e.g., EPSY 201). Topics emphasized in the course relate to (a) the purpose and principles of research design; (b) the use of multivariate approaches and analysis; and (c) the construction and validation of measuring instruments. *Prerequisites: EPSY 201 or equivalent and EPSY 214.*

EPSY 395h. Seminar: Learning Theories and Practice in Schools (3)
The student will study in-depth the basic learning theories which are currently in use in the schools, learning to utilize the concepts in the various theoretical positions in psycho-educational instruction. The student will be required to develop and defend his or her own theory of learning and psycho-educational instruction based on a thorough review of the extant literature in the area of at least two of the basic learning theories. *Prerequisite: EPSY 220.*

EPSY 395i. Seminar: Child Growth Theories Applied in Education (3)
The student will be able to describe, compare and apply to education and counseling the theories of Jean Piaget, Erik Erikson and other developmentalists. Readings include both primary and secondary sources. *Prerequisite: EPSY 295i or permission of the instructor.*

EPSY 395j. Seminar: Counseling and Testing Across Cultures (3)
Applies the principles of counseling and testing to clients whose cultural or sub-cultural background differs from the majority culture and/or counselor's culture in regard to racial, ethnic, social class, gender, age, religion and other groupings. Analysis of the counselor's own background and biases and those of the clients. Use, modification and interpretation of assessment instruments in intercultural settings. *Prerequisites: EPSY 215, 292b, and 265.*

EPSY 397. Graduate Research (1-3)
Doctoral students with the consent of the department chair.

EPSY 398a. Counseling Psychology Internship (1-4)
Registration is reserved for advanced doctoral students in counseling psychology. Students work under the supervision of a licensed therapist in a field placement approved by the instructor. *Prerequisites: EPSY 392a and consent of the instructor.*

EPSY 398b. School Psychology Internship (2-3)
Student will perform duties of a school psychologist in multicultural school settings at both elementary and secondary levels under the direct supervision of a credentialed school psychologist. Placement must be half- or full-time. *Prerequisites: EPSY 392b, and 394b. Students must have an intern credential and permission of the instructor before beginning an internship.*

EPSY 399. Doctoral Dissertation (1-15)

Educational Resource Center

Assistant Professor: Snyder (Director)
Instructors: Evans, Houck

MATH 1. Pre-algebra (3)
This course is designed for students whose Mathematics Placement Test score indicates a need to review arithmetic skills and Pre-algebra material. Topics covered include fractions, decimals, percents, basic area and volume formulas, signed numbers, use of variables in mathematical statements, translating statements in English to mathematical equations, solving linear equations and ratio and proportion. The course is taught using a Personalized System of Instruction. The course credit does not apply toward graduation. *Prerequisites: appropriate score on the Mathematics Placement Test and permission of the instructor.*

MATH 3. Elementary Algebra (3)
Topics covered include signed numbers, linear equations, polynomials, factoring, algebraic fractions, radicals, quadratic equations, inequalities and systems of linear equations. This is an introductory course for students with limited high school background in mathematics. This course is taught using a Personalized System of Instruction. This course is inappropriate for students who have passed the Elementary Algebra placement exam or any higher level placement exam. Course credit does not apply toward graduation. *Prerequisites: a grade of C- or better in MATH 1 or an appropriate score on the Mathematics Placement Test and permission of the instructor.*

MATH 5. Intermediate College Algebra (3)
Topics covered in this course include the real number system, solution of linear equations and inequalities, word problems, factoring, algebraic equations, exponents and radicals, quadratic equations, relations, functions, graphs, systems of equations and logarithmic and exponential functions. This course is not appropriate for students who have passed the Intermediate Algebra placement test or any higher level placement test. This course is taught using a Personalized System of Instruction. Students who complete MATH 5 and 7 may enroll in Calculus (MATH 51). *Prerequisites: a grade of C- or better in MATH 3 or an appropriate score on the Mathematics Placement Test and permission of the instructor.*

MATH 7. Trigonometry (2)
Topics in this course include angle measure, trigonometric functions, applications of trigonometry, graphs of trigonometric functions, trigonometric identities, inverse functions and complex numbers. This course is designed for students who have not studied trigonometry in high school. Prerequisites include a satisfactory score on the Intermediate Algebra placement test. This course is taught using a Personalized System of Instruction and meets three hours per week. (Students who complete MATH 5 and 7 may enroll in Calculus MATH 51). *Prerequisites: A grade of C- or better in MATH 5 or an appropriate score on the Mathematics Placement Test and permission of the instructor.*

ESL 9. Intermediate ESL: Pronunciation, Speaking and Listening (3)
Intermediate level skills in speaking and listening comprehension will be the focus, including improvement of pronunciation, rhythms, stress and intonation. Audio tapes of short talks on academic topics will be used as material for listening, note-taking and discussion.

ESL 10. Intermediate ESL: Writing and Grammar (3)
This course will lead students from writing simple paragraphs to longer, more complex compositions using chronology, enumeration, comparison/contrast, definition, and cause and effect as patterns of organizing content. The English tense and aspect system will be reviewed with other basic concepts of English grammar. More advanced concepts, such as modals and clause structure, writing paragraphs, compositions, and journal entries will be introduced. Placement in this course is on the basis of ESL testing. Pass/No credit (P/NC) grading option is not allowed for this course.

ESL 13. Advanced ESL: Reading and Grammar Development (3)
Reading for comprehension, related study skills and vocabulary expansion with particular attention paid to grammatical forms used in readings. Selections will help prepare students for textbook and journal article reading at the college level. A variety of topics common to a general education curriculum will be covered. Pass/No credit (P/NC) grading option is not allowed for this course.

ESL 15. Advanced ESL: Writing and Grammar Development (3)
Training in a variety of academic forms: note-taking, outlining, summaries, paraphrasing, reports, a short term paper, essays and journal writing. Complex grammatical patterns are studied and integrated into the writing assignments. These include verb phrase forms, indirect speech, conditionals, clauses, gerunds and infinitives, and the passive voice. Attention is also paid to correct word formation. Placement in this course is on the basis of ESL testing or prerequisite of ESL 10 or equivalent. Pass/No credit (P/NC) grading option is not allowed for this course.

WRIT 17. Writing from Cultural Perspectives (3)
Concentrates on word formation and sentence-level grammar in the English language used in composing short essays typical of college writing. Placement on the basis of ESL and writing competency test results. Pass/No credit (P/NC) grading option is not allowed for this course.

WRIT 19. Basic Writing (3)
Concentrates on the practical application of writing theory to develop confidence and competence in written composition skills. The course credit does not apply toward graduation. Placement on the basis of writing competency test results. Pass/No credit (P/NC) grading option is not allowed for this course.

WRIT 21. Writing for College (3)
Introduction to the types of written assignments required in college courses, including the research paper, expository writing and argumentation. Weekly writing assignments and individual conferences with instructor. Placement on the basis of writing competency test results. Pass/No credit (P/NC) grading option is not allowed for this course.

ESL 23. Advanced ESL: Speaking and Pronunciation (2)
The pronunciation, rhythm, stress and intonation of American English will be studies and practiced, as well as skills needed for academic discussion. Students will receive help in improving pronunciation of sounds.

ESL 25. Advanced ESL: Listening (2)
The understanding of college-level lectures and peer discussions will be stressed. Both audio and video material will be presented for practice in listening, note-taking and comprehension.

READ 31. Reading for College (2)
Examination of the nature of the reading process and of techniques used by successful readers. Development of vocabulary, comprehension, concentration, memory and fluency skills. Placement on the basis of basic skills reading test. Pass/No credit (P/NC) grading option is not allowed for this course.

READ 51. Reading Efficiency Development (2)
Increasing reading efficiency through use of rhythmic eye movements, analyzing text organization and reading for specific purposes. Development of sophisticated analytical, critical and aesthetic reading strategies.

READ 61. Study Efficiency (2)
Development of skills inherent in effective college learning, such as time management, study strategies, research techniques, preparing for and taking exams and self-management (decision-making, goal-setting, accomplishing goals). Offered spring semester.

READ 91. Individually Prescribed Study (1-3)
Development of specific thinking, organization and communication skills as determined through individual assessment and prescription.

READ 93. Special Projects (1-3)
Prerequisite: Consent of the instructor.

Gladys L. Benerd School of Education Faculty

John M. Nagle, 2000, Dean and Professor of Education, B.A., Hamilton College, 1962; M.A.T., Harvard University, 1963; Ph.D., University of Pittsburg, 1969.

Harriett Arnold, 1994, Associate Professor of Education, B.A., San Francisco State College, 1968; M.A., San Jose State University, 1974; Ed.D., University of San Francisco, 1984.

Dennis Brennan, 1980, Associate Professor of Education, B.S., Clarion State College, 1966; M.Ed., University of Pittsburgh, 1970; Ph.D., 1978.

Ruth V. Brittin, 1998, Associate Professor of Education, Ph.D., Florida State University, 1989.

Stephen H. Davis, 1995, Associate Professor of Education, B.A., Stanford University, 1971; M.A., San Jose State University, 1980; Ed.D., Stanford University, 1987.

Marilyn E. Draheim, 1986, Associate Professor of Education, B.A., Luther College, 1972; M.A., University of Iowa, 1974; Ed.S., 1974; Ph.D., University of California, Berkeley, 1986.

Susan W. Eskridge, 1989, Associate Professor of Education, B.S., Old Dominion University, 1973; M.S., 1977; Ed.D., University of Virginia, 1989.

Scott Evans, 1990, Instructor of Education, B.A., California State University, Sonoma, 1976; M.A., University of California, Davis, 1980.

Jean A. Gonsier-Gerdin, 1998, Assistant Professor of Education, B.A., M.A., Stanford University.

Rachelle Hackett, 1994, Associate Professor of Education, B.A., California State University, Fresno, 1982; M.S., Stanford University, 1986; Ph.D., 1994.

Phyllis Hensley, 1996, Assistant Professor of Education, B.A., Edinboro State University, 1972; M.A., 1975; Ed.D., State University of New York, Buffalo, 1996.

Howard R. Houck, 1989, Instructor of Education, B.S., Lewis and Clark University, 1949; M.S., California State University at Hayward, 1973.

Margaret A. Langer, 1981, Associate Professor of Education, B.S., Pennsylvania State University, 1960; Ed.M., Rutgers University, 1969; Ed.D., 1974.

B. Jean Longmire, 1976, Professor of Education, B.A., University of Wisconsin, Madison, 1965; M.S., Georgetown University, 1969; Ph.D., 1976.

Robert D. Morrow, 1975, Professor of Education, B.S., Ohio University, 1960; M.S., State University of New York, Brockport, 1968; Ed.D., University of Illinois, 1975.

Fred Muskal, 1970, Professor of Education, B.A., Roosevelt University, 1962; M.A., 1964; Ph.D., University of Chicago, 1975.

Thomas G. Nelson, 1995, Assistant Professor of Education, B.A., California State University, Northridge, 1975; M.A., California State University, Sacramento, 1988; Ph.D., University of Arizona, 1993.

Ray O. Posey, Assistant Professor of Education, B.A., Westmont College, Santa Barbara, 1976; M.S., California State University, Hayward, 1989.

Kathleen C. Sadao, 1997, Assistant Professor of Education, A.A., College of San Mateo, 1972; B.A., 1974; M.A., California State University, Chico, 1982; Ed.D., University of Hawaii, 1995.

Claudia W. Schwartz, 1987, Instructor of Education, B.A., University of the Pacific, 1974; M.A., 1981.

Vivian Snyder, 1993, Director of the Educational Resource Center, Assistant Professor of Education, B.S., 1968; M.S., 1971; Ph.D., 1982; Southern Illinois University.

Judith L. Van Hoorn, 1982, Professor of Education, B.S., University of Michigan, 1963; M.A., Columbia University, 1965; Ph.D., University of California, Berkeley, 1982.

Linda Webster, 1996, Associate Professor of Education, B.A., California State University, Fresno, 1981; M.A., University of California, Berkeley, 1984; Ph.D., 1988.

Michael T. Wright, 2000, Assistant Professor, B.A., California State University, Chico, 1992; M.A., 1997; Ph.D., Oregon State University, 2000.

school of engineering

Dean:
Ravi Jain

Department Telephone:
209.946.2151

Website
www1.uop.edu/eng

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Bioengineering
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A professional school offering a program in which theory and practice are interrelated; human problems and engineering come into sharp focus; and students find increased meaning in their studies.

Mission

The mission of the School of Engineering is to provide a superior, student-centered learning environment which emphasizes close faculty-student interaction and cooperative education in order to prepare graduates who excel in the engineering profession, are qualified to pursue advanced degrees, and possess the technical knowledge, critical thinking skills, creativity, and ethical values which are needed for leadership in developing and applying technology for the betterment of society and sustaining the world environment.

No single definition of engineering is adequate; however, engineering is well described as the application link between science and society. Engineers must have the ability to apply theoretical knowledge to practical situations. They are agents through whom science influences our society.

At the School of Engineering, engineers must develop dual competencies - technical and social. They must understand the principles of science as well as the nature of human needs and behavior and the impact of technology on society. The modern engineer deals with socially relevant matters including pollution, energy resources, sustainability and public transportation systems. Engineers are experts in manufacturing processes, communications systems, medical electronics, the space program and numerous other endeavors that provide citizens of the world with a safer, more enjoyable life.

The engineering program at University of the Pacific consists of three well-integrated parts: 1) mathematics, natural sciences and a broad range of courses in the humanities and social sciences; 2) engineering courses, which provide the specialized training for professional competence in engineering and; 3) on-the-job experience in the Cooperative Education (Co-op) Program described below. Through this threefold program, theory and practice are interrelated; human problems and engineering come into sharp focus; and students find increased meaning in their studies.

By studying at a private university with a strong liberal arts heritage, Pacific engineering students interact with students whose objectives, attitudes and approaches to human problems are different from their own. They experience meaningful associations with students from a variety of social, political and cultural backgrounds.

Degrees in Engineering

The School of Engineering offers seven undergraduate degree programs: Bioengineering, Civil, Computer, Electrical, and Mechanical Engineering, Engineering Management, and Engineering Physics. The engineering curricula are divided into lower-division and upper-division segments. The lower-division stresses fundamentals in science, mathematics and engineering. The first two years are essentially the same for all engineering majors. The upper-division combines courses in the major area with work experience through the Co-op Program.

Accreditation

Civil, Computer, Electrical and Mechanical Engineering and Engineering Physics are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology Inc., the nationally recognized accrediting body for engineering curricula.

Engineering Industry Fellowship (EIF)

The Engineering Industry Fellowship (EIF) is a dual-purpose partnership between industry and the University of the Pacific School of Engineering. It provides student fellows with a quality education, optimal training for success in the workplace, and relevant work experience with a major industry. It also provides industry with a means of establishing a five-year mentoring/ employment relationship with a top-notch student, the opportunity to groom a possible long-term future employee, and increased visibility on campus.

EIF's are based on good faith agreements between industry, the Cooperative Education Office, and student fellows while they pursue their degrees in engineering at Pacific. The industry provides paid summer internships plus two paid Co-op assignments. They also contribute $5,000 per year to be used for scholarships and partial program funding. The student fellow agrees to maintain long-term high academic achievement and to perform satisfactorily on the job.

Engineering Tuition

Engineering at Pacific is a five-year program with a mandatory Cooperative Education component. During the first two years of the program, the student's fee structure is identical to the University's. Overall tuition costs as shown elsewhere in this General Catalog apply, with the additional costs of summer school tuition.

During the last three years of the program, the students are required to complete two Cooperative Education periods, including one summer term, for which they are billed one-half semester tuition with each placement. During the last three years the students also attend two academic summer terms at no additional tuition. (See Cooperative Education Schedule). Therefore it is essential that any student who plans to participate in the Co-op Program completes the application for tuition remission at the earliest possible date. Applications are available in the Co-op Office.

Cooperative Education

Cooperative Education is an integral part of the engineering curriculum at University of the Pacific. Students alternate between terms in the classroom and periods of full-time, paid professional practice. The work experiences are coordinated through the School of Engineering Office of Cooperative Education. Faculty coordinators keep in close contact with students and their employers during the work periods.

Cooperative Education employment enhances an engineering degree program by relating theory to practice. During Co-op, the students apply what they have learned in the classroom to a working situation. This process of "learning by doing" increases student motivation.

The Cooperative Education Program is required for graduation from the School of Engineering. There are two exceptions to this requirement. 1) Because their study abroad experience qualifies as a significant "experiential learning" component of their education, non-citizens of the U.S. are not required to participate in Co-op, although they are encouraged to do so. 2) Students who have prior work experience in engineering may file a petition for equivalent Co-op credit prior to the end of the student's second semester on campus. Approval of the petition rests with the Co-op Director, the student's faculty adviser, and the Dean of the School of Engineering. Contact the Co-op Office at (209)946-2151

Students must be in residence at Pacific for one semester immediately prior to their first Co-op experience. Students on academic probation are not eligible to participate in the Co-op Program until they eliminate their academic deficiency. Successful Co-op placements depend on many factors. Students are expected to be willing to accept Co-op employment in a wide range of geographical locations and to work aggressively with the Co-op Coordinators in preparing resumes, developing interviewing skills and seeking appropriate placement. Given this level of cooperation by the student, the School of Engineering guarantees all such students Co-op placements.

All lower-division courses, including satisfying Fundamental skills requirements, must be completed before a student is eligible for the Co-op Program. All students must complete their Co-op requirement prior to the final semester of courses. A minimum of seven units must be completed after the final Co-op experience. At least three of the seven units must be from the School of Engineering (or from the School of Business in the case of an Engineering Management student).

If a student receives financial aid, income from Cooperative Education employment may affect the amount of financial assistance a student receives during each employment period.

Facilities

The School of Engineering's excellent facilities are readily accessible to engineering students. The School occupies five centrally located buildings on the Stockton campus.

Baun Hall, the original engineering building, houses the School of Engineering Dean's Office, the Office of Cooperative Education and MESA Programs, faculty offices, electrical and computer engineering laboratories, the Compaq-Cisco Network Laboratory and the Ralph M. Parsons Laboratory. The Parsons Laboratory, utilized by the Civil and Mechanical Engineering departments, features a dynamic materials testing system and a scanning electron microscope.

The Fluid Mechanics and Environmental Engineering laboratories are housed in a separate building and include a fully equipped fluid mechanics laboratory for experimentation in hydrostatics and hydrodynamics, and a tilting flume for hydraulics. The second floor serves as a student/faculty lounge.

Anderson Hall provides Electrical and Computer Engineering laboratories, classrooms, engineering faculty offices, and a student study area. It also houses two computer laboratories which are available to all registered engineering students on a 24-hour basis: a Computer-Aided Engineering and Design (CAE/D) laboratory for use by all undergraduate engineering students, and a computer workstation laboratory for upper-division students.

Khoury Hall houses laboratories for the study of instrumentation, energy, soils and manufacturing systems as well as faculty offices, classrooms and a study area for students. Owen Hall houses a 24-hour student workshop and the School's woodshop. New

Cooperative Education Schedule

ACADEMIC YEAR	Summer (May-Aug.)	Fall (Aug.-Dec.)	Spring (Jan.-May)
FRESHMAN YEAR		Classes	Classes
SOPHOMORE YEAR		Classes	Classes
JUNIOR (3rd) YEAR	Classes	Classes	First CO-OP
SENIOR (4th) YEAR	Classes	Classes	Classes
SENIOR (5th) YEAR	Second CO-OP		Classes

laboratory facilities and student project areas are being added.

Civil Engineering facilities include a materials laboratory for investigation of physical and mechanical properties of engineering materials and soils. Electrical Engineering laboratory facilities include modern test and measurement equipment necessary for the analysis and design of electrical and electronic circuits and systems.

Computers are used extensively both in the laboratories and in support of coursework. Mechanical Engineering facilities include laboratories in measurements, energy, materials, manufacturing and computer-aided design and drafting. The School's Computer Engineering laboratories are very well equipped and include numerous personal computers and Sun Microsystems' workstations. All engineering majors make extensive use of the computer equipment available throughout the engineering complex. A high-speed Ethernet local area network interconnects the School of Engineering with other University computer resources.

Student Organizations

National Honor Societies
Tau Beta Pi (Engineering Honor Society - all engineering majors)
Eta Kappa Nu (Honor Society - Electrical, Computer Engineering, Engineering Physics)
Student Affiliates of Professional Organizations
American Society of Civil Engineers (ASCE)
American Society for Engineering Management (ASEM)
American Society of Mechanical Engineers (ASME)
Institute of Electrical and Electronic Engineers (IEEE)
National Society of Black Engineers (NSBE)
Society of Hispanic Professional Engineers (SHPE)
Society of Women Engineers (SWE)
Society of Automotive Engineers (SAE)
Campus Clubs and Organizations
Associated Engineering Students (AES)
Associated Students of Engineering Management (ASEM)

Pacific MESA Center

The Pacific Mathematics, Engineering and Science Achievement (MESA) Center is the home of two programs: The MESA Schools Program (MSP) and the MESA Engineering Program (MEP).

Both programs serve educationally disadvantaged students who have traditionally not entered math and science-based professions. MSP provides hands-on math and science activities, academic enrichment, academic and college advising, and professional exposure to students in grades 4-12. It currently serves more than 1,200 students. Specific MEP goals are to increase matriculation, retention, and graduation rates of the students enrolled in the School of Engineering. MEP seeks to fulfill the above goals through collaborations and partnerships with an Industrial Advisory Board, three student chapters of related professional organizations, an affiliation with the Statewide MESA Office at the University of California, Office of the President, the National Consortium for Minority Engineering Students Pursuing a Graduate Degree (GEM), the National Association for Minority Engineering Program Administrators (NAMEPA), and the National Action Council for Minorities in Engineering (NACME).

Pacific MESA Center activities and support features include: pre-college outreach, financial aid (scholarships), career fairs, awards banquets, hands-on math and science workshops, enhanced advising and counseling, tutoring, motivational seminars, Saturday and summer programs, and a student study center.

General Education Requirements

The General Education requirements for engineering students are as follows: all entering freshmen must take Mentor Seminar I-Timeless Questions, and Mentor Seminar II-Today's Decisions. As seniors they must take Mentor Seminar III-Ethical Applications of Knowledge. In addition, they must take a total of four courses; two each from Category I-The Individual and Society and Category II-Human Heritage. These courses must be selected to allow the student to gain the broad education necessary to understand the societal impact of engineering and technology. The student's adviser will assist in the selection of courses. Students may satisfy up to two of their general education course requirements in Category I and Category II through satisfactory Advanced Placement (AP) testing. (Students may also satisfy any math and science requirements through relevant AP tests.)

Core Curriculum

Each program towards a degree in engineering includes the following core courses:

General Education (21 units)
MENT I, II, III
ENGL 105
Electives (4)
Math/Science
MATH 51, 53, 55, 57
PHYS 53, 55
CHEM 25
General Engineering
ENGR 5, 20, 25

Community College Transfers

The School of Engineering subscribes to the "Common Core" lower-division transfer program of the California State Engineering Liaison Committee (ELC).

Lower-Division Curriculum
(Adopted by ELC - October 23, 1998)

Subject Area	Semester Units
Mathematics	16
Chemistry	5
Physics	8
Statics	3-4
Engineering Graphics w/CADD	2-3
Computer Programming	3
Introduction to Engineering	1-2
Strength of Materials	4
EE Fundamentals	3-4
General Educatimon	18

Additional courses depend on the specific program of study. Students should consult with their faculty adviser.

Based on the most recent requirements of the ELC, any student from a California community college with a stated major in engineering, who presents a transcript showing satisfactory completion of the above proposed core program in lower-division, will be able to enroll in this institution with regular junior standing.

Further, assuming normal progress, such a student can complete the academic requirements for the bachelor's degree in two additional years plus 12 months of Cooperative Education employment, which means that he or she should graduate in three years following the transfer. Completion of a specific degree program including the Co-op requirements will be dependent upon proper selection of elective courses.

Community college students can transfer to the School of Engineering at any point in their academic program. It is important that each student contact the appropriate Engineering Department at Pacific as early as possible and arrange for faculty assistance in planning his or her transfer.

Transfer General Education

The School of Engineering will accept the Transfer General Education Program from any community college. In some instances, one additional class may be required. All students must take Mentor Seminar III during their senior year.

Engineering Prerequisite Requirement

All engineering course prerequisites must be passed with a C- or higher grade. All petitions to waive this prerequisite requirement must be approved by the School of Engineering's Academic Standards Committee before a student can enroll in the advanced course.

Courses Taken Pass/No Credit

A student may request to register for one (1) General Education course per semester on a Pass/No Credit basis in either Category I or II of the General Education Program by filing the completed Pass/No Credit form in the Registrar's Office before the deadline established by the Registrar's Office (approximately the end of the second week of classes). This petition must include the approval of the professor teaching the course and the student's adviser. A maximum of 16 Pass/No Credit units may be applied to meet the degree requirements. All other classes, including Technical Writing, Independent Studies and the basic science or mathematics elective classes, must be taken for a letter grade.

Independent Studies

Students who have an interest in a subject not offered as a regular course and who, by their overall performance at Pacific, have proven their ability to do independent work, may consider enrolling in an independent study. The qualified student should initiate discussions with his/her adviser and with a professor who is knowledgeable in the subject. If both parties are in agreement, the student must complete the Independent Study Form and submit it to the instructor before the end of the third week of classes. If the independent study is to be used to meet a General Education requirement, it must also have the approval of the Department's General Education Coordinator. Students on academic probation are not permitted to enroll in independent study courses in any department of the University. The following School of Engineering policies apply:

1. The course(s) may not be substituted for a regularly scheduled course unless approved by the department.
2. If the course is to be used to meet an engineering elective, approval by the student's adviser and the department chairperson is required.
3. All courses must be taken for a letter grade; the pass/no credit option is not allowed for independent study courses.
4. Only one independent study course may be taken per term.
5. Each course may be taken for one (1), two (2), three (3), or four (4) units. The unit value for the course will be established between the student and the professor responsible for the course. The student's adviser should be informed of this decision.
6. A maximum of eight (8) units of independent study may be used to satisfy graduation requirements.

Course Substitutions

The substitution of course(s) from the printed major program is discouraged. When extenuating circumstances warrant consideration, the student should meet with his/her adviser, and the final decision must have the approval of the department chair. Consideration should be given to the source of the problem (school, student, etc.), severity of the hardship case, and what the department considers best for the individual.

If a course substitution is allowed, ABET guidelines must be followed and the substitute course must be of the same unit value or more, and in the same academic area.

Maximum Summer Course Load and Credits

The maximum number of classes, excluding physical activity courses, that an engineering student may register for during any period of the summer program is three (3). The total academic units accumulated through any combination of the three summer sessions shall not exceed 14 units. Additional units must be petitioned through the engineering Standards Committee and if approved, the student will be charged at the summer school overload tuition rate for all credits over 14 units.

Fundamental Skills Requirement

Students are required to satisfy all the University Fundamental skills requirements (i.e., Writing, Mathematics, and Reading) prior to enrolling in any upper-division engineering courses.

Graduation Requirements

It is important that each student carefully monitor his or her academic program. Each student is expected to consult regularly with his or her faculty adviser. Meeting the graduation requirements is each student's responsibility. If a student should deviate from the printed curriculum, careful academic scheduling will be required and a plan must be developed indicating all courses needed for graduation, and when the classes will be taken. After the plan of classes is completed, the schedule must be approved by the student's faculty adviser and the Director of Cooperative Education.

In order to graduate, students must meet the following requirements:

1. Successful completion of all courses required in the student's major.
2. Successful completion of 50 Cooperative Education credits and the Professional Practice Seminar.
3. A Pacific GPA of at least 2.0.
4. An engineering GPA of at least 2.0. (Calculated on Pacific engineering courses only.)
5. Management Engineering students must have at least a 2.0 GPA in their business/management classes.
6. Submission of application for graduation to the Registrar's Office by September 1 (Fall graduation) or October 1 (Spring/Summer graduation) of the academic year in which the student intends to graduate.

Accelerated Engineering Program Scholars (AEP)

High-achieving prospective engineering students can apply for the Accelerated Engineering Program (AEP) which allows students to complete a four-year engineering degree, plus a full year of Cooperative Education in four academic years, including the summers before the sophomore, junior, and senior years.

Admission to this program requires:

- Minimum SAT score of 1350.
- Minimum high school grade point average of 3.5.
- Completion of college credit for Calculus I and at least one other college class prior to the freshman fall semester (this can be through Advanced Placement Testing.).

AEP Scholars should understand that this is an extremely rigorous program designed for the high-achieving, fast-paced student who is willing to forego some aspects of student life for the sake of increased academic intensity. AEP Scholars will be recognized on their transcripts and at commencement. AEP Scholars will also be given priority consideration for such distinguished academic opportunities as undergraduate research programs.

For more information, you may contact Dr. Gary Martin at (209) 946-3064 or gmartin@uop.edu.

Bioengineering

The educational objectives of the bioengineering degree program are:

1. To provide each student with relevant knowledge of biological systems (life sciences) and sufficient training and instruction in engineering so as to be recognized as an engineer.
2. To ensure that each graduate will be sufficiently well qualified both technically and personally to (a) enter practice as a professional engineer, (b) pursue advanced study and research in either engineering or the life sciences or interdisciplinary fields linking engineering and the life sciences, and/or (c) gain admission to professional schools to seek post-graduate degrees (e.g., Ph.D., MD, DVM, DDS).
3. To provide a breadth and depth of experiences, both academic and extra curricular, to enable each student to develop her/his leadership skills, including the ability to communicate effectively in both written and oral formats.
4. To instill through mentoring and a variety of experiences, personal and professional traits that are necessary for success, including curiosity, creativity, focus, high work ethic, and a willingness and ability to continue learning.

Year	Term	Standard Units	Accelerated Units
1st	Fall	15	18
	Spring	15	17
	Summer	Break	13
2nd	Fall	17	16
	Spring	15	Co-op
	Summer	8	11
3rd	Fall	16	18
	Spring	Co-op	18
	Summer	7	Co-op
4th	Fall	15	Co-op
	Spring	17	16
	Summer	Co-op	Done!
5th	Fall	Co-op	
	Spring	16	
	Summer	Done!	

5. To prepare each graduate, through suitable experiences, for work on interdisciplinary teams.

Bioengineering Program

Math/Science
BIOL 51, 61, 101
CHEM 27, 121, 123
MATH 39
General Engineering
ENGR 45
Computer Science
COMP 51
Electrical/Computer Engineering
ECPE 41/41L, 71/71L, 121, 172, 195, 196
4 Electives
Mechanical Engineering
MECH 110

Civil Engineering

The University of the Pacific Department of Civil Engineering seeks to develop educated graduates who take joy in learning, want to broaden themselves and have the practical technical skills to be productive civil engineers.

The objectives of the Civil Engineering Program are :

1. Graduates should have acquired the knowledge necessary to comprehend and solve open-ended problems in Environmental Engineering, Geotechnical Engineering, Structural Engineering and Water Resources Engineering.
2. Graduates should possess the skills appropriate to the practice of civil engineering in today's world.
3. Graduates should exhibit those qualities, such as a desire for continued learning, and a commitment to ethical practices, which will ultimately make them solid engineering professionals.

Civil Engineering Program

Math/Science
Math Elective
GEOS 51
General Engineering
ENGR 15, 45, 120, 121, and 79 or 122
CIVL 19, 22
Civil Engineering
CIVL 100, 130, 132, 133, 140, 170, 180
Civil Electives (1)
Civil Design I, II, III

Computer Engineering / Electrical Engineering

The objectives of the Computer Engineering and the Electrical Engineering Department are:

1. To meet the standards established by accrediting agencies and expected by employers and graduate schools.
2. To prepare computer engineers and electrical engineers with a level of competence in the science and technology of engineering so that they can be contributing members of a team, able to solve real problems with real constraints to meet real needs.
3. To instill an ability to continue learning in order to keep abreast of the rapidly changing field of engineering.

4. To provide an understanding of the constraints placed by the economy, the environment and society on the practice of engineering.
5. To instill an appreciation of the profession of engineering and an understanding of the value of professional organizations.
6. To maintain an environment in which faculty can provide innovative, effective teaching, can pursue scholarly interests in order to keep vital and can be of service to meet the needs of the University and the community.

Computer Engineering Program (BSCpE) Educational Objectives

Graduates of the BSCpE degree program will be able to practice computer engineering at the professional level or pursue advanced studies. They will:

1. Be able to write software and design computer systems according to given specifications by application of mathematics and the fundamentals of science and engineering.
2. Be able to design software and computer systems to meet specifications, with appropriate consideration of safety, the ecology and economics, while working individually or in teams.
3. Be able to select and apply common and standard technology to perform analysis, design and documentation in a professional manner.
4. Be able to design and apply a process to meet specific needs, analyze acquired data, and present results in a clear and useful manner.
5. Be able to integrate knowledge of math, science, engineering, humanities and social sciences in meeting the needs of society.
6. Be able to communicate effectively with superiors, colleagues and laypersons, in both spoken and written forms.
7. Participate in professional organizations and continued learning to update their knowledge and skills, and in recognition of the need to know and understand professional and societal issues.
8. Have knowledge of the history and development of their profession and of the impact it has had in global and societal contexts.
9. Have clearly defined career objectives, and be able to market themselves via an effective, professional resume and behavior-based interview techniques.
10. Have knowledge of common elements, demands and expectations of the engineering workplace, and of the basic tenets of professional behavior, including time management, ethical decision making, and principles of leadership.

Math/Science
Math Elective
General Engineering
Computer Science
COMP 51, 53, 151
Electrical/Computer Engineering
ECPE 5, 41/L, 71/L, 121, 127, 131/L, 173, 174, 175, 176, 195, 196
Electives (5)

Electrical Engineering Program (BSEE) Educational Objectives

Graduates of the BSEE degree program will be able to practice electrical engineering at the professional level or pursue advanced studies. They will:

1. Be able to analyze devices, circuits and systems by application of mathematics and the fundamentals of science and engineering.
2. Be able to design devices, circuits and systems to meet specifications, with appropriate consideration of safety, the ecology and economics, while working individually or in teams.
3. Be able to select and apply common and standard tools to perform analysis, design and documentation in a professional manner.
4. Be able to design and apply a measurement system or process to meet specific needs, analyze acquired data, and present results in a clear and useful manner.
5. Be able to integrate knowledge of math, science, engineering, humanities and social sciences in meeting needs of society.
6. Be able to communicate effectively with superiors, colleagues and laypersons, in both spoken and written forms.
7. Participate in professional organizations and continued learning to update their knowledge and skills, and recognize the need to know and understand professional and societal issues.
8. Have knowledge of the history and development of their profession and of the impact it has had in global and societal contexts.
9. Have clearly defined career objectives, and be able to market themselves via an effective, professional resume and behavior-based interview techniques.
10. Have knowledge of common elements, demands and expectations of the engineering workplace, and of the basic tenets of professional behavior, including time management, ethical decision making, and principles of leadership.

Math/Science
Math Elective
PHYS 161
General Engineering
Computer Science
COMP 51, Elective
Electrical/Computer Engineering
ECPE 5, 41/L, 71/L, 121, 125 or 172, 127, 131/L, 141, 144, 195, 196
Electives (5)

Mechanical Engineering

The objectives of the program in Mechanical Engineering are to prepare the graduate for the following:

1. To enter the profession as competent mechanical engineers, or to pursue graduate-level studies.
2. To meet the standards established by the Accreditation Board for Engineering and Technology (ABET).
3. To be aware of humanistic values of the individual, society and human heritage, and to communicate on both technical and non-technical levels.
4. To possess one year of work experience in an engineering activity (participants in the Co-op program) or an equivalent experiential educational practice. (This last objective applies to students of U.S. citizenship who are required to participate in the Co-op program.) Having achieved these objectives, our graduates are prepared to use mathematics, sciences, and engineering to adapt to changing technology and society.

Mechanical Engineering Program

Math/Science
Math Elective
General Engineering
ENGR 15, 45, 79/L, 120, 121, 122, CIVL 130

Mechanical Engineering
MECH 19, 100, 110, 120, 129, 140, 141, 150, 157, 175
Electives (4)

Engineering Management

The Bachelor of Science in Engineering Management is offered to provide academic preparation for individuals who plan a management career in a technically related field. Pacific graduates from this program have done well in such careers as technical sales, construction management, and industrial engineering.

Courses are taken in an engineering discipline through the third year with a fourth year of selected coursework in Engineering Management, Economics and Business Administration. The engineering options include Civil Engineering, Electrical Engineering, Mechanical Engineering and a general option.

Students may obtain an MBA from the School of Business after completing the B.S. in Engineering Management by taking one additional year of coursework through a special program between Business and Engineering.

Engineering Management Program

Math/Science
MATH 39
Basic Science Elective
General Engineering
ENGR 15, 79/L, 120, 122
Engineering Management
EGMT 170, 174
Engineering Electives (6, according to option)
Business and Economics
ECON 53, 55 (included in General Education)
BUSI 31, 33, 104, 105, 107, 109

Engineering Physics

The Bachelor of Science in Engineering Physics is offered in cooperation with the Department of Physics in the College of the Pacific. The degree is granted by the School of Engineering, and the student has an academic adviser in both schools. Engineering Physics is well suited for the student with a strong interest in physics but with the desire to apply that knowledge to real world problems.

The Engineering Physics Program at the University of the Pacific shall:

1. Educate students in the fundamental subjects of mathematics, physics and engineering preparing them for a career in engineering or physics at a professional or graduate level of study.
2. Educate students in the use of modern engineering and physics techniques and tools for measurement, data acquisition, interpretation and analysis.
3. Provide and facilitate teamwork experiences in both engineering and physics problem-solving throughout the curriculum.
4. Provide students with significant hands-on laboratory and design experiences throughout the curriculum.
5. Develop the oral and written communication skills of the students to an effective level.
6. Expose students to many examples of fundamental physics applied towards practical problems, and facilitate development of the student's ability to solve practical problems using the fundamental principles of physics.
7. Expose students to environmental, ethical and contemporary issues, including the historical advancements made in the field of physics, the innovations they have led to and their societal impact.
8. Facilitate the transition to the engineering workplace by educating students in the basic tenets of professional behavior, including time management, ethical decision making, and principles of leadership.

Students will graduate from this 5-year program with 1 year of paid professional work experience in the field of engineering physics.

Engineering Physics Program

Math/Science
MATH 392
PHYS 101, 111, 161, physics electives (2)
Elective
Engineering
ECPE 41/L, 71/L, 121, 131/L, 195, 196
ENGR 45, 120
CIVL 130
Electives (2)
Computer Science
COMP 51

Minor in International Engineering

Our "global village" is becoming increasingly integrated and international communications are now almost instantaneous. Thus, the professional who can operate in a multinational setting is a step ahead. With this in mind, the School of Engineering offers an International Engineering Minor.

Students taking this minor must fulfill all of the requirements for a major in one of the engineering disciplines. They must also complete 15 units in internationally oriented courses, drawn from fields such as political science, economics and business. Students can minimize the extra time required to complete the minor by making sure some of this "international" work satisfies their General Education component.

To obtain the minor, students must also have proficiency in a foreign language at the second semester level, perform one of their Co-op assignments overseas, and maintain a minimum GPA of 2.5.

Engineering Management Minor

Industry and the engineering societies encourage engineering students to have management skills because the average engineering graduate will be in some aspect of management within three to five years of graduation.

The minor in Engineering Management is for students majoring in engineering who desire an understanding of management concepts and basic engineering management skills. An engineering major can obtain a minor in Engineering Management by completing 20 units in the Engineering Management area and fulfilling the following requirements:

1. BUSI 31 Principles of Financial Accounting
2. CIVL 170 Engineering Administration
3. EMGT 174 Engineering Project Management
4. One of the following:
   EMGT 193 Systems Engineering Management
   BUSI 104 Operations Management
5. One other management course from the following:
   BUSI 33 Principles of Managerial Accounting
   BUSI 100 Management Information Systems
   BUSI 105 Financial Management
   BUSI 107 Marketing Management

Students minoring in Engineering Management must fulfill all prerequisites for the required courses. Appropriate prerequisite courses may count toward the 20-unit

requirement. At least four of the courses in the 20-unit requirement must be taken at Pacific. All courses must be taken for a letter grade with a minimum 2.0 grade point average.

Five-Year MBA Program

High ability engineering students who want technical management positions in industry can obtain a Bachelor of Science in Engineering Management, a full year of paid cooperative education and an MBA in 5 years. The Five-Year MBA Program is year-round with Co-op during the summers before the sophomore, junior, and senior years. Graduates must complete eight specified core courses in the undergraduate business curriculum with a grade of B or better (BUSI 31, 33, 53, 100, 104, 105, 107, 109). Students who have taken these classes and fulfill the admissions requirements for the MBA will be eligible to waive the MBA introductory courses and enter into the advanced phase of this uniquely designed graduate program. This program is for students who are motivated to complete their academic education in a timely manner.

For more information about the Five-Year MBA contact: Dr. Abel Fernandez, Engineering Management Program Director at (209) 946-3061, or Dr. Newman Peery, MBA Program Director at (209) 946-2642.

Minor in Technology (For Non-Engineering Students Only)

Engineering and Technology are integral parts of many careers and fields of study. As "technology" has become so prevalent in our lives and careers, more and more companies are demanding that their employees have a working knowledge in such areas as design, graphics, communications, hardware and software advances, etc. Consequently, college students majoring in non-technical disciplines would be well advised to consider taking advantage of technology-related courses to bolster their skills, knowledge, and awareness in any of these areas. In order to provide a structure and formal recognition towards this end, the School of Engineering offers a Minor in Technology.

The Technology Minor provides an introduction to various aspects of engineering and technology which will strengthen a student's employment qualifications. The University offers a number of engineering and technology-related courses which are basic enough in their content that non-engineering students can enjoy enrollment without intimidation.

Phrases like "The Age of Technology" and "Information Era" reflect the demand for professionals with more knowledge about engineering and technology. The student who takes advantage of this structured approach to additional studies will likely enjoy much greater job and salary recognition upon college graduation.

Requirements

The requirements for the Technology Minor are as follows:

1. Student must not be majoring in engineering.
2. Student must complete a program, approved by the minor adviser, consisting of a minimum of 20 units from a minimum of five courses. A minimum of 12 units must be taken at the University of the Pacific.
3. At least one course must be a computing class, and at least three must be from the School of Engineering.
4. Courses that count toward a minor cannot be taken on a "pass/no credit" basis.
5. Students must maintain a minimum GPA of 2.0 in a minor program.

For more information and advising details, students can contact their faculty advisor or Dr. Gary Martin at (209) 946-3064 or gmartin@uop.edu.

Course Descriptions

Courses are numbered in accordance with the general University system.

Courses labeled "ENGR" are intended for all engineering students, while courses labeled "CIVL," "MECH" or "ECPE" are primarily intended for majors in the Civil (CE), Mechanical (ME) and Electrical and Computer (ECE) departments.

**California Articulation Numbers (CAN) are listed for community college transfers. A student may not enroll in a course unless all prerequisites are successfully completed with a grade of C- or better.*

Engineering

ENGR 5. Introduction to Engineering (2)
Introduction to the principles and practices of engineering. Engineers and engineering activities in a technological society. Measurement, analysis and presentation of engineering data. Strength of materials and their utilization in design. Demonstrations and laboratory exercises. *Prerequisite: MATH 41 (Fall).*

ENGR 10. Info-Highway: Past to Present (4)
A past, present and future examination of communication systems starting with smoke signals through the telegraph to the World Wide Web. In this course students learn to use the Internet, electronic mail and the Web to communicate with peers and collect information. Present communications systems such as cellular phones, fiber optic systems and the Internet are examined along with their potential impact on different areas of society including education, politics and business. Recommended for non-engineering majors. Course does not count toward an engineering degree. *Prerequisite: passing scores on the General Education quantitative skills examination or MATH 5.*

ENGR 11. Technology and Society (3)
An exploration into origins of the major technological developments and their impact on society, culture, and human environment. Technological developments of ancient, medieval, and modern times are considered with respect to such areas as power and energy, materials, machinery, agriculture, transportation, human health, and communication. Course does not count toward an engineering degree.

ENGR 15. Engineering Graphics (3)
Principles and applications of graphics in engineering design. Pictorial and isometric sketching and orthographic projection. Use of auxiliary views and sections. Drafting standards and conventions, dimensioning and tolerances. Layout and assembly drawings, detail drawings and production drawings. Introduction to design; use of standard fasteners, bearings, seals and preferred sizes. Laboratory exercises using conventional methods and computer aided drafting systems. *Prerequisite: ENGR 5 or permission of the instructor (Fall). CAN ENGR 2.**

ENGR 20. Engineering Mechanics I (Statics) (3)
The fundamental principles of static equilibrium resulting from the application of forces on particles and bodies. *Prerequisites: MATH 53, PHYS 53 (Fall and Spring). CAN ENGR 8.**

ENGR 25. Professional Practice Seminar (1)
This course is designed to prepare students for the Cooperative Education experience. Presentations from representatives of industry, government, education and former Co-op students. Also covers topics in engineering ethics, professionalism, time management. Mock interviewing. *Prerequisite: permission of the instructor required (Spring, Fall).*

ENGR 45. Materials Science - Properties and Measurements (4)
The dependency of physical, chemical and mechanical properties on microscopic and macroscopic structure of materials. Laboratory experiments on properties of materials such as metals, polymers, composites and ceramics. *Prerequisites: CHEM 25, MATH 53 (Spring). CAN ENGR 4.**

ENGR 79. Electrical Science (3)
Introduction to basic electrical concepts, DC and AC circuit analysis, frequency response, single-phase and three-phase AC power, transformers, motors, generators, instrumentation, feedback control systems, communications systems, digital systems. NOT for Electrical Engineering, Computer Engineering, Engineering Physics, or electrical option in Engineering Management. *Prerequisite: computer literacy. Corequisites: PHYS 55, MATH 55, ENGR 79L (Fall, Spring). CAN ENGR 6.**

ENGR 79L. Engineering Science Lab (1)
Laboratory to accompany ENGR 79. Measurements and analysis of DC and AC circuits, power systems and devices and electrical systems and devices. In support of concepts in ENGR 79. NOT for Electrical Engineering, Computer Engineering, Engineering Physics, or electrical option in Engineering Management. *Prerequisite: computer literacy. Corequisites: PHYS 55, MATH 55, ENGR 79. CAN ENGR 6.**

ENGR 120. Engineering Mechanics II (Dynamics) (3)
The fundamental principles of particles and bodies in motion under the action of external forces. *Prerequisite: ENGR 20 (Fall and Spring).*

ENGR 121. Mechanics of Materials (4)
Concepts of stress, strain and deformation, analysis and design of simple elements of structures and machines. Introduction to failure theory and energy methods. *Prerequisites: CIVL 19 or MECH 19, ENGR 20. Corequisite: MATH 57. Permission of the instructor for Electrical Engineering students (Fall, Spring).*

ENGR 122. Thermodynamics I (3)
The first and second laws of thermodynamics for open and closed systems. Properties of gases and liquids and ideal gases. Introduction to cycles for power and refrigeration. *Prerequisites: CHEM 25, PHYS 53 (Fall, Spring).*

ENGR 190. Mentor III (2)
The School of Engineering (SOE) uses a specially designed capstone course that fulfills the Pacific requirements for Mentor III. The SOE Mentor III course is designed to meet the requirements stated for the Pacific course while also meeting the requirements of the ABET accreditation guidelines (Spring).

Civil Engineering

CIVL 19. Civil Engineering Computing (3)
An introduction to the use of the computers to solve problems related to the practice of civil engineering. Emphasis will be on the development of problem solving algorithms suitable for use on personal computers. Students will learn to use common analysis packages including spreadsheets and symbolic manipulators. Simulation programs will be explored and students will learn simple programming skills in a high level language. *Prerequisites: MATH 51 (may be taken concurrently), ENGR 5.*

CIVL 22. Surveying (3)
An introduction to plane and topographic surveying including laboratory work. Additional coverage includes the principles of geometric design, GPS and the use of the computer. *Prerequisite: trigonometry (Spring). CAN ENGR 10*.*

CIVL 60. Aquatic Chemistry for Environmental Engineers (4)
Chemical reactions and processes in aquatic systems with engineering applications. Chemical equilibrium and reaction kinetics. Introduction of organic chemistry concepts and biochemical processes relevant to environmental engineering. Laboratory included. *Prerequisites: CHEM 25, MATH 51.*

CIVL 100. Introduction to Structural Engineering (4)
An exploration of the fundamentals of structural analysis. Topics include: determination of loads, analysis of beams, trusses and frames, influence lines and indeterminate structures. *Prerequisites: CIVL 19, ENGR 121 (Summer).*

CIVL 130. Fluid Mechanics I (4)
The physical properties of fluids, statics and dynamics of incompressible fluids including hydrostatics, conservation of mass, energy and momentum principles; laminar and turbulent flow with emphasis on pipe flow. Laboratory included. *Prerequisite: ENGR 120 (Fall).*

CIVL 132. Introduction to Environmental Engineering (4)
Natural processes affecting water quality, water and wastewater treatment. Occurrence and prevention of air pollution. Solid and hazardous waste management. Groundwater contaminant transport and remediation. *Prerequisite: CHEM 25 (Fall).*

CIVL 133. Water Resources Engineering (4)
Hydraulic analysis and design including pipe flow and open channel flow. Elements of the hydrological cycle. Deterministic and probabilistic analysis of rainfall-runoff data for estimation and design. Application of computers in hydrologic and hydraulic design. *Prerequisite: CIVL 130. (Spring)*

CIVL 134. Groundwater (4)
The occurrence of various types of groundwater and associated natural contaminants. The principles involved in the transport of groundwater and contaminants (natural and manufactured). Application of computer modeling to the above phenomena with case studies and solution of practical problems. *Prerequisites: CHEM 25, MATH 57, CIVL 130.*

CIVL 136. Design of Water and Wastewater Facilities (4)
Advanced coverage of the physical, chemical, and biological processes involved in the design of water and wastewater treatment plant facilities. Includes applicable design standards and regulations. *Prerequisites: CIVL 130, 132.*

CIVL 140. Introduction to Geotechnical Engineering (4)
Provides a basic knowledge of the characteristics of soils and their behavior as an engineering material. Engineering behavior covered includes consolidation, stress distribution and shear strength. Design applications include settlement predictions, shallow and deep foundations. Includes laboratory work. *Prerequisite: ENGR 121 or GEOS 114 (Fall).*

CIVL 141. Foundation Design (4)
Advanced topics in foundation design. Course covers the analysis and design of soil exploration programs, retaining walls, sheet piles, anchored bulkheads, slope stability, cofferdams and trench bracing. Computer methods are applied to the design process. *Prerequisites: CIVL 140 and permission of the instructor*

CIVL 142. Slopes and Retaining Structures (3)
A practical hands-on design course to provide the basic concepts of rock and soil slope stability analysis and design. The design and analysis of retaining structures, including

concrete, steel, and reinforced earth walls is also included. In addition, a review of the Uniform Building Code (UBC) and California Code of Regulations (Cal-OSHA) regulations is conducted. An emphasis is placed on both hand solutions and computer solutions using current, industry-standard software. *Prerequisite: CIVL 140*

CIVL 145. Engineering Geology (4)
An introduction to the study of applied geology in which geologic principles, data and techniques are applied to civil engineering problems. *Prerequisite: GEOS 51, or CIVL 140.*

CIVL 150. Transportation Engineering (4)
Considerations and procedures in the planning and design of various transportation systems with primary emphasis on highways. Includes laboratory for field trips. *Prerequisites: ENGR 121, CIVL 22, CIVL 140.*

CIVL 160. Structural Analysis (3)
Modeling and analysis of determinate and indeterminate beams, arches, trusses and frames. Computation of deflections using geometrical and energy methods. Development of influence lines. Introduction to computer-assisted methods of analysis. *Prerequisite: CIVL 100, (Fall).*

CIVL 161. Matrix Analysis of Engineering Systems (4)
Analysis of structures and machines by matrix methods. Both classical methods and finite element methods are covered. Computer-aided analysis of structural mechanics problems is emphasized but problems in areas such as heat transfer and fluid flow are discussed. *Prerequisites: CIVL 100 or MECH 120, recommended MATH 110.*

CIVL 165. Structural Steel Design (4)
Design of steel structural members, including plastic design and connections to satisfy design code requirements. Studies include economy of materials and labor. *Prerequisite: CIVL 100.*

CIVL 166. Reinforced Concrete Design (4)
Design and proportioning of structural systems to satisfy design criteria for reinforced concrete and pre-stressed design in concrete. *Prerequisite: CIVL 100.*

CIVL 167. Small Building Design (4)
The design and analysis of wood structures due to gravity, lateral and combined loadings. Both member and connection details are considered. The design procedures, materials properties and allowable stress computations are based on UBC, NDS and other governing agencies. *Prerequisite: CIVL 100.*

CIVL 170. Engineering Administration (4)
Decision-making based upon engineering economy studies. Also emphasized are contracts, engineering specifications, professional ethics and the role of the engineer in the contracting process. *Prerequisite: upper-division standing in Engineering (Summer, Fall).*

CIVL 171. Water and Environmental Policy (3)
An introduction to Federal and State of California environmental regulations pertaining to air, water, hazardous wastes, and toxic substances. Includes an overview of water rights. Relevant case studies and monitoring and enforcement issues. Economic evaluations and impacts. *Prerequisite: none.*

CIVL 180. Engineering Synthesis (4)
A culminating experience wherein a group of students synthesize their previous classwork into one project. Both technical and non-technical concerns are addressed. One or more faculty members and/or professional engineers are involved depending upon the fields covered in the project. *Prerequisite: senior standing (Spring).*

CIVL 181-185. Professional Practice (1-18)
Cooperative employment in a professional engineering environment. Students may register for a variable number of credits depending upon the length of the work period. Requires satisfactory completion of the work assignment and a written report. Pass/Fail basis.

CIVL 191. Independent Study (1-4)
Special individual projects are undertaken under the direction of one or more faculty members knowledgeable in the particular field of study. *Permission must be received by the department chairperson and the faculty members involved.*

CIVL 193. Special Topics (1-4)
Upper-division elective subject area based on expertise of faculty member. *Prerequisite: approval of the instructor.*

CIVL 197. Undergraduate Research (1-4)
Applied or basic research in civil engineering under faculty supervision. *Approval by both the faculty supervisor and department chair is required. Student must be in good academic standing.*

Electrical Engineering/ Computer Engineering

ECPE 5. Introduction to Electrical and Computer Engineering (1)
Introduction to the various sub-disciplines of Electrical and Computer Engineering. Introduction to the tools, both hardware and software, that are used in Electrical and Computer Engineering. *Prerequisite: ENGR 5 (Spring).*

ECPE 41. Electric Circuits (3)
Concepts of voltage, current, power, energy, impedance, admittance, DC, AC, average and effective values. Network equations, laws and theorems. Steady-state solutions using phasors. *Prerequisite: computer literacy. Corequisites: PHYS 55, MATH 55, ECPE 41L (Fall, Spring, Summer). CAN ENGR 6.**

ECPE 41L. Electric Circuits Laboratory (1)
Basic electrical measurements laboratory of concepts discussed in ECPE 41. Must be taken concurrently with ECPE 41. *Prerequisite: computer literacy. Corequisites: PHYS 55, MATH 55, ECPE 41 (Fall, Spring, Summer). CAN ENGR 6.**

ECPE 71. Digital Design (3)
Number systems, binary arithmetic, Boolean logic. Analysis and synthesis of combinational and sequential circuits. Use of MSI, LSI, FPGA and micro-controller devices. *Prerequisites: completion of the basic math skills requirement, computer literacy. Corequisite: ECPE 71L (Fall, Spring).*

ECPE 71L. Digital Design Lab (1)
Laboratory treatment of the concepts discussed in ECPE 71. Must be taken concurrently with ECPE 71. *Corequisite: ECPE 71 (Fall, Spring).*

ECPE 121. Systems Analysis (4)
Analysis of continuous and discrete time systems in the time and frequency domains. Fourier, Laplace, and z-transforms, convolution. Difference equations. Zero-input and zero-state components. *Prerequisites: ECPE 41, MATH 57 (Fall, Spring).*

ECPE 125. Introduction to Digital Signal Processing (4)
Sampling and quantization, DFT and FFT, z-transform, discrete time systems, digital signal processing hardware and software, A/D and D/A converters, anti-aliasing filters, FIR and IIR digital filters, digital data communications, image processing, speech coding/decoding. Includes laboratory. *Prerequisites: ECPE 71, 71L, 121, 131/131L, COMP 51 (Fall).*

ECPE 127. Random Signals (3)
An introduction to probability and statistics in engineering applications. Random signals in the time and frequency domains. Linear systems with random inputs. Noise sources and modeling of noisy networks. *Prerequisites: ECPE 121, computer literacy (Spring).*

ECPE 131. Introduction to Integrated Circuits (3)
Solid-state behavior of the diode, mosfet, and bipolar transistor with particular emphasis on the mosfet in digital circuit applications. IC processing, device modeling, and circuit simulation. *Prerequisites: ECPE 41, 41L, CHEM 25, COMP 51, MATH 55, PHYS 55. Corequisite: ECPE 131L (Fall, Spring).*

ECPE 131L. Introduction to Integrated Circuits Lab (1)
Use of current software tools to model electronic devices, simulate circuit behavior, and layout integrated circuits. Use of electronic test equipment to verify operation of electronic devices. *Prerequisites: ECPE 41, 41L. Corequisite: ECPE 131 (Fall, Spring).*

ECPE 132. Analog Circuits Design (4)
Analysis, design and applications of analog integrated circuits. Includes laboratory. *Prerequisites: ECPE 131, 131L (Fall).*

ECPE 135. Power Electronics (4)
Study of high voltage, high current switching in power systems. Thyristors and other power devices; bridge and polyphase rectifiers. Phase controlled converters. High frequency switching DC/DC converters. Variable frequency DC/AC converters. Cycloconverters. Computer Modeling of circuits. Laboratory. *Prerequisites: ECPE 131, 131L (Spring, even years).*

ECPE 136. VLSI Design (4)
Issues in VLSI design including: logic families, sizing, timing models, fabrication, layout, high speed and low power design trade-offs, circuit simulation and device modeling. *Prerequisites: ECPE 71, 71L, 131, 131L (Spring, odd years).*

ECPE 141. Advanced Circuits (4)
Continuation of ECPE 41. Power in AC circuits. Three phase power systems. Frequency response. Operational amplifier circuits and applications. Filter design. *Prerequisites: ECPE 41, 41L. Corequisite: ECPE 121 (Fall).*

ECPE 144. Applied Electromagnetics (4)
The purpose of this course is for students to gain an understanding of transmission lines and field theory as it applies to communication circuits and systems. Electromagnetic wave propagation, reflection, and transmission through common materials will be examined. *Prerequisites: PHYS 55, MATH 57, ECPE 41 (or permission of instructor) (Spring).*

ECPE 151. Artificial Intelligence (3)
Basic concepts, techniques and tools used in Artificial Intelligence. Knowledge representation, search techniques, and problem solving strategies. Introduction to AI programming languages. *Prerequisite: COMP 51 or equivalent and sophomore standing (Spring, odd years).*

ECPE 153. Computer Graphics (3)
An introduction to the hardware and software of interactive computer graphics. The creation of graphics-based C++ programs with accompanying mathematics and data structures. Graphical user interfaces (GUIs) and engineering applications. Definition of appropriate graphics-based hardware systems. *Prerequisite: COMP 53 or permission of the instructor (Spring, even years).*

ECPE 155. Autonomous Robotics (4)
Overview of design and programming of autonomous robotics. Study of architectures for robot organization and control. Configurations of fixed and mobile robots. Sensors and actuators. Design of algorithms and data representations for robotics. Hands-on experiments with mobile robots. *Prerequisites: COMP 53, ECPE 71 or permission of instructor (Spring, even years).*

ECPE 161. Automatic Control Systems (4)
Component and system transfer functions. Open and closed loop response; stability criteria; applications to engineering systems. Includes laboratory. *Prerequisites: ECPE 121, 141 (Spring, odd years).*

ECPE 162. Communication Systems (4)
Elements of communication systems. Filtering and signal to noise ratios. Baseband communication systems. Quantizing and digital modulation including error rates. Analog modulation including noise performance. Frequency and time division multiplexing. Includes laboratory. *Prerequisite: ECPE 121. Corequisite: ECPE 127 (Spring, even years).*

ECPE 163. Energy Conversion (4)
A study of electromechanical energy conversion. Magnetic circuits, transformers, basic rotating machines, D.C. machines, polyphase A.C. machines, fractional-horsepower A.C. motors. Includes laboratory. *Prerequisite: ECPE 121 (Spring, odd years).*

ECPE 165. Power Systems (4)
Study of electrical power generation and transmission. Three phase balanced and unbalanced networks. Power transformers and generators. Transmission lines. Power flow analysis. System stability. Fault analysis and system protection. Computer modeling of power systems. Laboratory. *Prerequisite: ECPE 121 (Spring, even years).*

ECPE 172. Microcontrollers (4)
Design and implementation of digital monitoring and control systems using microcontrollers. Hardware and software development. Interfacing input and output devices. Assembly and C programming. Representative applications. Includes laboratory. *Prerequisites: COMP 51, ECPE 41, 41L or ENGR 79, ECPE 71, 71L (Fall).*

ECPE 173. Computer Organization (4)
Organization and operation of von Neumann computer architecture. Design of control, register, arithmetic-logic, memory and input/output units. Computer arithmetic. Assembly language and register transfer language. Implementation of central processing unit components. *Prerequisites: ECPE 71, 71L, COMP 51 (Fall, Spring).*

ECPE 174. Advanced Digital Design (4)
Analysis, design and implementation of synchronous state machines using modern programmable logic devices. CAD-based development using schematic capture and hardware description languages (HDLs). System simulation. Representative applications. Includes laboratory. *Prerequisites: COMP 51, ECPE 71, 71L (Spring).*

ECPE 175. Embedded and Real-Time Systems (4)
Design of computer systems for embedded and real-time applications. Interfacing to peripheral devices. Scheduling and multitasking. Network and communication interfaces such as CeBUS, FireWire, and USB. Survey of industry microcontrollers. Includes laboratory. *Prerequisite: ECPE 173 (Spring).*

ECPE 176. Computer Architecture (3)
Study of computer systems with an emphasis on contemporary designs. Pipelining, cache and memory design, input/output. Single and multiple processor systems. *Prerequisite: ECPE 173 (Spring).*

ECPE 177. Computer Networking (3)
The study of computer communications and

networking. The history of computer communications. The American telephone system. Circuit-switched and packet-switched networks. Common network topologies and communication protocols. Wide area networks (WANS) and local area networks (LANs). The Internet. Current and developing technologies. *Prerequisites: ECPE 71 and senior standing (Fall).*

ECPE 181-185. Professional Practice (1-18)
Cooperative employment in a professional engineering environment. Students may register for a variable number of credits depending upon the length of the work period. *Requires satisfactory completion of the work assignment and a written report. Pass/Fail basis.*

ECPE 191. Independent Study (1-4)
Special individual projects are undertaken under the direction of one or more faculty members knowledgeable in the particular field of study. *Permission must be received from the department chairperson and the faculty members involved.*

ECPE 193. Special Topics (1-4)
Special courses will be organized and offered from time to time to meet the needs or interests of a group of students.

ECPE 195. Senior Project I (2)
Students apply basic sciences, mathematics and engineering topics to meet a stated objective; students will establish design objectives and criteria, analyze solution alternatives, synthesize a problem, implement the solution, then evaluate design performance. Design documentation and demonstration are required. Includes both written and oral reports and presentations. *Prerequisites: ECPE 71, 71L, 121, 131, 131L, COMP 51, and senior standing (Fall, Spring).*

ECPE 196. Senior Project II (2)
Continuation of ECPE 195. Project is completed and tested against specifications. Periodic project reviews. Final written and oral reports and project demonstration. *Prerequisite: ECPE 195 (Fall, Spring, Summer).*

ECPE 197. Undergraduate Research (1-4)
Applied or basic research in electrical and/or computer engineering under faculty supervision. *Approval by the faculty supervisor and department chair is required. Student must be in good academic standing.*

Mechanical Engineering

MECH 19. Computer Applications in Mechanical Engineering (3)
Identification and solution of engineering problems using computers and numerical methods. Computation methods such as finite differences and finite element. Design and development of software. Computer programming concepts. *Corequisite: MATH 55 (Spring).*

MECH 100. Manufacturing Processes (4)
A study of traditional manufacturing processes such as formatting, cutting, joining, casting, and heat treating as well as advanced processing methods. Manufacturing with polymers, composites, and ceramics in addition to metals. Tribology, nondestructive evaluation, and quality control. Laboratory projects on manufacturing skills, reverse engineering, automated machines, geometric dimensioning and tolerancing, and statistical process control. *Prerequisite: ENGR 45 or permission of the instructor (Fall).*

MECH 102. Materials in Engineering Design (3)
Evaluating and selecting materials for engineering design applications. Study of the interaction between design criteria, materials selection, economics and manufacturing methods. Generation of material design criteria and performance data using laboratory exercises. Design methodologies using nontraditional and traditional materials including metals, polymers, composites, and ceramics. *Prerequisites: ENGR 45 or permission of the instructor, ENGR 121 (Fall).*

MECH 104. Robotics and Manufacturing (3)
An introduction to the fundamentals of industrial robotics and its applications in manufacturing. Spatial descriptions and connections, actuator space and Cartesian space. Forward and inverse Kinematics, Manipulator Jacobian. Trajectory generation. Practical experience with robots in laboratory sessions. *Prerequisites: ENGR 79, ENGR 120, MECH 110 or permission of the instructor.*

MECH 110. Instrumentation and Experimental Methods (4)
Experimental techniques in the measurement of quantities such as strain, force, temperature, pressure, flow, motion and noise. Statistical analysis and errors in measurement; data analysis and transmission. Use of instruments in the laboratory; a measurement project. *Prerequisite: MATH 57 (Fall).*

MECH 120. Machine Design (3)
Application of the principles of engineering mechanics to the design of machine components such as cams, springs, gears and links with emphasis on strength, wear and fatigue. Dynamic loads, stresses and theories of failure. Use of bearings and lubrication. *Prerequisites: ENGR 120, 121 (Fall).*

MECH 123. Kinematics and Dynamics of Machinery (3)
Design, analysis and simulation of complex mechanisms with emphasis on high speed and precision applications. Kinematics and dynamics of planar and three dimensional mechanisms; gyroscopic forces in machines and balancing; applications to robotics. *Prerequisites: ENGR 120, 121.*

MECH 129. Vibrations (3)
Modeling of physical systems with lumped and distributed parameters. Free and forced vibrations of machines and structures. Excitation and response of single degree of freedom systems. Introduction to multiple degree of freedom systems, finite element formulations and mode superposition techniques. *Prerequisites: MATH 57 or permission of the instructor, ENGR 120 (Fall).*

MECH 140. Engineering Design/Senior Project I (3)
Methods of initiating, planning, conceptualizing, and configuring engineering designs are discussed. The student will use these methods to develop an engineering design for a product or process involving mechanical engineering. Product realization methods, project management, materials selection, manufacturing for designers, guided iteration, communication skills, economics, ethics, liability, and safety issues are put into practice through class activities. *Prerequisite: MECH 120 or MECH 150 (Fall).*

MECH 141. Engineering Design/Senior Project II (3)
The student will complete the design phase of their project. Parametric design techniques such as guided iteration, optimization, and Taguchi's methods will be used to complete the detailed design of a product or process involving mechanical engineering. Manufacturing necessary to complete the product or process is a requirement. Weekly oral and written progress reports are required along with final comprehensive oral and written reports. *Prerequisites: MECH 100, 140 (Spring).*

MECH 150. Heat Transfer (3)
Heat transfer by conduction in one, two and three dimensions in transient and steady state. Heat transfer in extended surfaces. Solutions by numerical methods. Convection in external and internal flow; free convection, radiation. *Prerequisites: CIVL 130 or permission of the instructor, ENGR 122 (Spring).*

MECH 151. Applied Heat Transfer (3)
Applications and extensions of the topics in MECH 150. Multimode heat transfer; heat exchangers. Heat transfer with phase change. *Prerequisite: MECH 150.*

MECH 155. Solar Energy Engineering (3)
Introduction to solar energy, sun-earth geometry, radiation measurement, insolation on surfaces, principles of solar collectors, applications such as space heating and solar ovens, photovoltaics, laboratory experiments. *Prerequisites: MECH 150 or permission of the instructor, ENGR 122.*

MECH 157. Thermodynamics II (3)
Continuation of topics in Thermodynamics I. Availability, chemical reactions, combustion, and fuels. Processes involving air and water mixtures relating to heating, cooling and ventilating for human comfort. Introduction to the thermodynamics of the flow of ideal gases. *Prerequisite: ENGR 122 (Fall).*

MECH 158. Air Conditioning (3)
Introduction to air conditioning purpose, terminology and typical systems. Study of analysis and design of air conditioning as applied to residential and small commercial buildings. Use codes and standards applicable to this field. *Prerequisites: ENGR 122 and permission of the instructor.*

MECH 160. Fluid Dynamics (3)
Equations of continuity, energy, and momentum as applied to fluid flow. One dimensional compressible flow. Introduction to more advanced topics, such as turbomachinery, viscous flow and potential flow. *Prerequisites: CIVL 130, ENGR 122.*

MECH 175. Systems Analysis and Control (3)
Dynamic analysis and control of systems composed of mechanical, electrical, hydraulic and thermal components. Use of system modeling and simulation techniques to predict transient and steady state response; lumped parameter approximations and linearization. Use of feedback to enhance system performance and stability. Design of linear control systems in the time and frequency domains. *Prerequisites: ENGR 79, MECH 110 or permission of the instructor, MECH 129 (Spring).*

MECH 178. Finite Element Methods (3)
Introduction to the finite element method for engineering problems. Matrix formulation of finite element models for problems in solid mechanics, heat transfer and fluid flow. Solution of finite element equilibrium equations. Development of computer algorithms and applications using commercial finite element computer programs. Some familiarity with matrix methods is desirable. *Prerequisite: ENGR 121 (Spring).*

MECH 181-185. Professional Practice (1-18)
Cooperative employment in a professional engineering environment. Students may register for a variable number of credits depending upon the length of the work period. Requires satisfactory completion of the work assignment and a written report. Pass/Fail basis.

MECH 191. Independent Study (1-4)
Special individual projects are undertaken under the direction of one or more faculty members knowledgeable in the particular field of study. *Permission must be received by the department chairperson and the faculty members involved.*

MECH 193. Special Topics (1-4)
Special courses will be organized and offered from time to time to meet the needs or interests of a group of students.

MECH 195. Seminar (1-4)
Presentation of special topics of current interest by and for staff, students and guests (Fall, Spring).

MECH 197. Undergraduate Research (2-4)
Applied or basic research in mechanical engineering under faculty supervision. Projects may be experimental, mathematical or computational in nature. *Approval by the faculty supervisor and department chairperson is required. Student must be in good academic standing.*

Engineering Management

EMGT 170. Engineering Administration (4)
Decision-making based upon engineering economy studies. Also emphasized are contracts, engineering specifications, professional ethics and the role of the engineering in the contracting process.

EMGT 172. Engineering Economy (3)
Decision-making based upon engineering economy studies. This course covers techniques for economic evaluation of alternatives including time, value of money, risk costs, effects of taxation, monetary inflation, compound interest calculations, minimum attractive rate of return, capital budgeting, break-even analysis, sensitivity analysis and risk analysis.

EMGT 174. Engineering Project Management (3)
Fundamentals of project management used in estimating, planning, coordinating and controlling engineering projects. Included are fundamentals of specifications and contracts, and the scheduling of projects. *Prerequisite: EMGT 170 or permission of the instructor.*

EMGT 195. Engineering Management Synthesis (4)
The capstone course for Engineering Management majors. Emphasis on integration and application of management concepts, including project proposal and design, with periodic reviews and written and oral reports.

School of Engineering Faculty

Ravi K. Jain, 2000, Dean and Professor, B.S., California State University, Sacramento, 1961; M.S., 1968; Ph.D., Texas Tech University, 1971; MPA, Management and Public Policy, Harvard University, 1980.

Abel A. Fernandez, 2000, Associate Professor and Director of Engineering Management, B.S., Electric Power Engineering, Rensselaer Polytechnic Institute, 1974; M.E., Electric Power Engineering, 1976; M.B.A., 1976; Ph.D., Industrial Engineering, University of Central Florida, 1995. Registered Professional Engineer. Project Management, systems engineering, resource management, risk analysis and management, modeling and simulation, optimization.

Gary R. Martin, 1983, Assistant Dean of Administration and Professor of Cooperative Education, B.A., University of California, Davis, 1981; M.S., California State University, Hayward, 1982; Ed.D., University of the Pacific, 1987. Educational counseling and psychology, Pupil Personnel Services Credential.

Civil Engineering Department

David Q. Fletcher, 1973, Head and Professor of Civil Engineering, B.S., University of California, Davis, 1967; M.S., 1970; Ph.D., 1973. Registered Professional Engineer; Continuum mechanics, structures, soil mechanics.

Gary M. Litton, 1993, Associate Professor of Civil Engineering, B.S., University of California, Irvine, 1980; M.S., 1990; Ph.D., 1993. Registered Professional Engineer; Environmental engineering, water quality, engineering mechanics.

Camilla M. Saviz, 1999, Assistant Professor of Civil Engineering, B.S.M.E., Clarkson University, 1987; M.S.M.E., 1989; M.B.A., New York Institute of Technology, 1991; Ph.D., Civil and Environmental Engineering, University of California, Davis, 1999. Environmental Engineering, water resources, hydrodynamic and water quality modeling, fluid mechanics.

Electrical and Computer Engineering Department

Richard H. Turpin, 1984, Head of Electrical and Computer Engineering, Professor of Electrical Engineering and Computer Engineering, B.S.E.E., Iowa State University, 1962; B.S., Mathematics, 1962; M.S.E.E., University of Southern California, 1964; Ph.D., Ohio State University, 1969. Digital systems, microcomputers, embedded systems design, digital signal processing.

David F. Besch, 1985, Assistant Professor of Electrical Engineering, B.S.E.E., University of Illinois, 1961; M.S.Met., Engineering, Lehigh University, 1965; M.B.A., (Executive Program) University of Chicago, 1971. Registered Professional Engineer. Power system analysis and design, microelectronic design, failure analysis and prevention.

Kenneth F. Hughes, 1993, Associate Professor of Computer Engineering, B.S., Information and Computer Science, Georgia Institute of Technology, 1985; M.S., Computer Science, University of South Florida, 1989; Ph.D., Computer Science and Engineering, University of South Florida, 1994. Robotics, sensors and sensor fusion, computer vision, artificial intelligence, embedded systems, microprocessors and microcontrollers, digital systems.

Julie A. Kenrow, 1999, Assistant Professor of Electrical and Computer Engineering, B.S., Physics, University of California, Davis, 1986; M.S.E.E., 1989; Ph.D., Electrical Engineering, University of California Berkeley, 1994. Electron-phonon scattering, semiconductor devices, electronic circuits, computational electronics, quantum electronics, electromagnetics, visualization.

W. Joseph King, 1983, Professor of Electrical Engineering and Computer Engineering, B.S.E.E./C.S., University of California, Davis, 1977; M.S.E.E./C.S., 1978. Registered Professional Engineer; Computer languages, digital design, microprocessors, neural networks, computer graphics.

Jesse Kolman, 2000, Assistant Professor of Electrical Engineering and Computer Engineering, B.S.E.E., 1992, M.S.E.E, 1993, Ph.D., 1996, Purdue University, signal processing, optimization algorithms, image reconstruction and restoration, synthetic aperture radar, tomography.

Jennifer T. Ross, 1993, Associate Professor of Electrical Engineering, B.S.E.E., University of Illinois, 1988; M.S.E.E., University of California, Berkeley, 1990; Ph.D., 1993. Solid state electronics, optoelectronic and quantum devices, electricity and magnetism, quantum mechanics, optics.

George W. Schroeder, 1981, Professor of Electrical Engineering, B.S.E.E., St. Louis University, 1964; M.S.E.E., 1968; Ph.D., University of Missouri, Columbia, 1971. Linear systems, stochastic processes, communication theory, optical communication.

Louise Stark, 1992, Associate Professor of Computer Engineering, B.S.CpE, University of South Florida, 1986; M.S.CpE, 1987; Ph.D., Computer Science and Engineering, 1990. Computer vision, artificial intelligence, digital design, computer graphics, virtual reality.

Mechanical Engineering Department

Brian L. Weick, 1995, Chair and Associate Professor of Mechanical Engineering, B.S.M.E., Union College, 1986; M.S.M.E., Virginia Polytechnic Institute and State University, 1990; Ph.D., Materials Engineering Science, 1993. Manufacturing Processes, Materials Science, Design, Tribology and Viscoelasticity.

Ashland O. Brown, 1991, Professor of Mechanical Engineering, B.S.M.E., Purdue University, 1966; M.S.M.E., University of Connecticut, 1968; Ph.D., 1974. Licensed Professional Engineer; fluid mechanics, thermal sciences and finite element analysis.

Chi-Wook Lee, 1998, Assistant Professor of Mechanical Engineering, B.S.M.E., Hanyang University (Korea), 1981; M.S.M.E., University of Wisconsin-Madison, 1984; Ph.D., Mechanical Engineering, University of Florida, 1991. Mechatronics, systems dynamics, and bio-mechanics.

Edwin R. Pejack, 1982, Professor of Mechanical Engineering, B.S.M.E., Rensselaer Polytechnic Institute, 1961; M.S.M.E., 1962; Ph.D., The Ohio State University.

Office of Cooperative Education and Special Programs

Gary R. Martin, 1983, Assistant Dean of Administration and Professor of Cooperative Education, B.A., University of California, Davis, 1981; M.S., California State University, Hayward, 1982; Ed.D., University of the Pacific, 1987. Educational counseling and psychology, Pupil Personnel Services Credential.

Tod C. Bannister, 2000, Assistant Professor and Coordinator of Cooperative Education, B.A., California State University, Sacramento. Social Science (Government).

MESA

Maria Garcia-Sheets, 1995, Director of MESA (Mathematics, Engineering and Science Achievement) Schools Program and the MESA Engineering Program, B.A., University of California, Davis, 1991; M.A., Communication, University of the Pacific, 1999.

Elva Martinez, 1999, Academic Counselor of MESA (Mathematics, Engineering and Science Achievement) Schools Program, B.A., University of the Pacific, 1999.

school of international studies

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Contents
Global Economic Relations
International Environmental Policy
International and Regional Studies
International Relations
Self-Designed Program

An undergraduate professional school devoted to the study of global affairs, offering students a choice of majors, in conjunction with study abroad in one or more of 200 locations in over 70 countries.

The five majors in the School of International Studies, International and Regional Studies, International Relations, Global Economic Relations, International Environmental Policy and the self-designed major, are designed to prepare students for careers in business, law, government, journalism and other professions in the most globally integrated society in human history.

This newest school at University of the Pacific offers a unique and challenging program of study. The faculty brings to it a wide range of knowledge and experience from all regions of the world and in many different academic disciplines including politics, economics, history, business, anthropology and sociology.

The School stresses close faculty-student contact, student participation in School governance and a supportive community atmosphere. The international dimensions of experience are brought to the student by coursework and study abroad as well as the School's lecture series, internships and student participation in world affairs conferences.

For a student planning a career in diplomacy, international management, cross-cultural understanding, research or policy analysis and advocacy, the School of International Studies will provide a small and supportive community of students and scholars dedicated to understanding and helping to shape the world of the 21st century.

General Education Requirements

Each student is expected to take courses to fulfill the University's nine-course General Education requirement. Many of the courses in the core program and in the majors fulfill General Education requirements. Graduation from the School of International Studies requires the completion of 128 units of academic work

Core Requirements

All majors have a common core of requirements:

- ANTH 53-Cultural Anthropology
- ECON 53-Introductory Microeconomics
- INTL 10-Dean's Seminar (required for entering freshmen only).
- INTL 77-Contemporary World Issues — a basic introduction to current global issues and problems in the context of world history in the 20th century.
- Competence in a modern foreign language equivalent to four semesters of college work.
- INTL 81-Perspectives on World History
- INTL 101-International Research Methods
- INTL 151-Cross-cultural Training I prior to going abroad.
- At least one semester of study abroad. The semester abroad must be in a program approved by the adviser as appropriate to the major.
- INTL 161-Cross-cultural Training II on return from abroad.
- INTL 195-International Studies Senior Seminar
- POLS 11-Introduction to Political Science
- One course on a region or nation other than the U.S.

An internship appropriate to the major may substitute for a major course requirement. This core program will provide a solid base from which to branch out and specialize. Also, a core program ensures that from the very first semester a student will be in close contact with the other students and the faculty in the School.

Majors in International Studies

International and Regional Studies

The International and Regional Studies major is broadly conceived allowing the student considerable flexibility to specialize in a particular nation or world area. All students work closely with faculty advisers to craft individualized programs. In addition to the core, the requirements are:

– Two approved courses on particular nations,

– One approved course on a particular cultural region,

– One approved course on the interactions between cultural regions, and

– One approved course comparing regions.

International Relations

The International Relations major emphasizes the study of international politics and economics and the relationship between the two. In addition to the core, the requirements are:

ECON 55 Introductory Macroeconomics
POLS 51 International Politics
ECON 71* Global Economic Issues
one course in comparative politics, one additional course in foreign policy and two in international politics, all four of which are to be selected in consultation with the student's adviser.

** ECON 121-International Trade and ECON 123-International Finance together may be substituted for ECON 71.*

Global Economic Relations

The major in Global Economic Relations emphasizes the study of international economic relations, business, and finance. In addition to the core, the requirements are:

ECON 55 Introductory Macroeconomics
ECON 121 International Trade or
ECON 71 Global Economic Issues
POLS 51 International Politics
BUSI 31 Principles of Financial Accounting
BUSI 86 International Business
Also, two other courses in international economics, politics, or business chosen from a selected list for this major are required.

International Environmental Policy

The major in International Environmental Policy focuses on the economic and political aspects of environmental policy questions. In addition to the core, the requirements are:

POLS 51 International Politics
INTL 174 Global Environmental Policy
BIOL 35 Environment: Concepts and Issues
– One course in introductory or general biology or chemistry, as listed in the detailed major program

– One introductory or general geology course from the prepared list and

– Two courses chosen from:
ECON 128 World Population and Economics
ECON 157 Environmental Economics
GEOL 41 Environmental Geology
PHIL 35 Environmental Ethics
POLS 162 International Organization or
POLS 164 International Political Economy, and
SOCI 114 Dynamics of Social and Cultural Change.

Self-Designed Major

In consultation with the adviser, and with the approval of the SIS Committee on Academic Standards and Curriculum, the student may design his or her own program of at least five courses to be taken in addition to the core.

Such a program should constitute an integrated whole substantially different from the standard SIS majors in content. To qualify for a self-designed major, a student should have a grade point average above 3.0. The student's proposed plan should be submitted to the Academic Standards Committee before the student has completed 97 units of college work. Examples of self-designed majors students might particularly wish to consider are International Public Relations, Development and Cultural Change, Peace and Conflict Studies, and International Music Management.

Modifications in SIS Majors for Students From Abroad

1. Study Abroad requirement: May be waived by the SIS Academic Standards and Curriculum Committee, on petition by the student.
2. Language requirement: This will be waived for a student fluent in a first language other than English, on evidence of proficiency in English (e.g., by an acceptable TOEFL score).
3. Cross-cultural Training: Students from abroad may be exempted from taking INTL 161.
4. A course on the U.S. may be taken as a nation course required for the major.

Because the national status of some students may be ambiguous, academically appropriate adjustments in these requirements will be made as individual cases warrant. Students should consult with their advisers and with the Assistant Dean of Student Affairs as early as possible in their college careers.

Business Minor Track

(For Global Economic Relations Majors)

Students who wish to take the Eberhardt School of Business minor in management may do so within the framework of this major by adding one course, BUSI 109, to their programs, provided they have taken their business courses in Pacific's Eberhardt School of Business. They would then complete the major with a minor in management by taking the core plus the following courses:

ECON 55 Introductory Macroeconomics
POLS 51 International Politics
ECON 121 International Trade or
ECON 71 Global Economic Issues
BUSI 31 Principles of Financial Accounting
BUSI 86 International Business
BUSI 109 Management and Organizational Behavior; and one of the following pairs:
BUSI 53 The Legal and Ethical Environment of Business and
BUSI 167 International Business Law;

BUSI 105 Financial Management and
BUSI 163 International Financial Management;

BUSI 107 Marketing Management and
BUSI 165 International Marketing;

BUSI 169 Comparative Management and one other BUSI course.

Students minoring in management must fulfill all prerequisites for ESB courses.

Minor in International Studies

The minor in International Studies helps students from other disciplines to prepare for globalization in the 21st century by systematically deepening their understanding of the world outside of the U.S. All minors in international studies start with an introductory course on the world of the late 20th century, followed by one of three different international tracks to complete the requirements for the minor. The specific requirements are:

1. INTL 77-Contemporary World Issues
2. One of the following tracks:

Diverse Academic Track

– INTL 81-Perspectives on World History;

– A minimum of 14 units from other courses listed in the SIS section of the Pacific Catalog as "SIS Core Courses," "Anthropology courses, or "Other SIS Courses." These 14 units may include up to

8 units of Modern Language and Litera ture courses.

Foreign Language Track

- Demonstrated competence in a modern foreign language at least equivalent to successful completion of the fourth semester of college language study. This language may not be the same one used to complete a major in the Department of Modern Language and Literature.
- A minimum of 12 units from other courses listed in the SIS section of the Pacific Catalog as "SIS Core Courses," Anthropology courses," or "Other SIS Courses."

Study Abroad Track

- INTL 151-Cross-cultural Training I
- INTL 161-Cross-cultural Training II
- A semester of overseas study
- A minimum of 10 units from other courses listed in the SIS section of the Pacific Catalog as "SIS Core Courses," Anthropology courses," or "Other SIS Courses."

At least 10 units in the International Studies Minor must come from courses taken at or through University of the Pacific. This minor is not available to students in SIS. A student interested in the International Studies Minor should consult with the SIS Assistant Dean for Student Affairs in George Wilson Hall (209) 946-2650 early in his or her planning for the minor.

Study Abroad — International Programs and Services

University of the Pacific sponsors a wide variety of study abroad options for all students. Currently, International Programs and Services in the Bechtel International Center makes available 200 locations in more than 70 countries. Students should consult the most recent edition of the Study Abroad Directory, which is available in the Study Abroad library. The Directory gives brief descriptions of programs, admissions requirements, University policies pertaining to study abroad and general advice. International Programs and Services also maintains a library of work, study and travel abroad information for the campus, as well as educational materials on cross-cultural study, scholarship aid and career opportunities, and general tourist information.

Students are advised that admission to an approved study abroad program requires a minimum grade point average of 2.5.

Course Offerings

SIS Core Courses

INTL 10. Dean's Seminar (1)
A general introduction to making a successful transition to college. Emphasis will be on styles of learning, research, writing and presentation skills, collaborative learning, critical thinking and self-assessment. *Required for all SIS freshmen.*

INTL 77. Contemporary World Issues (4)
A basic introduction to current world geography, issues and problems in the context of global history in the 20th century.

INTL 81. Perspectives on World History (4)
A study of the shape of human history from its beginnings to the present day. The course will be built around the work of several modern historians whose interpretations differ, but whose insights help us to understand humanity's attempt to cope with life on Earth.

INTL 101. International Research Methods (4)
An introduction to conducting independent research in the social sciences, with particular emphasis on the scientific method. Students will be able to understand and compare typical research methodologies in the different social science disciplines. Students will be introduced to basic statistical methods for analyzing social scientific data, and will gain necessary computer skills for quantitative analysis.

INTL 151. Cross-cultural Training I (2)
A course designed to prepare the student, American or foreign, for study and life abroad. Topics include American values and assumptions, cross-cultural communication, cross-cultural adjustment and problems, and research on the host country.

INTL 161. Cross-cultural Training II (2)
A course designed to analyze and evaluate the effects and consequences of cross-cultural exposure. Topics include entry and return culture shock, linguistic/proxemic communications, alterations in value structure, and paradigms for characterizing personal and cultural change. *Prerequisite: study abroad.*

INTL 195. International Studies Senior Seminar (4)
A culmination of the four-year program, this course seeks to integrate the international course work in an analysis of policy alternatives using a wide range of disciplinary skills. *Prerequisite: Permission of the instructor required.*

Anthropology Courses

ANTH 53. Cultural Anthropology (4)
An introduction to the anthropological view of man, the character and nature of culture and the diversity of the human species. The major concepts and theoretical assumptions of the discipline will be illustrated by applying anthropological perspectives to both exotic peoples and one's everyday life.

ANTH 112. Physical Anthropology (4)
A detailed examination of human origins and an evaluation of man's place in the natural world. Topics will include geological environments, nature of life, reproduction and genetics, the fossil record, primatology, early man, the classification and distribution of living races, the question of "nature vs. nurture," the social and ethical implications of genetic engineering and the new sociobiology.

ANTH 120. Japanese Culture and Society (4)
A survey of the people and cultures of the Japanese archipelago from prehistory to modern times, particularly the interrelationship of social structure, environment, cultural patterns, economics and political organization. Topics will include family form, religious change, urbanism and industrialism. *No prerequisites, but recommended for international and regional studies majors and those interested in participating in an overseas program in Japan.*

ANTH 121. South Asian Civilization (4)
An introduction to the social organization, belief systems and economic patterns of the non-tribal peoples of India and surrounding areas. Emphasis will be placed on the interrelationship between Hinduism, kinship and the general forms and functions of the caste system, particularly as it affects modernization and the contemporary political and economic situation. Not recommended for freshmen.

ANTH 122. Contemporary African Societies (4)
A survey course on Sub-Saharan Africa, introducing students to the diversity of life on the continent today. The course explores the economic, political, and social systems which currently shape life in Africa. After learning about the basic history, geography and cultural systems, the course will consider such themes as: environmental degradation, underdevelopment, political instability, overpopulation, racism and economic inequalities.

Other SIS Courses

ECON 71. Global Economic Issues (4)
An introduction to all aspects of the global economy. Consideration of how the U.S. economy is linked to the rest of the world and how the world's economic problems affect the well-being of every U.S. citizen. Reviews economic principles in covering the basics of international trade, international finance, economic development of the poor countries, world population problems, international environmental economics and a brief comparison of the U.S. economic system with that of Japan and that of Russia. *Prerequisites: ECON 53 and 55 (or 51). (ECON 71 cannot be taken for credit if ECON 121 or 123 have already been taken.)*

ECON 121. International Trade (4)
A study of various economic trade theories and their application to major international issues today. Topics include the determination of trade patterns; the distributional effects of changing trade patterns; an analysis of tariffs, non-tariff barriers, dumping and trade blocs; and trade issues of developing countries. *Prerequisites: ECON 53 and 55.*

ECON 123. International Finance (4)
A study of the financial side of international economics. Topics include balance of payments accounts and the foreign exchange market; exchange rate determination and the macro economy; the international debt crisis and capital flight; and the history of international monetary systems. *Prerequisites: ECON 53 and 55.*

INTL 93/193. Special Topics (1-4)

INTL 123. Literature Across Cultures (4)
On the basis of selected works taken from the vast body of contemporary world literature, the course surveys the variety of literary expression from cultures around the globe. Although often separated physically by continents, creative writers respond to fundamental human dilemmas in ways characteristic of their craft, as well as individuals and members of a culture. Students read, compare, and discuss these responses as they have been formed in Lagos, Berlin, São Paulo, Tokyo, Paris or Mobile.

INTL 174. Global Environmental Policy (4)
An examination of the major environmental problems confronting the world today, and an analysis of specific policies formulated to address those problems. Among the issues to be studied are deforestation, atmospheric and marine pollution, climate change, ozone depletion, and species loss. *Prerequisite: POLS 51.*

INTL 179. Contemporary World Issues II (4)
This course will single out three central problem areas (e.g. environmental problems, ethnic conflicts, economic development) for more intensive study. Emphasizing the cultural, philosophical and political dimensions of these issues, this semester will also be concerned with methodological and epistemological problems involved in studying world issues, disciplinary vs. interdisciplinary approaches to such study, and the investigation of how individual and group responses to such problems manifest assumptions about how the world works. *Prerequisite: INTL 77 or permission of the instructor.*

INTL 191. Independent Study (2-4)

POLS 141. Western European Comparative Politics (4)
Comparative analysis of the political and economic forces that have shaped the advanced industrial states of Western Europe. Issues considered are: 1) state-building, nation-building and industrialization; 2) political and economic reconstruction of France, Great Britain and Germany; 3) contemporary problems facing the advanced capitalist states of Western Europe. *Prerequisite: POLS 11 or permission of the instructor.*

POLS 144. Comparative Politics: Eastern Europe (4)
Comparative analysis of the political systems and dynamics of Russia and some Eastern European countries. *Prerequisite: POLS 11 or permission of the instructor.*

POLS 148. Politics of the Middle East (4)
Comparative study of contemporary politics in the Middle East, emphasizing the problems of development, and the background, issues and political forces involved in the Arab-Israeli conflict.

POLS 150. Political Development (4)
A general introduction to the problems and politics of post-colonial or less developed countries, including case studies from Asia, Africa and Latin America.

POLS 152. Politics of Asia (4)
A general political introduction to modern East, South East and South Asia including a survey of geography, history and culture. Using selected case studies in all three areas, an exploration of problems of development and modernization, regional interaction and the relation of Asia to the West.

POLS 160. Theories of International Politics (4)
Intensive study of the principal analytical and normative theories of international politics and behavior. *Prerequisite: POLS 51 or permission of the instructor.*

POLS 162. International Organization (4)
Examination of the role of international organization in the contemporary global political system. Major theories and approaches in the field will be studied in conjunction with topics such as interstate conflict and peacekeeping, arms control and nonproliferation, human rights, economic relations between developed and developing countries, food and nutrition, and management of the global commons. *Prerequisite: POLS 51 or permission of the instructor.*

POLS 164. International Political Economy (4)
An examination of the major analytical and substantive issues in the field of international political economy, exploring the political and economic problems generated by growing interdependence among advanced industrial states and the conflicts between industrialized and developing countries over the structure and functioning of the postwar international economic order. *Prerequisite: ECON 55 or permission of the instructor.*

POLS 166. International Conflict and Conflict Management (4)
A study of the sources and nature of conflict and methods of conflict management in the international arena, directed especially to identifying and understanding the kinds and functions of non-violent conflict management now in use, including international law, international regimes, negotiation and arbitration. *Prerequisite: POLS 51 or permission of the instructor.*

POLS 168. Comparative Foreign Policy (4)
A comparative study of the formulation and execution of foreign policy in a variety of political systems, focusing especially on Russia, China, India, Britain, Japan, France, Germany and the United States. *Prior completion of a basic course in political science is recommended.*

POLS 170. U.S. Foreign Policy (4)
An examination of the major developments in American foreign policy and various analytical approaches to their study. Among the issues considered: isolationism, manifest destiny, the Cold War and containment,

Vietnam and Central America, detente and arms control, foreign economic policy and human rights. *Prerequisites: POLS 11 and 41.*

National Courses

ARTH 120 Chinese Art History
ARTH 122 Japanese Art History
ENGL 43 Major British Authors II
ENGL 138 British Novel
ENGL 146 Dickens and His Age
HIST 131 History of Modern Russia
HIST 140 History of Soviet Foreign Policy
HIST 144 Modern Germany
HIST 146 History of Mexico
HIST 151 Modernization of Japan
HIST 153 Modern Chinese History
HIST 154 History of Communism in China
HIST 186 History of the Holocaust

Second semester language courses count as national courses for IR&S majors, if in a student's second FOREIGN language.

FREN 51 French Literature in English
FREN 114 Civilisation Française B
FREN 118 Littérature Française B
FREN 120 Le Cinéma Française
FREN 124 Individu et Société
FREN 126 Penseurs et Philosophes
FREN 128 Images et Voix de Femmes
GERM 106 German Culture and Society II
GERM 124 German Writers of the Nineteenth Century
GERM 134 Modern German Prose
GERM 136 Modern German Drama
JAPN 125 Advanced Japanese I
JAPN 126 Advanced Japanese II
JAPN 170 Japanese Literature in English
JAPN 172 Japanese Culture and Civilization
JAPN 174 Modern Japanese Theatre
JAPN 176 Meiji Literature
JAPN 180 Modern Japanese Fiction
PORT 126 Reading and Discussion on Luso-Brazilian Culture
RUSS 73 Russian Culture and Civilization
RUSS 193 ST 20th Century or 19th Century Russian Literature
SPAN 101b Historia de la Literatura Española desde 1800
SPAN 112 Literatura Mexicana Contemporanea
SPAN 152 Literatura Española del Siglo XIX
SPAN 154 Literatura Española del Siglo XX

Regional Courses

ARTH 9 Survey of Western Art After 1400
ARTH 112 19th Century European Art
ARTH 114 20th Century European Art
FREN 122 La Francophonie
HIST 53 History of Western Civilization II
HIST 110 The European Age, 1815-1914
HIST 114 Europe in Turmoil, 1900-1945
HIST 115 Europe Since 1945
HIST 127 East Asian Civilization II
HIST 130 Modern Latin America
HIST 133 Women in Latin America
HIST 149 Southeast Asia and the West
HIST 180 European Socialist Tradition
HIST 186 History of the Holocaust
POLS 141 West European Comparative Politics
POLS 144 Comparative Politics: Eastern Europe
POLS 146 Latin American Politics
POLS 148 Politics of the Middle East
RELI 35 Judaism
SPAN 105 Literatura Hispanoamericana del Siglo XX

Comparative Courses (I&RS major)

ARTH 116 Contemporary Art and Film
BIOL 35 Environment: Concepts & Issues
BUSI 169 Comparative Management
COMM 143 Intercultural Communications
ECON 125 Economic Development
ECON 127 Comparative Economic Systems
ECON 128 World Population and Economics
HIST 138 French and Russian Revolutions
INTL 123 Literature Across Cultures
MHIS 6 Music of the World's Peoples
PHIL 122 Comparative Philosophy
POLS 150 Political Development
POLS 152 Politics of Asia
POLS 168 Comparative Foreign Policy
RELI 74 Autobiography and Religion
RELI 134 World Religions
RELI 135 Asian Religious Traditions
RELI 170 Religion and Modern Literature
SOCI 108 Food, Culture and Society
SOCI 114 Social and Cultural Change
SOCI 123 Sex and Gender

Interactive Courses (I&RS major)

BUSI 106 International Business
BUSI 163 International Financial Management
BUSI 165 International Marketing
BUSI 167 International Business Law
ECON 71 Global Economic Issues
ECON 121 International Trade
ECON 123 International Finance
HIST 140 History of Soviet Foreign Policy
HIST 149 Southeast Asia and the West
INTL 174 Global Environmental Policy
POLS 51 International Politics
POLS 61 Model United Nations I
POLS 161 Model United Nations II
POLS 162 International Organization
POLS 164 International Political Economy
POLS 166 International Conflict and Conflict Management
POLS 170 U.S. Foreign Policy
POLS 172 Inter-American Relations

Comparative Politics Elective Courses (IR major)

POLS 141 Western European Comparative Politics
POLS 144 Comparative Politics: Eastern Europe
POLS 146 Latin American Politics
POLS 148 Politics of the Middle East
POLS 150 Political Development
POLS 152 Politics of Asia

Foreign Policy Elective Courses (IR major)

HIST 140 History of Soviet Foreign Policy
POLS 168 Comparative Foreign Policy
POLS 170 U.S. Foreign Policy

International Politics Elective Courses (IR major)

BUSI 167 International Business Law
INTL 174 Global Environmental Policy
POLS 160 Theories of International Politics
POLS 162 International Organization
POLS 164 International Political Economy
POLS 166 International Conflict and Conflict Management
POLS 172 Inter-American Relations

Some special topics, overseas and independent study courses (check with adviser).

Global Economic Relations (GER major)

BUSI 163 International Financial Management
BUSI 165 International Marketing
BUSI 167 International Business Law
BUSI 169 Comparative Management
ECON 121 International Trade
ECON 123 International Finance
ECON 125 Economic Development
ECON 127 Comparative Economic Systems
ECON 128 World Population and Economics
POLS 162 International Organization
POLS 164 International Political Economy

Affiliated Faculty

Margee Ensign, 1998, Dean, B.A., New College, 1977; Ph.D., University of Maryland, 1982.

Susan Sample, 1999, Assistant Dean and Assistant Professor of Political Science, B.A., University of Missouri, 1991; Ph.D., Vanderbilt University, 1996.

Michael T. Hatch, 1985, Professor of Political Science, B.A., Utah State University, 1970; M.A., The Johns Hopkins University, 1973; Ph.D., University of California, Berkeley, 1983.

Gerald J. Hewitt, 1969, Professor of Political Science and Philosophy, B.A., University of Notre Dame, 1963; M.A., University of Chicago, 1966; Ph.D., 1973.

Leonard A. Humphreys, 1970, Professor of History Emeritus, B.S., United States Military Academy, 1945; M.A., Stanford University, 1960; Ph.D., 1975.

David Keefe, 1978, Associate Professor of Economics, B.S., Cornell University, 1965; Ph.D., University of California, Berkeley, 1980.

Brian Klunk, 1987, Associate Professor of Political Science, B.A., Pennsylvania State University, 1977; M.A., University of Virginia, 1980; Ph.D., 1985.

Bruce W. LaBrack, 1975, Professor of Anthropology and Sociology, B.A., University of Arizona, 1967; M.A., 1969; M.Phil., Syracuse University, 1975; Ph.D., 1979.

Jie Lu, 1995, Assistant Professor of Modern Language and Literature, B.A., Beijing Second Foreign Language Institute, 1982; M.A., University of Massachusetts, 1990; Ph.D., Stanford University, 1995.

Suzanne Pasztor, 1996, Assistant Professor of History, B.A., Adams State, 1986; M.A., Texas Christian University, 1988; Ph.D., University of New Mexico, 1995.

Elena Savelieva, 1992, International Studies Fellow, B.A., Leningrad State University, 1969; M.A., 1971.

Francis M. Sharp, 1979, Professor of Modern Language and Literature, B.S., University of Missouri, 1964; M.A., University of California, Berkeley, 1969; Ph.D., 1974.

Cortlandt B. Smith, 1970, Professor of Political Science, B.A., University of California, Berkeley, 1968; M.A., 1969; Ph.D., 1975.

Barbara West, 1995, Assistant Professor of Anthropology, B.A., Colgate University, 1989; M.A., University of Rochester, 1992; Ph.D., 1995.

thomas j. long school of pharmacy and health sciences

Dean
Phillip R. Oppenheimer
Department Telephone
209.946.2561
Website
www.uop.edu/pharmacy

Contents
Pharmacy
Physical Therapy
Speech-Language Pathology

A professional school dedicated to the training of pharmacists, physical therapists and speech-language pathologists in modern healthcare delivery.

Mission

The mission of the Thomas J. Long School of Pharmacy and Health Sciences is to prepare students for lifelong success in health careers by providing an excellent, student-centered learning environment. We want to develop in our students, leadership and a strong commitment to their professions and to society. These efforts are assisted by the linkages across the University's professional and liberal arts programs. We support outstanding professional and graduate teaching, research and other scholarly activity, and service as the means of achieving our mission.

The school administers three areas of study; the Thomas J. Long School of Pharmacy, the Physical Therapist Professional Education Program, and Speech Language Pathology.

Pharmacy Mission

The mission of the Pharmacy program is to educate men and women to lead socially useful and productive lives serving the needs of society and the health-related professions. We are committed to providing an environment of academic excellence and social responsibility that facilitates the propagation and acquisition of knowledge related to the provision of pharmaceutical care and the disciplines in pharmacy education. We recognize a responsibility to professional and graduate students, practitioners, educators, scientists and others to provide the necessary skills and opportunities for their lifelong learning in a student- centered environment. Faculty advance knowledge through research and professional involvement. They provide their special expertise toward solving the challenges facing pharmacy, the health-related professions and society.

Degrees in Pharmacy

The Thomas J. Long School of Pharmacy and Health Sciences offers the Doctor of Pharmacy degree and graduate degrees in pharmaceutical sciences. Satisfactory completion of the Doctor of Pharmacy degree enables a student to sit for the California State Board of Pharmacy examination and eventually practice pharmacy. The basic residence requirement for completion of the Doctor of Pharmacy degree is eight semesters which is completed in two and two-thirds years. This has been made possible by utilizing the summer months for instruction, thus providing the same number of instructional days as in four academic years.

Accrediting and licensure bodies require monitored pharmacy practice experience in the professional curriculum. The Doctor of Pharmacy degree program at the University of the Pacific has a two-semester experiential component. This component is described in detail in other literature available from the Admissions Office.

In addition to the Doctor of Pharmacy professional degree, the graduate degrees Master of Science and Doctor of Philosophy are available through the Graduate School in conjunction with the Thomas J. Long School of Pharmacy and Health Sciences.

Pre-Pharmacy Advantage Programs

Pacific offers first-time undergraduate freshmen three options that can lead to priority admission into the Doctor of Pharmacy program. The options are the five-year (2+3) Pre-Pharmacy/Pharm.D. option, the six-year (3+3) Pre-Pharmacy/Pharm.D. option and the seven-year (4+3) Bachelor's/Pharm.D. option. Specific admission criteria for each ensure that students have the appropriate time to successfully prepare for advancement into the professional pharmacy

program. Interested students should contact the Admissions Office and request information about the Pacific Pre-Pharmacy Advantage Program.

Accreditation

Organized in 1955, the Thomas J. Long School of Pharmacy is a member of the American Association of Colleges of Pharmacy, and its Doctor of Pharmacy Program is fully accredited by the American Council on Pharmaceutical Education (ACPE). Specific accreditation documentation requests may be made to ACPE, 311 West Superior Street, Suite 512, Chicago, IL 60610; (312) 664-3575, (800) 533-3606, Fax (312) 664-4652.

Pharmacy Licensure

For California pharmacy licensure requirements write California State Board of Pharmacy, 400 "R" Street, Suite 4070, Sacramento, CA 95814.

General Education Requirements

Students must pass the basic skills competency in quantitative skills and writing and satisfy any general education and liberal arts course requirement not completed in pre-pharmacy. Students entering the Doctor of Pharmacy program with a U.S. baccalaureate degree and students who have met the General Education requirements of another college or university are not required to meet the University General Education requirements. These requirements are listed elsewhere in this catalog.

Pre-Pharmacy College Requirements

Doctor of Pharmacy Degree Program

– Mathematics: One semester of college-level calculus or its equivalent.

– Physics: One year of high school physics (with laboratory) or one semester/quarter of college physics (with laboratory).

– Chemistry: (1) General chemistry with lab, eight semester units minimum and (2) organic chemistry with lab, eight semester units minimum. Coursework should be designed for chemistry or biology majors.

– Biological Sciences: General biology, eight semester units with laboratory both semesters; coursework may include two semesters zoology, one semester each botany and zoology, or two semesters of general biology designed for biology majors; general microbiology, four units.

Liberal Arts

– English Composition: Two semesters, minimum (Eng. 1A-1B or equivalent).

– Public Speaking: Three semester/four quarter units, minimum.

– Psychology: One semester, minimum.

– Economics: Three semester/four quarter units, minimum.

– General Education: At least one three semester/four quarter unit course from each non-science category of the University General Education Program.

The liberal arts requirements must total a minimum of 28 semester/42 quarter units. (No more than two semester units of physical education may be used to fulfill the electives requirements.)

Sixty-four transferable semester units are required.

Students with a U.S. bachelor's degree are exempt from the general education portion of the liberal arts requirement.

These pre-pharmacy requirements simply make the candidate eligible for selection. Final selection is based on recommendations, personal factors and strength of academic preparation. Applicants are urged to communicate with the Pacific Admissions Office regarding questions on the above requirements.

Admission to the Professional School

For information about admission to the Doctor of Pharmacy Program, see the "Special Requirements for Pharmacy Applicants" section under Admission Requirements at the front of this catalog. The pharmacy faculty determines admission requirements but the Office of Admissions manages the admissions process. Questions regarding admission should be directed to the Office of Admissions. The program places strong emphasis on the academic record, verbal and written communication skills, demonstrated interest in healthcare and leadership qualities in the selection process. The School attempts to select students with strength in all of these areas. After review of the completed application, the Office of Admissions will invite qualified candidates to participate in interviews on campus and a writing demonstration. Admissions decisions will be based on the application, the interviews and the writing sample.

Continuation/Progression Requirements

All required courses in semesters one, two and three must be successfully passed, in sequence, prior to the student's advancement to subsequent semesters. A student who does not successfully pass one of these courses will not be able to enroll in subsequent courses until the respective course is successfully completed. A student who has a major grade point deficiency may not enroll in clinical experience rotations until the deficiency is removed.

Graduation Requirements

Graduation requirements for each entering class are given to each student at the beginning of the first professional year. Accreditation requirements and curriculum changes may necessitate changes in these requirements. The Thomas J. Long School of Pharmacy and Health Sciences reserves the right to modify or change the curriculum at any time without prior notice.

Minimum Unit Requirements

Doctor of Pharmacy — 200 semester units (pre-pharmacy plus pharmacy).

Residency Requirements:

Eight semesters of Thomas J. Long School of Pharmacy and Health Sciences residency are required for the Doctor of Pharmacy programs. (A semester in residence consists of registering for a minimum of 12 semester units each semester.)

Grade Point Average Requirement:

A grade point average of 2.00 (on a 4-point scale) is required for graduation in: (1) Pharm.D. "major" courses (all required courses) and (2) Thomas J. Long School of Pharmacy and Health Sciences residency coursework (all courses taken while in residence in the professional program).

Thomas J. Long School of Pharmacy and Health Sciences Academic Standards:

Because of the integrated nature of the pharmacy curriculum, students are not permitted to enroll in Doctor of Pharmacy courses out of sequence. In order to remain in good academic standing, a student must maintain a C average in all required professional coursework. Students with a major, required course grade point deficiency of from 8.0 to 12.0 are not permitted to enroll in new required courses. Students with a major, required course grade point deficiency

of 12.0 or greater are disqualified from the professional program.

Professional Electives:
All candidates for the Doctor of Pharmacy degree are required to complete a minimum of six semester units of career-related electives while in residence. These may be pharmacy electives or selected University electives. Electives taken during pre-pharmacy or while not in residence may not be used to fulfill this requirement. Electives taken to fulfill the general education or liberal arts requirement may not be used to fulfill this requirement.

Liberal Arts Requirement:
Candidates for the Doctor of Pharmacy degree are required to complete a minimum of 28 semester units of liberal arts courses. This includes acceptable liberal arts courses completed in pre-pharmacy, plus any such courses taken while in residence in the Thomas J. Long School of Pharmacy and Health Sciences. Students entering the Doctor of Pharmacy program without this requirement are advised to complete it by proper selection of electives, particularly during the Fall semester each year.

Graduate Degree Programs

The Thomas J. Long School of Pharmacy and Health Sciences has programs leading to the Master of Science and Doctor of Philosophy degrees. Combined Pharm.D./Ph.D. and Pharm.D./M.S. degree programs are also offered. These unique dual-degree programs are intended for students who are interested in careers in research and teaching but who wish to also possess a professional degree in pharmacy. The entrance requirements include all pre-pharmacy Pharm.D. requirements, a baccalaureate degree with a minimum GPA of 3.0 and certain other standards.

A goal of the school is to provide a scholarly environment to support research in basic and applied pharmaceutical sciences, to advance pharmaceutical knowledge, to encourage fundamental discovery in healthcare sciences and the attainment of advanced degrees. The School attempts to provide students the opportunity for interdisciplinary programs within the pharmaceutical sciences. Students are encouraged to combine the specialties of several of the faculty into unique interdisciplinary programs which will meet their individual educational objectives.

Interested individuals may obtain further information by writing directly to the Dean of the Graduate School or to the Dean of the Thomas J. Long School of Pharmacy and Health Sciences.

Pharmacy Practice Experience

All pharmacy students are required to complete introductory and advanced clinical experiences as part of their formal program of study. The introductory practice experience is included in the Pharmacy Systems course sequence, providing experience in a variety of community settings. The advanced practice experience consists of two semesters during the senior year of clinical experience rotations in acute care, long term care, and ambulatory care settings, and in community pharmacies. The student is required to enroll in six-week rotations including Community Practice Rotation, Institutional Pharmacy Practice Rotation, Ambulatory Care Rotation and Internal Medicine Rotation. In addition, each student will complete two six-week elective rotations.

Practice Experience Placement Policy

Upon admission, each student is required to sign a form giving the Thomas J. Long School of Pharmacy and Health Sciences the right to place the student in the most appropriate clinical experience site. Selection of the sites for inpatient and outpatient experiences are made at the sole discretion of the University of the Pacific Thomas J. Long School of Pharmacy and Health Sciences.

Major Course Requirements for the Doctor of Pharmacy Degree

Special Note: The following courses must be taken in the prescribed sequence because of the integrated nature of the pharmacy curriculum.

Medicinal Chemistry and Pharmaceutics
PMED 110, 110L Pharmaceutical Dosage Forms
PMED 112 Pharmaceutical Calculations
PMED 114 Biophysical Properties of Drugs
PMED 120, 120L Introduction to Parenteral Products
PMED 124 Biochemistry
PMED 131 Biopharmaceutics
PMED 134 Medicinal Chemistry I
PMED 141 Clinical Pharmacokinetics
PMED 144 Medicinal Chemistry II
PMED 154 Chemotherapeutic Agents
PMED 161 Nutrition

Department of Pharmacy Practice
PRAC 125 Medical Microbiology
PRAC 142 Clinical Lab and Physical Assessment Techniques
PRAC 152 OTC Therapeutics and Health Accessories
PRAC 157 Therapeutics I
PRAC 158 Therapeutics Seminar
PRAC 167 Therapeutics II
PRAC 169 Therapeutics III
PRAC 171-179 Clinical Experience Rotations
PRAC 181-189 Clinical Experience Rotations

Physiology and Pharmacology
PHYP 117, 117L Physiology and Anatomy I
PHYP 127, 127L Physiology and Anatomy II
PHYP 133 Endocrinology
PHYP 134 Cell Regulation and Oncology
PHYP 136 Pharmacology-Toxicology
PHYP 147 Immunology and Inflammation
PHYP 148 Cardiovascular and Renal Pathophysiology
PHYP 156 Disease States II

Interdepartmental
PHAR 111 Pharmacy Systems and Experience I
PHAR 112 Pharmacy Calculations and Statistics
PHAR 113 Integrated Biological Sciences I
PHAR 114 Integrated Pharmaceutical Sciences I
PHAR 121 Pharmacy Systems II
PHAR 122 Dermatologic Pharmaceutical Care
PHAR 123 Integrated Biological Sciences II
PHAR 124 Integrated Pharmaceutical Sciences II
PHAR 131 Pharmacy Systems III
PHAR 132 Disease Processes
PHAR 133 Integrated Biological Sciences III
PHAR 134 Mechanisms of Drug Action I
PHAR 141 Pharmacy Systems IV
PHAR 142 Neuropsychiatric Pharmaceutical Care
PHAR 143 Cardiovascular Care
PHAR 144 Mechanism of Drug Action II
PHAR 151 Pharmacy Systems V
PHAR 153 Renal and Respiratory Care
PHAR 154 General Pharmaceutical Care I
PHAR 161 Pharmacy Systems and Experience VI
PHAR 163 Infectious Diseases
PHAR 164 General Pharmaceutical Care II
Career-related Electives –6 units

Course Offerings

Department of Pharmaceutics and Medicinal Chemistry
Xiaoling Li, Chairman
Professors: Floriddia, Fries
Associate Professor: Li, Kouzi
Assistant Professor: Chan, Jasti
Assistant Clinical Professor: Wagner
Adjunct Professors: Barr, Berner, Fleming, Letendre, Ogi

PMED 100. History of Pharmacy (1-2)
A survey of the historical background of pharmacy and medicine from ancient to modern times. Correlations of great medical discoveries and their influence on world history. Emphasis also on California pharmacy history.

PMED 110. Pharmaceutical Dosage Forms (3)
A study of the major types of pharmaceutical dosage forms. Basic facts of formulation, manufacture, packaging, labeling and dispensing are presented. Three lectures per week.

PMED 110L. Pharmaceutical Dosage Forms Laboratory (1)
Laboratory component of PMED 110. Instruction in extemporaneous compounding of topical and oral dosage forms. Practice in dispensing of and counseling for commercially manufactured dosage forms. One laboratory per week.

PMED 111. Teaching the Pharmaceutical Dosage Forms Laboratory (1)
A course designed to train pharmacy students in supervising a laboratory as a teaching assistant. *Prerequisites: PMED 110, 110L with a grade of B or better.*

PMED 112. Pharmaceutical Calculations (1)
A presentation of specific mathematical concepts as they apply to the practice of pharmacy. Emphasis is placed on the study of weights and measures as they apply to calculating doses as well as specific amounts of active ingredients.

PMED 114. Biophysical Properties of Drugs (3)
An introductory course designed to teach the beginning pharmacy student the basic principles and terminology which are required to understand the pharmaceutical sciences. Topics included in the class are biochemical energetics, physicochemical properties of drugs and drug-receptor interactions. *Prerequisite: two semesters of organic chemistry.*

PMED 115. Problem Solving in Biophysical Properties of Drugs (1)
This course is intended to be a supplement to PMED 114-Biophysical Properties of Drugs. The objective of the course is to provide extra instruction time to solving problems related to physicochemical principles of drugs as they relate to drug action.

PMED 120. Introduction to Parenteral Products (2)
A study of parenteral products, their components and use. Two lectures per week. *Prerequisite: PMED 110.*

PMED 120L. Parenteral Products Laboratory (1)
Laboratory component of PMED 120. The practice of aseptic technique, manipulation of needles and syringes and the compounding of some parenteral products. Additional practice in extemporaneous compounding of oral and topical products and the dispensing of and patient counseling for commercially prepared dosage forms. One laboratory per week.

PMED 124. Biochemistry (4)
A qualitative and quantitative study of the molecular basis of cellular function and control mechanisms; the relationship of chemical structure to biologic function; free energy changes in biochemical processes; extraction, release and storage of energy; intermediary metabolism; the genetic code, DNA replication, transcription and protein synthesis; modern recombinant technology. Three and one-half lectures per week and one laboratory every other week. *Prerequisite: PMED 114 or equivalent.*

PMED 130. Chemical Identification of Drug Products (2)
Methodology for separation of individual drugs from licit and illicit preparations. Qualitative identification made by a combination of chemical spot tests, chromatographic and spectroscopic techniques. Knowledge gained will be useful in community teaching and professional consultation.

PMED 131. Biopharmaceutics (3)
A study of the factors influencing the rate and extent of absorption of a drug, its delivery at the site of action and consequent biologic effect. An introduction to pharmacokinetic principles as related to drug product selection is presented concurrently. Two and one-half lectures per week and one-half unit of discussion per week. *Prerequisites: PMED 110, 110L, PRAC 122, 120, 120L.*

PMED 133. Medicinal Plants (2)
A study of selected plants and plant products used in medicine, including those used in modern, folkloric and ethnic or alternative systems of medicine around the world.

PMED 134. Medicinal Chemistry I (3)
A systematic study of the various classes of drugs with emphasis on the chemical reactivities and physical properties of drugs as they relate to stability, prescription incompatibilities and dosage formulation; drug absorption, distribution, biotransformation, excretion and toxicity characteristics; drug interactions and mechanisms of pharmacologic action as a basis for therapeutics. *Prerequisites: PMED 114, 124, concurrent enrollment in PHYP 135.*

PMED 138. Lectures in Nuclear Pharmacy Science (3)
A study of radioactivity, radionuclides, and nuclear radiations. Methods of detection and measurement of radiations. Basic rules of use for nuclides and radioactive material.

PMED 141. Clinical Pharmacokinetics (4)
A study of pharmacokinetic principles in the quantification of drug distribution in the body and their use in individualizing and optimizing drug dosage regimens. Two lectures (75 minutes each) and one discussion period per week. *Prerequisite: PMED 131.*

PMED 144. Medicinal Chemistry II (3)
A systematic study of the various classes of drugs with emphasis on the chemical re-activities and physical properties of drugs as they relate to stability, prescription incompatibilities and dosage formulation; drug absorption, distribution, biotransformation, excretion and toxicity characteristics; drug interactions and mechanisms of pharmacologic action as a basis for therapeutics. *Prerequisites: PMED 134, concurrent enrollment in PHYP 145.*

PMED 149. Special Topics (1-4)

PMED 154. Chemotherapeutic Agents (3)
A study of the properties of drugs used in the treatment of bacterial, fungal and viral infections. *Prerequisite: PHYP 146.*

PMED 161. Nutrition (3)
A course in nutrition designed for the prospective pharmacist. Adequate information will be provided to enable the prospective pharmacist to answer the many questions that are associated with concepts in nutrition. *Prerequisites: PMED 124, PHYP 137.*

PMED 164. Advances in Applied Pharmacokinetics (2)
A systematic approach to a rational application of basic pharmacokinetics to patient specific clinical practice. *Prerequisite: PMED 141.*

PMED 184. Cosmetics: Formulation and Function (2)
An introduction to the formulation and function

of cosmetic products intended for hair, nails, skin, lips and eyes. Includes consultant tips for effectiveness and consumer safety. Two lectures per week. *Prerequisite: PMED 110.*

PMED 185. Cosmetics: Formulation and Function Laboratory (1)
A hands-on introduction to the formulation and function of cosmetic products for the hair, nails, skin, lips and eyes. *Prerequisite: PMED 184.*

PMED 187. Drug Biotransformation (3)
A study of the molecular mechanisms and the influences of environment, genetics, sex and other factors on various enzyme systems, especially those located in the liver, which may alter drug molecules to less or more active metabolites. The relationship of drug biotransformation to pharmacokinetics, drug interactions and toxicity will be emphasized. *Prerequisites: PMED 124, 134 or 144.*

PMED 193. Undergraduate Independent Study (1-5)
Independent study involving library and/or laboratory.

PMED 221. Molecular Modeling and QSAR (3)
A study of modern methods in the applications of molecular modeling and quantitative structure activity relationships (QSAR) in the design and development of new chemotherapeutic agents. *Prerequisites: PMED 134, 144 and graduate standing and/or permission of the instructor.*

PMED 222. Drug Synthesis (3)
A study of the reactions used to construct clinically used and administered chemotherapeutic agents. Many drug classes will be represented and their general synthetic schemes discussed. *Prerequisites: PMED 134, 144 and graduate standing and/or permission of the instructor.*

PMED 231. Advanced Medicinal Chemistry: Drug Design (4)
A study of modern methods in design of chemotherapeutic agents including: enzyme inhibitors and metabolic blockers; rationale of selective toxicity; mechanisms of selective toxicity. *Prerequisites: PMED 134, 144, and graduate standing.*

PMED 235. Diffusion in Pharmaceutical Sciences (3)
Discussion of diffusion theories, experimental methods, and application to pharmaceutical/biological systems. *Prerequisites: CHEM 161, MATH 33 or equivalent.*

PMED 238. Introduction to Radiotracer Methods and Radiation Protection (4)
A study of radionuclides and radioactivity: their sources, properties and units; principles and instrumentation for detection and measurement of radiations; biological effects of radiations; and principles of radiation protection and safety: units, computations, records, rules and regulations.

PMED 249. Special Topics (1-4)

PMED 255 (CHEM 255). Biochemical Regulation (3)
Life processes require the coordination and integration of an enormous number of chemical reactions. Emphasis will be on the fundamental mechanisms involved in regulation of enzyme catalyzed reactions as they function in rate-limiting steps in metabolic processes.

PMED 264. Pharmacokinetic Study Design and Analysis (2)
A study of research techniques in pharmacokinetics. Emphasis is placed on project conceptualization, data collection, data analysis and interpretation of results. Various computational software employed including SAS, SPSS, Minitab and NONMEM. *Prerequisites: PMED 131, 141, MATH 37 or equivalent, graduate standing or permission of the instructor (Spring).*

PMED 287. Drug Biotransformation (3)
A comprehensive study of the molecular mechanisms involved and the influences of environment, genetics, sex and other factors on various enzyme systems, especially those located in the liver, which may alter drug molecules to less or more active metabolites. The relationship of drug biotransformation to pharmacokinetics, drug interactions and toxicity will be emphasized. *Prerequisites: PMED 124 and PHYP 135.*

PMED 288. Advances in Drug Delivery Systems (3)
An examination of recent developments in the design and formulation/fabrication of controlled release, and other novel drug delivery systems for oral, transdermal, ocular and other routes of delivery. Three hours of lecture per week. *Prerequisites: PMED 131 or equivalent and permission of the instructor.*

PMED 289, 290. Manufacturing Pharmacy (3, 3)
An in-depth study of basic and applied aspects of pharmaceutical manufacturing operations. Two lectures and one laboratory period per week. *Prerequisite: graduate status or permission of the instructor.*

PMED 293. Graduate Independent Study (3, 3)
Laboratory problems and research in selected topics. *Prerequisite: permission of the instructor.*

PMED 295. Graduate Seminar (1)
Review of current topics in pharmacy. All Master of Science degree candidates are required to attend and to participate.

PMED 297. Graduate Research (1-5)
May be repeated as progress warrants. *Prerequisite: graduate standing.*

PMED 299. Thesis (4)
For M.S. degree candidates only.

PMED 391. Independent Study (1-5)
May be repeated as progress warrants.

PMED 395. Seminar (1)
All doctoral (Ph.D.) candidates are required to attend and participate in the seminars. No more than six credits may be used toward doctoral degree requirements.

PMED 397. Advanced Research (2-12)
Limited to doctoral (Ph.D.) candidates. May be repeated as progress warrants.

PMED 399. Dissertation (2-12)
Open only to doctoral (Ph.D.) candidates.

Department of Pharmacy Practice

Kehoe, Chairman
Professors: Abood, P. Catania, Carr-Lopez, Harralson, Ito, Oppenheimer, Sarnoff, P. Williams
Associate Professors: Blalock, Ferrill, Gundersen, Kang, Lee, Norton
Assistant Professors: Borland, Chu, Manzo, Moon, Palmieri, M. Ravnan, S. Ravnan, Shek
Assistant Clinical Professor: Kaye
Instructor: Saroyan
Adjunct Professors: Agent, Albus, Ambrose, Apostolo, Auwinger, Baier-Andrew, Baird, Bardas, Barr, Batman, Berner, Bio, Blancaflor, Boatwright, Borden, Borgsdorf, Boro, Boss, Brennecke, Breshears, Bresnahan, Brodbeck, Brodowy, D. Brown, J. Brown, W. Brown, Byler, Cai, Caiazzo, R. Caldwell, Campbell, Catania, Cavallavo, Cawley, Chai, D. Chan, D. Chan, Chau, Chen, M. Chen, Cheung, Chiaro, Chinn, Chiu, Chong, L. Chow, L. Chow, Choy, Chretien, Chun, Cogburn, Coleman, Cookson, Corbitt, Cording, Coronado, Cortopossi, Cottman, D. Cox, D. Cox, T. Cox, Cranston, Cromer, Culbreath, Curtis, Dagoberg, Dahl, Dalere, Dare, Day, Deamer, Dedden, Deftereos, Delameter, DeMeo, Dennis, Dick, Dietrich-Yoon, Dillon, Dishman, Doak, K. Dolph, L. Dolph, Dominguez, Doyle, Dugoni, Dydek, Eastman, Eejima, Ekins, Ellenor, Elliott, Endow, Eom, O. Ereso, L. Evans, S. Evans, Felber, Fellin, Fields, Fisher, P. Fleming, T.

Fleming, Fogel, E. Fong, N. Fong, Ford, Forland, Frank, Frantz, Fredella, Freeman, Furr, Garlick, Gate, Geierman, Gianni, C. Gibson, J. Gibson, Golish, Goo, Gordon, Gray, Green, Hall, Hallbauer, Hamada, Hambright, J. Hansen, Harlan, Harmon, Harris, Hassen, Hatai, Hausauer, Hazama, Helfman, Hendon, Henricks, Hest, Higa, Hinton, Hodgkins, Hom, Hong, Hoyer, Hui, Hunter, Huynh, N. Huynh, Iknoian, C. Imoto, R. Imoto, Inokuchi, Ishisaka, Jacobs, Jai, Jannett, Januska, B. Joe, D. Joe, Johl, Johns, Johnson, C. Jones, K. Jones, Jordan, Joshi, Joy, Jurewitz, Kaneshiro, Kapre, Kaye, Keeney, Keimach, Khoury, Kibble, Kiley, R. Kim, S. Kim, King, Kirk, Kitayama, Kiyohara, Kluj, Kondo, Koole, Korman, Korr, Kotzin, Krasner, Kudo, Lacro, Lacy, Lai, Laverone, Lazzaretto, A. Le, Le, Leckband, E. Lee, R. Lee, S. Lee, S. Lee, S. Lee, S. Lee, S. Lee, Lenhoff, Lennon, Leonard, S. Leong, Letendre, Leung, K. Lew, W. Lew, Li, Lim, Lobner, Lofholm, Lopez, Louie, Lovetro, A. Lowe, L. Lowe, R. Lowe, Lucas, Luck, Ma, MacDonald, Macmillan, Maddix, Mann, Mar, Marconi, Marcus, Marshall, Martin, Marty, Matsuda, Matsunaga, Matsune, McAndrews, McDonough, Meier, Melvin, Mende, Metelak, Meyerson, Misaki, Miyashiro, Mole, Moniz, Montoya, Moore, Morgan, Mori, A. Morreale, S. Morreale, Mote, Muramoto, Nguyen, Niemeyer, Nishijo, Nishioka, Normark, Norris, D. O'Brien, L. O'Brien, O'Connell, Ogawa, Ogi, Okamoto, O'MearaOtsuji, Oumaye, Pachorek, S. Park, S. Park, T. Park, P. Patel, R. Patel, Paulson, Pearson, Pelter, Percy, Perry, Person, Petrillo, Pierce, Pigeon, Plowman, Poole, Potter, Prasad, Price, Pugh, Puzantian, Quan, Reed, Reynolds, Riley, Riser, Roberts, Rootsaert, Ross, Rupp-Deffubagh, Ryono, Saffler, Salas, Sandhu, Sandoval, Sarram, Sayers, Schaftel, Scheidt-mann, Schmidt, Schneider, K. Scott, Sekutera, Senzaki, Seo, L. Shaffer, M. Shaffer, Shellooe, Sherman, Shin, Shintaku, Shrivastava, Sikand, Simental, Simon, Simpson, Souza-Bio, Stebbins, Stefani, Steger, Sterling, Stogsdill, Stolley, Stoner, Sun, Sze, Tagawa, Takemoto, Takeshita, Taketa, Tam, Taniguchi, L. Thai, L. Thai, Thalken, Thomas, Thorn, Timothy, To, Tomasco, C. Toy, D. Toy, A. Tran, K. Tran, Traverso, Tsunekawa, Tsutaoka, Uyesato, Valencia, Valenzuela, Van Mater, Vo, Volschenck, Wachholz, Wagner, Waite, Wakefield, Wardwell, Warmington, Warren, Watanabe, C. Weber, S. Weber, Wei, Weiner, J. West, R. West, White, Wieser-Wells, Willis, L. Witt, L. Witt, Woelfel, A. Wong, K. Wong, S. Wong, S. Wong, C. Woo, M. Woo, Wright, Yang, Yano, Yasavolian, Yawman, Yeazel, B. Yee, F. Yee, H. Yee, M. Yee, W. Yee, Yip, Yoshinobu, Young, Yuen, Zelman, Zhang, Zoolakis.

PRAC 101. Pharmacy Orientation (1)
A general survey of the scope of pharmacy including but not limited to educational and licensing requirements, career and occupational opportunities, pharmacy organizations (campus, local, state and national), basic pharmacy terminology and University and School of Pharmacy and Health Sciences regulations and pre-pharmacy requirements.

PRAC 121. Basic Life Support (2)
Training program to prepare instructors to teach basic life support courses.

PRAC 123. Health Care Delivery Systems (2)
The structure and function of Health Care in the U.S., with emphasis on the effects on the practice of pharmacy.

PRAC 125. Medical Microbiology (2)
Introduction to micro-organisms with emphasis on those microbes that cause infections in humans. Two lectures per week. *Prerequisite: professional school standing.*

PRAC 126. Home Health Care (2)
The practice of pharmacy in home health care settings. The clinical, legal and economic aspects of pharmacy services in various domiciliary settings. *Prerequisite: PRAC 162 or concurrent enrollment.*

PRAC 127a-f. RxTract Writer (1)
Students write and publish pharmaeotherapy reports in a newsletter format.

PRAC 128. Gerontology and Geriatric Therapy (2)
An exploration of the social and psychologic aspects of aging as well as the pharmacokinetic and pharmacodynamic changes related to elderly patients. In addition, this course examines common diseases of the elderly and how aging affects drug therapy. *Prerequisite: sixth semester standing only.*

PRAC 135. Student Journal Club (2)
An application of principles of literature analysis and evaluation including statistics and study design and coverage of therapeutics and treatment recommendations. *Prerequisite: PHAR 121.*

PRAC 137a-c. RxTract Editor (2)
Students organize and edit reports that are published in a newsletter format. *Prerequisite: Second year status.*

PRAC 138. Behavioral Medicine in Pharmaceutical Care (2)
Basic principles of behavior, behavioral medicine, and health psychology. Application of these principles to diabetes, asthma, chronic pain, cardiovascular disease, and pain. *Prerequisite: professional school standing.*

PRAC 139. Microcomputer Programming (3)
The essentials of microcomputer programming for the pharmaceutical sciences and for contemporary pharmacy practice.

PRAC 142. Clinical Laboratory and Physical Assessment Techniques (3)
Basic clinical laboratory medicine, physical assessment techniques and their application to the diagnostic process and utility in the monitoring of the patient to drug therapy. *Prerequisites: PMED 124, PHYP 127.*

PRAC 148. Introductory Biostatistics (2)
An introductory course in the terminology and use of biostatistics.

PRAC 149. Special Topics (1-4)

PRAC 152. OTC Therapeutics and Health Accessories (3)
Non-prescription drug therapy and use of health devices and accessories. *Prerequisites: PMED 144, PHYP 145, 146, concurrent enrollment in PHYP 156.*

PRAC 153. Pharmacy Management (3)
An analysis of the financial, personnel and product management systems applicable to the various environments in which pharmacy is practiced.

PRAC 154. Applied Finance for Pharmacy (1)
Practice in the application of business and financial principles and concepts to community environments using computer simulation. Four hours of discussion per week for six weeks. *Prerequisite: PRAC 153 or concurrent enrollment.*

PRAC 155. Pharmacy Management Information Systems (2)
An introduction to the people, equipment, procedures and data (Management Information Systems or MISs) used to produce professional and business statements about the structure of entities that enable health care professionals to make informed decisions.

PRAC 156. Opportunities in Pharmacy Practice (2)
Personal and business tools to make the transition from the academic environment to the daily practice of pharmacy, with an emphasis on entrepreneurship. *Prerequisite: PRAC 151.*

PRAC 157. Therapeutics I (3)
Consideration and precautions in the selection, dosing and monitoring of drugs used to treat commonly encountered medical problems. *Prerequisites: PRAC 142, PMED 141, PHYP 145, 146.*

PRAC 158. Therapeutics Seminar (1)
Seminar on topics covered in Therapeutics I and II. *Prerequisite: concurrent enrollment in PRAC 157 and 167 (second semesters).*

PRAC 163. Pharmacy Law and Ethics (3)
An examination of the laws and regulations pertaining to the control of drugs and devices and the legal framework and ethical considerations within which the practice of pharmacy exists.

PRAC 165. Business Law for the Pharmacist (2)
An introduction to the business laws affecting the pharmacist.

PRAC 167. Therapeutics II (3)
A continuation of the topics begun in Therapeutics I. *Prerequisites: PRAC 157, PMED 141, PHYP 145, 156.*

PRAC 168. Pediatric Pharmacokinetics (2)
This course is designed to provide an overview of the developmental patterns of drug absorption, distribution, metabolism and excretion in pediatric patients. The development of pediatric therapeutic drug regimens for selected drug groups will also be covered. *Prerequisites: PMED 141, permission of the instructor.*

PRAC 169. Therapeutics III (3)
Therapeutics for infectious diseases. Two lectures per week plus alternate week discussion sessions. *Prerequisites: PHYP 135, 145, PMED 154, PRAC 157.*

PRAC 171. Internal Medicine Rotation (6)

PRAC 172. Ambulatory Care Rotation (6)

PRAC 173. Hospital Pharmacy Practice Rotation (6)

PRAC 174. Community Pharmacy Practice Rotation (6)

PRAC 176a. Anticoagulation Clinic Rotation (6)

PRAC 176b. Antimicrobial Drug Monitoring Rotation (6)

PRAC 176c. Critical Care Rotation (6)

PRAC 176d. Drug Information Rotation (6)

PRAC 176e. Cardiology Rotation (6)

PRAC 176f. Clinical Pharmacokinetics Rotation (6)

PRAC 176g. Gynecology (OB/GYN) Rotation (6)

PRAC 176h. Home Health Care Rotation (6)

PRAC 176i. Industrial Pharmacy Rotation (6)

PRAC 176j. Geriatrics/Long Term Care Facility Rotation (6)

PRAC 176k. Psychopharmacy Rotation (6)

PRAC 176L. Institutional Pharmacy Administration Rotation (6)

PRAC 176m. Community Pharmacy Management Rotation (6)

PRAC 176n. Neurology Rotation (6)

PRAC 176o. Oncology Rotation (6)

PRAC 176p. Pediatrics Rotation (6)

PRAC 176q. Quality Assurance Rotation (6)

PRAC 176r. Non-Prescription Therapy and Management Rotation (6)

PRAC 176s. Surgery Rotation (6)

PRAC 176t. Total Parenteral Nutrition Rotation (6)

PRAC 176u. Drug Utilization Review Rotation (6)

PRAC 176v. Association Management Rotation (6)

PRAC 176x. Poison Control Rotation (6)

PRAC 176y. Women's Health Rotation (6)

PRAC 175. Elective Rotation (3)

PRAC 177. Elective Rotation (3)

PRAC 180. Clinical Nuclear Pharmacy Clerkship (15)
Resident training at an affiliated hospital to develop professional competency in clinical nuclear pharmacy. *Prerequisites: PRAC 239 and permission of the instructor.*

PRAC 181. Advanced Elective Rotation (3)

PRAC 182. Advanced Elective Rotation (3)

PRAC 184. Advanced Elective Rotation (6)

PRAC 185. Advanced Elective Rotation (6)

PRAC 191. Pharmacy Practicum (1-3)
Procedures related to pharmacy practice. Conference and practicum. May be re-elected for a maximum of three units. *Prerequisite: permission of the instructor.*

PRAC 193. Undergraduate Independent Study (1-5)
Library, conference and clinical studies in clinical pharmacy. *Prerequisite: permission of the instructor.*

PRAC 195, 196. Seminar (1-2, 1-2)
Analyses of current topics and research in health care administration. *Admission by consent only.*

PRAC 210. Advances in Drug Therapy (3) (S)
Discussion of new and experimental therapeutic applications of drugs, posology and specialized techniques of administration. Three lecture periods per week. *Prerequisites: PRAC 142 and permission of the instructor.*

PRAC 215. Advanced Microbiology (3)
Introduction to virology, microbial physiology, biochemistry and genetics. Three lectures per week. *Prerequisites: microbiology, biochemistry, senior or graduate standing. Offered alternate years.*

PRAC 220. Immunology (3)
The nature of antigens and antibodies and their interactions. Theories of antibody formation, mechanisms of natural and acquired immunity, auto-immune diseases, transplantation immunity, allergies. Three lectures per week. *Prerequisites: microbiology, biochemistry, senior or graduate standing. Offered alternate years. Alternates with PRAC 215.*

PRAC 249. Special Topics (1-4)

PRAC 282. Long-Term Care Practice (3)
A clinical pharmacy component in a long-term care facility with special emphasis on opportunities and research needs. This course is intended for the student who has not taken comparable course content. *Prerequisites: PRAC 142, 157, PMED 141 or equivalent; graduate standing and permission of the instructor.*

PRAC 283. Ambulatory Care Practice (3)
Application of clinical pharmacy to ambulatory care settings with special emphasis upon opportunities and research needs. P*rerequisites: PRAC 142, 157, PMED 141 or equivalent, graduate standing and permission of the instructor.*

PRAC 285, 286. Topics in Acute Care Practice (3, 3)
Application and investigation of clinical pharmacy in an acute care setting with emphasis on medical management of common diseases and national drug therapy. *Prerequisites: PRAC 142, 157, PMED 141.*

PRAC 293. Graduate Independent Study (1-5)
Laboratory problems and library research in selected topics. *Prerequisite: permission of the instructor.*

PRAC 295. Graduate Seminar (1) (S)
Review of current topics in pharmacy. All Master of Science degree candidates are required to attend and participate.

PRAC 297. Graduate Research (1-5)
May be repeated as progress warrants. *Prerequisites: graduate standing and permission of the instructor.*

PRAC 299. Thesis (4)
For M.S.degree candidates only.

PRAC 391. Independent Study (1-5)
May be repeated as progress warrants.

PRAC 395. Seminar (1)
All doctoral (Ph.D.) candidates arerequired to attend and participate in the seminars. No more than six credits may be used toward doctoral degree requirements.

PRAC 397. Advanced Research (2-12)
Limited to doctoral (Ph.D.) candidates. May be repeated as progress warrants.

PRAC 399. Dissertation (2-12)
Open only to doctoral (Ph.D.) candidates.

Department of Physiology and Pharmacology

James W. Blankenship, Chairman
Professors: Blankenship, Runion
Associate Professors: Livesey, Meerdink, Smith
Assistant Professors: Thomas
Lecturer: Ferguson

PHYP 108. Clinical Depression (1)
An introduction to the pathophysiology of depression with an emphasis on highlighting behavior that may mask depression in children, young adults and the elderly.

PHYP 109a. Neurology: Five Common Problems (Part I)
(1) An examination of five common neurologic problems. (Neurology Part I and Part II are given alternate years during the third semester each year.) Part I topics: headaches, multiple sclerosis, sleep disorders, obsessive compulsive disorders/ panic attacks and Alzheimer's. Five Friday afternoon 3-hour lectures plus a one-hour final. *Prerequisites: Open to third semester Pharm.D. students. Neurology: Five Common Problems (Part II) will be offered, but not required on alternate years. You may elect to take Part I and Part II in any sequence, or take one, but not the other.*

PHYP 109b. Neurology: Five Common Problems (Part II)
(1) An examination of five common neurologic problems. (Neurology Part I and Part II are given alternate years during the third semester each year.) Part II topics: diagnosis and treatment of Myasthenia gravis, narcolepsy, non-Alzheimer's cognitive problems, amyothrophic lateral sclerosis and peripheral neuropathy. Five Friday afternoon 3-hour lectures plus a one-hour final. *Prerequisites: Open to third semester Pharm.D. students. Neurology: Five Common Problems (Part I) will be offered, but not required on alternate years. You may elect to take Part I and Part II in any sequence, or take one, but not the other.*

PHYP 111. Veterinary Pharmacology (2)
The application of pharmacology to the problems of animal health. One two-hour lecture per week. *Prerequisites: PHYP 135 and 145.*

PHYP 112. Applied Pathology (2)
Lecture, discussion and demonstrations of pathological conditions in animals with comparison to human pathology. A study of tissue correlates in organic disease. Two one-hour periods per week. *Prerequisites: PHYP 137 and concurrent enrollment in PHYP 146.*

PHYP 113. Teaching Anatomy and Physiology Laboratory (1)
Preparation necessary to act as a teaching assistant in PHYP 117(L), 127(L), 133, 134, 135, and 136. *Prerequisites: permission of the instructor and grade of C or better in the course. Course may be repeated twice for credit.*

PHYP 117. Human Physiology and Anatomy I (3)
The first of a 3-semester series. General cell physiology, cytology, histology, central, peripheral, and autonomic neurophysiology. Basic medical vocabulary. Three hours of lecture per week.

PHYP 117L. Human Physiology and Anatomy Laboratory (.5)
The first of a 2-semester laboratory to accompany the first two components of the 3-semester series. Cytology, histology, neurologic assessment, and studies of the neural, integumentary, cardiovascular, respiratory, digestive, and renal organ systems. One 3-hour lab every other week. *Prerequisite: concurrent enrollment in PHYP 117 (Fall) and PHYP 127 (Winter).*

PHYP 124. Common Pediatric Disease States and Treatment (1)
An examination of the pathophysiology and treatment of the ten most frequent medical problems brought to the pediatrician in children of neonate to age eleven. *Prerequisites: PHYP 145, 156. This class is limited to 30 students.*

PHYP 127. Human Physiology and Anatomy II (4)
The second of a 3-semester series. Integrative study of physiology and functional human anatomy of the integumentary, cardiovascular, respirator, digestive and renal organ systems. Emphasis on inter-relations and clinical correlations to provide fundamental knowledge needed to understand the mechanisms of drug action on physiologic processes. Four hours of lecture per week. *Prerequisite: PHYP 117.*

PHYP 127L. Human Physiology and Anatomy Laboratory (.5)
The second of a 2-semester laboratory to accompany the first two components of the 3-semester series. Cytology, histology, neurologic assessment, and studies of the neural, integumentary, cardiovascular, respiratory, digestive, and renal organ systems. One 3-hour lab every other week. *Prerequisites: concurrent enrollment in PHYP 117 (Fall) and PHYP 127 (Winter).*

PHYP 133. Endocrinology (2)
The third course in the physiology and anatomy sequence. Endocrine control mechanisms of the body. An in-depth study of the functional anatomy and physiology of the endocrine system and selected pathophysiology of the hormonal regulation system. *Prerequisite: PHYP 127.*

PHYP 134. Cell Regulation and Oncology (1)
The controls governing normal cell division and replication. Disorders of cell replication, including neoplastic transformation at the molecular level. General principles of oncology. *Prerequisite: PHYP 127.*

PHYP 135. Pharmacology-Toxicology I (Nerve and Muscle) (4)
A study of the therapeutic and toxic effects produced by drugs and other chemicals and the neural mechanisms involved. Four one-hour lectures per week. *Prerequisites: PHYP 117, 127 and concurrent enrollment in PHYP 136.*

PHYP 136. Pharmacology and Toxicology Laboratory (1)
The activities of prototype medicinals are illustrated using laboratory animals. One three-hour laboratory each week. *Prerequisite: concurrent enrollment in PHYP 135.*

PHYP 145. Pharmacology-Toxicology II (Organ Systems) (4)
A study of the therapeutic and toxic effects produced by drugs and other chemicals and the alterations of homeostatic systems involved. Two two-hour lectures per week. *Prerequisites: PHYP 135, 137 and concurrent enrollment in PHYP 136.*

PHYP 147. Immunology and Inflammation (1)
Basic principles of immunology and inflammation with emphasis on the molecular and cellular level and how they relate to human disease. Case studies. *Prerequisites: PHYP 133, 134.*

PHYP 148. Cardiovascular and Renal Pathophysiology (1)
Pathophysiology of the cardiovascular and renal organ systems with emphasis at the molecular and cellular level. Case studies. *Prerequisites: PHYP 133, 134.*

PHYP 149. Special Topics (1-4)

PHYP 155. Pharmacogenetics and Gene Therapy (1)
An overview of the genetic factors influencing response to drugs and the application of

nucleic acid derivatives and genetic material to drug therapy.

PHYP 156. Disease States II (3)
Principles of infectious disease including AIDS, diseases of the respiratory tract, gastrointestinal tract including the hepotobiliary system, and the blood. The principles of autoimmune diseases are also discussed. *Prerequisite: PHYP 147, 148 or permission of the instructor.*

PHYP 158. Fundamentals of Toxicology (2)
An introduction to the general principles of toxicology. The toxic effects of various classes of nonmedical chemicals will be discussed with emphasis on the mechanisms of action, sites of action, signs and symptoms of toxicity, and the treatment of toxicity. *Prerequisite: PHYP 145.*

PHYP 180. Fundamentals of Neurologic Evaluation (2)
The principles of non-invasive investigation of the central and peripheral nervous systems are presented along with a systematic approach to developing a concise history of the presenting patient. Parkinsonism, multiple sclerosis, stroke, disc involvements, tremor variants and other diseases will be discussed as examples to illustrate investigative techniques useful to the pharmacist. *Prerequisites: PHYP 135, 145.*

PHYP 193. Undergraduate Independent Study (1-5)
Independent study involving library and laboratory work and the writing of a report. *Prerequisite: permission of the instructor.*

PHYP 201. Pro-seminar in Physiology and Pharmacology (2)
A seminar course designed to introduce students to the research literature in physiology and pharmacology and to the historical development of certain basic concepts in these areas. One two-hour lecture per week. *Prerequisite: graduate standing.*

PHYP 220. Biotechniques (2)
Presentation and utilization of laboratory techniques and instrumentation for biochemical analysis in the pharmaceutical sciences.

PHYP 246. Molecular Pharmacology of Nucleic Acids (3)
A study of the mechanisms by which drugs and other chemicals can affect gene expression and cell division through actions on DNA structure and nucleic acid and protein metabolism. *Prerequisite: graduate standing or permission of the instructor.*

PHYP 249. Special Topics (1-4)

PHYP 251. Cardiovascular Physiology and Pharmacology (3)
An in-depth study of the physiology and pharmacology of the cardiovascular system especially as related to current research and laboratory techniques. Two one-hour lectures and one laboratory session per week. *Prerequisites: graduate standing and permission of the instructor.*

PHYP 258. Toxicology (2)
A study of the adverse effects of various classes of non-medicinal chemicals with emphasis on the sites and mechanisms of action and on the critical evaluation of research literature. *Prerequisites: graduate standing and permission of the instructor.*

PHYP 263. Neurochemical Pharmacology (4)
A study of the neurobiology of nerve cells and the neurochemical pharmacology associated with function of the central and peripheral nervous systems. Two two-hour lectures per week. *Prerequisite: graduate standing.*

PHYP 273. Electrophysiological Technology (4)
Designed to introduce the fundamentals of electronic instrumentation, to provide training in electrophysiological techniques and to introduce research design procedures using electronic instrumentation to solve problems in physiology and pharmacology. Two one-hour lectures and two laboratory sessions per week. *Prerequisites: graduate standing and permission of the instructor.*

PHYP 274. Applied Clinical and Laboratory Electrophysiology (2-4)
Designed to provide experience in solving real problems in biomedical instrumentation, clinical evaluation or laboratory investigation utilizing an electronic approach to data gathering and analysis. *Prerequisites: PHYP 273 and permission of the instructor. Hours arranged, may be re-elected with permission for a maximum of six credits.*

PHYP 293. Graduate Independent Study (3)
Laboratory problems and library research in selected topics.

PHYP 295. Graduate Seminar (1)
Review of current topics in physiology, pharmacology and toxicology. *All Master of Science degree candidates are required to attend and to participate each semester. No more than 2 credits may be used toward master's degree requirements.*

PHYP 297. Graduate Research (1-5)
Research experiences for students at the M.S. level. *May be repeated as progress warrants. Prerequisites: graduate standing and permission of the instructor.*

PHYP 299. Thesis (4)
For M.S. degree candidates only.

PHYP 391. Independent Study (1-5)
Restricted to doctoral (Ph.D.) candidates. May be repeated with permission as progress warrants. No more than 8 credits may be used toward doctoral degree requirements.

PHYP 395. Seminar (1)
All doctoral (Ph.D.) candidates are required to attend and participate each semester. No more than six credits may be used toward doctoral degree requirements.

PHYP 397. Advanced Graduate Research (1-12)
Limited to doctoral (Ph.D.) candidates. May be repeated with permission as progress warrants. No more than 8 credits may be used toward doctoral degree requirements.

PHYP 399. Dissertation (1-12)
Open only to doctoral (Ph.D.) candidates. No more than 8 credits may be used toward doctoral degree requirements.

Interdepartmental

PHAR 111. Pharmacy Systems and Experience I (5)
An exploration of the place of pharmacy in the healthcare system with emphasis on oral, written, and electronic communication, and development of initial practice competencies. Five lectures per week or equivalent. *Prerequisite: first professional year standing.*

PHAR 112. Pharmacy Calculations and Statistics (2)
Mathematical and statistical concepts as they apply to the practice of pharmacy. Emphasis on weights and measures, with methodology for calculating doses and procedures to determine actual ingredients for various formulations. *Prerequisites: first year pharmacy status; concurrent enrollment in PHAR 111 and PHAR 114.*

PHAR 113. Integrated Biological Sciences I (5)
A conceptual study of cellular function and control mechanisms at the molecular level. *Prerequisites: first year pharmacy status or permission of the instructor.*

PHAR 114. Integrated Pharmaceutical Sciences I (5)
A study of dosage forms and the relationship between the physicochemical properties of

drugs and drug reaction. *Prerequisites: first year pharmacy status in the Doctor of Pharmacy program.*

PHAR 121. Pharmacy Systems and Experience II (3)
A continuation of PHAR 111; literature analysis, ethical dilemmas and the development of introductory practice competencies. *Prerequisites: PHAR 111 and second semester standing in the Doctor of Pharmacy Program.*

PHAR 122. Dermatological Pharmaceutical Care (2)
An integrated study of dermatological disorders with emphasis on triage, medication options, pharmaceutical care, and dispensing medications. *Prerequisites: Professional school standing and PHAR 111, PHAR 112 and PHAR 114.*

PHAR 123. Integrated Biological Sciences II (5)
An introduction to the biology, anatomy, and physical assessment of the nervous and cardiovascular organ systems. *Prerequisites: PHAR 113.*

PHAR 124. Integrated Pharmaceutical Sciences II (5)
A continuation of PHAR 114, with emphasis on parenteral dosage forms, biopharmaceutics, and basic pharmacokinetics. *Prerequisites: PHAR 114.*

PHAR 131. Pharmacy Systems and Experience III (2)
A continuation of PHAR 121; a practice-based experience with emphasis on oral communication, applications of pharmaceutical care, and problem solving in a community practice setting. *Prerequisites: PHAR 111, PHAR 121, third semester standing in the Doctor of Pharmacy Program.*

PHAR 132. Disease Processes (5)
A study of the human defense and disease processes including consideration of organ-specific disorders. *Prerequisites: Professional school standing and PHAR 123.*

PHAR 133. Integrated Biological Sciences III (5)
A continuation of PHAR 123 with emphasis on the anatomy and physiology of the respiratory, endocrine, hepatorenal, and gastrointestinal systems. *Prerequisites: Professional school standing and PHAR 123.*

PHAR 134. Mechanisms of Drug Action I (5)
Effects of therapeutic agents and the mechanisms whereby these effects are induced. Prototype medicinals will be presented to illustrate the effects of drug classes in the treatment of disease. *Prerequisites: PHAR 123 and concurrent enrollment in PHAR 133.*

PHAR 141. Pharmacy Systems and Experience IV (2)
A continuation of PHAR 131, a practice based experience focusing on the long term care patient. Two hours of discussion and two hours of experiential learning per week or equivalent. *Prerequisites: PHAR 111, PHAR 121, PHAR 131, and fourth semester standing in the Doctor of Pharmacy program.*

PHAR 142. Neuropsychiatric Pharmaceutical Care (3)
Pharmaceutical care for the patient with neurologic and psychiatric disorders, emphasizing appropriate use of drug therapy in the management of these disorders. *Prerequisite: Successful completion of all courses in semesters 1-3 of the Doctor of Pharmacy Program.*

PHAR 143. Cardiovascular Care (5)
Pharmaceutical care for the patient with cardiovascular diseases, emphasizing appropriate use of drug therapy in the management of the disease. *Prerequisites: Successful completion of all courses in semesters 1-3 of the Doctor of Pharmacy program.*

PHAR 144. Mechanism of Drug Action II (5)
A continuation of PHAR 134. Effects of therapeutic agents and the mechanisms whereby these effects are induced. Prototype medicinals will be presented to illustrate the effects of drug classes in the treatment of disease. *Prerequisites: Professional school standing; PHAR 123, PHAR 124, and PHAR 134.*

PHAR 151. Pharmacy Systems and Experience V (4)
A continuation of PHAR 141, financial and personnel issues in pharmacy practice; problem solving with a focus on pharmacoeconomics. Three and one-half lectures and one hour of discussion per week or equivalent. *Prerequisites: PHAR 111 through PHAR 141, and fifth semester standing in the Doctor of Pharmacy program.*

PHAR 153. Renal and Pulmonary Care (5)
Pharmaceutical care for the patient with respiratory and renal diseases, emphasizing appropriate use of drug therapy in the management of disease. *Prerequisites: Successful completion of all courses in semester 1-4 of the Doctor of Pharmacy program.*

PHAR 154. General Pharmaceutical Care (5)
Pharmaceutical care for the patient with common disorders, emphasizing appropriate use of drug therapy in the management of these disorders. *Prerequisites: Successful completion of all courses in semester 1-4 of the Doctor of Pharmacy program and PHAR 144.*

PHAR 161. Pharmacy Systems and Experience VI (4)
A continuation of PHAR 151, law, regulations and case law related to pharmacy practice; problem solving using practice scenarios. Three and one-half lectures and one hour of discussion per week or equivalent. *Prerequisites: PHAR 111 through PHAR 151, and sixth semester standing in the Doctor of Pharmacy program.*

PHAR 163. Infectious Diseases (5)
Pharmaceutical care for the patient with infectious disease, emphasizing appropriate use of drug therapy in the management of disease. *Prerequisites: Successful completion of all courses in semester 1-5 of the Doctor of Pharmacy program.*

PHAR 164. General Pharmaceutical Care II (5)
Pharmaceutical care for the patient with common disorders, emphasizing appropriate use of drug therapy in the management of these disorders. *Prerequisites: Successful completion of all courses in semester 1-5 of the Doctor of Pharmacy program.*

Physical Therapy

J. Carolyn Hultgren, Chair
Professor: Umphred
Associate Professors: Mansoor, Stockert
Assistant Professors: Hultgren, Lazaro, Mieras
Lecturers: Merrill, Serra, Solberg

Physical Therapy Mission

The mission of the Physical Therapist Professional Education Program (PTPEP) is to contribute to the University's mission by providing a learning environment of academic excellence and to ensure excellence in clinical education in order to facilitate and encourage acquisition of the knowledge, problem solving and clinical skills as well as of the humanitarian and professional values and behaviors necessary for the successful practice of physical therapy. The program is committed to educating men and women to lead useful and productive lives in response to their personal needs, the needs of society, and of the profession. Programs of learning are offered to

prepare students for entry into the profession of physical therapy as well as to prepare graduates for lifelong learning.

The mission of the Post-Professional Master of Science Program in Physical Therapy is to contribute to the University's mission by providing an enriched, student-centered, adult learning environment for professional physical therapists who wish to pursue additional academic education beyond the educational program that prepared them to enter practice as physical therapists. The educational focus is individualized to enable each student to develop analytical, evaluative and synthesis strategies that will foster leaders within the profession of physical therapy, the health care delivery system and society.

Programs Offered

The Department of Physical Therapy offers two separate and distinct master's degree programs, both of which currently culminate in the awarding of the Master of Science degree. The Physical Therapist Professional Education Program is designed for individuals seeking to enter the physical therapy profession. The Physical Therapist Post-Professional Education Program is designed for individuals who currently hold a bachelor's degree in physical therapy from an accredited physical therapist professional education program and are seeking an advanced degree in the field of physical therapy.

Master of Science Degree Professional Program

The Physical Therapist Professional Education Program is a highly structured 21-month course of study, including the summer session between two consecutive academic years. Coursework includes foundational sciences (anatomy, physiology, pathophysiology), clinical sciences, management of professional life and practice, and substantive clinical practical experience.

A major element of the program is the opportunity for students to be involved in meaningful professional clinical experiences under the supervision of carefully selected practitioners. Opportunities include acute care facilities, skilled nursing facilities and rehabilitation sites in the Central Valley, in the San Francisco Bay Area, in Southern California and in selected sites out of state. All students must successfully complete the clinical internships requirements as an inherent part of the professional program.

Prerequisites to participation in the clinical internships are:

1. Satisfactory completion of all other required courses with a minimum GPA of 3.0;
2. Admission to degree candidacy; and
3. Permission of the department faculty.

To receive the Master of Science degree in physical therapy, each student must demonstrate clinical competence as well as academic success. Academic success means:

1. Maintenance of a cumulative GPA of at least 3.0
2. No grade below a B- (2.7) in any course at the 200 level will be counted toward the degree program.

Clinical competence means:

1. The ability to evaluate individuals with movement dysfunction and identify problems appropriate for physical therapy intervention.
2. The ability to establish appropriate treatment goals and plans, including specific physical therapy procedures or modalities.
3. The ability to effectively apply the various physical therapy procedures and modalities.
4. The ability to relate effectively to clients, their families and other health care providers.

Assessment of these competencies will be made by faculty before recommending award of the degree.

Accreditation and Licensing

The Physical Therapy Program is accredited by the Commission on Accreditation of Education of the American Physical Therapy Association. Successful completion of an accredited program qualifies the graduate to take the licensing examination.

Persons applying for admission to the Physical Therapy Program should be aware that the Physical Therapy Practice Act in the State of California requires that, in addition to successful completion of an accredited physical therapy education program, an applicant for a license to practice physical therapy in California shall be "*. . . not addicted to alcohol or any controlled substance . . . and not have committed acts or crimes constituting grounds for denial of licensure . . .*" Many other states have similar provisions in their licensure laws. An individual who believes he/she may not be eligible for licensure as a physical therapist on this basis, should contact the California Physical Therapy Examining Committee, 1430 Howe Avenue, Sacramento, CA 95825 (or similar agency in other states), prior to applying for admission to the Physical Therapy Program.

Admission to the program is selective and limited to 32 openings each year.

Prerequisites for admission to the program include the following:

1. Bachelor's degree with a major of the student's choice.
2. Successful completion of the listed prerequisite courses:
   a. Prerequisite courses must be passed with a grade of C or above.
   b. Prerequisite courses are to be taken on a graded basis; pass/fail courses are not acceptable.
   c. Biological science, chemistry and physics courses must all include significant laboratory experiences.
   d. It is strongly suggested that the science courses be distributed over the four years with physics being taken in the fourth year.
   e. Correspondence or extension coursework is not acceptable.
3. In addition, the applicant must have observational or work experience (volunteer or paid) in physical therapy practice settings which includes some acute care experience.
4. The GRE General Test must be taken no later than November 30 preceding the application deadline. The test scores must be less than five years old.
5. A personal interview may be required at the invitation of the selection committee.

Prerequisite Courses

General Biology with lab:

4 semester credits/5-6 quarter hours minimum. If the course is a two- or three-term sequence, all terms must be taken.

Human Anatomy with lab:

4 semester credits/5-6 quarter hours minimum. Vertebrate anatomy acceptable if human anatomy not available.

Human Physiology with lab:

4 semester credits/5-6 quarter hours minimum. Animal physiology acceptable if human physiology not available.

Note: A single-semester course combining anatomy and physiology does not meet this requirement. However, a two-semester sequence of the combined subjects will meet this requirement.

Microbiology:
4 semester credits/5-6 quarter hours minimum. Epidemiology or bacteriology courses may be acceptable if microbiology not available.

General Chemistry with lab:
8 semester credits/12 quarter hours minimum. The standard two-semester or three-quarter course.

General Physics with lab:
8 semester credits/12 quarter hours minimum. The standard two-semester or three-quarter course. Calculus-level physics not required but would be accepted.

Abnormal Psychology plus one other psychology course:
6 semester credits/9 quarter hours minimum.

Composition/Expository/ Advanced Writing.:
6 semester credits/9 quarter hours minimum. College freshman-level course or above. Basic or remedial composition and literature courses do not meet this requirement.

Note: Courses other than composition or writing courses that meet a university's writing requirement may be considered as meeting this requirement upon documentation from the institution's catalog.

Computer Literacy Course:
3 semester credits/4-5 quarter hours minimum. A basic course which includes experiences in use of and programming of computers as well as use of software. Documented lengthy and extensive computer use in a health profession setting may substitute for the required course.

Medical Terminology Course:
3-4 semester credits/4-5 quarter hours minimum. A basic course in bio-scientific terminology, analyzing the Latin and Greek elements in scientific English.

Completed applications must be postmarked by January 4 of the year the student wishes to enter; students are admitted to begin classes only in the fall of each year. Admission to the program does not guarantee successful completion; ability to work successfully in clinical settings is as important as academic achievement.

For further information and application forms, contact the Graduate School. When requesting information or application forms, it is important that one specify which program information/application is requested (professional or post-professional).

Master of Science Degree Post-Professional Program

The Post-Professional Education Program is designed to prepare practicing physical therapists beyond the professional education level, to develop skills, knowledge and problem solving strategies to become or continue to lead the profession into the 21st century. The philosophy of this post-professional program is to help physical therapists: 1) investigate paradigms within the field of physical therapy and related fields; 2) develop advance clinical expertise within one area of professional interest; 3) demonstrate research and writing/communication skills necessary for the future development and credibility of the profession; and 4) develop a commitment to learning as a lifelong process for personal professional advancement.

The post-professional program provides three general areas of professional focus: 1) physical therapy education; 2) physical therapy practice; 3) physical therapy administration.

Physical Therapy Education:
The focus of this tract is on development of teaching skills in a specific content area of interest to the student within the practice of physical therapy and to facilitate the growth of a potential academician.

Physical Therapy Practice:
The emphasis of this focus is for the physical therapist practitioner to develop advance skills in clinical management of clients. This program emphasizes use of the resources of basic science knowledge in the process of developing advanced clinical competence and will include significant post-professional internships in clinical settings.

Physical Therapy Administration:
This area is designed for physical therapists seeking additional preparation in business and management of physical therapy/health care facilities. Various aspects of the management of health care delivery systems, in addition to general business management and administration sciences are emphasized. In addition to the Master of Science in physical therapy, students choosing this focus will be offered the option of taking an additional year and completing the MBA program within the Eberhardt School of Business.

Admission Requirements

In addition to the several Graduate School admission requirements, applicants are required to have:

1. A bachelor's degree from an accredited physical therapist professional education program or an equivalent education program outside of the United States and evidence of current licensure to practice as a physical therapist in at least one state in the United States.
2. Application to the Graduate School including the filing of test scores for the Graduate Record Examination (taken within the last five years) and all undergraduate and graduate academic transcripts.
3. Three letters of recommendation supporting the suitability of the applicant for graduate studies and potential for contribution to the field of physical therapy.
4. Evidence of qualities of character in keeping with the philosophy and standards of this University.

Students who do not meet all of the above requirements may be considered on a provisional basis. Performance in prior coursework, standardized test scores and career experience are all considered in the admission decision. An interview may be required at the invitation of the Post-Professional Selection Committee.

Degree Requirements

A minimum of 33 units of approved graduate work including:

1. The core curriculum, required for all students in the post-professional program, consisting of three courses for a total of 9 units;
2. The required courses in the selected area of focus, plus the appropriate number of elective courses for that area of focus;
3. Six units of thesis project culminating in a physical therapy project report prepared as a traditional thesis or as a finished project as determined by the student's research committee;
4. A grade point average of 3.0 or better.

Course Offerings

PTHR 201. Gross Human Anatomy (4)
This course is a lecture and lab course that permits students "hands-on" experience with human structure by dissection. Emphasis is placed on bone-muscle-function relationships

of appendicular and axial skeletons as relevant to physical therapy. Muscle origins, insertions, innervations, and spatial relationships will be a primary concern of the class, as will clinical relevance of this knowledge. *Prerequisite: admission to the Physical Therapy Professional Program (Fall).*

PTHR 202. Exercise Physiology in Health Science (2)
This course is the first in a series of courses designed to give students a useful background in physiology, exercise physiology and pathophysiology. The three courses, PTHR 202, PTHR 204, and PTHR 206 are designed to give students a solid understanding of normal physiological function, how this function changes with exercise and how this function changes with disease. *Prerequisite: admission to the Physical Therapy Professional Program (Fall).*

PTHR 204. Cardiopulmonary Physical Therapy (3)
This course sequence (PTHR 204 and PTHR 206) involves the detailed analysis of the structure, function and pathology of the various organs and systems primarily contained within the thoracic and abdominal cavities of the human body. The course has a lecture component (including audiovisual demonstrations and discussions) and a laboratory component (including cadaver dissection as well as evaluation and treatment procedures). *Prerequisites: completion of PTHR 201 and PTHR 202 with a grade of B- or better (Spring).*

PTHR 205. Clinical Kinesiology I (3)
Detailed kinesiological and biomechanical analysis of both normal and abnormal muscle action(s) and joint motion(s) as related to human functional abilities or deficits and to patient care. *Prerequisite: admission to the Physical Therapy Professional Program (Fall).*

PTHR 206. Pathophysiology (2)
This course continues the sequence with PTHR 204 and involves the detailed analysis of the structure, function and pathology of the various organs and systems primarily contained within the thoracic and abdominal cavities of the human body. The course has a lecture component (including audiovisual demonstrations and discussions) and a laboratory component (including cadaver dissection as well as evaluation and treatment procedures). *Prerequisites: completion of PTHR 201, 202 and 204 with a grade of B- or better (Summer).*

PTHR 207. Clinical Kinesiology II (3)
This course continues the sequence with PTHR 205 and includes a detailed kinesiological and biomechanical analysis of both normal and abnormal muscle action(s) and joint motion(s) as related to human functional abilities or deficits and to patient care. *Prerequisites: completion of PTHR 201 and 205 with a grade of B- or better (Spring).*

PTHR 209. The Nervous System and Behavior (4)
This course is designed to give students an understanding of the structure and function of the nervous system, how it controls movement and behavior, and how deficits in the system affect movement and behavior. *Prerequisites: completion of PTHR 201, 202, 203 with a grade of B- or better or permission of the instructor (Spring).*

PTHR 213. Physical Agents Modalities/Electrotherapy (3)
This course will enable the student to properly select and safely and competently apply the various physical and electrical agents used by physical therapists. Through the use of case studies and hands-on practice using the modalities for simulated patient problems, students will gain skill in selecting the appropriate modality and assessing the effectiveness of treatment. Emphasis will be placed on knowledge of normal and abnormal physiological responses to each modality, and the role of physical and electrical modalities in the total management of patients. *Prerequisites: completion of PTHR 201, PTHR 202, PTHR 221 and PTHR 215 with a grade of B- or better (Spring).*

PTHR 215. Physical Therapy Examination and Evaluation (4)
This course is a lecture and lab course designed for students to learn basic examination techniques employed in the practice of physical therapy, including history taking, vital signs, inspection, palpation, range of motion measurement, manual muscle testing, sensory testing, selected special tests and other selected functional tests. *Prerequisite: admission to the Physical Therapy Professional Program (Fall).*

PTHR 217. Therapeutic Exercise: Basic Theory and Application (3)
This course is a lecture and lab course that provides the theories and principles of therapeutic exercise. Included are the physiological bases, procedures and techniques of functional mobility training, gait training with assistive devices, stretching, strengthening and power-building exercises. The course includes Proprioceptive Neuromuscular Facilitation (PNF), aquatic therapy, and orthopedic lecture topics. *Prerequisite: admission to the Physical Therapy Professional Program (Spring).*

PTHR 219. Pediatric Physical Therapy (1)
This course will focus upon common pediatric problems encountered by physical therapists. The students will analyze a variety of impairments and disabilities seen in children, formulate diagnosis, prognosis and discuss possible intervention strategies commonly practiced by physical therapists. *Prerequisites: successful completion of PTHR 201, PTHR 202, PTHR 205, PTHR 215 with a grade of B- or better (Spring).*

PTHR 221. Introduction to Physical Therapy and Patient Care (3)
This course is a lecture and lab course and provides the student with knowledge of basic techniques of patient care, awareness of ethical, interpersonal and inter-professional issues in professional practice. *Prerequisite: admission to the Physical Therapy Professional Program (Fall).*

PTHR 225. Analysis of Human Movement through the Life Span (3)
This course is a lecture and lab course that covers visual analysis and differentiation between normal patterns of movement and movement deviations across the life span. Analytical and practical application of motor control and motor learning theory is interwoven throughout. Medical and pathological aspects of neurological conditions as well as physical assessment and appropriate physical therapy treatment techniques. *Prerequisites: completion of PTHR 204, 209, 213, and 217 with a grade of B- or higher or permission of the instructor (Summer).*

PTHR 227. Clinical Experience I (0)
A one-week full-time clinical experience for practicing learned physical therapy intervention skills and other professional behaviors under the supervision of qualified licensed physical therapists. *Prerequisite: admission to the Physical Therapy Professional Program (Spring).*

PTHR 229. Clinical Experience II (0)
A two-week full-time clinical experience for practicing learned physical therapy intervention skills and other professional behaviors under the supervision of qualified licensed physical therapists. *Prerequisite: admission to the Physical Therapy Professional Program (Summer).*

PTHR 231. Clinical Kinesiology III (2)
Detailed analysis of the components of normal gait and gail deviations. Includes content on prescription, fitting and use of various orthotic and prosthetic devices. *Prerequisite: admission to the Physical Therapy Professional Program (Summer).*

PTHR 233. Research: Theory and Application (2)
Introduction to basic research methodology and design. Emphasis is also placed on critical analysis of the clinical research literature. *Prerequisite: admission to the Physical Therapy Professional Program (Fall).*

PTHR 237. Medical Conditions and Treatment Procedures (2)
This lecture and lab course involves a study of various medical conditions, their etiologies, signs and symptoms, and patient management by physical therapists and other health professionals. *Prerequisites: admission to the Physical Therapy Professional Program and completion of PTHR 204 with a grade of B- or better (Summer).*

PTHR 239. Administration and Management of Physical Therapy Services I (2)
This course is designed to provide the essential elements and principles of middle and upper management in health care facilities with emphasis on the physical therapy department. *Prerequisite: admission to the Physical Therapy Professional Program (Summer).*

PTHR 239a. Administration and Management of Physical Therapy Services (3)
This course is similar to PTHR 239 with the addition of a paper analyzing a health care setting management problem. *Prerequisite: admission to the physical therapy post professional program or permission of the instructor (Summer).*

PTHR 241. Administration and Management of Physical Therapy Services II (3)
A continuation of PTHR 239 with emphasis on the physical therapy profession as it is affected by health care delivery systems, professional organization, state and federal laws, ethics, and issues and trends. Planning and establishing a physical therapy department/ practice is the topic of group projects. Job search, interviewing, and planning professional development are included. *Prerequisite: completion of PTHR 239 (Fall).*

PTHR 247. Neurological Conditions and Treatment Procedures (4)
This lecture and lab course provides for development of a theoretical framework for use of intervention techniques as well as a justification for their use. Development of examination, evaluation, diagnostic, prognostic and treatment planning skills are threaded throughout the course. The course gives the student a total framework in which intervention techniques can be included. Discussion of treatment principles is based on a neurophysiological and motor control/ learning theory rather than according to individual philosophy. Identification of clinical problems and development of individual treatment programs based on sound reasoning is a major goal to be accomplished by the end of the semester. *Prerequisites: completion of PTHR 206, 225, 231, and 237 with a grade of B- or better, or permission of the instructor (Fall).*

PTHR 249. Psychosocial Aspects of Illness and Disability (3)
This course is a survey of psychological and social factors related to physical illness and disability. Scientific, theoretical and clinical literature are highlighted with emphasis upon understanding the impact of illness and/or disability in terms of the individual, the family, and the health care professional. Stress management and professional burn unit are included. *Prerequisite: admission to the Physical Therapy Professional Program or permission of the instructor (Fall).*

PTHR 251. Clinical Experience III (0)
A two-week full-time clinical experience for practicing learned physical therapy intervention skills and other professional behaviors under the supervision of qualified licensed physical therapists. *Prerequisite: admission to the physical therapy program (Fall).*

PTHR 253. Seminar (2)
This course is conducted in lecture and small group discussion sessions. Major focus is on physical therapy practice in a variety of clinical settings where clinical decision-making processes may be affected by that environment. *Prerequisite: admission to the Physical Therapy Professional Program (Fall).*

PTHR 254. Foundations of Teaching and Learning in the Health Sciences (3)
This course focuses on teaching skills necessary for effective interaction with the classroom setting with emphasis on the adult learner. Writing objectives and test questions, teaching strategies, learning styles, teaching aids are included. *Prerequisite: graduate student status, current faculty, or permission of the instructor (Spring).*

PTHR 255. Paradigm Analysis within Physical Therapy (3)
Students analyze various models to develop examination, assessment, diagnostic and intervention procedures used in clinical problem solving. Parameters of practice in all areas of physical therapy are included, *Prerequisite: admission to the Physical Therapy Post-Professional Program or permission of the instructor (Fall).*

PTHR 256. Society and Health Care Today and Tomorrow: Impact on Physical Therapy (3)
This course investigates sociological trends in health care delivery today and potential trends tomorrow. Legislative decisions, societal needs and trends, traditional and non-traditional health care services are included. *Prerequisite: admission to the Physical Therapy Post-Professional Program or permission of the instructor (Spring).*

PTHR 261. Manual Therapy (4)
A lecture and lab course including a study of orthopedic conditions. Emphasis is on physical therapy examination, assessment and intervention techniques for patients with orthopedic impairments and disabilities. Includes some lectures on medical and surgical aspects of selected orthopedic problems. *Prerequisites: admission to the Physical Therapy Professional Program and completion of all courses through the first 3 semesters of the program with a grade of B- or better (Fall).*

PTHR 263. Clinical Internship I (4)
Full-time six-week clinical experience in various settings under supervision of licensed physical therapists. *Prerequisite: completion of all required courses in the Physical Therapy Professional Program with a 3.0 GPA (Spring).*

PTHR 265. Clinical Internship II (4)
Full-time six-week clinical experience in various settings under supervision of licensed physical therapists. *Prerequisite: completion of all required courses in the Physical Therapy Professional Program with a 3.0 GPA (Spring).*

PTHR 267. Clinical Internship III (4)
Full-time six-week clinical experience in various settings under supervision of licensed physical therapists. *Prerequisite: completion of all required courses in the Physical Therapy Professional Program with a 3.0 GPA (Spring).*

PTHR 269a. Post-Professional Internship: Administrative/Business Focus (3)
An administrative experience designed to meet the specific needs of the student. Requires at least 100 hours of internship activities. *Prerequisite: admission to the Physical Therapy Post-Professional Program or permission of the instructor.*

PTHR 269b. Post-Professional Internship: Administrative/Business Focus (0)
An administrative experience designed to meet the specific needs of the student. Requires at least 100 hours of internship activities. Additional requirement(s) required by the MBA summer internship program will be incorporated. *Prerequisites: admission to the Physical Therapy Post-Professional Program and selecting the MBA focus.*

PTHR 269c. Post-Professional Internship: Educational Focus (3)
An educational experience designed to meet the specific needs of the student. Includes serving as a teaching assistant in a course in the Physical Therapy Professional Program. *Prerequisite: admission to the Physical Therapy Post-Professional Program or permission of the instructor.*

PTHR 269d. Post-Professional Internship: Clinical Practice Focus I (3)
A clinical experience designed to meet the specific needs of the student. Requires at least 80 hours of internship activities dealing with clients of the student's area of special interest. Includes a weekly seminar for discussion of clinical problems. *Prerequisite: admission to the Physical Therapy Post-Professional Program or permission of the instructor.*

PTHR 269e. Post-Professional Internship: Clinical Practice Focus II (3)
A clinical experience designed to meet the specific needs of the student. Requires at least 80 hours of internship activities dealing with clients of the student's area of special interest. Includes a weekly seminar for discussion of clinical problems. *Prerequisite: admission to the Physical Therapy Post-Professional Program or permission of the instructor.*

PTHR 291. Independent Graduate Study (1-4)

PTHR 297. Research (1-3)
Students carry out and complete a research project designed during PTHR 237. *Prerequisite: admission to the Physical Therapy Professional Program (Spring, Summer, Fall).*

PTHR 299. Thesis (1-6)

Speech-Language Pathology

Simalee Smith-Stubblefield, Chair
Associate Professors: Chambers, Fogle, Hanyak, Smith-Stubblefield
Assistant Professor: Blanchard, Ward-Lonergan
Clinical Coordinators: Flores, Nimtz
Clinical Instructors: Hirota, Kost, Savage

Mission

The mission of the Speech-Language Pathology department is to prepare reflective speech-language pathologists for lifelong success by providing an excellent, student-centered learning environment. Our students are mentored in developing leadership, critical thinking skills, and a strong commitment to their profession and society. These efforts are assisted by the department's commitment to professional and liberal arts programs. The faculty is dedicated to continued professional growth through clinical practice, scholarly activity, and service to the profession and the community. The graduate professional preparation program is developed in accordance with state and national accreditation standards and guidelines to ensure that graduates provide exemplary professional practice throughout their careers.

The Study of Speech-Language Pathology

Speech-Language Pathology is a professional program of habilitative and rehabilitative services. This program leads to varied occupations involved with persons with communication handicaps.

Speech-language pathologists work with people of all ages and are prepared to evaluate speech and language problems. They plan and carry out programs to correct or modify the disorder, or develop other means of communicating. Some examples of the types of problems include articulation disorders, stuttering, voice, delayed language development and aphasia.

The Bachelor of Science in Speech-Language Pathology is a pre-professional program leading toward a career in rehabilitative services for speech, hearing and language impaired individuals. The department has a designed major which, when combined with the graduate program, leads to the academic and in-residence clinical requirements for the Certificate of Clinical Competence in Speech-Language Pathology. This certificate is awarded by the American Speech-Hearing-Language Association.

Special Features

In addition to demonstrating satisfactory academic performance, students will be allowed to demonstrate clinical competence. This includes:

1. The ability to identify individuals with communication handicaps.
2. The ability to perform comprehensive evaluation of individuals with communicative handicaps.
3. The ability to effect positive changes in the communicative skills of individuals with communicative handicaps.
4. The ability to relate effectively to clients, their families and fellow professionals.
5. The ability to conduct oneself as a prospective professional, accepting the responsibilities and exhibiting the interest which this requires.

Clinical competencies are assessed throughout the clinical experience and are considered in the recommendation to grant the B.S. degree.

Clinical practicum experiences are performed in the University's Speech, Hearing and Language Center and the Stockton Scottish Rite Childhood Language Disorders Center. These local centers allow the student to directly observe and participate in the habilitative and rehabilitative processes. At the junior level, students may participate in a junior clinician role in conjunction with more advanced students. At the senior level, students are directly responsible for their own clients in the Center. All clinical experiences are under the direct observation of licensed and certified personnel.

Accreditation

The Department of Speech-Language Pathology is accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association.

Speech-Language Pathology Facilities

The department is housed in quarters designed specifically for the clinical aspects of the program. Observation mirrors and audio-monitoring systems are installed in each of the 15 therapy rooms. The facility allows for close student-faculty interaction and clinical experiences incorporating all persons involved in the therapeutic process. The Center strengthens the clinical aspect of the program and serves to abet the development of strong clinical skills.

Career Options

Speech-language pathologists are members of health care teams. Depending upon the nature of the problem, they may work with physicians, surgeons, orthodontists, psychologists, educators, counselors or social workers. Employment settings of the speech-language pathologist include public schools, clinics, hospitals and private practice.

Recommended High School Preparation

A strong college preparatory program will serve the student very well in this major. Although not required, experience in a foreign language, good writing skills, behavioral and biological sciences and mathematics will enhance the student's skills for performance in the major.

Typical First-Year Program

No courses within the major are required during the first year. However, students interested in the major are encouraged to take SLPA 51-Introduction to Speech-Language Pathology for an overall survey of the field during their first semester. The student is also encouraged to take a broad selection of courses in the Humanities, Social and Behavioral Sciences and the Physical Sciences toward fulfillment of the general education requirements.

Program Requirements

The B.S. degree in Speech-Language Pathology is viewed as a pre-professional degree which requires a year of clinical experience. In order to participate in Beginning and Intermediate Clinical Practicum, the student must have a 3.0 GPA in the major and successfully complete a junior clinician experience.

In order to be certified, licensed and/or credentialed in the field the student must acquire the Master's degree. Further information regarding advanced work may be obtained by contacting the Speech-Language Pathology Department.

Major Requirements		*Units*
51	Introduction to Speech-Language Pathology	3
101	Clinical Methods I	1
103	Clinical Methods II	1
105	Clinical Methods III	1
107	Clinical Methods IV	1
121	Speech and Language Development	3
123	Language Disorders I	3
125	Articulation and Phonology	3
127	Audiology	3
129	Anatomy and Physiology of Speech	3
131-	Phonetics	3
137	Speech and Hearing Science	3
139-	Diagnostics	3
141	Research Methods –Speech-Language Pathology	3
143	Multicultural Populations	3
145	Disorders of Fluency	3
147	Neuroanatomy and Physiology	3
183	Diagnostic Lab	1
189a	Beginning Clinic	1
189b	Intermediate Clinic	1
PSYC 29	Child Development	4
MATH 35, 37, or PSYC 103	Statistics	4
Bio./Physical Science Course selected from the following:		
BIOL 11	Human Anatomy and Physiology	4
BIOL 41	Introduction to Biology	4
PHYS 17	Concepts of Physics	4
PHYS 39	Physics of Music	4
and	Introduction to Psychology/ Sociology Course	4
	Major Total	*74*

Speech-Language Pathology Minor

A minor in Speech-Language Pathology would provide a basic understanding of normal speech, language and hearing processes, as well as an introduction to the identification of speech and language disorders.

The minor would serve as an adjunct to such programs as Education, Music Therapy, Pre-Physical Therapy, Recreation Therapy, English (Linguistics), Psychology, Communication and Pre-Health Profession Preparation.

Requirements (21 units)

12 units of the following core courses:

SLPA 51	Introduction to Speech-Language Pathology
SLPA 121	Speech/Language Development
SLPA 127	Audiology
SLPA 131	Phonetics
9 units	selected from the following in consultation with a departmental adviser.
SLPA 53	Sign Language I
SLPA 123	Language Disorders I
SLPA 125	Articulation and Phonology
SLPA 129	Anatomy and Physiology of Speech
SLPA 137	Speech and Hearing Science
SLPA 143	Multicultural Populations
SLPA 147	Neuroanatomy and Physiology

A minimum of 12 units must be completed at the University of the Pacific.

Course Offerings

SLPA 51. Introduction to Speech-Language Pathology (3)
An introduction to language, voice, fluency, articulation and hearing disorders in children and adults. Open to non-majors.

SLPA 53. Sign Language I (3)
An introduction to comprehension and expression through sign language. Open to non-majors.

SLPA 55. Sign Language II (3)
A major part of the instruction for this course will be conducted in sign language. This course requires active participation by the students to further develop beginning sign language skills. *Prerequisite: SLPA 53.*

SLPA 101. Clinical Methods I (1)
Observations and analysis of: therapy, materials, teaching methods, behavioral management and data collection. *Prerequisite: concurrent enrollment in SLPA 125.*

SLPA 103. Clinical Methods II (1)
Methods, materials, treatment of communicative disorders: staffings, case studies, presentations, demonstrations, and class discussion. *Prerequisite: concurrent enrollment SLPA 123.*

SLPA 105. Clinical Methods III (1)
To assist the beginning clinician with: writing professional reports, accountability issues, exploring a variety of therapy delivery models. *Prerequisite: concurrent enrollment in SLPA 189a.*

SLPA 107. Clinical Methods IV (1)
Discussion and analysis of current clinical experiences. Exploration of different disorders, populations and work environments. *Prerequisite: concurrent enrollment in SLPA 189b.*

SLPA 121. Speech and Language Development (3)
A course designed to provide basic information relative to speech and language acquisition in normal children. Phonological, morphological, syntactic, semantic and pragmatic development will be considered, as well as psychosocial and intellectual correlates. Open to non-majors.

SLPA 123. Language Disorders I (3)
An introduction to the speech, language and behavioral characteristics associated with mental

retardation, hearing impairment, emotional disturbance and neurological involvement. Discussion of appropriate diagnosis and therapeutic techniques. *Prerequisite: concurrent enrollment in SLPA 103.*

SLPA 125. Articulation and Phonology (3)
Etiology, development and management of articulation and phonologic disorders. *Prerequisite: concurrent enrollment in SLPA 101.*

SLPA 127. Audiology (3)
Introductory course in audiology, emphasizing basic acoustics and psychoacoustics, anatomy and physiology of the ear, hearing measurement (pure-tone, speech and tympanometry) and types and causes of hearing impairment. Open to non-majors.

SLPA 129. Anatomy and Physiology of Speech (3)
Examination of the anatomy and physiology of the mechanisms of speech and hearing. Open to non-majors.

SLPA 131. Phonetics (3)
Analysis and classification of the phonemes of standard and nonstandard dialects of American English; intensive practice in the use of the International Phonetic Alphabet; intensive use of Visual Phonics; and the application of phonetics to communicative disorders.

SLPA 137. Speech and Hearing Science (3)
Provides the student with academic and laboratory training in the sciences that provide the foundation of clinical practice in communication disorders. Students will gain proficiency with various types of clinical equipment through hands-on experience.

SLPA 139. Diagnostics (3)
Principles, models and methods of assessment of speech and language disorders, including interview, testing and reporting procedures. *Prerequisite: GPA in the major of 3.0 or better.*

SLPA 141. Research Methods – Speech-Language Pathology (3)
Exploration of various research methodologies and statistical designs applicable to communicative disorders. Study and critical evaluation of empirical studies from current literature. Scholarly and professional writing skills. Application of the scientific method, including use of qualitative and quantitative data, to assessment and treatment of clients with communicative disorders.

SLPA 143. Multicultural Populations (3)
Theoretical models of normal second language acquisition and bilingualism; emphasis on relationship to accurate identification of communication disorders. Distinguishing between language differences due to differing cultural linguistic variables and underlying, cross-lingual language impairment. Current research and trends in diagnosis and re-mediation techniques for multicultural clients. Problem-solving approaches for specific clinical cases. *Prerequisite: SLPA 139.*

SLPA 145. Disorders of Fluency (3)
Introductory course in fluency disorders (stuttering) with emphasis upon etiology, theory, diagnosis, and treatment of this speech disorder.

SLPA 147. Neuroanatomy and Physiology (3)
A study of the structure and function of the human nervous system as it relates to speech, hearing and language. *Prerequisite: SLPA 129.*

SLPA 183. Diagnostic Laboratory (1)
A weekly three-hour lab experience that includes demonstration and practicum in assessment of speech and language disorders. *Prerequisite: concurrent enrollment in SLPA 139.*

SLPA 189a. Beginning Clinic (1)
Prerequisites: SLPA 101, 103, 123 and 125; 3.0 GPA in the major. Concurrent enrollment in SLPA 105. Letter grade only.

SLPA 189b. Intermediate Clinic (1)
Prerequisites: SLPA 101, 103, 123 and 125; 3.0 GPA in the major. Concurrent enrollment in SLPA 107. Letter grade only.

SLPA 191. Independent Study (2-4)

SLPA 193. Special Topics (2 or 4)

SLPA 205. Adult Neurological Disorders (3)
Neurologically based speech and language disorders in adults will be investigated. The understanding and management of aphasia and similar language disorders are included. *Prerequisite: graduate standing.*

SLPA 209. Language Disorders II (3)
The nature, possible causes and management of language pathologies in children. *Prerequisite: graduate standing.*

SLPA 213. Advanced Clinical Audiology (3)
Audiologic tests for site of lesion, functional auditory disorders, and central auditory dysfunction; test procedures include advanced speech, acoustic reflex, and auditory brain stem response testing. *Prerequisite: graduate standing.*

SLPA 215. Aural Rehabilitation (3)
Theory and methods of habilitation/rehabilitation of hearing impaired children and adults. Procedures include speech and language development, speech conservation, speech reading, auditory training and amplification with individual and group hearing aids. *Prerequisites: SLPA 127 and graduate standing.*

SLPA 217. Voice Disorders (3)
This graduate course concerns the study of the human voice and related disorders. Course content includes normal vocal development as well as functional and organic voice disorders. The primary course objective is to instruct students in the etiology, diagnosis, and treatment of vocal pathologies. *Prerequisite: graduate standing.*

SLPA 219. Phonological Disorders (3)
Critical analysis of research and theory in etiology, diagnosis, and treatment of phonological and articulatory disorders. Emphasis on current scientific research findings and their application to clinical work. Assessment and intervention techniques for disorders of articulation and phonology. *Prerequisite: graduate standing.*

SLPA 221. Motor Speech Disorders (3)
Disorders associated with apraxia and dysarthria in adults and children, including cerebral palsy and head injury. *Prerequisite: graduate standing.*

SLPA 225. Public School Issues (1)
Seminar in organization and administration of language, speech, and hearing programs in public schools. Review of federal and state legislation and legal decisions influencing public school speech-language pathologists. *Prerequisite: graduate standing.*

SLPA 227. Professional Issues (3)
Graduate seminar in ethical and legal issues, practice standards, employment and business considerations, and work settings for the speech-language pathologist. Principles, theories and techniques of counseling for speech-language pathologists will also be discussed. *Prerequisite: graduate standing.*

SLPA 229. Dysphagia/Swallowing Disorders (3)
This graduate-level course investigates the nature of normal and abnormal swallowing function, the causes of dysphagia, its assessment and clinical management. *Prerequisite: graduate standing.*

SLPA 231. Augmentative/Alternative Communication (2)
The course will provide students with information about unaided and aided systems for alternative and augmentative communication. Students will gain

information and laboratory experiences which help them determine the most appropriate devices and methods of therapy for an individual and how to incorporate them into a complete communication system.
Prerequisite: graduate standing.

SLPA 233. Craniofacial Anomalies (3)
Analysis of research and theory in etiology, diagnosis and treatment of craniofacial anomalies and other genetic syndromes involving communicative disorders. Diagnosis and treatment of speech disorders associated with cleft palate will be emphasized.
Prerequisite: graduate standing.

SLPA 235. Gerontology (3)
Prepare students to work with the geriatric population, primarily in skilled nursing facilities and to understand and better cope with the aged people in their own lives.
Prerequisite: graduate standing.

SLPA 285. Colloquium in Speech-Language Pathology (2)
Lectures presented by invited professionals covering current issues in speech-language pathology. SLPA 285 may be repeated annually.

SLPA 287a. Internship in Speech and Hearing (2-4)

SLPA 287b. Fieldwork in Speech and Hearing (2)

SLPA 288. Externship (9)
Graduate student status. This experience is designed to provide students with a full-time, supervised experience in the field. Educational and medical settings are available.
Prerequisite: Open only to graduate students in the Department of Speech-Language Pathology who have completed all of their academic coursework, comprehensive examinations and have maintained a graduate GPA of 3.0 or higher.

SLPA 289a. Advanced Clinic (1-3)

SLPA 289b. Advanced Clinic (1-3)

SLPA 291. Independent Graduate Study (2 or 4)

SLPA 293. Special Topics (2-4)

SLPA 297. Graduate Research (1-4)

SLPA 299. Thesis (2 or 4)

Thomas J. Long School of Pharmacy and Health Sciences Faculty

Administrative Officers

Phillip R. Oppenheimer, 1997, Dean, School of Pharmacy and Health Sciences, Professor of Pharmacy Practice, Pharm.D., University of California, San Francisco, 1972.

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Supportive Personnel

Jeb Burton, 1998, Media Center

Ken Crowe, 1986, General Services

Norma Peterson, 1998, Administrative Assistant

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Richard R. Abood, 1991, Professor of Pharmacy Practice, B.S., University of Nebraska, 1972; J.D., University of Nebraska, 1976.

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Allen Shek, 2000, Assistant Professor of Pharmacy Practice, B.S., State University of New York at Buffalo, 1991; Pharm.D., University of Illinois, 1998.

Paul J. Williams, 1982, Professor of Pharmacy Practice, Pharm.D., University of the Pacific, 1974; M.S., University of North Carolina, 1980.

Physical Therapy Faculty

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Rolando T. Lazaro, 1995, Assistant Professor, B.S., University of the Philippines, 1986; M.S., University of the Pacific, 1997.

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Terry L. Pipp, 1992, Adjunct Professor, Pharm.D., Philadelphia College of Pharmacy and Science, 1971.

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Richard I. Sakai, 1998, Adjunct Professor, Pharm.D., University of California, San Francisco, 1975.

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Brian D. Sherman, 1995, Adjunct Professor, Pharm.D., University of Southern California, 1975.

Neal J. Shikuma, 1999, Adjunct Professor, B.S., Stanford University, 1973; M.D., University of Hawaii, 1977.

Mark M. Shinmoto, 1998, Adjunct Professor, B.S., University of California, Davis, 1977; Pharm.D., University of the Pacific, 1980.

David M. Shintaku, 1996, Adjunct Professor, B.S., University of California, Davis, 1974; Pharm.D., University of California, San Francisco, 1978.

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Harminder Sikand, 1998, Adjunct Professor, B.S./B.A., University of California, Davis, 1985; Pharm.D., University of California, San Francisco, 1990.

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Lana Gee Witt, 1996, Adjunct Professor, Pharm.D., University of California, San Francisco, 1974.

Lawrence D. Witt, 1996, Adjunct Professor, Pharm.D., University of California, San Francisco, 1974.

Betty P. Wong, 1997, Adjunct Professor, B.S., University of California, Davis, 1992; Pharm.D., University of the Pacific, 1995.

Priscilla Wong, 2000, Adjunct Professor, Pharm.D., University of California, San Francisco, 1995.

Susan Wong, 2000, Adjunct Professor, B.S., University of California, Irvine, 1982; Pharm.D., University of California, San Francisco, 1986.

Christopher A. Woo, 1991, Adjunct Professor, Pharm.D., University of the Pacific, 1988.

Joseph C. Woo, 1994, Adjunct Professor, B.S., University of the Pacific, 1977.

Margie M. Woo, 1988, Adjunct Professor, Pharm.D., University of the Pacific, 1987.

Ron R. Yamamura, 1998, Adjunct Professor, B.S., University of the Pacific, 1968.

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Martha E. Yasavolian, 1995, Adjunct Professor, B.S., University of Wisconsin, 1984.

Monica M. Yeazel, 1995, Adjunct Professor, B.S., University of Wisconsin, 1989.

Betty W. S. Yee, 1995, Adjunct Professor, A.A., City College of San Francisco, 1970; Pharm.D., University of California, San Francisco, 1994.

Freddie Yee, 1988, Adjunct Professor, B.S., California State University, Sacramento, 1978; B.S., University of the Pacific, 1981.

Helen S. Yee, 1995, Adjunct Professor, Pharm.D., University of California, San Francisco, 1993.

Michael C. Yee, 1994, Adjunct Professor, Pharm.D., University of Southern California, 1988.

William P. Yee, 1986, Adjunct Professor, Pharm.D., University of the Pacific, 1983.

Franklin Yip, 1995, Adjunct Professor, B.A., University of California, Berkeley, 1988; Pharm.D., University of the Pacific, 1991.

C. Kelly Yip, 1999, Adjunct Professor, B.Sc., University of Wisconsin, 1980; Pharm.D., University of Illinois, 1992.

Goldie Yip, 1999, Adjunct Professor, Pharm.D., University of the Pacific, 1990.

Blain Yoshinobu, 1995, Adjunct Professor, Pharm.D., Idaho State University, 1991.

Alan Young, 1975, Adjunct Professor, B.S., University of the Pacific, 1966.

Ceaminia S. Yuen, 2000, Adjunct Professor, B.S., Pharm.D., University of Minnesota, 1996.

Robert C. Zehnder, 2000, Adjunct Professor, B.S., California Polytechnic University, San Luis Obispo, 1983; Pharm.D., University of California, San Francisco, 1989.

Larry A. Zelman, 1985, Adjunct Professor, Pharm.D., University of Southern California, 1983.

Quingstrong L. Zhang, 2000, Adjunct Professor, Pharm.D., University of Illinois, Chicago, 1997.

center for professional and continuing education

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Evening Degree Program
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The Center for Professional and Continuing Education extends learning opportunities beyond the traditional campus environment, providing a variety of programs designed to meet the educational needs of lifelong learners.

The Center for Professional and Continuing Education provides many opportunities for students to add courses and special topic programs to their experience at University of the Pacific. It is the regional center for extension education, customized workforce training, professional development, Evening Degree program, certificate programs and distance learning. Additionally, the Center offers a variety of programs and services designed to meet the educational needs of the entire family including summer programs for youth and programs for active adult learners. The Center is designed to help students and residents of San Joaquin County and the surrounding region improve their professional skills, update their knowledge, develop new personal or professional expertise, or participate in vocational or personal development activities.

Evening Degree Program

The Evening Degree Program is designed to meet the needs of adult students who may have started but never finished a college degree. There are evening programs in three areas: Sociology, Communication, and the interdisciplinary major in Organizational Behavior. Sociology and Communication are offered through the traditional semester courses in an evening format (see individual department information).

The Bachelor of Science in Organizational Behavior major is an intensified program designed for students who have already earned between 60 and 70 college units. The evening class format provides adults the opportunity to complete their undergraduate education without interfering with employment. The program focuses on the interdisciplinary study of social interaction and social change, incorporating group dynamics involved in planning for change in the businesses and organizations in the 21st century. The Organizational Behavior major combines courses from various disciplines within the University in order to provide students with the organizational and business skills necessary to work effectively within a variety of organizations. Students will be able to complete their degree over an 18-month period by taking two 3-unit classes every eight weeks. The courses are offered on a rotating basis so students may complete their degrees as smoothly and quickly as possible.

The degree requires 124 units of credit, including completion of the academic major and the University General Education Program, as well as writing and quantitative skills proficiency requirements. Students must earn a minimum C grade point average (2.00) in all college work taken for the degree at Pacific and in courses taken as requirements in the major. A residency requirement stipulates that a minimum of 32 of the last 40 units taken for completion of the undergraduate degree must be taken at Pacific, excluding units received for credit for prior experiential learning.

A maximum of 30 units may be earned through a combination of concurrent enrollment in classes at other colleges and universities while enrolled at Pacific, correspondence and extension courses from other regionally accredited colleges and universities, and military courses evaluated by the American Council on Education

The Office of Adult Learners

The Office of Adult Learners serves the needs of adults, often part-time students, who wish to obtain or complete an undergraduate degree. It assists interested persons in determining if they can be admitted to the University, identifying appropriate academic programs to meet individual needs, acquiring financial aid information and securing access to needed student services. The Office provides adults re-entering Pacific guidance in planning their academic career in relationship to their individual needs, abilities and goals. Often adults re-entering Pacific have spent several years employed or caring for a family before continuing their education. The Office of Adult Learners begins by providing assistance in discovering their options that are available. Assessment of personal goals, learning style, vocational interests and level of student skills are

among the services offered in cooperation with several University offices. Because adult students often experience difficulty integrating their study schedules with their work and family situations, The Office of Adult Learners staff is prepared to assist students with the transition to the University.

They also help students with "mainstreaming" programs, which integrate adult learners with the younger "traditional" students. The classes chosen by adult learners are taken from the traditional curriculum and are taught by highly qualified full-time University faculty members. The academic diversity of Pacific is available to all adult learners. Adult students work with a faculty advisor and a fellow re-entry student advisor to develop an individualized program of study from existing university resources. Currently adult learners are majoring in Business, Computer, Science, Biology, Chemistry, Communication, English, Art, and multi-subject credential programs through the Liberal Studies Major. The University has a policy that allows students to enroll in a minor field of study in addition to the major. Students may take advantage of this option in a variety of disciplines including history, gender studies and other areas.

Adult learners have several opportunities to earn elective unit credit for experiential learning. A fee is charged for the evaluation services and credit awarded. Students may take CLEP examinations (College Level Examination Program) for a reasonable fee and earn four units of undergraduate, lower division credit, for each test receiving a passing score. Broad area tests and specific field tests are available. Other forms of experiential credit include units earned through challenging courses and through cooperative education and internships.

Summer Session (see right) at Pacific offers special opportunities for adult learners with early morning, daytime and limited evening classes at a lower tuition. Because the summer contains three separate sessions, students may complete the equivalent to an entire semester's work by taking the maximum number of units allowed in each session.

"Sprinkle a few adult students into your courses – and guess what? Other students begin to connect class discussion to the world outside the University. Why? Because adult students have experience, their comments make the world of ideas real to others. And because the sacrifices necessary in returning to school engender a seriousness about study evident to others, they often make the best possible models regarding what college life is all about."

Professor Roy Childs

Adult learners experience many advantages because Pacific is a resident campus. Students can participate in and benefit from the many activities and events that take place every day of the week. Conservatory concerts, notable speakers, athletic events, recreational opportunities and other activities for learning and entertainment are available to adult learners.

An important dimension of Pacific is the supportive nature of its student body. Adult learners, in spite of their busy schedules balancing work, family and school, respond to the personal and academic needs of their peers. Frequently, students tutor each other and participate in study groups. The non-traditional student group, Pacific Adult Learners (PALS), develops activities of interest for students and their families. Pacific's Iota Gamma, chapter of the national honor society, Alpha Sigma Lambda, recognizes the academic achievement of adult learners.

Extended Education Credits

Extended Education Credit courses (EXTN) are offered for semester units of undergraduate degree credit. These courses are designed to meet individual's personal and professional learning and training needs. Undergraduate students may take these courses to earn elective units adding to their total unit count required for completion of their academic degree. Students should check with their academic department regarding the total number of extension units counted toward the degree. (The average number of units is eight units but vary depending on academic department.)

Summer Sessions

The University offers a varied summer program that allows Pacific students to both fulfill degree requirements and to accelerate their academic progress. It also provides an opportunity for individuals from the community to enroll in one or two University courses without being admitted as regular students. Summer Session courses are divided among two five-week sessions and a four-week session immediately following the end of spring semester. Special programs for varying lengths of times are also available. Students may register by mail or in person. For information on Summer Sessions and a description of courses to be offered, call the Center for Professional and Continuing Education at (209) 946-2424.

Community Programs

The Center for Professional and Continuing Education also offers a variety of programs specifically for our surrounding community.

Customized Workforce Training programs are offered to businesses throughout Stockton and the surrounding community to improve workplace skills and address workforce needs. A few examples of customized programs available include, computer training, interpersonal and teamwork skills, professional communication, and customer service skills.

Post-baccalaureate professional development credit courses (9000 series number) are designed for educators and administrators for professional skill and salary enhancement. This graduate level credit is not applicable toward a degree.

Continuing Education Unit (CEU) courses are offered for individuals in professions where the CEU is accepted as the measure of continuing professional development or is required for recertification or relicensure.

Non-credit courses are offered for personal enrichment.

Special Programs and Camps are offered throughout the year to children and youth (SummerQuest, Ecamp, Journalism Academy and Summer Scholars) as well as to active adult learners (Pacific Experience).

Conference Services

Conference Services is an ancillary unit of the University of the Pacific and is housed in the Center for Professional and Continuing Education. Conference Services provides support services to groups renting university facilities for conferences, seminars, retreats, sports camps, reunions, and other activities that make use of residence halls, classrooms, conference rooms, auditoriums, recreational and dining facilities.

The primary mission of Conference Services is to extend the resources of the Pacific campus and to provide a service to the University and the surrounding community, as well as the national community. Conference Services acts as a "One Stop Shop" for conference and event guests who visit the campus for educational and recreational endeavors. Conference Services coordinates each groups needs including: residence hall accommodations, meeting/study facilities, recreational sites, dining facilities, audio visual, public safety, and physical plant services.

For more information, visit the Center for Professional and Continuing Education in McConchie Hall or call (209) 946-2424.

graduate school

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A division of the University of the Pacific offering graduate programs emphasizing distinctive forms of creative scholarship, while training students in the principles and methods of research and developing their professional competence.

The goal of graduate education at the University is threefold: to excite and discipline the intellectual capacities of its students, to record and publish the products of intellectual inquiry, and to advance knowledge. To achieve this goal, the Graduate School encourages faculty to work closely with advanced students to create an environment congenial to advanced academic and professional study and to further scholarship and research.

Unique and Distinctive Programs

The distinctiveness of the Graduate School is that its graduate programs emphasize different forms of creative scholarship while training students in the principles and methods of research and developing their professional competence.

Pharmacy & Health Sciences

Interdisciplinary programs in the Thomas J. Long School of Pharmacy and Health Sciences involve physical-chemical mechanisms of drug absorption and bioavailability, molecular mechanisms of drug action, chemical definition of auto-recognition sites, tumor biology and clinical studies in acute and long-term care facilities. So, its programs emphasize a multi-disciplinary perspective and skills for solving basic problems in individual and community health.

Biological Sciences

Graduate students in biological sciences carry out research in areas ranging from field studies in plant and animal systematics and ecology to laboratory studies on bacterial antibodies and cellular morphogenesis. They learn a variety of techniques such as slab gel electrophoresis, electron microscopy and computerized data reduction.

Education

In the Gladys L. Benerd School of Education, the Bureau of Educational Research and Field Services enables graduate students to develop and implement their own research projects, as well as participate in programs funded by outside agencies.

Communication

Students studying in communication are urged to become involved in interdisciplinary learning experiences augmented by field study and internships as they pursue their degrees in such areas as mass media, behavioral studies, rhetorical theory and linguistics.

Business

In the Eberhardt School of Business, MBA students work with senior managers throughout their studies in internship and mentorship programs researching and solving actual business problems in the workplace.

Psychology

In psychology, students work toward a degree in behavioral psychology emphasizing either applied behavior analysis/therapy or behavioral medicine. Students prepare for positions providing services to mentally and/or developmentally disabled populations, positions in business settings and positions in health care delivery systems involving the application of psychological knowledge to the treatment of physical diseases. The program also provides preparation for doctoral work in psychology for those students who wish to study beyond the master's degree.

Language Pathology

The master's degree in speech-language pathology prepares students for California licensure and national certification. Both on-campus and off-campus practicums are complements to the academic program. Students may also elect to obtain the Clinical Rehabilitative Services Credential/Speech, Hearing and Language.

Music

In the Conservatory of Music, some students are being prepared to enter college teaching or music education in public or private schools and others study music therapy. Music education students have the opportunity to become involved in a carefully developed micro-rehearsal program.

Degrees

The Graduate School offers programs through the departments of the College of the Pacific, the Eberhardt School of Business, the Gladys L. Benerd School of Education, the Thomas J. Long School of Pharmacy and Health Sciences, the School of International Studies and the Conservatory of Music. Advanced degrees are the Master of Arts; the Master of Science; the Master of Business Administration; the Master of Music; the Master of Education, this degree is in combination with a credential program for teaching; the Doctor of Education; and the Doctor of Philosophy in pharmaceutical and chemical sciences. A 21-month professional Master of Science program in physical therapy and a 15-month Master of Science program in speech-language pathology are in the Thomas J. Long School of Pharmacy and Health Sciences.

Degree Programs

Master's degree programs are offered in the areas of study listed below:
Biological Sciences (M.S.)
Business Administration (M.B.A.)
Communication (M.A.)
Education (M.A., M.Ed.)
Intercultural Relations (M.A.)
Music (M.M.)
Music Therapy (M.A.)
Pharmaceutical/Chemical Sciences (M.S.)
Physical Therapy (M.S.)
Psychology (M.A.)
Speech-Language Pathology (M.S.)
Sport Sciences (M.A.)

Degree programs leading to the Ph.D. are offered in a newly redesigned interdisciplinary program with faculty from physiology-pharmacology, medicinal chemistry, pharmaceutics, clinical pharmacy and chemistry.

Degree programs leading to the Ed.D. are offered in the following areas:

Educational administration; educational psychology; school psychology; counseling psychology; and curriculum and instruction.

Accreditation

The Graduate School, as an integral part of the University, is accredited by the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges. In addition, the Conservatory of Music is a charter member of the National Association of Schools of Music, and its curriculum in music therapy is accredited by the National Association of Music Therapy. The teacher education work in the School of Education is approved for all of its degrees and credentials by the State Commission for Teacher Preparation and Licensing and by the National Council for Accreditation of Teacher Education. The Department of Speech-Language Pathology is accredited by the American Speech-Language-Hearing Association. The Physical Therapy degree program is accredited by the American Physical Therapy Association. The School of Business is accredited by the American Assembly of Collegiate Schools of Business.

Credential Program

The graduate program in education prepares candidates for credentials for public schools. Preparation programs exist in the following areas: classroom teaching, pupil personnel services, school psychologist, administrative services and two specialist programs (Special Education and Bilingual/Cross-cultural Education [Spanish-English]).

Degree Requirements

For Master's – Satisfactory completion of 30 or more units of graduate work or a minimum of six or eight courses, depending on whether the student follows a thesis plan, a non-thesis plan or a plan which also meets certain State certification requirements.

For Ed.D. and Ph.D. – Degree requirements are outlined in information sheets specific to the program.

For detailed program listings and admission requirements, write for information at the following address:

Dean of Research and Graduate Studies
University of the Pacific
Stockton, California 95211
or

e-mail: *gradschool@uop.edu*;
fax: (209) 946-2858;
telephone: (209) 946-2261;
www.uop.edu/graduate.

Financial Assistance

Contact the appropriate academic department for information regarding the following:

1. government-funded programs in such areas as special education, and
2. teaching assistantships and graduate fellowships.

Contact the Financial Aid Office for information on the following programs:

1. California State Graduate Fellowships,
2. federal loan programs, and
3. college work-study.

For information on government bilingual teacher grant programs, contact both the Gladys L. Benerd School of Education and the Financial Aid Office.

school of dentistry

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A professional school offering the Doctor of Dental Surgery degree in a unique 36-month program that prepares graduates to provide quality dental care and to supplement and adapt their knowledge and skills throughout their professional lives.

University of the Pacific School of Dentistry prepares competent general dentists in a humanistic environment. Its graduates have earned a reputation for the highest standards of clinical excellence and are active and successful members of the profession.

The health sciences campus, located in San Francisco, includes didactic, laboratory, and clinical instruction as well as research facilities. The School also has nearby, reasonably-priced student housing, a community-based teaching clinic in Union City, and a dental clinic in the planning stages on the main campus in Stockton.

In addition to the Doctor of Dental Surgery degree, Pacific has a graduate program in orthodontics leading to a certificate and the Master of Science degree in Dentistry; a graduate program in oral and maxillofacial surgery leading to a certificate; an International Dental Studies program which grants a D.D.S. degree after two years of training to individuals who already have graduated from a foreign dental school; a baccalaureate program in dental hygiene offered in conjunction with the College of the Pacific to begin Fall 2002; and residency programs in Advanced Clinical Education (ACE) and Advanced Education in General Dentistry (AEGD).

The School of Dentistry is well known for the quality of its clinical education, its 36-month program (the only such program in the United States), a humanistic approach to education, and the active participation of its graduates in the school and the profession of dentistry. All dental education programs are fully accredited by the Commission on Dental Accreditation. The School of Dentistry is a member of the American Dental Education Association.

Mission

The mission of the School of Dentistry is to:

1. Educate individuals who, upon completion of the program, will be professionally competent to provide quality dental care in an evolving profession.
2. Provide patient-centered, comprehensive, quality care in an efficient clinical model which demonstrates the highest standards of service achievable.
3. Conduct research and disseminate findings which promote the scientific practice of dentistry.
4. Assist dental professionals with their diverse needs for continuous professional growth through information, formal advanced training, and other services.

The school as a community, its members, and its graduates will be distinguished by the following attributes:

- Continuous enhancement through professional development.
- Humanistic values that respect the dignity of each individual and foster the potential for growth in all of us.
- Application of theory and data for continuous improvement.
- Leadership in addressing the challenges facing the profession of dentistry, education, and our communities.

Curriculum

Basic biomedical, pre-clinical, and clinical arts and science subjects are combined with applied behavioral sciences in a program that prepares graduates to provide excellent quality dental care to the public and to enter a changing world that will require them to supplement and adapt existing knowledge and skills. The 36-month curriculum leading to the degree of Doctor of Dental Surgery begins in July and is divided into 12 quarters, each consisting of 10 weeks of instruction, one week of examinations, and a vacation period of varying length (between one and four weeks).

Beginning in the first quarter, students practice use of dental instruments and materials, working position and posture using direct and indirect vision, and basic dental laboratory procedures, and are introduced to study and test-taking skills and methods of time management that will assist them in succeeding in this professional curriculum. The school's state-of-the-art simulation laboratory facilitates transfer of pre-clinical skills to the patient care clinical setting. Biomedical science instruction in anatomy, biochemistry, physiology, pharmacology, and microbiology is offered in the first eight quarters, followed by multi-disciplinary presentations of basic science foundations for clinical topics such as the importance of saliva, tissue aging, nutrition, and infection control. During the final year, students learn application of basic sciences to biomedical problems of dentistry using the scientific method of inquiry.

Pre-clinical instruction is concentrated in the first four quarters with students learning to work from a seated position in preclinical laboratories and with a chair-side assistant in conjunction with pediatric dental practice. Clinical work with patients is initiated in the fourth quarter.

The school's comprehensive patient care program is based on the concept of private dental practice where the student assumes responsibility for assigned patients' treatment, consultation, and referral for specialty care. Second-year students practice clinical dentistry 15 hours per week; during the third year the clinical hours increase to 29 per week (evening clinic appointments supplement patient care oppourtunities and are available to second- and third-year students). In the clinic students learn to provide comprehensive dental care under the direction of group practice administrators and multi-disciplinary faculty from diagnostic sciences, periodontics, restorative dentistry, endodontics, and removable prosthodontics. Oral and maxillo-facial surgery, pediatric dentistry, and radiology are learned in respective specialty clinics. Doctoral students participate with faculty and graduate orthodontic students in adjunctive orthodontic care and oral development clinics.

Advanced clinical dentistry and evaluation of new developments and topics that involve several disciplines are learned in the third year in conjunction with patient care and in a comprehensive course taught by faculty from all clinical departments. A capstone experience involving presentation of completed patient cases is required of all students. Rotation to extramural clinics provides management training that will increase efficiency in delivery of high quality dental care in a setting that resembles private practice. Community college dental assisting students gain clinical experience working with dental students.

Behavioral science aspects of practice management, ethics, and dental jurisprudence are presented throughout the curriculum. Epidemiology and demography of the older population, basic processes of aging and dental management of hospitalized patients, geriatric patients and those with the most common disabling conditions are studied during the third year.

Students are counseled individually with regard to establishing practices and applying for postgraduate education. A weekend conference devoted to new developments in dentistry serves to acquaint students with opportunities for postgraduate education and with alumni views of the realities of dental practice.

Admission Requirements

There are four basic requirements for admission to the course of study leading to the degree of Doctor of Dental Surgery: completion of required pre-dental education, completion of the Dental Admission Test (DAT), submission of complete application materials through the American Dental Education Association's Application Service (AADSAS), and appearance at the school for a personal interview.

Pre-dental education must be completed at a college or university from which subject matter is accepted for credit toward advanced standing at University of the Pacific or universities with equal standing. At least three years of collegiate work, including 135 quarter or 90 semester credits, is recommended. Courses from a community college will be acceptable if they are transferable as equivalent to pre-dental courses at a four-year college. Applicants should submit a copy of an advanced standing evaluation form provided by the four-year college or a course equivalency statement from the community college.

Students are encouraged to develop their course of study with the assistance of a pre-dental adviser. Pre-dental advisers can identify courses that meet School of Dentistry requirements and help prepare individuals for the rigors of professional education and practice. They are also aware of courses that would best prepare a student for competitive scores on the Dental Admission Test (DAT).

Number of Required Pre-dental Courses

	Semesters
Biological Sciences with laboratory*	4
General Physics with laboratory	2
Inorganic Chemistry with laboratory	2
Organic Chemistry	2
English Composition, Communication or Speech**	2

** The Admissions Committee strongly recommends that applicants complete one course in anatomy or cellular biology as part of their preparation in the biological sciences.*

*** One course in composition or technical writing is required. Other courses should develop written or verbal communication skills. Courses in English as a Second Language (ESL) do not meet this requirement.*

Pass/Fail evaluations in required subjects are unacceptable unless accompanied by a narrative transcript provided by the awarding school.

Although it is recommended that applicants have a baccalaureate degree, no specific major is required or preferred. Upper-division courses that extend knowledge of required subjects and/or those in areas such as economics, computer science, business administration and the humanities are recommended.

The Dental Admission Test

The computer-based format (the computerized DAT) is available on almost any day of the year. Preference for admission is given to students who provide DAT scores no later than October for the class entering the following July. For information about the test and applications contact:

Division of Educational Measurements
American Dental Association
211 East Chicago Avenue
Chicago, Illinois 60611
800 621-8099.

Application Materials

The School of Dentistry participates in the American Dental Education Association's Application Service (AADSAS). AADSAS is an information clearinghouse which will transmit to a dental school the biographical and academic data required by admissions committees, thereby relieving the applicant of the burden of completing multiple and repetitious individual applications. To request application maaterials please, mail a postcard to:

AADSAS
625 Massachusetts Avenue N.W., Suite 101
Washington, D.C. 20036

Return the completed application form to AADSAS with copies of transcripts from each college and university attended. Completed application materials must be received by AADSAS no later than February 1 for an applicant to be considered for the class entering in July. A fee of $75 is required by the school before processing of an application is initiated.

If the applicant's undergraduate institution has a pre-health sciences advisory committee, a committee evaluation is highly recommended. Otherwise, three letters of evaluation are required, one from a pre-dental adviser and two from pre-dental or upper-division course professors. Letters of recommendation from health care professionals who know the applicant well are encouraged. Letters of evaluation should be sent directly to AADSAS.

Personal Interview

Applicants whose credentials appear to meet pre-dental requirements may be invited to the school for an interview with one or more members of the Admissions Committee and a current dental student. Applicants selected for interview are notified by letter of available dates for the interview. During the interview the applicant's interest in dentistry, future plans, maturity and personal qualities needed for successful work with patients are assessed. In addition, applicants participate in an orientation seminar, meet informally with current students and tour the school.

Selection Factors

The Admissions Committee carefully considers each applicant's scholastic record, scores on the DAT, AADSAS essay, letters of evaluation, evidence of manual dexterity (including the perceptual ability portion of the DAT), other personal attributes and qualities as well as demonstration of his or her understanding about a career in the dental profession. Applicants who are offered the opportunity to enroll must complete planned coursework at a specified performance level.

The Admissions Committee has a firm policy of not discriminating against any applicant because of age, creed, national or ethnic origin, marital status, race, color, gender or sexual orientation. Established review procedures ensure applicants an equal opportunity to be considered for admission. The school has an affirmative action program with regard to admission of qualified underrepresented minorities and females.

Honors Programs

In cooperation with College of the Pacific on the Stockton campus, the School of Dentistry offers three honors programs for pre-dental students. The programs were initiated in 1984 and have been refined over the years.

Five-Year Program Leading to a D.D.S. Degree

This program provides the minimum foundation in pre-dental education through two years of study on the Stockton campus for a select group of highly qualified students. Students admitted to the program take a prescribed list of general education and science courses as undergraduates in College of the Pacific. After two years of study, they will be evaluated for admission to the School of Dentistry. Freshmen who meet the following criteria will be considered for admission to this highly selective program.

1. An ACT composite score of 31 or a combined SAT-I score of 1,350 with a minimum verbal score of 630.
2. A minimum 3.7 grade point average (on a 4.0 scale) based on a substantial number of math and science courses in a college preparatory program.
3. Acceptable scores on the Pacific fundamental skills tests in reading, writing, and quantitative analysis administered upon entering the University.

Six-Year Program Leading to a B.A. or B.S. Degree and a D.D.S. Degree

Students also have an opportunity to enroll in a selective six-year program of study. Those accepted into the program major in Biological Sciences or Chemistry and obtain a Bachelor of Science or Arts in Biological Sciences or a Bachelor of Arts in Chemistry from College of the Pacific after three years on the Stockton campus and one year at the School of Dentistry in San Francisco. This special opportunity, combined with the 36-month accelerated program of the School of Dentistry, makes possible the completion of all requirements for both the Bachelor of Science or Arts degree and the Doctor of Dental Surgery degree in a total of six years. Students must meet the following criteria in order to be considered for the program.

1. An ACT composite score of 29 or a combined SAT-I of 1,270 with a minimum verbal score of 600.
2. A minimum 3.6 grade point average (on a 4.0 scale) in a solid college preparatory program.
3. Substantial coursework in English, sciences and mathematics.

Seven-Year Program Leading to a B.A. or B.S. Degree and a D.D.S. Degree

This program is designed to provide students with the opportunity to spend four full years earning a bachelor's degree in any discipline, and then complete their dental education at the School of Dentistry in San Francisco. Students benefit by knowing early in their careers that they will be admitted to the School of Dentistry provided they meet the requirements outlined in their pre-dental program acceptance letter. Students admitted to this program can major in any subject, but must complete a series of science courses as prescribed by a pre-dental adviser. Freshmen applying for the program should meet the following guidelines:

1. A combined SAT-I of 1,150 with a minimum verbal score of 600.
2. A minimum 3.5 grade point average (on a 4.0 scale) in a solid college preparatory program.
3. Substantial coursework in English, sciences and mathematics.

School of Dentistry Expectations for Admission

To be admitted to the School of Dentistry, honors students must: (1) meet all course requirements for the pre-dental programs, including grade point standards; (2) achieve scores of 17 or higher on all scales of the Dental Admissions Test; (3) successfully complete an interview at the School of Dentistry; (4) file an AADSAS application; (5) submit the $75 application fee; and (6) obtain at least three letters of evaluation from science faculty, including one from a pre-dental faculty adviser.

Graduate Orthodontic Program

The advanced orthodontic education program was instituted in 1971. Classes begin each July for the 24-month graduate program in orthodontics. Instruction prepares the resident to provide excellent treatment based on contemporary biologic orthodontic principles and is recognized for educational eligibility by the American Board of Orthodontics.

Courses of instruction include principles of orthodontics, cephalometrics, biomechanics, craniofacial biology, research methodology, appliance laboratory, psychiatry/pediatrics, statistics, anatomy, oral pathology, research design, oral physiology, cleft lip and palate, comparative appliances, occlusion and gnathology, orthognathic surgery, practice

management and periodontic/orthodontic care. Faculty foster a collegial atmosphere with informal professional relationships and mutual respect among residents and faculty.

Clinical instruction and practice are conducted in the school's orthodontic clinic in seven half-day clinics per week including four general orthodontic, one mixed dentition, one adult care and one surgical orthodontic clinic. Adult patients constitute about one-fourth of a student's caseload. Each resident treats 50-60 new patients and 70-80 transfer patients during their training. Residents are also rotated through the facial pain research clinic. Fixed appliance treatment employs the edgewise technique, although instruction permits a wide latitude of clinical variation based on patient needs. Experience in treating the entire range of orthodontic problems is provided.

Each resident engages in an investigative project and completes an acceptable thesis to qualify for the Master of Science in Dentistry degree. Theses are additionally submitted for publication in scientific journals.

Residents are scheduled for didactic and clinical instruction five full days per week, and full participation is required. While there is no prohibition of weekend private dental practice, students' commitments during the program seriously limit this opportunity.

International Dental Studies Program

Through the Division of International Dental Studies, the opportunity to earn the Doctor of Dental Surgery degree is available to qualified graduates of foreign dental programs. This 24-month, eight-quarter program provides practical and comprehensive training in dental techniques as practiced in the United States. The program is described more fully in a separate brochure available from the

Program Coordinator, International Dental Studies Program
School of Dentistry, University of the Pacific
2155 Webster Street
San Francisco, CA 94115-2399, U.S.A.

The International Dental Studies (IDS) curriculum includes pre-clinical and clinical instruction in dental subjects in the school's traditional D.D.S. program, as well as instruction in pharmacology, oral pathology, differential diagnosis of oral diseases, facial pain, care of disabled, hospital dentistry and preparation for state licensure; the behavioral sciences include basic management science, introduction to geriatric dentistry, fundamentals of dental practice and jurisprudence. IDS students begin clinical patient care in the third quarter and spend the greater portion of their second year in clinical practice.

Complete admission requirements and application procedures are described in the separate brochure available from the Coordinator, International Dental Studies Program. Basic prerequisites for admission are: 1) possession of a dental degree from a foreign dental school, 2) completion of PART I of the Dental National Board Examination with a score of 80 or higher in each section, and an overall score of at least 80; and 3) all applicants are required to take the Test of English as a Foreign Language (TOEFL) examination and submit a minimum score of 580 for the paper-based and 237 for the computer-based version.

After careful evaluation of applications, selected individuals will be invited to participate in a faculty interview and to sit for the technical examination. Final selection of matriculants will be made by the IDS admissions committee.

Advanced Education in General Dentistry Program

The Advanced Education in General Dentistry (AEGD) Program offers a one year, accredited postgraduate residency leading to a certificate of completion. There is an option to gain more in-depth training in a two-year accredited residency program. The core of the program involves advanced clinical treatment of patients requiring comprehensive general dental care. Advanced clinical instruction in all the dental specialties is supplemented by a variety of medical and dental seminars and by rotations in anesthesia and hospital dentistry. There is an emphasis on dental care for persons with developmental disabilities or severe medical problems and geriatric individuals. The clinical program consists of a variety of experiences designed to stimulate the general practice of dentistry in a group practice setting. The majority of time is spent treating patients in the AEGD Program clinic under the supervision of the AEGD faculty. There is specialty supervision available in endodontics, implants, orthodontics, oral and maxillofacial surgery, pediatric dentistry, periodontics, and fixed and removable prosthodontics.

There is an emphasis on hospital dentistry. Dental patients are treated under general anesthesia in a hospital operating room. Residents care for patients from admission through discharge, participating in consultation and treatment of patients who are undergoing cardiac surgery, chronic renal dialysis, treatment for tumors of the head and neck, organ transplant and other patients with special medical and dental problems. In addition to the hospital rotation, there is a two week rotation in anesthesiology through the California Pacific Medical Center across the street from the dental school. Rotations within the dental school clinics include oral surgery, pediatric dentistry, facial pain, oral medicine, and dental implants.

Residents attend seminars on each aspect of dentistry taught in the program in the areas of operative dentistry, endodontics, implants, oral and maxillofacial surgery, periodontics, pediatric dentistry, orthodontics, fixed and removable prosthodontics, treatment planning, oral pathology, facial pain, hospital dentistry, and esthetics. Seminar topics also include quality assurance, practice management, literature review, dental emergencies and medical risk assessment.

July 1 is the start date for the AEGD Program. There is no tuition. AEGD residents receive an educational stipend which is paid in 12 equal monthly payments. Applicants must be graduates of an accredited North American dental school. Applicants are not required to have a California dental license. Required application materials include: completed PASS application, small photograph, undergraduate transcripts, C.V., dean's letter with academic rank, National Board Scores Part II, dental school transcript, 3 or more letters of recommendation, personal statement, and a Postdoctoral National Matching Service Program registration number. The AEGD Program accepts most application materials through the AADS Postgraduate Application Support Service (PASS). Application materials for the July entering class must be submitted to the PASS program by October 1. All application materials must be received by the AEGD Program coordinator by October 15. Complete application procedures and more information about the program are described in materials available from the AEGD Program at the School of Dentistry. Program information is also available online at www. dental.uop.edu. Follow the links to applicants, programs of study, and postgraduate programs.

School of Dentistry Catalog

Complete information on the School of Dentistry and a course listing can be found in the School of Denistry's 2001/2002 Course Catalog.

mcgeorge school of law

Dean (Interim)
John Sprankling
Telephone
916.739.7191
Website
www.mcgeorge.edu

A professional school offering a Juris Doctor Degree in a full-time or part-time program, and a Master of Laws Degree in Transnational Business Practice.

McGeorge School of Law was founded in 1924. Its goal is to educate practice-ready graduates for the many roles performed by members of the legal profession. As the Sacramento campus of the University of the Pacific, McGeorge occupies a significant place in the legal education community. The Law School is a dynamic center for legal education, research and training in the skills of legal advocacy.

About 1,100 students are enrolled in the School's full-time day and part-time evening divisions as well as its graduate law program. More than 100 undergraduate institutions are represented in a typical entering class.

The Law School is within easy driving distance of the California State Capitol, legislative and government offices and federal, state, local and appellate courts. Students are thus able to observe the law- and decision-making processes at their sources and are conveniently located near clinical or work-study assignments.

Accreditation

McGeorge School of Law is a member of the Association of American Law Schools, fully accredited by the American Bar Association and by the Committee of Bar Examiners of the California State Bar, and approved by the Veterans Administration for veterans' educational benefit programs. The School of Law has a chapter of The Order of the Coif, the national legal scholastic honor society.

Campus and Library Facilities.

The Sacramento campus, which is devoted exclusively to law training, occupies a 22-acre site considered one of the finest in the nation. Facilities are accessible to the handicapped. On-campus housing as well as a swimming pool and other recreational facilities are located within the law school complex.

The Law Library consists of six reading rooms including a two-story stack area. A variety of study accommodations are available, including individual carrels, group study rooms, typing rooms and videotape viewing rooms. The library presently contains over 400,000 volumes/volume equivalents. The Law Lab, a computer learning and research center, contains computer terminals available for use by students in computer-assisted law exercises, LEXIS and WESTLAW computerized legal research and word processing.

The Law School's Center for Legal Advocacy houses the nationally recognized "Courtroom of the Future." This circular courtroom arena contains design features and advanced electronic and visual display equipment to function as a model for developing new methods to facilitate the judicial process. The courtroom's main purpose is to serve as a classroom for training in the skills of trial advocacy.

Admission Requirements

The School of Law will consider applications for admission from individuals who have completed, or will have completed by the time of enrollment, a bachelor's degree from an accredited college or university. An applicant with less than a bachelor's degree but in senior year undergraduate status at the time of enrollment may be approved for enrollment prior to receipt of a bachelor's degree if there are compelling reasons. See also the Pacific/McGeorge 3+3 Program described earlier.

Application materials include:

1. Completed application form, available from the Admissions Office;
2. Law School Admission Test results;
3. Law School Data Assembly Service (LSDAS) report;
4. Personal Statement;
5. Nonrefundable application fee.

Review of application files begins early in each calendar year for the entering fall semester class. The number of seats available for each entering class is limited so early completion of application materials by May 1 is advised.

In reviewing applicants, preference is given to University of the Pacific graduates when compared to equally qualified graduates of other schools.

To receive the law school's Admissions Bulletin with application forms, write to:

Admissions Office
McGeorge School of Law
University of the Pacific
3200 Fifth Avenue
Sacramento, CA 95817

or e-mail: admissionsmcgeorge@uop.edu.

Basic Program of Study and Degree Requirements

The Law School operates on the semester system with 88 units required for the J.D. degree. The full-time program in the Day Division requires three years of law study, while the part-time Evening Division program requires four years. Evening Division students may earn the J.D. degree in three and one-half years by satisfying graduation requirements through enrollment in an accelerated evening program. The required first-year curriculum for full-time students includes Criminal Law, Contracts, Torts, Property, Legal Process and Civil Procedure. In advanced years, students take a combination of required and elective courses. The current program contains over 100 electives in the areas of business, commerce, labor law, environmental law, child and elder law, property and land use planning, personal relationships, torts, criminal justice, taxation, public and administrative law, comparative and international law, clinical and practice-oriented electives, and special programs and activities.

Joint degree programs are available with limited cross-credit for acquisition of the J.D./M.B.A. (Master of Business Administration) through the University's School of Business or through CSU Sacramento's School of Business. A J.D./M.P.P.A. (Master of Public Policy and Administration) is also available in cooperation with CSUS.

The faculty is composed of over 45 full-time and 50 adjunct instructors. The Law School has a tradition of close and personal relationships among the faculty, administrators and students which helps to create an environment in which professional ideals are developed and maximum learning takes place.

University of the Pacific/McGeorge 3+3 Program

University of the Pacific undergraduates may plan a course of study which leads to enrollment at the University's McGeorge School of Law during the fourth undergraduate year. Both a bachelor's and a J.D. degree may be earned in a total of six years rather than the usual seven.

To be eligible for admission to McGeorge under the 3+3 program, undergraduates must meet grade point average, course, and unit requirements prior to enrolling at McGeorge as well as have a minimum LSAT score within the 50th percentile range. Further information is available from the Dean of Admissions or the Pre-Law Advisor on the Stockton campus and the Office of Admissions at McGeorge.

Activities

The McGeorge Law Review, published quarterly, is edited and managed by a board of student editors. McGeorge's location in the state capitol has led to a natural emphasis on California legislation, and a special supplement, "Review of Selected California Legislation" is published annually. *The Transnational Lawyer*, another student-edited journal, focuses on matters of interest to the practitioner involved in international business transactions.

All students are members of the Student Bar Association which, through its elected Board of Governors, coordinates a number of activities. Organizations open to all law students include the Women's Caucus, minority law students' organizations, legal fraternities, Nevada Law Students Association, Student Trial Lawyers, religiously affiliated organizations, the Environmental Law Forum, the International Law Society, the Public Legal Services Society and other interest and social groups.

Appellate Advocacy and International Advocacy Honors Boards, composed of advanced students, assist with the appellate advocacy programs in which all second-year students participate. McGeorge teams compete with other law schools in statewide, regional and national competitions.

The Roger Traynor Honor Society, named for the distinguished former Chief Justice of the California Supreme Court, honors scholastic excellence by selecting for membership students named to the Dean's Honor List for each of two years. Students whose academic performances place them in the top ten percent of the graduating class are eligible for election to The Order of the Coif.

Special Programs

Governmental Affairs Program

A specialized curriculum leads to a Certificate in Governmental Affairs awarded concurrently with the J.D. degree. Students who complete the program are specially qualified to begin careers in legislative advocacy, administrative adjudication, drafting of legislation, representation of government agencies and officials, representation of persons who regularly deal with government agencies, and related public policy-making positions. Students in the program are members of the School's Institute for Legislative Practice and are invited to attend symposiums, seminars and other activities sponsored by the Institute.

Tax Law Concentration

McGeorge has fashioned one of the strongest J.D. tax programs in the West. It offers a structured curriculum leading to a J.D. degree with a concentration in taxation. Law students who seek to enter the tax field will benefit from an outstanding faculty, excellent library resources, and a curriculum which features six required courses and a broad array of tax and business electives.

Graduate Programs

McGeorge offers a full-time graduate program leading to the Master of Laws (LL.M.) in Transnational Business Practice.

International Programs

McGeorge's international programs provide educational and practical experience abroad. A Summer International Legal Studies program is available to J.D. students in Salzburg, Austria, in cooperation with the Univeristy of Salzburg, for J.D. and LL.M. students. For post-juris doctor study, a specialized graduate study program combined with an overseas internship with a firm or public agency in Europe or the Pacific Rim leads to the Master of Laws (LL.M.) in Transnational Business Practice.

Trial Advocacy and Clinical Programs

The School of Law has been a leader in advocacy training and clinical experiences designed to develop students' skills and confidence in both mock and real practice settings. A program for seniors in Trial Preparation and Advocacy provides opportunities for learning how to interview clients, gather evidence, prepare facts and present evidence in a full-day trial in the McGeorge courtroom. Students may also earn credit working on actual cases through a number of clinical programs including

District Attorney and Public Defender Internships, the Attorney General Civil and Criminal Appellate Practice programs, Legal Aid Clinics, Legislation and the Law of Politics, and various State of California agencies such as the Energy Commission, the Department of Water Resources, Public Employee Retirement System and the State Board of Equalization. Additionally, students gain clinical experience through judicial internships and placement with other agencies such as the Office of the United States Attorney, the Internal Revenue Service, the San Joaquin County District Attorney and the Sacramento County Counsel.

The Law School operates clinical law offices that include the Community Legal Services Center, and the Administrative Adjudication, Victims of Crime, and Parole Representation Clinics. These offices are staffed by full-time attorney instructors and a large staff of student attorneys.

Through these programs, students gain experience in all phases of the attorney-client relationship, including supervised representation of clients in court. Other opportunities for clinical legal experience exist through volunteer service and through work-study programs in government legal offices. By providing these and other opportunities, McGeorge strives to bridge the gap between law school and practice in the profession.

McGeorge School of Law Catalog

Complete information and a course listing can be found in McGeorge School of Law's 2001/2002 Course Catalog.

university administration

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Development Officer, COP/SIS ..... vacant
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Vice President for Student Life ..... Julie Sina
Dean of Students ..... William H. Barr
Associate Dean of Students ..... Jesse J. Marks
Assistant Dean of Students, Residential Life and Housing ..... James G. Falcone
Director, Dining Services ..... Chuck Douros
Director, Career and Internship Center ..... Marty Ford
Director, Community Involvement and Multicultural Programs ..... Stephan L. Coggs
Director, Counseling Center ..... Susan Williams-Quinlan
Director, Student Activities and McCaffrey Center .. Derick "Rick" Morat
Director, Student Advising and Orientation ..... Douglas Smith
Administrative Director, Cowell Student Health Center ..... Nancy Schlemmer
Medical Director, Cowell Student Health Center ..... Kenneth Forsythe, M.D.
Director, SUCCESS and Disabled Student Services ..... Anita M. Bautista
University Chaplain ..... vacant

Activity and Service Officers

Director, Athletics Media Relations ..... Mike Millerick
Director, Bands ..... Eric Hammer
Manager, Baun Fitness Center ..... Jennifer Sexton
Director, Educational Resource Center ..... Vivian Snyder
Associate Director, Campus Recreation ..... David Hall
Director, Math Resource Center ..... Jennifer Smith
Director, Opera Theatre ..... James Haffner
Director, Orchestra ..... Nicolas Waldvogel
Director, Pacific Singers ..... Edward Cetto
Coordinator, Retention Services ..... Sandra Mahoney
Director, Speech and Hearing Clinic ..... Janet Nimtz

Intercollegiate Athletics Coaches and Administrators

Lynn King, 2000, Director of Athletics, B.A., University of Northern Iowa, 1969; M.A., 1971.

Ted Ballmer, 1996, Head Golf Coach, B.A., University of California, Berkeley, 1988.

Guido Baumann, 1998, Head Men's Tennis Coach, B.A., Georgia College, 1992.

Don Bryan, 1998, Assistant Director of Athletics, Finance and Compliance, B.A., Linfield, 1962; M.A., Syracuse, 1964; Ph.D., 1974.

Steve Cernohaus, 1997, Assistant Director of Athletic Training, B.A., California State University, Chico, 1996; M.A., University of the Pacific, 1999.

Keith Coleman, 1994, Head Women's Soccer Coach, B.S., Cal Poly, San Luis Obispo, 1991.

Michelle Coleman, 1995, Assistant Women's Soccer Coach, B.A., Chico State, 1994.

Leslie Cox, 2000, Director of Marketing and Promotions, B.A., University of the Pacific, 1996; M.B.A., 1999.

Sam Crosson, 1999, Assistant Men's Volleyball Coach, B.A., University of the Pacific, 1997.

Jim Dugoni, 1996, Executive Director Pacific Tigers Athletic Association, Assistant Director of Athletics, Development, B.S., University of the Pacific, 1986; M.S., U.S. Sports Academy, 1990; M.A., Stanford University, 1993.

John Dunning, 1985, Head Women's Volleyball Coach, B.A., San Diego State University, 1972.

Allison Freedman, 1998, Assistant Director of Athletics, Student-Athlete Services, B.A., Princeton University, 1991; J.D., Chicago-Kent College of Law; Ed.D. pending, University of the Pacific.

Jamie Gabbert, 1998, Assistant Women's Basketball Coach, B.A., St. Cloud State, 1982.

Debbie Geiman, 1991, Director of Athletic Finance and Business.

Steven Geller, 2000, Assistant Director of Athletics Media Relations, B.S., Towson University, 1997.

Vicki Gorman, 1997, Head Women's Water Polo Coach, B.A., Bucknell University, 1993.

Randy Hale, 1998, Head Cross Country Coach, B.A., Fresno Pacific College, 1988; M.A., University of Arkansas, 1990.

Craig Jackson, 1998, Assistant Women's Basketball Coach, B.S., Willamette University, 1997.

Adam Jacobsen, 1999, Assistant Men's Basketball Coach, B.A., University of the Pacific, 1997; MA., 1999.

Stacey Jensen, 1996, Associate Director of Athletic Training, B.S., California State University, Long Beach, 1991; M.S., California State University, Fullerton, 1996.

Justin Kern, 2000, Assistant Baseball Coach, B.A., University of the Pacific, 1997; M.A., Centenary, 1999.

Brian Kolze, 1992, Head Softball Coach, B.A., Cal. State Northridge, 1984.

Ray Looze, Jr., 1997, Head Men's and Women's Swimming Coach, B.A., University of Southern California, 1990.

Linda MacDonald, 1998, Head Field Hockey Coach, B.A., Springfield College, 1973; M.A., University of the Pacific, 1991.

Alan Major, 1995, Assistant Men's Basketball Coach, B.A., Purdue University, 1992; M.A., California Lutheran University, 1995.

Jayne Gibson-McHugh, 1989, Assistant Women's Volleyball Coach, B.A., University of the Pacific, 1982.

Maria Mendez, 1995, Head Women's Tennis Coach, B.S., California State University, Fresno, 1991; M.A., 1995.

Mike Millerick, 1991, Director of Athletic Media Relations, B.A., University of the Pacific, 1991.

Sherri Murrell, 1998, Head Women's Basketball Coach, B.A., Pepperdine, 1991.

Quincey Noble, 1989, Head Baseball Coach, B.S., S. Dakota State, 1984; M.S., Ed., N.W. Missouri State University, 1986.

Denny Peterson, 2000, Assistant Baseball Coach, B.S., Northwest Missouri State University, 1991; M.A., 1998.

Chris Pond, 1990, Director of Athletic Training, B.S., Utah State, 1988; M.S., University of Arizona, 1990.

Courtney Porter, 1998, Head Men's Water Polo Coach, B.S., University of the Pacific, 1979; M.S., Stanford, 1983.

Mas Shibata, 1994, Assistant Women's Volleyball Coach, B.S., California State University, Fresno, 1978.

Todd Smith, 1998, Director of Athletic Performance, B.S., University of Miami (Ohio), 1995.

Cindy Spiro, 1994, Associate Director of Athletics, Operations, B.A., University of the Pacific, 1976; M.A., University of the Pacific, 1984.

Heather Tarr, 1999, Assistant Softball Coach, B.A., University of Washington, 1997.

Robert L. Thomason, 1988, Head Men's Basketball Coach, B.A., University of the Pacific; 1971; M.A., 1985.

Yvette Valdez, 1997, Assistant Women's Soccer Coach, B.A., University of the Pacific, 1997.

Ron Verlin, 1994, Assistant Men's Basketball Coach, B.S., Cal State University, Sacramento, 1990.

Joe Wortmann, 1991, Head Men's Volleyball Coach, B.A., Loyola Marymount, 1978.

Library Faculty

Judith K. Andrews, 1966, Associate Professor, Reference Librarian, A.B., Chico State College, 1961; M.S. in L.S., Drexel Institute of Technology, 1962; M.A., California State University, Sacramento, 1978.

Antonio M. Calvo, 2000, Assistant Professor, Humanities, Music Librarian, B.M., San Francisco State University, 1985; MLIS, San Jose State University, 2000.

A. Craig Hawbaker, 1991, Professor, Head of Reference Department, B.S., Drake University, 1973; MSL, Western Michigan University, 1975.

Lorrie Knight, 1996, Assistant Professor, Electronic Services Reference Librarian, B.A., University of Texas, Austin, 1975; MLIS, Louisiana State University, 1989.

Janice M. Krueger, 2000, Assistant Professor, Instruction and Outreach Librarian, B.S., Duquesne University, Pittsburgh, PA, 1977; M.S., Drexel University, Philadelphia, PA, 1988.

Daryl Morrison, 1985, Professor, Head of Special Collections Department, B.A., University of Illinois, 1971; MLS, 1974; M.A., University of Oklahoma, 1979.

Jean Purnell, 1984, Associate Professor, Assistant Provost, Dean of the Library, B.A., Wake Forest University, 1976; M.A. in Music-ology, University of North Carolina at Chapel Hill, 1980; MSLS, University of North Carolina at Chapel Hill, 1980.

Kathlin L. Ray, 1993, Associate Professor, Assistant Dean, B.S., Brigham Young University, 1985; MLS, Brigham Young University, 1989.

Ron L. Ray, 1992, Assistant Dean, Associate Professor, B.A., Brigham Young University, 1985; MLS, Brigham Young University, 1988.

Emeritus Faculty/Staff

Glen A. Albaugh, 1971, Professor of Sport Sciences, Emeritus, 1999.

Steven C. Anderson, 1970, Professor of Biological Sciences, Emeritus, 1997.

William P. Bacon, 1967, Professor of Education, Emeritus, 1984.

David P. Baral, 1981, Professor of Educaiton, Emeritus, 1999.

Roger Barnett, 1965, Professor of Geosciences, Emeritus, 1999.

Stanworth R. Beckler, 1955, Professor of Music Theory, Emeritus, 1990.

Robert W. Blaney, 1966, Professor of Religious Studies, Emeritus, 1996.

John W. Blasingame, 1982, Associate Professor of Business, Emeritus, 1999.

George P. Blum, 1962, Chair and Professor of History, Emeritus, 1999.

Jerry B. Briscoe, 1964, Professor of Political Science, Emeritus, 1994.

Gwenneth L. Browne, 1968, Professor of Philosophy, Emerita, 1997.

George L. Buckbee, 1973, Professor of Music, Emeritus, 1996.

Erwin C. Burmeister, 1962, Professor, University Libraries, Emeritus, 1994.

Gaylon L. Caldwell, 1970, Dean and Professor of Political Science, Emeritus, 1982.

Wallace F. Caldwell, 1970, Professor of Political Science, Emeritus, 1994.

John P. Carew, 1967, Professor of Economics, Emeritus, 1995.

David J. Carson, 1964, Professor of Biological Sciences, Emeritus, 1983.

Ronald J. Caviani, 1978, Professor of Music Composition, Emeritus, 1993.

Kishori Chaubal, 1972, Associate Professor of Biological Sciences, Emerita, 1999.

Madhukar G. Chaubal, 1964, Professor of Medicinal Chemistry, Emeritus, 1999.

William J. Christopherson, Jr., 1972, Professor of Clinical Pharmacy, Emeritus, 1991.

Elmer U. Clawson, 1974, Professor of Education, Emeritus, 1995.

Charles Clerc, 1963, Professor of English, Emeritus, 1990.

Joan E. Coulter, 1973, Assistant Professor of Music, Emerita, 1997.

William Darling, 1966, Associate Professor of Business and Public Administration, Emeritus, 1990.

Catherine P. Davis, 1953, Associate Dean of Students, Emerita, 1984.

Gilbert L. Dellinger, 1973, Professor of Art, Emeritus, 2000.

Clifford L. Dochterman, 1972, Vice President, Emeritus, 1990.

Richard P. Dodge, 1964, Professor of Chemistry, Emeritus, 1994.

William C. Dominik, 1967, Professor of Music, Emeritus, 1995.

I. Dale Dunmire, 1973, Professor of Electrical and Computer Engineering, Emeritus, 1990.

Mark E. Ealey, 1969, Professor of Black Studies, Emeritus, 1990.

Alberto Eraso, 1964, Associate Professor of Modern Language and Literature, Emeritus, 1990.

Erling A. Erickson, 1969, Professor of History, Emeritus, 1997.

H. Richard Etlinger, 1982, Professor of Music Mangement/Busi- ness, Chair, Department of Music Management, Emeritus, 2000.

Ruth M. Faurot, 1962, Professor of English, Emerita, 1982.

Lee C. Fennell, 1968, Professor of Political Science, Associate Provost and University Registrar, Emeritus, 1999.

U. Wolfgang Fetsch, 1967, Professor of Piano, Emeritus, 1991.

Herschel Frye, 1956, Professor of Chemistry, Emeritus, 1990.

Anne Funkhouser, 1966, Professor of Biological Sciences, Emerita, 1991.

Fay Goleman, 1937, Professor of Education and Sociology, Emerita, 1976.

Paul H. Gross, 1966, Professor of Chemistry, Emeritus, 1999.

Donald H. Grubbs, 1963, Professor of History, Emeritus, 1998.

Fay B. Haisley, 1984, Dean, Gladys L. Benerd School of Education, Emerita, 1999.

Robert E. Hamernik, 1962, Professor of Engineering, Emeritus, 1998.

George T. Hankins, 1980, Professor of Electrical and Computer Engineering, Emeritus, 1991.

Halvor P. Hanson, 1959, Professor of Communication, Emeritus, 1990.

Lois N. Harrison, 1985, Professor of Music Education, Emerita, 1997.

Paul J. Hauben, 1969, Professor of History, Emeritus, 1994.

Floyd F. Helton, 1959, Professor of Mathematics, Emeritus, 1980.

Leonard A. Humphreys, 1970, Professor of History, Emeritus, 1991.

Alice S. Hunter, 1970, Professor of Biological Sciences, Emerita, 1995.

Mari G. Irvin, 1981, Professor of Education, Emerita, 2000.

Harold S. Jacoby, 1933, Professor of Sociology, Emeritus, 1976.

J. Marc Jantzen, 1940, Dean of the School of Education, Emeritus, 1974, Professor of Education, Emeritus, 1978.

Sy M. Kahn, 1963, Professor of Drama, Emeritus, 1986.

Janine Kreiter, 1959, Professor of Modern Language and Literature, Emerita, 1994.

Robert A. Kreiter, 1960, Professor of Modern Language and Literature, Emeritus, 1994.

Charles DeWolf LaMond, 1948, Associate Professor of Piano and Theory, Emeritus, 1982.

Neil L. Lark, 1962, Chair and Professor of Physics, Emeritus, 1999.

Estelle P. Lau, 1977, Professor of Education, Emerita, 2000.

Ira C. Lehn, 1968, Professor of Violoncello, Emeritus, 1991.

Louis Leiter, 1963, Professor of English, Emeritus, 1990.

Ronald H. Limbaugh, 1966, Professor of History, Emeritus, 2000.

Heath W. Lowry, 1966, Professor of Education, Emeritus, 1985.

Bertram L. Lum, 1977, Professor of Pharmacy Practice, Emeritus, 2000.

Armand P. Maffia, 1971, Associate Professor of Education, Emeritus, 1983.

O. Boyd Mathias, 1965, Associate Professor of Mathematics, Emeritus, 1991.

Elizabeth Matson, 1945, Professor of Physical Education and Recreation, Emerita, 1981.

Alice Jean Matuszak, 1963, Professor of Medicinal Chemistry, Emerita, 2000.

Charles A. Matuszak, 1963, Professor of Chemistry, Emeritus, 2000.

Arthur H. Maynard, 1958, Professor of Religious Studies, Emeritus, 1985.

Hugh J. McBride, 1975, Professor of Education, Emeritus, 1996.

Stanley E. McCaffrey, 1971, President, Emeritus, 1987.

E. Leslie Medford, Jr., 1962, Dean of Admissions, Emeritus, 1988.

Lawrence Meredith, 1966, Professor of Religious Studies, Emeritus, 1999.

Doris C. Meyer, 1956, Professor of Education, Emerita, 1990.

Sally M. Miller, 1967, Professor of History, Emerita, 1999.

Roger C. Mueller, 1969, Professor of English, Emeritus, 1997.

Fuad M. Nahhas, 1964, Professor of Biological Sciences, Emeritus, 2000.

Thuan V. Nguyen, 1969, Professor of Engineering, Emeritus, 1998.

Carl E. Nosse, 1980, Professor of Theory-Composition, Dean, Conservatory of Music, Emeritus, 1999.

Walter Nyberg, 1962, Professor of Religious Studies, Emeritus, 1990.

Lawrence J. Osborne, 1951, Professor of English, Emeritus, 1978.

J. Ronald Pecchenino, 1970, Professor of Art, Emeritus, 1996.

Richard L. Perry, 1961, Professor of Physics, Emeritus, 1997.

Darrell C. Persels, 1965, Professor of Drama, Emeritus, 1995.

Sandra L. Persels, 1976, Professor of Drama and Dance, Emerita, 1996.

Larry L. Pippin, 1965, Professor of Political Science and Geography, Emeritus, 1994.

Efward T. Pohlman, 1961, Professor of Education, Emeritus, 1995.

Max Polinsky, 1961, Professor of Pharmaceutics, Emeritus, 1981.

John Calvin Potts, 1965, Professor of Chemistry, Emeritus, 1975.

Virginia L. Puich, 1969, Associate Professor, Emerita, 1997.

Herbert R. Reinelt, 1962, Professor of Philosophy, Emeritus, 1999.

Andres F. Rodriguez, 1964, Professor of Physics, Emeritus, 1997.

Charles Schilling, 1956, Professor of Music, Emeritus, 1985.

John V. Schippers, 1962, Professor of Education, Emeritus, 1990.

John E. Seaman, 1969, Professor of English, Emeritus, 1999.

Kathleen Shannon, 1955, Associate Professor of Religious Studies, Emerita, 1979.

Donald Y. Shirachi, 1971, Professor of Physiology and Pharma-cology, Emeritus, 1994.

John D. Smith, 1970, Professor of English, Emeritus, 1999.

Reuben W. Smith III, 1972, Dean of the Graduate School, Emeritus, 1994, Professor of History, Emeritus, 1994.

Robert J. Smutny, 1955, Professor of Classics, Emeritus, 1987.

Donald L. Sorby, 1984, Dean of the School of Pharmacy, Emeritus, 1995.

Elizabeth Spelts, 1948, Professor of Voice, Emerita, 1985.

Evelyn Spring, 1968, Associate Professor of Physical Education and Recreation, Emerita, 1991.

S. Thomas Stubbs, 1963, Chair and Associate Professor of Sport Sciences, Emeritus, 1999.

J. Connor Sutton, 1963, Associate Professor of Sport Sciences, Emeritus, 1999.

Arthur W. Swann, 1970, Associate Professor, Science Librarian, Emeritus, 1982.

Ted T. Takaya, 1979, Professor of Modern Language and Literature, Emeritus, 1996.

B. Jan Timmons, 1971, Assistant Dean and Professor of Communication, Emerita, 2000.

Roy J. Timmons, 1970, Professor of Communicative Disorders, Emeritus, 1990.

Graciela T. de Urteaga, 1963, Professor of Modern Language and Literature, Emeritus, 1982.

Warren van Bronkhorst, 1967, Professor of Violin, Emeritus, 1991.

Ray VarnBuhler, 1980, Professor of Art and Art History, Emeritus, 1998.

Ravindra C. Vasavada, 1973, Director of Graduate Studies in Pharmacy, Professor of Pharmaceutics, Emeritus, 2000.

William H. Wadman, 1955, Professor of Chemistry, Emeritus, 1988.

Patricia Wagner, 1962, Professor of Sociology, Emerita, 1981.

Walter C. Wagner, 1962, Professor of Economics, Emeritus, 1986.

Earl J. Washburn, 1946, Professor of Art, Emeritus, 1984.

Elaine M. Werner, 1985, Lecturer and Assistant Director, Mathematics Resource Center, Emerita, 2000.

Roy A. Whiteker, 1976, Dean of the College of the Pacific, Emeritus, 1989, Professor of Chemistry, Emeritus, 1992.

William P. Whitesides, 1978, Professor of Voice, Emeritus, 1996.

John S. Williams, 1965, Professor of English, Emeritus, 1998.

Robert R. Winterberg, 1950, Vice President, Emeritus, 1990.

Paul H. Winters, 1956, Professor of Communication, Emeritus, 1989.

John P. Wonder, 1963, Professor of Modern Language and Literature, Emeritus, 1990.

Carl E. Wulfman, 1961, Professor of Physics, Emeritus, 1996.

academic calendar 2001-2002

2001 Fall Semester

(All Schools and Colleges except Pharmacy)

Freshman Orientation and Registration
- Session 1 ..... June 23-25
- Session 2 ..... June 30-July 2
- Session 3 ..... August 21-23

International Student Orientation and Registration ..... August 20
Transfer Orientation and Registration ..... August 25-26
Registration – All Students** ..... August 27-29
Classes Begin ..... August 28
Late Registration (with late fee) .....August 30-September 11
Labor Day Holiday ..... September 3
Application Deadline for December Graduation ..... September 4
Last Day to Add Classes** ..... September 11
Last Day for Pass/No Credit or Letter Grade Option** . September 11
Last Day to Receive Applied Music Refund ..... September 17
Application Deadline for May & August Graduation .....October 1
Fall Student Break .....October 12
Advising for Spring Semester* ..... October 15-November 2
Last Day to Drop Fall Classes** .....October 19
Fall Festival/Homecoming .....October 19-21
Last Day for Tuition Refund .....October 24
Early Registration for Spring 2002 ..... October 29-November 16
Thanksgiving Vacation ..... November 21 (8:00 am)-23
Classes Resume ..... November 26
Classes End .....December 14
Final Examination Period .....December 17-21

2002 Spring Semester

(All Schools and Colleges except Pharmacy)

International Student Orientation ..... January 10-11
International Student Testing ..... January 11
New Student Orientation and Registration ..... January 12-13
Registration – All Students Except Pharmacy**
(see Pharmacy calendar) ..... January 14-16
Classes Begin ..... January 15
Late Registration (with late fee) ..... January 17-29
Martin Luther King, Jr. Holiday ..... January 21
Last Day to Add Classes** ..... January 29
Last Day for Pass/No Credit or Letter Grade Option ..... January 29
Last Day to Receive Applied Music Refund .....February 8
Presidents' Day ..... February 18
Advising for Fall Semester* ..... February 25-March 22
Last Day to Drop Spring Classes** .....March 8
Spring Break .....March 11-15
Last Day for Tuition Refund .....March 16
Classes Resume .....March 18
Early Registration for Fall 2002** ..... March 18-April 5
Student Travel Day ..... April 1
Classes End .....May 7
Study Day .....May 8
Final Examination Period .....May 9,10, 13-15
Commencement Weekend .....May 18-19

**Limited to currently enrolled students.*

***Advisers should arrange to be available on this day.*

School of Pharmacy and Health Sciences

2001 Fall Term

Clinical Experience ..... August 26-27
Registration, Returning Students ..... August 27-29
Classes Begin ..... August 28
Late Registration (with late fee) .....August 30-September 11
Labor Day Holiday ..... September 3
Application Deadline for December Graduation ..... September 4
Last Day to Add Classes ..... September 11
Application Deadline for May and August Graduation .....October 1
Advising for Winter Term Classes .....October 8-19
Fall Student Break .....October 12
Last Day to Drop Fall Classes .....October 15
Last Day for Tuition Refund .....October 19
Fall Festival/Homecoming .....October 19-21
Early Registration for Winter 2002 ..... October 22-November 2
Thanksgiving Vacation .....November 21 (8:00 a.m.)-23
Classes Resume ..... November 26
Classes End ..... November 30
Final Examination Period .....December 3-4, 6-7
Study Day .....December 5
Winter Semester Break ..... December 10-January 2

2002 Winter Term

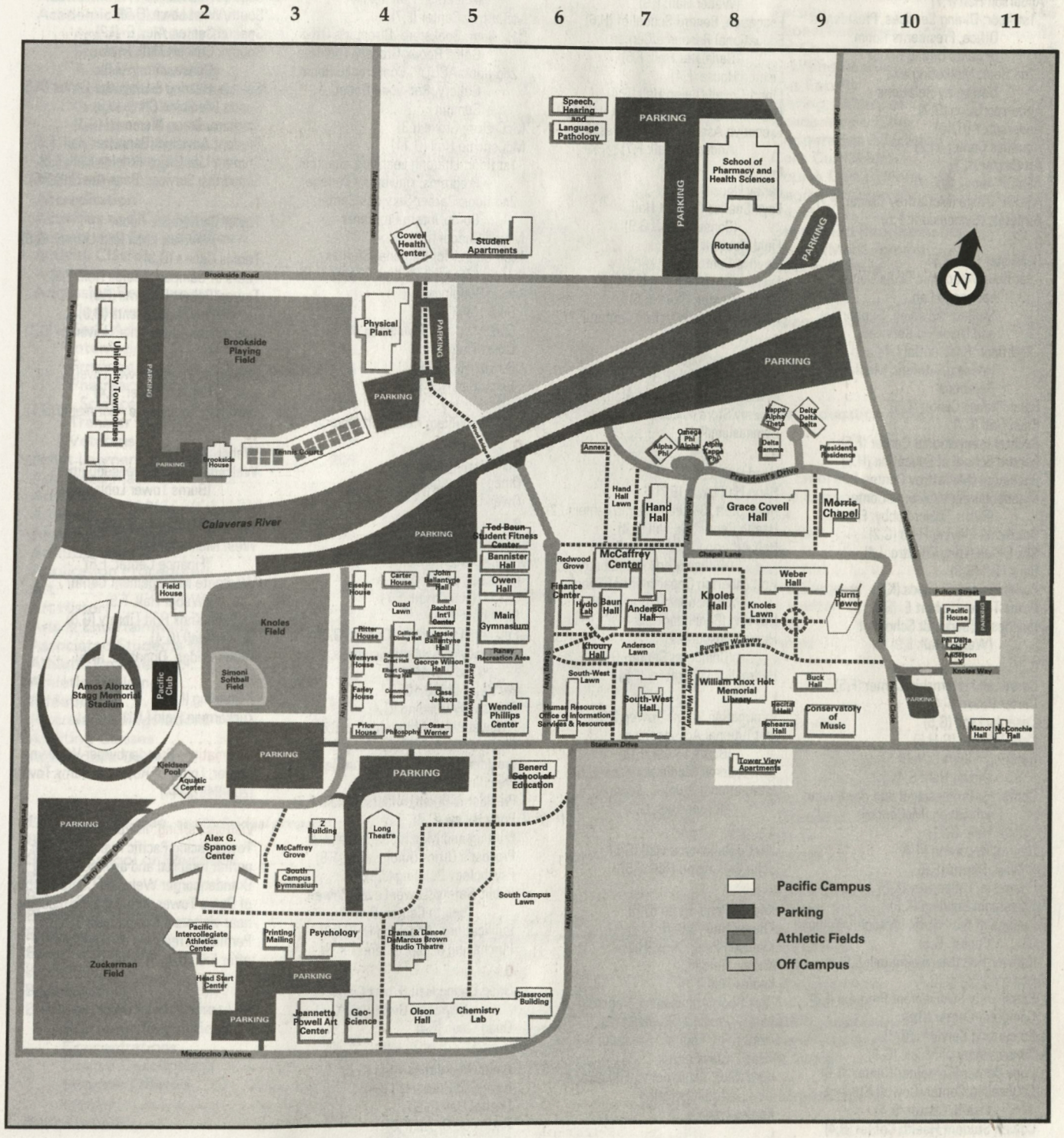
Registration .....January 3-4
Classes Begin ..... January 3
Late Registration (with late fee) .....January 7-18
Last Day to Add Classes ..... January 18
Martin Luther King, Jr. Holiday ..... January 21
Last Day to Drop Winter Classes ..... February 15
Presidents' Day ..... February 18
Last Day for Tuition Refund ..... February 21
Advising for Spring ..... February 19-March 1
Early Registration for Spring .....March 4-22
Spring Break .....March 11-15
Classes Resume .....March 18
Student Travel Day ..... April 1
Classes End ..... April 12
Final Examination Period ..... April 15-16, 18-19
Study Day ..... April 17
Spring Semester Break ..... April 20-24

2002 Spring Term

Registration ..... April 25-26
Classes Begin ..... April 25
Late Registration (with late fee) .....April 29-May 10
Last Day to Add Classes .....May 10
Commencement Weekend .....May 18-19
Early Registration for Fall Term 2002 ..... May 20-June 7
Memorial Day Holiday .....May 27
Last Day to Drop Spring Classes ..... June 7
Last Day for Tuition Refund ..... June 12
Independence Day Holiday ..... July 4
Classes End .....July 26
Final Examination Period .....July 29-30-August 1-2
Study Day .....July 31

Note: All students on the Stockton campus, including Pre-Pharmacy and Communicative Disorders (Speech-Language Pathology), follow the two-semester calendar.

campus map



See campus location guide page 226

campus map

A
Admissions (Knoles Hall: F,8)
Albright Auditorium (Wendell Phillips Center: G,5)
Alpha Kappa Lambda (E,2)
Alpha Kappa Phi (Archania: D,8)
Alpha Phi (D,7)
Alumni and Parent Programs (Burns Tower: F,9)
Amos Alonzo Stagg Memorial Stadium (G,1)
Anderson Hall (F,7)
1st floor: Dining Services, President's Office, Presidents Room, Regents Dining Room
2nd floor: Marketing and University Relations
Anderson Lawn (G,7)
Anderson Y (G,10)
Aquatics Center (H,2)
Art Center (K,3)
ASUOP Annex (D,6-7)
ASUOP Office (McCaffrey Center: F,7)
Athletics (Gymnasium: F,5)

B
Bannister Hall (F,5)
1st floor: Academic Skills Center, Language Lab, Student Advising, Supportive and Disabled Services
2nd floor: Residential Life and Housing, Athletic Media Relations
Baun Fitness Center (E,5)
Baun Hall (F,7)
Bechtel International Center (F,5)
Benerd School of Education (H,6)
Bookstore (McCaffrey Center: F,7)
Brandenburger Welcome Center (Burns Tower Lobby: F,9)
Brookside Playing Field (C,2)
Box Office (Long Theatre: I,4)
Buck Hall (G,9)
Buildings and Grounds (K,3)
Burns Tower, Robert E. (F,9)
Business, Eberhardt School of (Weber Hall: F,9)

C
Career and Internship Center (F,5)
Carter House (F,4)
Casa Jackson (G,5)
Casa Werner (G-H,5)
Catering (Elbert Covell Dining Hall: G,4)
Center for Professional and Continuing Education (McConchie Hall: G,11)
Central Receiving (K,4)
Chapel, Morris (E,9)
Chemistry Laboratory (K,5)
Classroom Building (K,6)
College of the Pacific (Wendell Phillips Center: G,5)
Colliver Hall (Morris Chapel: E,9)
Common Room (G,4)
Community Involvement Program (F,8)
Computer Center (G,6)
Computing Services (G,6)
Conservatory of Music (G,9)
Copy Center (Computer Center: G,6)
Counseling Center (Cowell Student Health Center: B,4)
Cowell Student Health Center (B,4)
1st floor: Public Safety
2nd floor: Counseling Center, Student Health Center
Curriculum Library (G,8)

D
Dance Studio (I,3)
Dean of Students (F,8)
Delta Delta Delta (D,9)
Delta Gamma (D,8)
DeMarcus Brown Studio Theatre (J,4)
Development (Burns Tower: F,9)
Dining Services (Bannister Hall: F,5)
Drama & Dance Building (J,4)

E
Eberhardt School of Business (Weber Hall: F,9)
Education, Benerd School of (H,6)
Educational Resource Center (Bannister Hall: F,5)
Eiselen House (F,4)
Elbert Covell Dining Hall (G,4)
Engineering, School of (Baun Hall: F,7)
Executive Assistant to the President (Anderson Hall: F,7)

F
Farley House (G,4)
Faye Spanos Concert Hall (Conservatory: G,9)
Field House (F,2)
Finance Center (F,6)
Financial Aid (Hand Hall: E,7)
Fitness Center, Baun (E,5)
Food Service (McCaffrey Center: F,7)

G
Geosciences Center (K,4)
Grace Covell Hall (E,8)
Graduate School (Knoles Hall: F,8)
Grocery Store (McCaffrey Center: F,7)
Gymnasium (F,5)

H
Hand Hall (E,7)
Hand Hall Lawn (E,7)
Head Start, Sandra Anselmo Center (J,2)
Health Center, Cowell (B,4)
Holt Atherton Conference Room (William Knox Holt Library: G,8)
Holt Atherton Department of Special Collections (Library: G,8)
Housing (Bannister Hall: F,5)
Human Resources (Computer Center: G,6)
Hydraulics Laboratory (F,6)

I
Information (Burns Tower: F,9)
Institutional Advancement (Burns Tower: F,9)
Instructional Media Services (G,5)
International Studies, School of (Wilson Hall: G,5)

J
Jessie Ballantyne Hall (G,5)
John Ballantyne Hall (F,5)

K
Kappa Alpha Theta (D,8)
Khoury Hall (G,6-7)
Kjeldsen Pool, Chris (H,2)
Knoles Field (F,3)
Knoles Hall (F,8)
1st floor: Admissions, Registrar, Provost, Student Life
2nd floor: English, Graduate School, Classrooms
3rd floor: Classrooms, Financial Aid Administration
Knoles Lawn (F,9)

L
Language Lab (Bannister Hall: F,5)
Learning Resources Center (Benerd School of Education: H,6)
Library, William Knox Holt, Main (G,8)
Lifelong Learning (McConchie Hall: G,11)
Locker Rooms (J,2)
Locker Rooms, Athletics (Field House: F,2)
Long Theatre (I,4)

M
Mail Room (J,3)
Manor Hall (G,11)
Marketing and University Relations (Anderson Hall: F,7)
McCaffrey Center (F,7)
1st floor: Bookstore, Director's Office, Game Room, Grocery,Theater
2nd floor: ASUOP, Conference Room, Gallery, Redwood Room, Summit
McCaffrey Grove (I,3)
McConchie Hall (G,11)
1st floor: Lifelong Learning, Summer Programs, University College
2nd floor: Career Services Center, Co-op/Intern Programs
Morris Chapel (E,9)
Muir Center for Regional Studies (Wendell Phillips Center: G,5)
Music Buildings
Buck Hall (G,9)
Conservatory of Music (G,9)
Owen Hall (F,5)
Recital Hall (G,9)
Rehearsal Hall (G,9)
Music Library (William Knox Holt Library: G,8)

O
Olson Hall (K,4)
Omega Phi Alpha (D,7)
Owen Hall (F,5)

P
Pacific Club (G,1)
Pacific House (F,10)
Pacifican/Epoch Offices (Hand Hall: E,7)
Pavilion (E,5)
Personnel (Computer Center: G,6)
Pharmacy and Health Sciences, School of (A,8)
Phi Delta Chi (G,10)
Philosophy Building (G,4)
Physical Plant, Maintenance (C,4)
Physical Therapy (Rotunda: B,8)
President's Office (Anderson Hall: F,7)
President's Residence (D,9)
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Price House (G,4)
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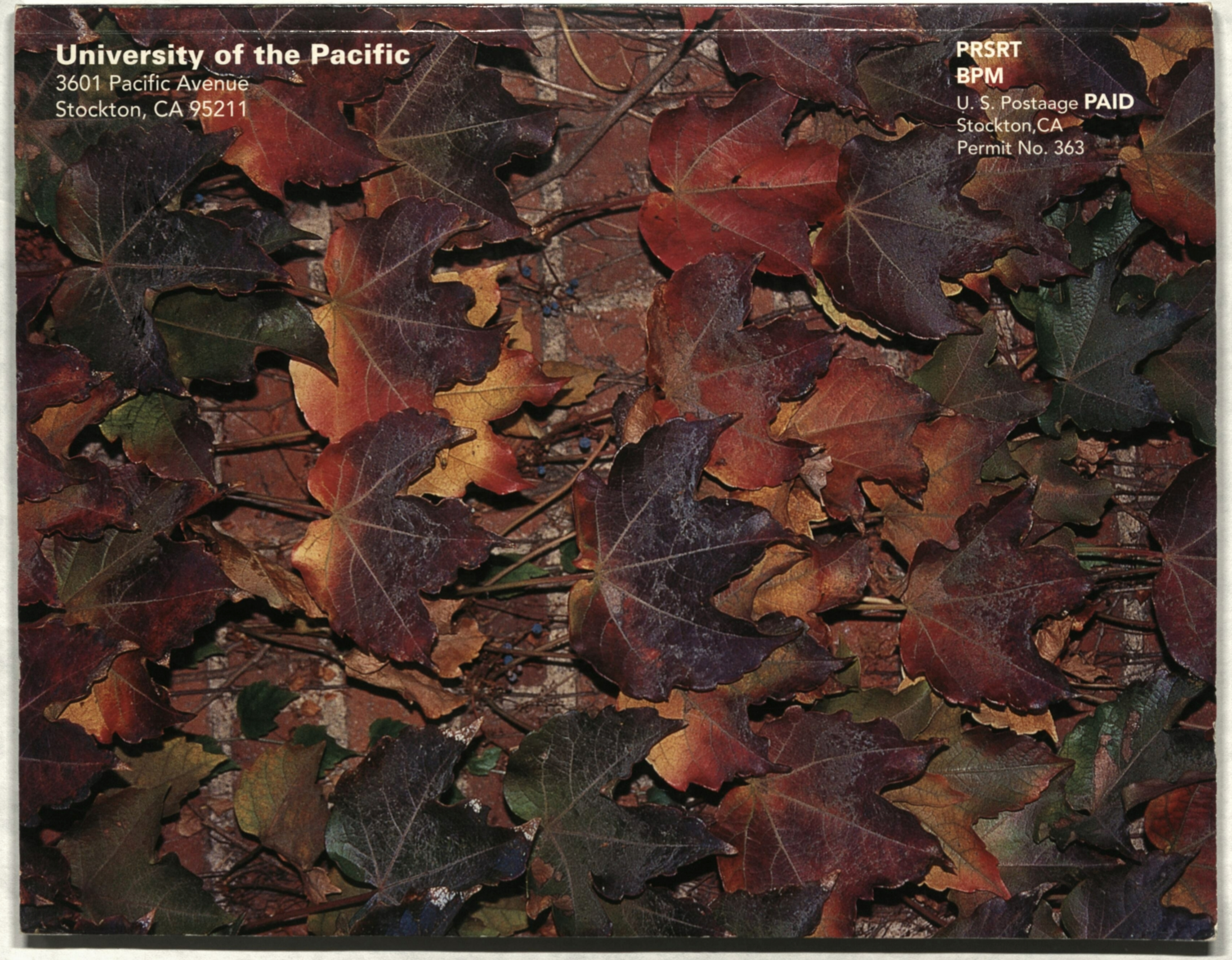

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