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## 2009/2010 University of the Pacific General Catalog

University of the Pacific

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# university of the pacific

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**general catalog 2009 • 2010**

## Academic Divisions of the University

College of the Pacific (Arts & Sciences)

Conservatory of Music

Eberhardt School of Business

Gladys L. Benerd School of Education

School of Engineering and Computer Science

School of International Studies

Thomas J. Long School of Pharmacy and Health Sciences

Office of Research and Graduate Studies

Arthur A. Dugoni School of Dentistry

McGeorge School of Law

Center for Professional and Continuing Education

# university of the pacific

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## general catalog 2009 - 2010

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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 (WASC), located at 985 Atlantic Ave., Suite 100, Alameda, CA 94501; 510-748-9001.

#### **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 Arthur A. School of Dentistry in San Francisco and Pacific 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 does not discriminate on the basis of race, gender, sexual orientation, national origin, ancestry, color, religion, religious creed, age, marital status, cancer-related or genetic-related medical conditions, disability, citizenship status, military service status, and any other status protected by law.

In accordance with the above University policy and in compliance with all applicable laws, all educational services will be provided and all employment decisions (including recruitment, training, compensation, benefits, employee relations, promotions, terminations) will be made without regard to the individual's status protected by law. To the extent provided by law, the University will reasonably accommodate qualified individuals with disabilities which meet the legal standards for documentation, whenever the individual is otherwise qualified to safely perform all essential functions of the position.

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.

*Because the catalog is compiled well in advance of the academic year it covers, changes in programs, policies, and the academic calendar may well occur.*

*All catalog information is subject to change without notice or obligation.*

# a history of innovation

University of the Pacific was established by pioneer Methodist ministers in 1851 as the first chartered institution of higher learning in California. Since its founding, Pacific has earned widespread recognition for its student-centered approach to education, its many firsts and innovations, and the accomplishments of more than 55,000 living alumni.

As an innovator and leader in higher education, Pacific provided the West Coast with its first medical school in 1858 (it later became part of Stanford and today is California Pacific Medical Center), its first coeducational campus in 1871, its first conservatory of music in 1878 and the nation's first "cluster colleges" in the 1960s. Pacific was also the nation's first 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. By moving from San Jose to Stockton in 1924, Pacific became the first four-year private university in the Central Valley. Shortly after occupying the new campus, Pacific established one of California's earliest schools of education. 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 an expansion into graduate professional education under the administration of Dr. Robert Burns (1947-1971). In 1955 the School of Pharmacy was opened (now the Thomas J. Long School of Pharmacy and Health Sciences in honor of the benefactor and Regent who, with his brother Joseph Long, founded Longs Drugstores) and in 1956 the graduate school. The School of Engineering (now the School of Engineering and Computer Science) was established in 1957 and five years later the College of Physicians and Surgeons, a school of dentistry founded in San Francisco in 1896, merged with the University and became the San Francisco campus. In 2004 the dental school was renamed the Arthur A. Dugoni School of Dentistry to honor the extraordinary leadership of its Dean from 1978 to 2005, based on a \$50 million gift from alumni and friends.

A new concept in higher education in the United States found expression in the establishment of cluster colleges in the 1960s that adapted the Oxford and Cambridge model to an American setting. The colleges integrated faculty and students into living and learning communities. The first, Raymond College, was established in 1962. A second followed in 1963 with the opening of Elbert Covell College, the first bilingual, bicultural college in the country. A third, Callison College, was

established in 1967 and focused on non-western studies with a year of study in an Asian culture. The cluster colleges ended in 1982. However, their emphasis on a global education continued in a new School of International Studies, the first university-based undergraduate school of international studies in California. The learning community concept of the cluster colleges was strengthened in College of the Pacific, the liberal arts core of the University, recognized for preparing responsible citizen leaders who will contribute in lasting ways in their careers and communities.

Continuing expansion of graduate professional education, McGeorge College of Law, an independent law school founded in Sacramento in 1924, merged with the University in 1966. In the fall of 1977, the department of business administration in College of the Pacific was reorganized as the School of Business and Public Administration. In 1995 it was renamed the Eberhardt School of Business in honor of the Eberhardt family's endowed gifts. In 1985 programs designed specifically for adult "re-entry" students were reorganized and revitalized through University College, with further reforms and expansion a decade later into the Center for Professional and Continuing Education.

Beginning in 1995, under the leadership of the University's 23<sup>rd</sup> President, Donald V. DeRosa, a new era of expansion and innovation began. That year, Pacific offered the first four-year guarantee whereby students were assured completion of the bachelor of arts degree in four years. Accelerated programs were initiated by President DeRosa to enable students to complete undergraduate studies in combination with professional degrees in pharmacy, law, dentistry and business in one to three fewer years.

In 1999 alumni Dave ('42) and Iola ('45) Brubeck announced that their papers, recordings and memorabilia, a treasure of historic American music and memorabilia, would be deposited at Pacific for study and research. In response to this gift and in honor of a legend in jazz and American music, President DeRosa announced formation of The Brubeck Institute for the study, promotion and performance of American music.

Over the last decade, Pacific has completed or begun work on more than \$200,000,000 in new and renovated facilities, including two residence halls, an Art and Geosciences Center, a biological laboratories building, a health science learning center and clinics, a baseball field, an expanded fitness center, a new Humanities building, and an addition and renovation of the library on the

Stockton campus. A new University Center and Biological Sciences Center opened, and construction began on a new gymnasium and engineering and technology center in fall 2008.

Pacific's progress and leadership in higher education have earned national recognition. The University has been consistently ranked in the top 50 "best values" among doctoral level universities by U.S. News and World Report, and is included in many top ten or top five lists for attention to students, financial aid, career placement and student counseling. A Phi Beta Kappa chapter, installed in 2007, is evidence of national recognition of the quality of Pacific's academic programs. The Stockton campus was ranked as the sixth most beautiful campus in the nation.

In May 2007, President DeRosa announced a \$100,000,000 estate gift from former and current Regents of the University Robert and Jeannette Powell. This transformative gift will primarily be used for scholarships and campus beautification. At the time of the announcement, only 29 other universities world-wide had received a gift of that size.

Pacific Rising, 2008-2015, the University's strategic plan, was adopted by the Board of Regents in April 2007. It presents the core values, aspirations, commitments and strategies for Pacific to become the West's most distinctive, student-centered, national university.

The six commitments are . . .

- innovation and creativity across the University.
- distinctive programs recognized for their quality, uncommonness, and sustainability.
- collaborative, multidisciplinary programs that integrate liberal arts and professional education.
- preparing the whole student, especially for responsible professional and civic leadership in a global context.
- strategically expanding and improving partnerships among its alumni and in local, regional, national, and global communities.
- resource growth and management to support ongoing improvements in the quality of education and service.

The complete plan can be viewed at [www.pacific.edu/ipc](http://www.pacific.edu/ipc).

In April 2008, President DeRosa announced plans to retire on June 30, 2009. In February 2009, Pamela A. Eibeck was selected to become the 24<sup>th</sup> President of University of the Pacific, its sixth President since the University's move to Stockton in 1924.

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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.

An undergraduate's formal education at Pacific consists of three parts:

- 1) the major program or area of specialization,
- 2) the General Education Program, which consists of the Pacific Seminars and the Breadth Program, 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 General Education Program is designed to provide undergraduate students with common intellectual experiences and breadth of knowledge regardless of their areas of specialization. These goals are engendered through exposure to different ways of organizing knowledge and the development of competencies such as writing, critical and quantitative reasoning, retrieval of information, oral communication, understanding diversity, and working in groups. 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 is 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 allows students a broad choice in the selection of elective courses beyond those required for their major programs and for general education. Students are encouraged to participate in service learning and in work-based learning such as internships.

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 4,650 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 nearly 70% 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.

### *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 and minor 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 arts and the social and behavioral sciences, as well as a number of inter-disciplinary programs which cut a cross 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 600 students are enrolled in the School's undergraduate and MBA programs in business administration.

### *Gladys L. Benerd School of Education*

The Gladys L. Benerd School of Education prepares students for careers in teaching, school psychology 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 and Computer Science*

The School of Engineering and Computer Science, with some 500 students, offers eight baccalaureate programs: Bioengineering, civil, computer, electrical, and mechanical engineering; engineering physics, engineering management, and computer. All engineering degree programs combine academic and practical training with the engineering curricula requiring a minimum of seven months of paid engineering related work experience.

### *School of International Studies*

The School of International Studies, the newest school on campus, has 140 students enrolled. All students in the School must spend at least one semester abroad and learn a foreign language. They 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 350 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 13 disciplines, and doctorates in education, pharmaceutical and chemical sciences and physical therapy. 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 Education Specialist, Master of Arts or 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. Chemistry graduate programs are included in the Pharmaceutical Sciences Graduate Program.

### *McGeorge School of Law and A. Dugoni 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 Arthur A. Dugoni School of Dentistry in San Francisco. Some 1,100 students are enrolled at McGeorge in both full-time and part-time programs, while the dental school has an enrollment of about 470 students.

## **General Education**

Pacific's general education prepares students for a lifetime of reflection. It liberates the individual and energizes the citizen. The program introduces students to different academic areas and disciplines and thus to the various ways that critical thought is organized. It develops

fundamental skills—such as writing, analytical thinking, critical reading, quantitative analysis, and oral presentation skills—that are transferable to any kind of study. The general education program has three main components: the Pacific seminars, the breadth program, and fundamental skills. Refer to the general education section for additional information.

### *The Pacific Seminars*

All students who enter the University as freshmen must complete the three Pacific Seminars. Freshmen are required to take Pacific Seminars 1 and 2 in their first year, and Pacific Seminar 3 in their senior year. Students who enter Pacific having completed 28 or more units of transferable, classroom college work that appear on a college transcript are exempt from taking Pacific Seminars 1 and 2 but must complete Pacific Seminar 3. Freshman students admitted to the honors program are required to complete Pacific Seminars 1 and 2 regardless of the number of college units completed.

**Students are not allowed to drop Pacific Seminar 1 or 2 for any reason, even if they plan to transfer to another college or university.**

Freshmen entering in the spring semester begin the Pacific Seminar sequence the following fall. Students who would benefit from special attention to reading and writing skills are deferred from the Pacific Seminar sequence until their sophomore year.

Pacific Seminar 3 must be taken in the senior year, which means students must have completed 92 or more units to take the course.

Transfer and Post Baccalaureate students must complete Pacific Seminar 3.

### *The Breadth Program*

In addition to the Pacific Seminars, students must complete between six to nine courses in the breadth program. Students should check with their school or college dean's office for specific breadth program requirements. With the guidance of their adviser, students select courses from the categories below:

#### *I. Social and Behavioral Sciences*

- A. Individual and Interpersonal Behavior
- B. U.S. Studies
- C. Global Studies

#### *II. Arts and Humanities*

- A. Language and Literature
- B. Worldviews and Ethics
- C. Visual and Performing Arts

#### *III. Natural Sciences and Mathematics*

- A. Natural Sciences
- B. Mathematics and Formal Logic
- C. Science, Technology and Society

Students can take a maximum of 8 units from a single department (as defined by subject code, e.g., HIST or ENGL or MPER) to satisfy the breadth requirement. All bachelor's and first professional degree students on the Stockton campus must complete a minimum of two courses in each category. All students must complete a course in categories III.A and III.B. In subcategory IIC, students may take three one-unit courses in applied music or dance.

### Fundamental 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, graduate 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 School of Engineering with a blended BS/MSES program, the School of Pharmacy and Health Sciences offers a Pre-Pharmacy Advantage Program, the School of Dentistry offers a Pre-Dental/DDS. accelerated program, and the McGeorge School of Law offers a Bachelor's/JD or a Four-Year JD/MBA. Details on these programs can be found in each school's section later in this publication. Graduate program details can be found in the Graduate Catalog

## Admission Requirements

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 diverse ethnic, religious, economic and geographic backgrounds.

Please refer to the Office of Admission website for the most current policies regarding all subjects in the following section of this catalog. The website address is [www.pacific.edu/admission](http://www.pacific.edu/admission).

## Undergraduate Admission

[www.pacific.edu/admission](http://www.pacific.edu/admission)

### Application Priority Dates

[www.pacific.edu/keydates](http://www.pacific.edu/keydates)

### Fall Freshman Applicants

November 15 Application Priority Date

- All Pre-Pharmacy Applicants/Notification: March 15
- All Pre-Dental Applicants/Notification: March 15
- All Dental Hygiene Freshman Applicants/Notification: March 15
- All Powell Scholarship Applicants/Notification After Admission
- All Early Action Admission Program Applicants (see below)/Notification: January 15

January 15 Application Priority Date

- Regular Admission Program (all majors not listed above) / Notification: March 15

Applications are reviewed once they are complete. Most students will be mailed notification in 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.

### Fall Transfer Applicants

February 15

Priority Admission and Financial Aid Application Date to Receive the Best Possible Financial Aid Package (based on individual circumstances and financial aid eligibility)

June 1

- Deadline for All Transfer Applicants

## Spring Freshman & Transfer Applicants

September 1

- Dental Hygiene Transfer Applicants / Notification: December 1

August 1

- All applicants (excluding Dental Hygiene applicants)/Notification: Rolling

Applications may 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 Pharm.D. website: [www.pacific.edu/pharmd](http://www.pacific.edu/pharmd) for deadline information.

### 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 Admission postmarked by November 15. Early Action applicants will be notified in mid-January. Those admitted under this plan have the same National Candidates Reply Date of May 1 as all other admitted students.

### Interviews

Prospective students are encouraged to visit the campus, but formal interviews are not usually required for freshman or transfer applicants (except Dental Hygiene, Pharm.D, Pacific Legal Scholars, and Organizational Behavior). 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

[www.pacific.edu/visitus](http://www.pacific.edu/visitus)

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 Admission will arrange a schedule for a prospective student's visit which may include an appointment with a faculty member, an admission counselor appointment, a tour, and/or a group information session. The opportunity for high school seniors to spend the night in a residence hall is also available on a limited basis.

For individuals or small groups, student-led tours are available most days, Monday through Friday, morning and afternoon as well as some Saturday mornings. Tours and informational sessions for larger groups are also available, but must be planned at least two weeks in advance with the Office of Admission. During the academic year the Office of Admission is open most days Monday through Friday from 8:30 a.m. to 5:00 p.m. and on selected Saturdays from 9:00 a.m. to noon. Summer hours may differ. Saturday visits and tours are by appointment only. Please go to [www.pacific.edu/visitus](http://www.pacific.edu/visitus) or call the Office of Admission 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, use any of the following information to reach the Office of Admission:

Office of Admission,  
University of the Pacific  
3601 Pacific Avenue  
Stockton, CA 95211  
Telephone: (209) 946-2211  
Fax: (209) 946-2413  
Website: [www.pacific.edu/admission](http://www.pacific.edu/admission)  
E-mail: [admission@pacific.edu](mailto:admission@pacific.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.

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 Admission Committee reviews the results of either the SAT or the ACT.

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

### **A Completed Application Includes:**

- 1) Form and Fee: [www.pacific.edu/apply](http://www.pacific.edu/apply)  
Option I: On-line application. The application must be filled out and submitted by the applicant. The normal application fee is waived (it's free to apply) Option II: Paper application. The form must be completed, dated and signed by the applicant. The normal application fee is waived (it's free to apply)
- 2) Essay: A 500 word essay is required. Please include your name and birth date on each page if submitting a paper application.
- 3) Recommendation: [www.pacific.edu/recommendation](http://www.pacific.edu/recommendation). One academic recommendation from an academic teacher, counselor or adviser is required.  
Those recommending an applicant may use the online form at [www.pacific.edu/recommendation](http://www.pacific.edu/recommendation) or send a written recommendation on official letterhead.
- 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. Applicants must also submit transcripts for any college work taken while still in high school. Transfer applicants 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 University has the right to revoke the offer of admission.
- 5) Test Score Policies for Applicants to the Fall 2009 or Spring 2010 semesters
  - Freshman applicants must submit scores from the SAT or/and ACT. Transfer applicants are not required to submit these test scores.
  - If the applicant has taken the SAT or ACT multiple times, Pacific will accept the highest combination of sub scores from all SAT attempts and highest combination of all sub scores from all ACT attempts.
  - Pacific requires that the SAT or ACT scores be sent electronically from the College Board (SAT) web site, [www.collegeboard.com](http://www.collegeboard.com) or the ACT web site, [www.act.org](http://www.act.org).

- Scores received in January from the December SAT or ACT tests are the last scores that will be used for admission or scholarship consideration for fall applicants. Students for whom later tests are the first and only test taken are exempt from this policy.

### **Special Admission Requirements**

- Music Applicants: [www.pacific.edu/music](http://www.pacific.edu/music) 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 is available at [www.pacific.edu/music](http://www.pacific.edu/music) or by calling the Conservatory of Music at (209) 946-2418.
- Dental Hygiene Applicants: [www.pacific.edu/dentallygiene](http://www.pacific.edu/dentallygiene)  
Strong candidates applying for the dental hygiene program will be invited to campus for an interview after items one through five (above) have been received.  
Dental Hygiene applicants have separate application deadlines (September 1 for Spring or November 15 for Fall). After an initial review, strong dental hygiene candidates will be invited for interviews that are required for admission into the program.
- Art Applicants (Transfer Students Only): [www.pacific.edu/cop](http://www.pacific.edu/cop) All college transfer students applying for degrees in the Art Department must contact that office to find out more information about the portfolio required for admission consideration. Students may call the Art Department at (209) 946-2241.

### **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 algebra I, II and



geometry; at least two years of laboratory science in at least two disciplines (biology, chemistry, Earth science or physics); at least two years of the same foreign language; three years of social science; 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, dentistry 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 Others	Science & Technical	All Majors
English	4 years	4 years
Fine Arts/Performing Arts	1 year	1 year
Foreign Language (one)	2 units	2 years
Social Science	2 years	3 years
Mathematics*	4 years	3 years
Laboratory Science**	3 years	2 years
Academic Electives***	1 year	1 year

\* Suggested math sequence for science and technical majors: algebra, geometry, algebra II, trigonometry or calculus. Minimum 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 Admission 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

Please see [www.pacific.edu/advancedcredit](http://www.pacific.edu/advancedcredit) for the latest policies regarding granting of advance credit. College credit (four units per examination) may be granted to students who achieve scores of a four and five on Advanced Placement examinations and/or scores of five through seven on International Baccalaureate

exams taken at the higher level. A maximum of 28 units total from Advanced Placement, International Baccalaureate, DANTES and/or CLEP test results may be applied toward a Pacific degree including General Education and major requirements.

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 is awarded college credit 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 Admission.

### 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 (AP) Examinations or the International Baccalaureate (IB) Program.

### Admission of Undergraduate Transfers

[www.pacific.edu/transfer](http://www.pacific.edu/transfer)

To be considered for admission, transfer applicants must:

- Be in good academic standing at the college in which they are currently enrolled
- Have a satisfactory record (recommended minimum 2.80 GPA in all coursework)
- Provide a supporting recommendation from the most recent college or university

### 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.
- Courses taught at a community college are not acceptable to replace upper division courses at Pacific.
- 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. Courses are accepted in chronological order.
- A course with a grade of C- or below will not transfer to Pacific. No units will be awarded for that course and does not fulfill any requirements towards a degree.
- If a student repeats a course in which a C- or below was earned, the most recent grade will be used and a new GPA for the course will be calculated for the transfer admission grade point average only. *Note: Only course content and credit are accepted in transfer; the associated grades do not become a part of the Pacific record.*
- If a student repeats a course in which a C or higher is earned, the second attempt will not be calculated in the GPA. No units will be awarded for the repeated course.

### 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

[www.pacific.edu/international](http://www.pacific.edu/international)

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 appropriate immigration documents 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 either the Test of English as a Foreign Language

(TOEFL) or from the English Language Testing Service (IELTS) tests. The minimum TOEFL score accepted for undergraduate admission consideration is 475 (paper-based), 150 (computer-based) or 52 (iBT). The minimum IELTS score accepted for undergraduate admission consideration is 5. The minimum TOEFL score for professional Pharm.D. admission consideration is 550 (paper-based), 213 (computer-based) or 80 (iBT). The minimum IELTS score for professional Pharm.D. admission consideration is 6.5. SAT-I: Reasoning Test results are not routinely required of international students applying from outside the U.S. unless they are graduating from an American-style high school, or if they are interested in consideration for the Accelerated Pre-Dental Programs, Pre-Pharmacy Advantage Programs, or the bachelors degree programs in biological sciences or dental hygiene.

In order to comply with regulations of the United States Citizenship and Immigration 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 Programs**

#### **Pre-Pharmacy Advantage Programs**

[www.pacific.edu/prepharm](http://www.pacific.edu/prepharm)

Pacific offers three options which provide for guaranteed admission into our Professional Pharmacy (PharmD) 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 for consideration are valid for students entering in the Fall semester 2007. University of the Pacific reserves the right to change criteria for freshmen entering in subsequent years.

#### **Five-Year (2+3) Pre-Pharmacy/ PharmD 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 for consideration: High school GPA of 3.75 (on a 4.0 scale) and either a combined SAT Reading and Math score of 1350 (with at least a 600 in both Reading and Math), or an ACT composite of 30.

#### **Six-Year (3+3) Pre-Pharmacy/PharmD 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 for consideration: High school GPA of 3.65 (on a 4.0 scale) and either a combined SAT Reading and Math score of 1270 (with at least a 600 in both Reading and Math), or an ACT composite of 28.

#### **Seven-Year (4+3) Bachelor's/PharmD Option**

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. Minimum criteria for consideration: High School GPA of 3.55 (on a 4.0 scale) and either a combined SAT Reading and Math score of 1200 (with at least a 600 in both Reading and Math), or an ACT composite of 27.

*\* 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 PharmD Program.*

#### **Accelerated Dental Programs**

[www.pacific.edu/predent](http://www.pacific.edu/predent)

Pacific offers three accelerated dental programs to first-time freshmen which combine undergraduate preparation with the only three-year DDS program in the country. Students admitted to any of these programs will be admitted to Pacific's Arthur A. Dugoni 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 Arthur A. Dugoni School of Dentistry in San Francisco.

Any freshman applicant who selects "pre-dental" from the list of majors 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 course load as most students on campus, they are simply taking only those specific courses which will meet the requirements to advance to the Arthur A. Dugoni School of Dentistry after two or three years.

The following minimum criteria for consideration are valid for students entering in the Fall semester 2007. Pacific reserves the right to change criteria for students entering in subsequent years.

### **Five-Year (2+3) Pre-Dental/Doctor of Dental Surgery (DDS)**

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 Arthur A. Dugoni 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 3.75 (on 4.0 scale) and either an ACT composite score of 31 or a combined SAT Reading and Math score of 1350 (with a minimum Reading score of 630). Only students who are coming to Pacific as first-time freshmen are eligible for this program at the time of admission.

### **Six-Year (3+3) Bachelor's/DDS**

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. The minimum GPA and test score requirements for admission into the 3+3 Program are a high school GPA of 3.65 (on a 4.0 scale) and either an ACT composite score of 29 or a combined SAT Reading and Math score of 1270 (with a minimum Reading 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/DDS**

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 3.55 (on 4.0 scale) and either an ACT composite score of 27 or a combined SAT Reading and Math score of 1210 (with a minimum Reading 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 DDS 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 Arthur A. Dugoni 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 Admission 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.*

### **Pacific Legal Scholars**

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

<http://web.pacific.edu/x13999.xml>

This program permits highly qualified students to enroll at University of the Pacific's McGeorge Law School during the fourth year of study at the University and complete a bachelor's degree at the end of the first year of law school. Students must apply for admission to the Pacific Legal Scholars program and meet program admissions requirements, including an admissions interview. To move on to Pacific McGeorge, students must complete all general education and major course requirements, complete three seminars to prepare for law school and participate in a number of off-campus law-related activities. They must also complete the application for admission to Pacific McGeorge and meet all admissions criteria including the median LSAT score and undergraduate GPA for the prior year's matriculating students (currently 158 and 3.42). The Pacific Legal Scholars Program is open to students in any major, but some majors may not be possible to complete in three academic years. A 4+3 version of the program is also available.

#### **Admission of Professional PharmD Students**

[www.pacific.edu/pharmd](http://www.pacific.edu/pharmd)

Students seeking admission to the Doctor of Pharmacy degree program who did not enter Pacific as a freshman through the pre-pharmacy advantage 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 Thomas J. Long 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). Students who have not taken organic chemistry or biology within the last seven years must enroll in refresher courses before entering.

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, demonstrated leadership positions, pharmacy work experience, and a mandatory interview.

All students applying to the Doctor of Pharmacy program must apply through the Pharmacy College Application Service (PharmCAS): [www.pharmcas.org](http://www.pharmcas.org). Pacific's application deadlines for this program can be found at [www.pacific.edu/pharmd](http://www.pacific.edu/pharmd). 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 published deadlines will be considered on a space available basis only. A completed application includes: PharmCAS application and fee, supplemental application form and fee, two recommendations (on required forms), Educational Background Chart, resume, and official transcripts from all colleges and universities attended. International students must also supply an official letter on bank stationary verifying funding for at least one full year; a copy of their I-20 form, and a copy of their I-94 form, and furnish an international address. Some documents must be sent to PharmCAS and some to Pacific. Students with international coursework are required to submit an evaluation from Educational Credential Evaluators (ECE). Students whose native language is not English may be requested to submit scores from the Test of English as a Foreign Language (TOEFL). The minimum acceptable TOEFL score for admission consideration is 550 (paper-based), 213 (computer-based), or 80 (International Based).

Please visit [www.pacific.edu/pharmd](http://www.pacific.edu/pharmd) for details on application requirements. Direct any questions about the Thomas J. Long School of Pharmacy and Health Sciences to the Coordinator for Pharmacy Admission at (209) 946-2211.

### **Tuition and Fees**

The University of the Pacific is an independent institution. On the Stockton campus, each student is charged a tuition fee that 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. A resident is a student who resides in University housing. Non-resident students do not live on campus. Tuition and fees are the same

for students regardless of their state or country of residence. Basic expenses are as follows:

Item	Resident	Non-Resident
Tuition* per school year, 2009-2010 permitting enrollment for 12 to 18 units in each semester	\$31,730	\$31,730
Wellness Center	240	240
Room and Board	10,616	
ASUOP Student Fee	200	200
Activity & Recreation Fee	60	60
Total, per school year	\$42,846	\$32,230
School of Pharmacy and Health Sciences Annual Tuition (Eleven-month program, three terms)		\$50,400

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

There are other fees and charges unique to certain programs. These fees or charges may be determined by contacting Student Accounts or the University office that administers those programs or activities in which the student intends to enroll or engage.

Expenses for books and supplies, special fees, and personal expenses will usually average approximately \$3,888 per term.

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)	\$15,865
Part-time (9 to 11.5 units) per unit	1,380
Part-time (.5 to 8.5 units) per unit	1,095
Excess units above 18 units, per unit	1,095
Engineering Co-op (full-time) tuition rate	7,933

**Tuition – School of Pharmacy and Health Sciences (per semester)**

Full-time (12 to 19 units)	\$16,800
Part-time (9 to 11.5 units) per unit	1,461
Part-time (.5 to 8.5 units) per unit	1,159
Excess units above 19 units, per unit	1,159
Pharmacy Clerkship Rotation (full-time)	16,800
Pharmacy Professional Fee*	325
Pharmacy Technology Fee*	330

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

**Tuition – Graduate Students (per semester)**

16 to 18 units	\$15,865
.5 to 15.5 units, per unit	992
Excess units above 18 units, per unit	992

**General Fees (per semester)**

**Wellness Center Fee \$120**

Required for all students who reside in University housing. Also required for all others, both graduate and undergraduate, taking 9 units or more. Optional for students taking .5 to 8.5 units.

**ASUOP Student Fee \$100**

Required for all undergraduate students who reside in University housing and all undergraduates taking 9 units or more. Optional for students with .5 to 8.5 units.

**Activity & Recreation Fee \$30**

Required for all students taking 9 units or more.

**Engineering/Computer Science Fee \$150**

Required for all students enrolled in the School of Engineering and Computer Science. Students are exempt from the fee while enrolled full time in the off-campus cooperative education program.

**Course Audit Fee, per class \$50**

Instructor permission is required. 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.

**Business School Fee \$20**

Required for all Business Majors.

**Conservatory Fee \$250**

Required for all Conservatory Majors.

**Practice Room Fee \$10**

Required for all Conservatory Majors.

**Applied Music Fees**

Private lesson\* fees vary by instrument and are based upon length of lesson. Fees range from \$70 to \$375. Please check with Student Accounts or the Conservatory to determine appropriate charges. Applied music lessons must be arranged through the Conservatory Office.

\*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
Course Audit Fee	50
Non-refundable, Credit by Exam Fee	50
Additional fee for successful Credit By Exam results	200
Transcript Fee	5
Petition Fee	25

**Undergraduate Confirmation Deposit**

A deposit of \$150 is required for all new students once notification of acceptance to the University has been received. The deposit will be applied toward the student's tuition and is nonrefundable after May 1.

**Housing Deposit**

A deposit of \$250 is required for all new students applying to reside in campus housing. This should be paid once notification of acceptance to the University has been received. The deposit will be applied towards the student's housing charges and is nonrefundable after May 1.

**Financial Responsibility**

Registration, when accepted by the University of the Pacific, constitutes a financial agreement between the student and the University. Registration is considered complete when the bill has been settled. 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.

In order to receive a bill that includes tuition and fees prior to the payment deadline, you must early register for courses. **Please note that students with delinquent accounts will not be permitted to register.** It is the students' responsibility to pay by the deadline, regardless of receiving a statement. Students can obtain their current account balance by logging into insidePacific at [www.pacific.edu/insidepacific](http://www.pacific.edu/insidepacific). The University sends billing statements via electronic billing. Students will receive a monthly email notifying them that their statement is ready for viewing. This statement notification email will also be sent to any authorized users that the student establishes. (Authorized users will not have access to any other student information through this site.) The billing statement can be printed from the computers located in the lobby of the Finance Center or by a request to the Office of Student Accounts.

**All email correspondence will be sent to the student's pacific.edu email address.**

A dispute of any charge on your student account must be submitted in writing within sixty days from the date of billing. All disputes must be sent to the Student Accounts Office. If you fail to comply within the sixty day time period, you may forfeit your rights to dispute the charge in the future.

### Payment of Bills

**Tuition, fees, and room and board, if applicable, are due in full by the payment deadline.** The payment deadlines are August 1<sup>st</sup> for the fall semester and January 1<sup>st</sup> for the spring semester for general students. Payment deadline information for other programs is available online on the Student Financial Services website located at [www.pacific.edu/finance](http://www.pacific.edu/finance). Any outstanding balances from prior semesters must be paid in full as well as the current semester payment, by the deadline. Students who have not yet registered can estimate their payment amount by utilizing the Calculation Worksheets available at the Student Financial Services website. Please select the Forms and Worksheets option and utilize the worksheet for your academic program. Payments must be made by the deadline, even if the student has not completed their course registration. Late fees will be assessed for payments received after the deadline. **Failure to complete financial obligations will result in the cancellation of registration.**

The University offers two payment options. The first is payment in full of all charges, less any applicable financial aid, by the deadline. The second option is a 4-month payment plan. The Monthly Plan requires a 25% down payment in addition to a \$75 deferred fee, which **must be paid by the deadline**. Those wishing to utilize the monthly payment plan must enroll **online** through their insidePacific account by selecting the Manage Your Account Option. In order for a parent or guardian to enroll in the monthly payment plan, their student must officially establish them as an Authorized User. The student can establish Authorized Users through the Manage Your Account Option. Monthly payments are due by the first of the month.

International students may not utilize the monthly payment plan. Payment in full is required by the payment deadline.

It is the student's responsibility to ensure that all financial aid is properly credited to his/her account.

Payments can be made by cash, paper check, money order, cashiers check, wire transfers, and electronic checks. Credit card payments are processed through a third party vendor that accepts Mastercard, Discover and American Express. All credit card transactions are processed through the online payment system. A non-refundable convenience fee of 2.75% will be assessed by the vendor. Cards displaying the Visa logo cannot be utilized. **Payments must be received by the deadline; postmarks are not acceptable.** Payments by check or cash can be made in person at the Cashiers Office, located in

the Finance Center. If making payment by mail, please send check or money order to the attention of Student Accounts. Please include the students' identification number or send a copy of the statement, which can be downloaded and printed in order to ensure proper payment application.

Students who have not paid in full, completed all financial aid requirements and/or enrolled in the monthly payment plan by the payment deadline, will be assessed a \$150 late payment fee. In addition, monthly payments are due by the first of the month. A late fee of \$50 will be assessed for any payments made after the due date.

Failure to make payments as agreed will result in the University of the Pacific canceling all financial arrangements, a student's registration, and denying all University services.

Any payment on the student account that is returned by a financial institution for any reason may lead to cancellation of registration. If registration is cancelled for the semester, the student will not receive credit for those courses. A returned payment fee of \$25 will be assessed for the first returned payment. Any payment returned subsequently will be assessed a \$35 returned payment fee. After two (2) returned payments, the University may suspend check writing privileges and institute collection and/or legal actions against the payer. The student's account will be placed on a financial hold thus preventing the student from receiving any services from the University.

The University requires that all accounts be paid in full by the end of the semester. Any account that remains delinquent will be transferred to the Student Loan Department for servicing. Once the account is transferred, the Student Account Note or balance is subject but not limited to, principal, interest, late charges, collection fees, credit bureau reporting and any legal fees associated with the collection of the debt. Students are responsible for all fees associated in the collection of the debt. A student with a balance due to the University will not be allowed any benefits from the University including but not limited to, registration for courses, copies of transcripts or diplomas, and utilization of University housing and meals, until the balance is paid in full. In addition, all institutional loans or other loans guaranteed by the Federal Government must be in good (current) standing and exit interviews completed prior to the release of diploma or transcripts.

If payments exceed charges on a student account, the account is said to have a credit balance. Credit balances are to be returned to the student based upon the method of payment.

The student account is not to be used as a means for cash advances or payments to third parties. Upon request, credit balances resulting from cash or check payments will be refunded to the student. Credit balances resulting from *refundable* student loans and scholarships will also be refunded upon request. All financial aid must be disbursed on the students' account before a refund is processed. **Credit balances resulting from credit card transactions must be credited back to the original card, and are not refundable in the form of a check.** Refunds are issued on a weekly basis.

### Refund of Tuition

The following refund schedule pertains only to tuition charges and is applicable when the student drops below full time enrollment or **officially withdraws** from the University. Students who intend to withdraw must notify the Office of the Registrar.

Refunds are based upon a percentage of calendar days. Calendar days of a semester may vary from semester to semester. For exact dates, please refer to the Student Accounts website or contact their office.

Notification and withdrawal before classes begin – No charge.

First day of classes until last day to add – \$100-\$200 clerical charge

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.

Housing and meal plan charges are refunded on a prorated basis as determined by the Office of Housing and Greek Life. Refunds are based upon per diem charges and actual approved check out date.

If the student reducing units or withdrawing from the University is a financial aid recipient, the student's financial aid award may be adjusted according to federal and state regulations and University policy. The Financial Aid Office can provide additional information related to changes in financial aid awards.

### Financial Aid

The University maintains a substantial student financial assistance program 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 the appropriate deadline or priority date.

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.

Students are advised to file the FAFSA electronically at the Federal Student Aid Web site. A worksheet and instructions may be downloaded from the Web site, or 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 admission and financial aid priority dates; 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. Students must enroll on at least a half-time basis to qualify for most financial aid and some awards require full-time enrollment. Aid is usually awarded for the entire school year, with the full-year amount divided equally among the 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. Additional financial aid information is available from the Office of Financial Aid.

When a financial aid recipient withdraws during a semester, the student's financial aid is adjusted according to federal and state regulations and University policy.

### **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 at least 67% of all units attempted 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.

### **Educational Equity Programs: Community Involvement Program (CIP)**

#### **History**

The Community Involvement Program (CIP) was established in 1969 by a group of students, community members, faculty and staff who wanted to provide educational opportunities to the local community. Since implementation of the scholarship program there have been over 1000 CIP Alumni. This program serves the educational needs of students who demonstrate low income and first generation college status.

#### **Purpose**

The Community Involvement Program is limited to new incoming freshman or transfer students to the university. The review process for the scholarship places a substantial emphasis on the applicant's educational and financial background. It also examines the applicant's community involvement and awareness, maturity, and potential to contribute his/her time and energy to the Community Involvement Program.

#### **Qualifications**

- Demonstration of financial need. Must be eligible for Cal and Pell Grants at the University of the Pacific.
- Clear demonstration of community involvement, volunteerism, and awareness of social issues prior to acceptance at the university.
- Stockton resident (must have resided in Stockton, i.e. Census Tracts #1-38 boundaries) for the past three years. (Does not apply to transfer students from San Joaquin Delta College)
- First generation college student (neither parent/guardian has earned a bachelor's degree from an accredited university).
- Accepted for admission at Pacific.
- U.S. citizen or permanent resident.

#### **For additional information, please contact:**

Pov Chin, Director  
Community Involvement Program  
Bannister Hall, First Floor  
Phone (209) 946-2436  
E-mail: pchin@pacific.edu

## **Work-Study**

University of the Pacific participates in the Federal Work-Study program, which provides employment opportunities for students who demonstrate financial need.

## **Scholarships and Grants**

University of the Pacific students who demonstrate financial need may qualify for federal and state grants. In addition, Pacific offers scholarships and grants from income provided by gifts, endowments and the University's general fund. 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 freshmen who demonstrate superior leadership ability and a commitment to academic excellence and meet minimum academic criteria may be recommended by their high schools for the Powell Scholarship, valued at \$15,000 per academic year.

Entering students who complete the admission application process by January 15 are automatically considered for the merit-based scholarships listed below.

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 community college in the tri-county area. 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 \$5,000.

A student who qualifies for more than one academic scholarship will receive the most advantageous award.

**General Academic Endowed Scholarships**

Many of the scholarships listed below provide funding for the Regents', President's, and Bishop's Scholarship programs. Scholarships are also available for students regardless of major. A student will be considered an eligible candidate via his/her application for financial aid and maintaining a 3.0 GPA.

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.

Laura Tull, Walter Pike Austin, and Henrietta T. Austin Endowed Scholarship.

John N. and Jessie L. Ballantyne Endowed Memorial Scholarships. Established during their lifetimes by these Lodi friends of Pacific.

Grace Burns Baun endowed Scholarship. Established with gifts from her estate.

Gertrude Moore Beans and William Know Beans Endowed Memorial Scholarship. Established by a bequest from an alumna of the Class of 1920.

Lonzo and Julie Beck Endowed Scholarship. Established in memory of her husband.

Henry and Elsie Bell Memorial Endowed Scholarship. Established with gifts from her estate.

Gladys L. Benerd Endowed Scholarship. Established by Gladys Benerd.

William and Dorothy Biddick Endowed Scholarship. Established by William and Dorothy Biddick.

Bishop's Endowed Scholarship.

William M. Black Endowed Scholarship. Established by the bequest of a faculty member's father.

Constance Bowen Endowed Scholarship.

Anton Brawthen Endowed Memorial Scholarship. Established by his daughter Clara Brawthen.

Seba M. Bronson Endowed Scholarship. Established with a trust.

Dahl Burnham Endowed Scholarship.

Robert E. Burns Endowed Scholarship. Established in memory of Robert E. Burns, 20th president of the University, by his widow Grace Weeks Burns Baun.

Norman J. Cain Endowed Memorial Scholarship. Established by Dr. Harvey D. Cain in memory of his son.

Central United Methodist Church Endowed Scholarship.

Class of 1927 Endowed Scholarship. Established and supplemented by members of the class of 1927.

Classes of '49, '50, and '51 Endowed Scholarship. Established by the members of these three classes.

Class of 1965 Endowed Scholarship. Established by various gifts from members of the Class of 1965.

Claypool Endowed Scholarship. Established by an estate gift given in memory of Jane Singleton Claypool and Rosa Shambeau Claypool.

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

Robert L. and Lucy S. Colthart Endowed Scholarship. Established with gifts received from their trust.

Elmer C. and Lena E. Courtney Endowed Memorial Scholarship. Established by Lena C. Courtney.

Grace Covell Endowed Scholarship.

S. H. Cowell Foundation Endowed Scholarship. Established by the Foundation and matching gifts.

Juanita and Earnie Cronkite Endowed Scholarship. Established with their estate gift.

Paul L. Davies, Sr. Endowed Memorial Scholarship. Funded by a gift from a special friend.

Hugh and Esther Davis Endowed Scholarship. Established with an estate gift.

Robert C. and Olive V. d'Erlach Endowed Memorial Scholarship. Funded by their bequest.

Clifford L. Dochterman Endowed Scholarship. Established to honor him upon his retirement.

Coach Don Edwards Endowed Scholarship. Established with a gift from Mr. Cecil Harp in memory of his wife Joan E. Harp.

Christopher A. and Cora S. Elliott Endowed Scholarship.

Charles Sumner Esrey Endowed Scholarship.

Fiftieth Reunion Class Endowed Scholarship. Established in 1991 and supplemented annually by each 50th reunion class.

Elliott L. Fisher Endowed Memorial Scholarship. Established by his family and friends.

Samuel Jacob and Gertrude Alice Fox Endowed Scholarship. Established by a gift from his estate.

Emery and Susie Freeman Endowed Scholarship. Established by a bequest from the Susie Freeman estate.

Friedberger Endowed Educational Scholarship. Established by the bequest of Dr. William Friedberger, in memory of his parents, Arnold and Lotta Friedberger.

David Friedrich Memorial Endowed Scholarship. Established by parents, family and friends in memory of David, class of 1988, who lost his life in a water skiing accident in his senior year at U.O.P.

A. P. Giannini Endowed Scholarship. Established by a bequest.

Irving and Fay Goleman Endowed Educational Opportunity Scholarship. Established by Gordon Zuckerman in honor of two Pacific professors emeriti.

Mildred Woodward Graham Endowed Scholarship. Established with a gift from the National Society of Colonial Dames.

Virginia Graves Endowed Middle Income Scholarship.

Sarah Elizabeth Riley Harris Endowed Memorial Scholarship. Established by the will of Grace Dell Stuart in memory of her mother.

Hearst Foundation Endowed Scholarship. Established by The Hearst Foundation.

Ruth M. Heath Scholarship. Established through her bequest.

Francis W. and Mary V. Hellman Endowed Scholarship. Established through their bequest.

Ruth Templeton Henney Endowed Memorial Scholarship. Established through her bequest.

Hoefer Foundation.

Claude H. Hogan Endowed Memorial Scholarship. Established through his bequest.

The Honey Family Endowed Scholarship.

John and Ruth Bay Hoobyar Endowed Scholarship. Established with an estate gift.

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.

Ruth and Francis H. Jackson Endowed Memorial Scholarship. Established in his memory by his wife Ruth M. Jackson.

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.

- Clarence and Martha Jones Endowed Scholarship. Established by Clarence and Martha Jones.
- Donald S. Jones Memorial Scholarship. Established through an estate gift.
- Fletcher Jones Endowed Scholarship.
- Dorothy Lea and Anthony J. Ketman Memorial Endowed Scholarship. Established with an estate gift.
- 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.
- Edith E. Knoles Endowed Scholarship. Established through her estate.
- 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.
- Samuel Kress Endowed Scholarship.
- Dr. Harry W. Lange and William H. Pfund Endowed Scholarship.
- 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.
- 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.
- The Leatherby Family Endowed Scholarship. Established with a gift from Russell and Susie Leatherby.
- Edward Charles Leighton Endowed Scholarship Fund. Established with an estate gift.
- Bessie Lenvig Endowed Scholarship.
- William and Carol Linee Endowed Scholarship. Established through the bequest of these long-time Stockton residents.
- Garth Rodrick Lipsky Endowed Memorial Scholarship. Established by his mother, Edna Lipsky.
- Lenora M. Magee Endowed Memorial Scholarship.
- George H. Mayr Endowed Scholarship. Established by the George H. Mayr Foundation in honor of their founder.
- Erford and Dorothy Knoles McAllister Endowed Scholarship.
- Stanley E. McCaffrey Endowed Scholarship. Established by family, friends and colleagues in honor of the 21st president of Pacific (1971-1987).
- John A. McCarthy Memorial Endowed Scholarship.
- Robert T. Monagan Endowed Scholarship. Established with honorary gifts from Omega Phi Alpha and Delta Upsilon donors.
- Wert E. and Viola Moore Endowed Scholarship. Established by a bequest of long-time Stockton resident, Viola Moore.
- 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.
- Marshall O. Nelson Endowed Scholarship.
- 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.
- Pacific Alumni Board Endowed Scholarship. Established by the Alumni Board in honor of Kara Brewer, past Alumni Director.
- Pacific Co-op House Endowed Scholarship. Established by former students who resided in Pacific's Co-op House during the 1930s and '40s.
- Doris and Frank Peirano Endowed Scholarship. Established by an estate gift.
- Irma E. Pennycook Endowed Scholarship. Established by a bequest from this University friend.
- Marion Pope Endowed Scholarship. Established by a bequest.
- Powell Scholars Endowment Scholarship Program. Established with a gift from the Robert C. and Jeannette C. Powell Trust.
- Nina Reid Prather Endowed Scholarship.
- Chalmers Price Endowed Scholarship. Established with gifts from his estate.
- Sandy Price Endowed Memorial Scholarship. Established by the Caldor Lumber Company and the Mildred Kellogg estate.
- Alstyn E. and Frances A. Pruner Endowed Scholarship. Established with an estate gift.
- Rhizomia Endowed Scholarship. Established by members of Rhizomia Fraternity.
- Lincoln and Stella Ruggles Endowed Memorial Scholarship. Established by Lottie Ruggles in memory of her parents and later supplemented through her will.
- 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.
- Rupert and Philamena Russell Endowed Scholarship. Established by the bequests of Mr. and Mrs. Russell.
- Walter B. Sampson Endowed Scholarship. Established by a bequest.
- George and Georgia Sanderson Endowed Scholarship. Established with gifts from their son Robert E. Sanderson.
- 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.
- Audrey and Henry Schwerin Endowed Scholarship. Established by a bequest.
- Charles Schiffman Endowed Memorial Scholarship. Established with an estate gift.
- Dorothy J. and Daniel H. Singleton Endowed Scholarship. Established by a bequest.
- J. W. and Florence E. Smith Endowed Memorial Scholarship.
- Mary Leach Smith Endowed Memorial Scholarship. Established by Onnie Smith in memory of her mother.
- Robert J. and Ernestine Smutny Endowed Scholarship. Established with an estate gift.
- Southeast Asian Endowed Scholarship. Established by memorial gifts and proceeds from benefit performances. In memory of the five children killed at Cleveland Elementary School in 1989.
- Mary Lou Spiess Scholarship. Established by her son.
- R. & R. Stuart Endowed Scholarship.
- Esther J. Tarr Endowed Scholarship. Established by Curtis W. Tarr, in honor of his mother and augmented by gifts in her memory.
- Elliott J. Taylor and Burta M. Taylor Endowed Scholarship. Established with gifts from their estate.
- Charles A. and Harriette E. Thomas Endowed Scholarship. Established by bequest and given in loving memory of their parents.
- 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.
- Guy P. and Grace Tucker Endowed Scholarship. Established by a bequest from these University friends.



Twenty-fifth Class Reunion Endowed Scholarship. Established by various 25<sup>th</sup> Reunion classes.

Alex and Jeri Vereschagin Endowed Scholarship. Established by Mr. and Mrs. Vereschagin, both loyal Pacific alumni and parents.

Zana Taylor Weaver Endowed Scholarship. Established by her will.

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.

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.

Steven G. Werner Endowed Scholarship.

Ed and Joan Westgate Endowed Scholarship.

Gene and Arlene Weston Endowed Scholarship.

Robert and Margaret Wicker Endowed Scholarship.

Wickert Memorial Endowed Scholarship. Established by the Carol Wickert Raab Trust.

Wightman Memorial Endowed Scholarship. Established in her brother's memory by Mrs. Bessie Jasmann.

Norma H. Williams Endowed Scholarship.

Theresa Woo Scholarship. This scholarship was established by her estate.

Carlos and Madeline Wood Endowed Scholarship.

Zeta Phi Scholarship. Established by Zeta Phi alumnae.

### **Annually Funded Academic Scholarships**

In addition to the endowed scholarships, the University receives restricted scholarships annually from a variety of sources. These may provide funding for the following scholarship programs:

- Corporate Patrons of Pacific; annually funded by gifts from companies and corporations.
- Patrons of Pacific; annually funded by gifts from alumni, parents and friends of Pacific.

### **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. It is NOT necessary to submit a separate application form unless specifically noted. Many of these scholarships provide funding for the Regents', President's, and Bishop's Scholarship programs.

### **College of the Pacific**

A. S. H. Graduate Research Endowed Biology Award. Established by Dr. Alice S. Hunter, a respected faculty emeritus.

Art Award Endowed Scholarship. Established by sale of University art holdings and friends of the Art Department.

Julian Smith Bacon, Jr. and Jedediah Smith Society Scholarship. Established with gifts from the Jedediah Smith Society.

Barker-Knoles Endowed Scholarship.

Jess A. Berger Endowed Memorial Scholarship. Established by Dr. Evelyn Berger Brown in honor and memory of her husband.

Gertrude Sibley Billard Endowed Memorial Scholarship. Established in memory of a former professor of English at Pacific.

Frank Black Endowed Memorial Scholarship. Established in memory of a former student.

Maynard A. Bostwick Endowed Scholarship. Established by an alumnus.

Erma Boyce Endowed scholarship.

DeMarcus Brown Endowed Drama Scholarship. Established by Elinor P. Canedy, class of 1944, in honor of the emeritus drama chairman.

Leslie M. Burwell Endowed Memorial Scholarship. Established by Mrs. Leslie M. Burwell.

William P. Christiansen Endowed Award.

Howard and Emma Churchill Endowed Scholarship. Established by a bequest.

Eva and Stout Clack Endowed Scholarship.

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.

Iva B. Colliver Endowed Scholarship. Established by her bequest.

Roselyn J. Cook Endowed Scholarship.

Corson Family Endowed Scholarship. Established with gifts from the Corson family members

Ray and Ruby Dami Endowed Scholarship.

Ellen Deering Endowed Senior Award.

Ellen Deering Endowed Senior Art Award.

Helen B. Dooley Endowed Scholarship.

Max and Victoria Dreyfus Foundation Endowed Award.

Helene and Jack Drown Endowed Scholarship.

Fred J. Early, Jr. and Marguerite C. Early Science Research Endowed Award.

Marie Easterbrook Endowed Scholarship.

Fred L. Farley Endowed Scholarship. Established by Erwin and Tom Farley.

David Friedrich Memorial Endowed Scholarship.

Fresno Methodist Foundation Endowed Scholarship. Established in 1970 from a transfer of the Foundation's assets to the University.

Martin T. Gipson Endowed Memorial Scholarship. Established by friends wishing to memorialize a former Psychology Department Professor.

Jan Good Endowed Award. Established by Janice E. Good for outstanding students majoring or minoring in French or Spanish.

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.

Clifford J. Hand Endowed Scholarship.

Clarence Hinkle Endowed Art Scholarship. Established through the estate of Mable Bains Hinkle.

Kathryn Gehlken Howe Endowed Memorial Scholarship. Established by Edna Gehlken, former chair of the Home Economics Department, in memory of her sister.

Wesley O. Janzen Endowed Theology Scholarship. Established with an estate gift from Alicia "Alice" M. Powell.

James Earl Jewell Endowed Scholarship in Technical Theatre.

Harold Klose, Jr. Endowed Scholarship. Established with various memorial gifts.

Sharon Brookhart Krakora Endowed Scholarship. Established by a gift from her husband as a loving tribute to her lifetime achievements.

Geraldine Scott Krause Endowed Scholarship. Established by this alumna of the class of 1936.

Allen and Helen Laursen Scholarship. Established by a stock gift.

F. Melvin and Verna Kopka Lawson Endowed Scholarship.

Los Angeles Pacific Club Pantheon of the Arts Endowed Scholarship. Established by a gift from the Los Angeles Pacific Club.

Bryon R. Meyer Endowed Theatre Scholarship honoring DeMarcus Brown '23. He was a very active and respected professor in the Theatre Arts Dept. at UOP from 1924-1968.

- Charles B. Norman Endowed Economics Scholarship. Established in memory of Dr. Charles B. Norman, who taught economics at Pacific for 32 years.
- Doris E. Osborn Endowed Scholarship.
- Dr. Vincent D. Panico Endowed Scholarship. Established with gifts from family and friends.
- Mr. and Mrs. Michael A. Pappas Endowed Scholarship. Established to support biology students.
- Irving Pasternak Endowed Memorial Scholarship.
- Ida R. Patton Endowed Memorial Scholarship. Established through the Ida Patton Trust Fund.
- Margaret S. Payne Endowed Scholarship. Established by memorial gifts from her husband Dr. Herbert Reinelt & friends.
- 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.
- Barbara Bodley Reinelt Endowed Scholarship. Established with a gift from Dr. Herbert Reinelt.
- San Joaquin County Medical Society Pre-Medical Endowed Scholarship. Established with a gift from the society.
- Karma Cundell Schad Endowed Scholarship. Established in memory of a former art student by her husband.
- Arnold C. Scott Endowed Scholarship. Established through his estate.
- John E. Seaman Endowed Scholarship. Established with a gift from Leeyee J. Su.
- 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.
- John D. Smith Endowed Scholarship. Established with a gift from Leeyee J. Su.
- Bud Stefan Endowed Memorial Scholarship. Established by his friends, relatives and wife in his memory.
- Derek Forbes Stewart Endowed Memorial Scholarship. Established by his family and friends in commemoration of his life.
- Dr. John Hadman Sticht Endowed Memorial Award.
- Doris Reyburn Lathy, Margaret Reyburn Collis and Adda Reyburn Thompson Endowed Scholarship.
- Esther Myers Umhalt Class of 1918 Endowed Scholarship. Established by a bequest.
- Stanley G. Volbrecht Endowed Scholarship.
- John D. Valentine Endowed Scholarship for Writing Excellence. Established by a gift from Russell E. and Mary S. Leatherby.
- 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.
- Marjorie Webster Williams Endowed Art Scholarship.
- Paul Winters Endowed Forensics Scholarship. Established to honor Paul Winters on the occasion of his retirement in the spring of 1989.
- Conservatory of Music*
- Marietta Atherton Endowed Scholarship. Established by a bequest from a University friend and Stockton patroness of the arts.
- 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.
- 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.
- Maynard A. Bostwick Endowed Scholarship. Established by an alumnus.
- Alix E. and Horace I. Brown Endowed Scholarship. Established in memory of these music professors.
- Buck Family Young Musicians Endowed Scholarship. Established by a gift from Mrs. Eva Buck.
- Roberta Burland Endowed Scholarship.
- Ruth J. Camp Scholarship. Funded annually from an outside endowment.
- Chrissie W. Collins Endowed Vocal Scholarship. Established by various family gifts.
- Elford-Roy Endowed Scholarship. Established by Mr. and Mrs. Robert Elford in honor of their parents.
- Calla Guild Music Endowed Scholarship. Established by Ralph Guild to honor his wife, Calla.
- Wilhelmina Harbert Music Therapy Endowed Scholarship.
- Evelyn Ashmore Heath Endowed Scholarship.
- P. Maddux Hogin Endowed Memorial Scholarship. Established by a bequest from Gwen Hogin in memory of her husband, a 1937 alumnus.
- Gladys Thelma Ryan King Endowed Scholarship. Established by her bequest.
- Delete spaceLenora M. Magee Endowed Scholarship.
- Virginia Short McLaughlin Endowed Scholarship.
- 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.
- Edna B. Meyerholz Endowed Scholarship. Established by the bequest of Mrs. Meyerholz, class of 1911.
- Jules F. Moullet Endowed Memorial Scholarship. Established by an estate gift from Louis F. Moullet.
- The Naylor Family Endowed Scholarship. Established by Victor and Polly Naylor.
- Pooled Endowed Scholarship. Established and augmented by alumni, parents and friends of the Conservatory.
- William H. and Pauline Crawford Ramsey Endowed Scholarship.
- Elizabeth E. Rice Endowed Memorial Scholarship. Established by Mrs. Marion V. Neufeld in memory of her mother.
- Rosalie C. Rohr Scholarship. Established and funded annually by a distribution from her estate.
- Bernice L. Rose Endowed Scholarship. Established by a 1925 Conservatory alumna.
- Margaret Michael Saladana Endowed Scholarship.
- Arnold C. Scott Endowed Scholarship. Established by an estate gift.
- Mildred Murphy Scott Endowed Scholarship. Established by Oliver D. Scott in honor of his wife.
- Lawrence and Marilyn Short Endowed Scholarship.
- John W. Sloss Endowed Conservatory Scholarship. Established by William and Joseph Sloss in memory of their father.
- Doenda Hammond Smith Endowed Piano Scholarship. Established to assist Conservatory Students.

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.

Dr. Lucas and Kathe Underwood Endowed Scholarship.

Richard Van Alstyne Endowed Scholarship.

Eva Varnum Endowed Memorial Scholarship.

Jack and Eleanor Vogel Endowed Scholarship.

C. A. Webster Foundation Endowed Stringed Instrument Scholarship.

Judith and Walter Willmette Endowed Scholarship. Established by Judith and Walter Willmette.

Steven and Maureen Wincor Family Endowed Scholarship. Established to assist Jazz Studies Students.

R. Coke Wood Memorial Endowed Scholarship. Established with memorial gifts.

#### ***Eberhardt School of Business***

Bank of America Foundation Endowed Scholarship.

Charles and Carolyn Bloom Endowed Scholarship.

Chambers Family Endowed Scholarship. Established by the Chambers Family Charitable Trust.

Credit Bureau of San Joaquin County Endowed Scholarship.

Robert E. Ferguson Endowed Scholarship. Established in memory of alumnus and Regent Bob Ferguson.

Joseph Kaeslin Endowed Memorial Scholarship.

George B. Lagorio Endowed Scholarship.

Daisy Lum Lee Endowed Scholarship. Established in her memory by family.

Marian and George Malloy Endowed MBA Scholarship.

John and Rhonda Minges Endowed Scholarship.

Gregory A. and Amy Lonegran Mitchell Endowed Scholarship.

Andrew and Helen Neumann Endowed Scholarship. Established with an estate gift.

Benedict H. Van Endowed Scholarship. Established with an estate gift.

Jack and Eleanor Vogel Endowed Scholarships.

Robert R. Winterberg Outstanding Senior Award.

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.

Barker-Knoles Endowed Scholarship.

Benerd School of Education Graduate Student Endowed Scholarship. Established through the Gladys L Benerd Estate.

Benerd School of Education Pooled Endowed Scholarships. Established and augmented by alumni, parents and friends of the School of Education.

Esther Berchtold Endowed Scholarship. Established by this alumna, class of 1926.

Melvin and Jayne Bernasconi Endowed Graduate Scholarship. Established by Mr. and Mrs. Bernasconi.

R. John, Jr. and Margaret Wennhold Charles Endowed Scholarship. Established through their estate.

Clare Ann Christian Memorial Endowed Scholarship. Established in the memory of this 1967 alumna by her husband, family and friends.

Armando B. Flores Endowed Scholarship. Established to honor his years of services with APS Company.

Quintard and Patricia Gregory Endowed Scholarship.

Al and Lois Erwin Family Endowed Scholarship.

J. Marc and Ruth P. Jantzen Endowed Scholarship. Established in honor of the retired dean of the School of Education.

Susie Leatherby Endowed Scholarship. Established by Russell and Susie Leatherby.

Hilga G. Lister Endowed Scholarship. Established by Dr. and Mrs. Cy Coleman in memory of her mother.

The John and Elizabeth Nagle Family Endowed Scholarship.

Pedro and Edna Osuna Endowed Graduate Scholarship. Established by Professor and Mrs. Osuna.

Alexandra Green Ottesen and Peter Ottesen Endowed Scholarship.

Glen Ainslee Payne Endowed Memorial Scholarship. Established by the Walter A. Payne family.

Marion Pease Endowed Scholarship. Established by several local groups in honor of Pacific emeriti professor of education.

Phi Delta Kappa Endowed Scholarship.

Willis N. and Viola Potter Endowed Scholarship.

Janet Rose Baker Robinson Endowed Scholarship. Established by bequest from a 1936 School of Education graduate.

Victor Russell Robinson Endowed Scholarship.

Tony and Dorothy Rodina Endowed Scholarship.

Barbara Ratto Rosemond Endowed Memorial Graduate Scholarship. Established from memorial gifts.

J. A. and Mary Thomason Endowed Scholarship. Established by Mr. and Mrs. Thomason.

Bonnie Jean Thompson Endowed Scholarship. Established by Mary Middleton Cunningham, class of 1957.

Virginia Sadler Toomay Memorial Endowed Scholarship. Established with a gift from General John C. Toomay.

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.

Milton M. Tyler Endowed Scholarship. Established in memory of the former special education professor by his family and friends.

Chuck Verduzco Endowed Memorial Scholarship.

Phyllis L. Vince Endowed Memorial Scholarship. Established by her husband, Mr. Robert Vince.

#### ***School of Engineering and Computer Science***

James F. Baun Family Endowed Scholarship. Established with a trust.

Charles and Carolyn Bloom Endowed Scholarship.

Chambers Family Endowed Scholarship. Established by the Chambers Family Charitable Trust.

Gladys and John de Arrieta Endowed Scholarship. Established by an engineering graduate and his wife, both alumni, class of 1940.

Robert H. and Margaret E. Edwards Endowed Scholarship. Established through their estate.

General Mills Endowed Scholarship Fund.

Jack C. Goble Endowed Scholarship. Established with memorial gifts from family and friends.

Roy S. Hamma Family Endowed Scholarship. Established by an estate gift in honor of himself and his three siblings, all of whom received baccalaureate degrees from Pacific.

Robert L. Heyborne Endowed Scholarship. Established in memory of a former dean of the School of Engineering from 1969-1990 with memorial gifts from family, friends, alumni and faculty.

- Robert C. Johanson Endowed Scholarship. Established with memorial gifts from family and friends.
- Robert and Emily Lovell Endowed Scholarship.
- Joseph and Genevieve Madeiros Endowed Engineering Scholarship. Established with an estate gift.
- Henderson E. McGee Endowed Fund.
- Herman G. and Myrtle E. Nelson Endowed Scholarship. Established through their estate.
- Laurie Ann Pecoraro-Nemetz Endowed Scholarship. Established with memorial gifts.
- Andres Rodriguez Endowed Scholarship. Established with memorial gifts.
- Paul M. Sensibaugh Endowed Scholarship. Established with various gifts in his honor.
- Teichert Foundation Endowed Scholarship.
- Elsa and David Wheeler Endowed Scholarship.
- School of International Studies**
- Kirk and Laura Bowman Endowed Scholarship.
- Arthur J. Cullen Endowed Scholarship.
- Rom Landau Endowed Scholarship. Established by Professor Landau through life-time gifts and by his will.
- George and Isabelle Wilson Endowed Scholarship. Established by a gift from Mrs. Isabelle Wilson.
- Thomas J. Long School of Pharmacy and Health Sciences**
- Gregory Bard, M.D., Endowed Physical Therapy Scholarship. Established in his honor by his wife.
- 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.
- Ocea McMurray Brooksbank Endowed Scholarship.
- Allen and Hazel M. Caldeira Endowed Scholarship. Established with a gift from her estate.
- The Catania Family Endowed Scholarship. Established with a gift from Patrick and Harriet Catania.
- H. R. Cenci Family Endowed Scholarship. Established with a family trust.
- Charles T. Countryman Endowed Memorial Scholarship. Established by his family and friends in memory of this distinguished pharmacy graduate.
- Ray and Ruby Dami Endowed Scholarship. Established through the bequest of Mrs. Ruby Dami.
- Mabel and Charles P. Dezzani Endowed Scholarship.
- Ted and Georgia Econome Endowed Scholarship. Established with memorial gifts from family and friends.
- The Flowers Foundation Endowed Scholarship.
- Joseph S. Gee Endowed Scholarship.
- Jay Patrick Gould Endowed Memorial Scholarship. Established by friends and family.
- James C. King Endowed Scholarship.
- Steven Edward Lancaster Endowed Scholarship. Established with gifts from Miyuki Lancaster.
- J. M. Long Foundation Endowed Scholarship.
- Thomas J. and Muriel T. Long Endowed Scholarships. Established by gifts from the co-founder of Long's Drug Stores and emeritus Regent of the University.
- Charles Magnasco Endowed Memorial Scholarship. Established by Andrew Magnasco in memory of his brother.
- Marvin Malone Endowed Memorial Scholarship. Established with memorial gifts in memory of Marvin Malone.
- Erin Michael McGreevy Endowed Memorial Pharmacy Scholarship. Established with a gift from the estate of his wife Lucille McGreevy.
- Janet Nimtz Endowed Scholarship. Established by the Dept. of Speech Language Pathology in recognition of her 19 years service to Pacific.
- Pacific Golf Tournament Endowed Scholarship. Funded by proceeds from annual tournament.
- Mr. and Mrs. Michael Pappas Endowed Scholarship.
- Virginia Puich Endowed Scholarship for Academic and Clinical Excellence.
- Rexall Pharmacy Endowed Scholarship.
- Carl C. Riedesel Endowed Scholarship.
- Emmons E. Roscoe Endowed Memorial Scholarship. Established with memorial gifts from family and friends.
- Ivan W. and Helen T. Rowland Endowed Scholarship. Established in their honor.
- George H. Sanderson Endowed Scholarship for Physical Therapy. Established with an estate gift from his son Robert E. Sanderson.
- Charlotte and George Saroyan. Established by a gift from their son, Ralph L. Saroyan, Professor Emeritus, Thomas J. Long School of Pharmacy and Health Sciences.
- Ralph L. Saroyan Endowed Scholarship. Established in his honor by various donors.
- Warren J. Schneider Endowed Memorial Scholarship.
- John H. Shinkai Endowed Graduate Pharmacy Student Scholarship.
- John H. Shinkai Endowed Pharmacy Scholarship.
- Masao and Ayako Shinkai Endowed Memorial Scholarship. Established by Dr. John H. Shinkai in memory of his parents.
- Florence Scott Van Gilder "The Tolley Award" Endowed Award.
- 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.
- 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.
- University Library**
- Gladys L. Benerd Student Employee Endowed Scholarship.
- Intercollegiate Athletics**
- Athletic Grants are awarded to qualified student athletes according to the regulations of the National Collegiate Athletic Association (NCAA).
- Jim and Lois Berens Endowed Athletics Scholarship. Established by a gift from James and Lois Berens.
- Chester Caddas Family Endowed Scholarship. Established by gifts from various donors.
- Ellen L. Deering Endowed Athletic Scholarship. Established by bequest.
- Marilyn E. Field Endowed Scholarship. To support Women's Athletics.
- Jessie Murphy Grogan and Robert Grogan Endowed Memorial Softball Scholarship. Established in her memory by her family and friends.
- Larry E. Heller Endowed Scholarship.

Al and Lois Irwin Family Endowed Scholarship.

Bing and Jody Kirk Endowed Athletic Scholarship. Established by a gift from E. Bing and Jody Kirk.

Claudine and Jerald Kirsten Endowed Athletic Scholarship. Established with estate and various memorial gifts.

Chris Kjeldsen Endowed Memorial Scholarship. Established in honor of an alumnus and long-time member of the University faculty.

Ted and Stefanie Leland Endowed Scholarship.

Justin and Shirley Marshall Endowed Scholarship.

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.

Warren T. McNeil Endowed Memorial Scholarship.

Myers' Moose Men Endowed Scholarship. Established through tribute gifts for Jack 'Moose' Meyers UOP football coach 1950-1961.

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 high moral character.

Doug Scovil Memorial Endowed Scholarship. Established with memorial gifts.

Tom Stubbs Endowed Baseball Scholarship. Established by gifts honoring him as baseball coach, assistant football coach, and professor at UOP for 33 years.

Bert I. Van Gilder Memorial Endowed Scholarship. Established through a gift from Marian Schroven '29 in memory of her husband.

## Student Loans

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

### *Federal Direct Stafford/Ford Loans and Federal Direct PLUS Loans.*

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

Loan, while graduate students and professional Pharmacy students may qualify for the Graduate/Professional PLUS.

### *Federal Perkins Loan.*

This federally sponsored program provides five percent loans for students who demonstrate high financial need.

### *Health Professions Student Loan.*

The HPSL program, administered by the U.S. Department of Health and Human Services, provides loans at five percent interest for eligible students enrolled full-time in the University's professional pharmacy program.

### *Henry and Elsie Bell Memorial Endowed Student Loan Fund.*

Established with gifts from the Virginia and Harris Fowler Trust.

### *Herbert E. and Lillian E. Burbank Memorial Student Loan Fund.*

Established with an estate gift from their daughter Jeanne C. Burbank.

### *Robert and Merle Carter Student 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.

### *Juanita and Earnie Cronkite Loan Fund.*

Established with an estate gift to assist deserving students with their education.

### *Lloyd Ivan Gerry Memorial Loan Fund.*

Established from the estate of Isa Spencer Gerry in memory of her husband.

### *Claude H. Hogan Revolving Loan Fund.*

Established to provide emergency loans, supplemental loans and summer study loans for non-traditional students.

### *Clara and Frank Mayo Student Loan Fund.*

Established from a trust to assist students with interest-free loans.

### *Blanche Pope Neal Student Loan Fund.*

Established with a gift to assist students.

### *Ralph M. Parsons Revolving Loan Fund.*

Established by a gift from 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.

### *Mr. & Mrs. Robert C. Powell Merit Loan Program.*

Established to assist students from middle income families who would not otherwise qualify for adequate aid to attend UOP.

### *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.

### *SIS Tenth Anniversary Loan Fund.*

Established to assist students with the cost of attending Pacific.

### *Francis A. Wagstaff Loan Fund.*

To assist students with expenses. Established with an estate gift.

### *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.*

The Emergency Loan Program was made possible through the generosity of United California Bank, The Jones Foundation of Los Angeles, and other interested benefactors and friends of the University. This program is designed to assist students in coping with unanticipated financial emergencies. Payment of tuition and fees, rent, utility bills, and other normal expenses are not considered unanticipated and are therefore not emergencies as defined by this program. Loans from this source are limited to \$150. Each loan application is reviewed on a case by case basis. Repayment in full is expected within 90 days or by the end of the semester, whichever comes first.

### *Emergency Loans, Pharmacy and Health Sciences*

Emergency loan funds for students in the Thomas J. 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)

All undergraduates are urged to read these general regulations carefully. Failure to be familiar with this section does not excuse a student from the obligation to comply with all the described regulations.

Although every effort has been made to ensure the accuracy of this catalog, students are advised that the information contained in it is subject to change. They should therefore consult the Registration Information section of the Office of the Registrar web page for any term to relate these regulations to calendar dates. The University reserves the right to revise its regulations and programs in accord with sound academic standards and requirements.

### University of the Pacific's Four-Year Guarantee

The purpose of the Four Year guarantee is to facilitate a student's goal to graduate in four years with a Bachelors degree through a contract with Pacific. If Pacific does not meet its part of the contract, the cost of the additional course would be paid by the university.

Declare and be admitted to a major by the beginning of the sophomore year by filing a Change of Program form. You may change majors, if at the time you make a change, you can still meet the requirements of the new major and graduate within four calendar years.

Remain in good academic standing (2.00 GPA – major and institutional) at the University.

Complete 32 semester hours of units each year for four years as required by the college and major, and meet all degree progress checkpoints.

Meet with your faculty adviser prior to registration each term to review your course plan and monitor progress.

Register for courses within **two days** of the assigned early registration appointment. Enroll in available courses needed for the program of study; accept any available section that can be accommodated in your course schedule. Sole exceptions: Students who are on Study Abroad or off campus participating in a full-time co-op may require a few additional days to register.

Make timely annual application for all necessary financial assistance, to avoid registration problems.

Apply for graduation by the stated deadline published in the academic and/or term calendars.

Monitor your own progress toward degree using CAPP (electronic degree check audit system) and ROAR (Roam On Line Articulation Reports)

regarding transfer work to help you stay on track.

Notify faculty adviser if unable to register for a required course needed in the major or for graduation.

\*Special exclusions: Five year programs and students following individualized learning programs.

**If the student meets all the conditions of the four year plan but is unable to graduate due to unavailability of a course, the university will offer one of the following:**

Enable the student to graduate in four years by substituting a different course or an independent study assignment, as determined by the department and the college offering the student's major.

Allow the unavailability of the course to delay the student from graduating in four years, in which case the University will waive Pacific tuition and mandatory fees in order for the student to graduate within the next academic year.

These two adjustments will be Pacific's sole remedies for the four year guarantee. The University is under no obligation to provide one of these adjustments unless the student submits a written request for an accommodation to the Provost prior to beginning of classes in the last term of the student's four year plan.

### Academic Residence Requirement

The minimum residence requirement for a bachelor's degree program requires 32 out of the last 40 units to be earned in residence at University of the Pacific. This means once a student has reached 40 units less than what is required for his/her degree only 8 more units may be accepted from a four year accredited institution. Additional community college or four year institution courses will satisfy content requirements only and will not apply to the minimum units required for the degree.

Example: If 124 units are required for the degree once a student has reached 84 units only 8 more units can transfer in (from a four year accredited institution). If 128 units are required for the degree once a student has reached 88 units only 8 more units can transfer in.

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.

### Academic Standing

At the end of each semester, an undergraduate student's academic standing will be determined to be one of the following: good standing, good standing with warning, probation, subject to disqualification (temporary status) or 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:

- term GPA of 2.00 or higher and a cumulative Pacific GPA of 2.00 or higher

#### Good Standing with Warning:

- term GPA below 2.00 and a cumulative Pacific GPA of 2.00 or higher.

#### Probation:

If prior semester is 'Good Standing':

- Freshman-Junior: term GPA is below 2.00 and cumulative Pacific GPA below 2.00

If prior semester is 'Good Standing with Warning or 'Probation':

- Freshman: term GPA is below 2.00 and cumulative Pacific GPA between 1.50 and 1.99
- Sophomores: term GPA below 2.00 and cumulative Pacific GPA between 1.80 and 1.99
- Juniors: term GPA below 2.00 and cumulative Pacific GPA between 1.95 and 1.99
- All undergraduates: term GPA of 2.00 or higher and cumulative Pacific GPA below 2.00

***Subject to Disqualification (temporary status):***

If prior semester is 'Good Standing':

- Seniors: term GPA below 2.00 and cumulative Pacific GPA below 2.00

If prior semester is 'Good Standing with Warning' or 'Probation':

- Freshmen: term GPA below 2.00 and cumulative Pacific GPA below 1.50
- Sophomores: term GPA below 2.00 and cumulative Pacific GPA below 1.80
- Juniors: term GPA below 2.00 and cumulative Pacific GPA below 1.95
- Seniors: term GPA below 2.00 and cumulative Pacific GPA below 2.00

***Disqualified:***

Each school 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 Admission 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.

***Acquisition of Graduate Credit as an Undergraduate***

Pacific undergraduates may petition to open a graduate transcript (i.e., receive credit in graduate-level courses) if they meet all of the following conditions.

***The undergraduate student must:***

- be within 9 units of completing the bachelor's degree
- be in the last semester of the bachelor's degree,
- request that their adviser submit the completed Evaluation of Degree Requirements form to the Office of the Registrar prior to the last day to add classes. (This serves as permission by the undergraduate adviser for the student to take graduate-level coursework), and

- be accepted into a graduate or credential program and receive approval of the Application to Receive Graduate Credit as an Undergraduate Student by the Dean of Research and Graduate Studies before the last day to add classes of the last semester as an undergraduate.

***The regulations for receiving graduate credit as an undergraduate are as follows:***

- Graduate credit will only be granted for upper division (100 level) courses.
- The total number of credits for the semester cannot exceed the maximum graduate course load for the department providing the graduate coursework; this includes coursework taken at other schools.
- The tuition rate for the entire semester is at the undergraduate rate.
- Units cannot be retroactively transferred from an undergraduate to a graduate program. The approval must be obtained prior to the last day to add classes of the last semester.
- Coursework will not count for graduate credit if the student fails to complete the bachelor's degree during the semester.
- Graduate courses completed under this agreement will be recorded by the Registrar as a new "Unclassified" graduate credit; grades from these courses will not be accounted in the undergraduate grade point average (unless the bachelor's degree is not completed).
- No more than 12 units (16 units for student teachers), no matter when they are earned, can be transferred from an "Unclassified" transcript into a graduate program.
- Students who do not complete the bachelor's degree in the semester when graduate courses are taken will not be admitted into a Graduate program and cannot take additional graduate coursework until the bachelor's degree has been awarded.

There is no guarantee that graduate units earned as an undergraduate will transfer to or be counted as post-baccalaureate units by other universities or school districts.

Students are not classified as graduate students until they have been admitted to a Graduate program, have registered for courses, and have completed a term that begins after receiving the bachelor's degree.

***Auditing a Class***

Auditing of a course is an option that allows exposure to a course with no course credit awarded. To audit a course, approval must be granted by both the instructor and the chair of

the department in which the course is offered via an add/drop form. 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 an auditing fee. Courses taken through auditing may not subsequently be converted to a course credit or grade. The student must indicate at the time of registration if they wish to audit a course, and pay the appropriate fee. An audited course and grade (AU) may not be used to fulfill or waive any degree requirements.

***Cancellation***

If you are a newly admitted and confirmed student and do not wish to attend Pacific for a semester and instruction has not yet begun, you must formally request a cancellation of your registration from the university. To cancel your registration (prior to the start of the term) contact the Office of Admission. If you are a continuing student you are not permitted to drop your last class via the web on InsidePacific after the last day to add classes. You must visit the Office of the Registrar, located on the 1st floor of Knoles Hall, if you wish to withdraw completely. Official withdrawal must be processed by the Office of the Registrar. Your official withdrawal date and tuition refunds are based on your date of notification to the Office of the Registrar.

***Catalog Expiration and Requirements Policy***

The University of the Pacific catalog lists requirements for active degrees offered by the university. Each catalog goes into effect at the beginning of the fall term the academic year of issue. It expires at the end of summer session the seventh academic year after publication for students maintaining attendance. Advisers and other university employees are available to help, but students have final responsibility for satisfying degree requirements for graduation.

Students are held to program requirements (general education and major/minor) in effect at the time of first enrollment. Students who change their program/major are held to degree requirements in effect at the time of the change of program. Students may, using a Change of Program form, elect to graduate under degree requirements specified in subsequent catalogs; under no circumstances will the requirements from an earlier catalog be applied.

The university requires that any candidate for a bachelor's degree who has not completed work within seven years of continuous attendance to reapply and be subject to any new requirements in effect at that time.

### Change of Address

All students must notify the Office of the Registrar immediately of any change in their addresses or those of their parents or guardians. The University assumes no responsibility for materials sent through the mail not received.

### 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 obtain and submit an approved Change of Program form with the Office of the Registrar.

### 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.

### 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 – 27.99 units designates a freshman.
- 28 – 55.99 units designates a sophomore.
- 56 – 91.99 units designates a junior.
- 92 – up units designates a senior.

Other students are classified as Undergraduate Unclassified. See Undergraduate Unclassified section of this catalog.

### Commencement

Commencement exercises to honor students who have earned baccalaureate and graduate degrees are held each year in May. Students who have earned their degrees in the previous Fall term or in Summer Session are welcome to participate.

Students who have not completed all their degree requirements may participate in commencement if they have accumulated 92 units by the end of the Fall semester prior to May commencement. Students with deficiencies who plan to participate in the May commencement ceremony must apply for graduation by the April deadline.

### Course 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. If a student is approved to take courses concurrently at another institution, the units at Pacific and the other institution may not exceed 18 units during Fall and Spring or 8 units during the first two Summer Sessions and 4 units during the third Summer Session.

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

### Course Numbering System

#### Undergraduate Courses:

Lower Division courses. Courses, numbered 001 – 099, are primarily designed for freshmen and sophomores.

Upper Division courses. Courses, numbered 100 – 199, are typically open to students who have met the necessary prerequisites as indicated in the catalog course description. These courses are designed primarily for juniors and seniors but exceptions may be appropriate for qualified sophomores.

#### Graduate Courses:

Courses numbered 200 – 399 are primarily designated for graduate students. 300 and above are primarily for students admitted to a doctoral program.

Courses numbered in the 9000 series are used for specific professional development courses that are graduate level, non-degree courses in the Center for Professional/ Continuing Education.

#### Prerequisites

Prerequisites for courses should be noted carefully; the responsibility for meeting these requirements rests on the student. The instructor may request that a student who has not completed the prerequisites be dropped from the course. General Education courses and Extension courses (offered by the Center for Professional/Continuing Education) generally do not have prerequisites.

### Variable Unit Courses

Some course numbers are used to describe specific types of courses, as follows:

- 087/187/287 – Internship study. Work experience conducted off campus, under the supervision of a non-full time Pacific faculty member.
- 089/189/289 – Practicum. Work experience conducted on campus, under the direction of a faculty member.
- 092/192 – Cooperative education. Work experience on full-time or part-time basis. The Cooperative Education Program in each school or college differs in unit allowance. See appropriate school for unit specifics in the general catalog.
- 093/193/293/393 – Special Topics. Departments may offer, on occasion, special topic courses. Courses may reflect the current research of the instructor or the needs and interests of a group of students. Detailed descriptions can be obtained from the chair in which the courses are being offered.
- 191/291/391 – Independent Study
- 195/295/395 – Seminar.  
Undergraduate/Graduate/doctoral
- 197/297/397 – Independent Research.  
Graduate/Doctoral
- 299 – Master's Thesis
- 399 – Doctoral Dissertation

*Note: These numbering standards are general standards and reflect current practice among most units. Some units may have exceptions to these. Students should check for these within their majors for individual unit standards that may differ from these general numbering standards.*

### 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 obtain a Credit by Examination form from the Office of the Registrar and pay the scheduled \$50.00 service fee (non-refundable).

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. Students who pass the exam will be charged an additional \$200.00 for the course credit. Such credit shall not be considered to generate an overload.

#### **Credit Limitations**

Students on the Stockton campus can apply a combined total of eight units of ACTY 001-049. General Activity, ACTY 050-099 - Intercollegiate Sports and THEA 005 in the Theatre Arts Department toward graduation. Up to 8 units of activity and intercollegiate sports classes may count toward the COP breadth requirement. A one-unit activities class (ACTY 001-049) can be repeated only once; no two-unit general activities class may be repeated for credit.

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 term 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.

A total of no more than 28 units may be applied towards a degree from Advanced Placement (AP), International Baccalaureate (IB), DANTES and/or CLEP tests.

#### **Cross Listed Courses**

A cross-listed course is one that carries credit in more than one department or program.

#### **Dean's Honor Roll**

Each undergraduate student currently enrolled in the University 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.

#### **Degree Types**

##### **Second Bachelor's Degree (consecutively or concurrent):**

Second Bachelor's degrees are awarded under the following conditions:

1. The student completes 32 units beyond those required for the degree that has the highest credit requirement. These units must be completed in residence at Pacific.
2. The student completes all specific requirements of both programs (both general educations and majors).
3. Both degrees must be completed at the same time under the same catalog requirements when earned concurrently.

##### **Dual Major:**

Students may obtain a baccalaureate degree with two majors by completing the requirements for both majors under the same catalog requirements. A dual major may consist of two departmental majors, two interdepartmental majors or two majors in different schools. Students must consult each school for specific requirements. Multiple majors will be recorded on the student's permanent record, but only one degree is awarded. The degree is issued by the student's declared school.

##### **Diplomas**

Diplomas are not awarded at Commencement but are available approximately four months afterward. Diplomas are mailed to the permanent address on file. Diplomas will not be issued if you have outstanding financial obligations to the University. Diplomas left unclaimed are destroyed after five years. Students must re-order and pay for new or replacement diplomas.

The student's diploma will list the degree, the school or college of the University awarding the

degree, and, if applicable, major and academic honors. The official academic transcript will also list the major(s), concentration(s) minor(s) and academic honors. Graduation dates posted on the diploma coincide with the last day of the semester. Degrees are posted 3 times a year Fall, Spring and Summer with the exception to the Doctor of Physical Therapy program which has an additional date of September 30<sup>th</sup>. The official graduation date will reflect the completion of all academic requirements for the degree and not necessarily the last term of enrollment.

#### **Enrollment Verification**

Students who need enrollment verification from the Office of the Registrar must be registered in the term to be verified. Students should print enrollment verifications by logging onto insidePacific, then selecting the National Student Clearinghouse (NSC) Link and print Enrollment verification.

#### **Final Examinations**

Students are required to take all scheduled exams. Matters of grading and testing procedures are the responsibility of individual instructors. If the instructor chooses to give a final examination, it must be scheduled during the time specified by the University Registrar for the final examination for that course. No student is allowed to take a final examination before the scheduled time.

#### **Grade Point Average**

The Pacific grade point average is determined by adding the total quality points and by dividing the resultant sum by the total number of quality hours. As a general rule, the ratio is based on the number of letter graded units completed; e.g., if a student repeats a course both courses will be considered in the grade point average.

Beginning Fall 2006, transfer courses which a student takes at other colleges or universities will NOT be counted in the overall cumulative grade point average.

#### **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 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. Grade 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: <ol style="list-style-type: none"> <li>what work remains to be completed</li> <li>how it is to be evaluated</li> <li>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.</li> </ol> <p>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.</p>
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 from the Instructor. Please contact the instructor.
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.

### **Graduation Requirements for Bachelor's Degrees**

Candidates for undergraduate degrees must adhere to all of the University's regulations. In particular they 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;

2. Completed a minimum of 30 units in general education including Pacific Seminars 1, 2 and 3 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 Fundamental skills requirements;
4. Achieved a grade point average of at least 2.0 on all letter-graded work completed at 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 prior to receiving the degree; and
6. Accumulated the appropriate number of program units specified by the particular school or college.

The university requires that any candidate for a bachelor's degree who has not completed work within seven years of continuous attendance to reapply and be subject to any new requirements in effect at that time.

### **Filing for Graduation**

*Application for Graduation:* An Undergraduate Application for Graduation must be filed with the Office of the Registrar as an indication of intent to graduate at a specific time. It should be filed upon completion of 92 units (senior standing) with the Office of the Registrar in the Spring semester (see Term calendars on Office of the Registrar web site) 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.

*Degree Check:* After you have filed your Undergraduate Application for Graduation your college or school will check for the fulfillment of major, department, and college requirements as well as General Education breadth requirements. The Office of the Registrar will check your records to ensure that you have completed University requirements and are in good academic standing (2.00 or better).

### **Honors at Graduation**

Effective Spring '05, university wide honors at graduation for undergraduates is awarded on the following criteria. The student must have completed a minimum of 54 letter-graded units at Pacific and will be based on the student's final institutional (Pacific) grade point average. The requirements are: Cum Laude (honors) 3.5, Magna Cum Laude (high honors) 3.7, and Summa Cum Laude (Highest Honors) 3.9.

Because Commencement occurs prior to spring semester grading, the commencement program will indicate honors as of fall semester grades. The student must have completed a minimum of 36 letter graded units at Pacific at this time. Actual honors confirmed, as shown on diplomas and transcripts, will be determined once all coursework has been completed and graded.

### **Major**

A major represents the area of study a student has chosen to pursue for a bachelor's degree. Students who have not chosen a major are designated as 'exploratory'. A student who decides to change a major or to declare one must obtain and submit an approved Change of Program form with the Office of the Registrar. Course requirements for each of the majors offered are in the department's section of the University Catalog.

### **Minor**

A minor represents a prescribed group of courses in a subject area other than the major. A minor is not required for a degree, but may be elected to strengthen preparation in areas related to the major. To earn a minor a minimum of 20 units and a minor GPA of 2.00 is required. Course requirements for each of the minors offered are in the department's section of the University Catalog. Students wishing to have a minor posted to their academic record must obtain and submit an approved Change of Program form with the Office of the Registrar.

### **Official Grades**

Official grades are available to students via insidePacific approximately four weeks after the end of the term. Unofficial grades are available on insidePacific after the end of the faculty grade deadline. The grades posted at that time are merely an indication of grades submitted, and grades still missing. They do not show a GPA, or academic standing.

### **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. Add/Drop forms are available in the Office of the Registrar and must be submitted prior to the deadline for adding classes.

**Regression Rule**

Students who complete coursework at an intermediate or advanced level without first completing the lower level introductory courses may not then go back and take the lower level courses for credit. This rule applies primarily to coursework in mathematics, the sciences, and foreign language. It may also apply in other departments in which there is a clear content sequence between courses.

**Returning to Pacific****After Cancellation**

*New Students:* If you cancelled your registration and wish to attend Pacific in a future term, you must submit a new application for admission. Your previous admission status will have no bearing on the decision for admission in the future.

*Continuing Students:* If you cancelled your registration, have been gone from the university for more two consecutive semesters (excluding summer) and wish to attend Pacific in a future term, you must submit an Application for Return to Active Status, available at the Office of Admission, 1st floor Knoles Hall. The deadline filing dates are July 1st for Fall and December 1st for Spring.

*After Withdrawal:* If you withdrew from the University and wish to return in a future semester, you must submit an Application for Return to Active Status, available at the Office of Admission, 1st floor Knoles Hall. The deadline filing dates are July 1st for Fall and December 1st for Spring.

**Registration**

Registration is the means by which an individual officially becomes a student at Pacific. Registrants are further identified by school/college of the University, degree status, classification and major.

All students must register on the dates published. No registration activity is permitted after the last day to add or drop, as published in the University Academic Calendar. Students are held accountable to complete every course for which they register. If it is necessary to add or drop a course, the student must complete the appropriate registration transaction by the last day such activity is allowed as published in the University Academic Calendar.

After the deadline dates have passed (but prior to the end of the term) requests to add or drop courses must be made by special petition to the student's respective school/college.

Requests to add or drop courses after the term must be made to the Academic Regulations

Committee (ARC). In either case, petitions are normally 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 or in the calculation of the grade point average.

Any petitions approved after the deadline dates will be subject to a clerical service fee. Tuition and fee refunds are based on the date a withdraw form is initiated in the Office of the Registrar.

**Registration - Individualized Study:**

Individualized study courses are designed for special educational needs which are not met by the available curriculum. To register for an Individualized Study (Independent Study course, Internships, Practicum, or non engineering Co-op) obtain and submit an approved Individualized Study Request form to the Office of the Registrar. *Note: Students on academic probation may not register for Individualized Study.*

**Repetition of a Course**

In order to repeat a course students must have received a C- or lower the first time the class was taken. Once a course is completed (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 as the one used originally. Any given course can be repeated one time only. Basic Skills courses are exempt from the one time repeat rule. Grades will be averaged when courses are repeated. The Pacific grade point average will reflect the two grades averaged.

In any course or program where enrollment demand exceeds the resources to offer sufficient openings or sections to meet that demand, the academic unit may give registration priority to students taking the course for the first time.

If a student repeats a course at Pacific, when transfer credit or test units has been allowed; the credit and grade for the course completed at Pacific will NOT be reflected in the Pacific grade point average. The credit previously accepted in transfer or awarded for placement exams will remain unchanged.

A student who receives permission to repeat a course at another institution will have no adjustment made to the Pacific grade point average. The new course may count for content and/or for credit as determined by established transfer policies.

**Grade Replacement Policy****(Applies only to courses taken at Pacific for the first time prior to Fall 2008)**

The policy applies only to courses originally taken at Pacific for the first time prior to Fall 2008. Courses taken Fall 2008 or after are not eligible for grade replacement. The last grade received is the grade that will be calculated into the GPA although the transcript will include all courses and earned grades. The student receives credit for the units of the course only once. Eligible students may exercise their grade replacement rights up to a maximum of three times while at Pacific. Repeats of basic skills courses are not included in this maximum. Students and faculty must complete a "Grade Replacement" form to assure the course will be calculated correctly by the deadline (see Academic Calendar).

**Transcripts**

Upon request by the student to the Office of the Registrar, 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 \$5.00 (subject to change) per transcript is charged for processing the record. Students can request a transcript online, in person or by mail.

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.

**Transfer College Credit Limitations**

Units are granted in chronological order of when courses were taken. The maximum number of combined units acceptable from community colleges is 70 semester units. After a student has a total of 70 units, including those from Pacific, those accepted in transfer, AP, IB, or CLEP exam scores and additional lower level military course work, cannot earn units and will not apply to the minimum units required for graduation. Once a student has reached 40 units less than what is required for his/her degree, only 8 more units may be accepted from a four year institution. Courses taken after these limits are reached do not have to be repeated at Pacific since the content of the course may fulfill a requirement, even though no units are allowed in transfer.

Courses that a student takes at other colleges or universities in programs not affiliated with Pacific will not be counted in the student's cumulative grade point average.

A current student who is working toward a degree at Pacific and who wants to take a course or courses at another college or university must obtain approval prior to enrolling in such courses. In addition, students must be approved by the deans designee of their school/college to take units at other institutions if those outside units, when combined with Pacific courses in a semester, exceed 18 units.

The Transfer Course Approval form is available on the Office of the Registrar's web site and must be completed to obtain the necessary approval to transfer course units back to Pacific. It is the student's responsibility to have a transcript of the approved work forwarded to the Office of Admission once completed.

### **Undergraduate Unclassified Students**

Undergraduate Unclassified students may complete up to 27 units (to include completed courses and courses in progress) prior to being required to formally apply for admission to the university. Upon acceptance to the university, resident and transfer coursework will be evaluated.

### **U.S. Military Mobilization:**

All students who are called to active duty must start the process by providing a copy of the military summons to the Office of the Registrar's Veterans Affairs (VA) Coordinator, Knoles Hall, first floor, 209-946-2135. Cancellations processed during the first twelve weeks will receive 100% refund and all course sections will be dropped before leaving for active duty, it is essential that a copy of the military summons is delivered to the Office of the Registrar before departure from campus. This ensures that classes will be dropped and that grades of 'F' will not be issued.

Students called to active duty toward the end of the semester, who are short submitting final papers or cannot take final examinations, are entitled to receive Incompletes (I) for the semester. Arrangements to receive Incompletes must be made with each instructor and copies of the military summons must be left with the Office of the Registrar. Students receiving Incompletes under these conditions will be given four semesters to complete the work and remove the marks of 'I'. If the work is not completed during this special four semester period, the marks of I will automatically convert to marks of W. If the military service period extends beyond the special four semester period, students can file an Academic Regulations Committee (ARC) petition for extension of this special incomplete time period.

Students who leave the University for U.S. military service and follow the procedures

outlined above will be placed on leave of absence and eligible to re-enroll as returning students. Returning students must file a 'Return to Active Status' application with the Office of Admission. Returning students who have questions about Veterans Affairs benefits should contact the VA Coordinator in the Office of the Registrar at 209-946-2135.

### **Withdrawal from a Semester or the University**

Students wishing to completely withdraw from a semester or from the university will have to initiate the process in the Office of the Registrar. The date in which the student picks up the form from the office will be the official date used by financial aid for Title IV refunds and by student account for tuition refunds. If a student wishes to withdraw from a semester after the last day to withdraw, it must be approved by the Academic Regulations Committee. Courses the student was registered for after the last day to drop will appear on that student's transcript with the notation "W" but will not count in the units earned or in the calculation of the grade point average. If you only withdraw from a semester you have one more semester to keep your continuing active status. If you have completely withdrawn from the University you must file a Return to Active Status application with the Office of Admission. The deadline is July 1st for Fall admission or December 1st for Spring admission.

An official withdrawal from the University is the termination of rights and privileges offered to currently enrolled students, including but not limited to early registration.

## **Division of Student Life**

The vision of Student Life at Pacific is to be nationally recognized as an exemplary Student Life program committed to the development of a campus culture that values Diversity, Integrity, Collaboration, Leadership, Respect, and the connection of individuals to the Community. The mission of Student Life is to provide exceptional service and support to Pacific students. Through innovative thinking and dynamic programs, each Student Life staff member focuses on all aspects of a student's personal growth and educational experience. These values transcend individual roles and departmental functions and unify the division. The mission is fulfilled through:

- Sharing individual skills, passions, differences and lives through the services and programs that we provide to each student;
- Creating a living, learning, and working environment that encourages students to reach their potential;

- Encouraging the expression, understanding of, and respect for differences within and beyond our university community;
- Intentionally facilitating the inclusion of all community members through active community building;
- Working towards social justice related to policy and historic and emerging forms of exclusion;
- Modeling ethical decision making and leadership;
- Collaborating with faculty, students, staff, and community partners to provide learning experiences that extend beyond the classroom;
- Celebrating our community accomplishments and;
- Being flexible, passionate, and fun.

### **Freshman Orientation**

Even after four successful years of high school, for most students, college is the first day of school all over again. Freshmen orientation is specifically designed to address the transition into college life for the first-time college student. During orientation, freshmen will meet current Pacific students, faculty and staff, learn about academic majors, expectations, and opportunities for involvement in campus life; participate in advising; and complete registration for fall classes.

### **Transfer Orientation**

Transfer orientation is designed to recognize and build on the previous college experiences of transfer students, while at the same time introducing them to the unique aspects of college life at Pacific. Transfer students participate in an orientation program that includes academic advising, course registration and information about how to quickly become engaged in Pacific's academic and campus culture. During transfer orientation, students will have the opportunity to interact with many faculty, students and staff that will play a key role in their college career and time at Pacific.

### **Family Orientation**

Students tend to have a more meaningful college experience and make better decisions when they discuss their academic and campus life choices with their families. Family Orientation is structured with this thought in mind. Family members attending orientation will leave with an understanding of Pacific culture, knowledge about academic requirements and expectations, and information about the services and opportunities available to their student. Family members participating in

orientation can also expect to enjoy Pacific hospitality and the company of other families during their time on campus.

### **Welcome Week**

Welcome Week serves as a kick off to the academic year at Pacific. For new students, the week provides the opportunity to participate in one of multiple shared experiences: a trip to Yosemite, a trip to the Headlands Institute just outside of Golden Gate Park, river rafting and clean up on the Sacramento River, camping at Mount Diablo, or travel within the local area as a part of “Reach Out Pacific”. Each experience includes social activities; a service project; opportunities to meet students, faculty staff and alumni; and an orientation to Pacific values and areas of distinction. The week concludes with Convocation and an all campus BBQ. For returning students, the weekend provides time to reconnect with friends, faculty and staff and prepare for the rigors of the coming year.

### **New Student Convocation**

New Student Convocation serves as a formal welcome of new students into the academic life of the University. During the ceremony, Pacific’s values of scholarship, leadership, and citizenship are introduced and highlighted. New Student Convocation is also intended to be a celebration of university life and a formal acknowledgement of the university’s commitment to support students in the achievement of their educational goals – both inside and outside the classroom.

### **Reach Out Pacific**

Reach Out Pacific serves as an introduction for new students to our Stockton community. During this day new students work throughout Stockton on various community service projects. Participants also get a tour of Stockton so they are more familiar with the community and what it has to offer. This event welcomes new students into Pacific’s culture of community service.

### **Environmental Stewardship: Making the Most of Muir**

All first year and transfer students are invited to experience the impact of Pacific’s relationship with John Muir through a class trip to Yosemite, the Headlands Institute, Mount Diablo, or the regional network of rivers. While at Yosemite or Headlands, students will work alongside park and university faculty on the completion of an environmental service project. This trip provides an opportunity for students to further develop social connections within the Pacific community and region. This experience also serves as an introduction to leadership

development at Pacific and provides students with at least one initial deposit for the leadership component of their General Education e-portfolios.

### **Parent Programs**

Parents and family members with questions about Pacific resources or programs may seek assistance through the staff of the Student Life Office at (209) 946-2365. Information on Parent Weekend and other programs specifically for family members can also be accessed via the internet – just click “Parent” on the University’s website [www.pacific.edu](http://www.pacific.edu). University calendar information, campus news, and special event information can also be accessed through the “Parent” page.

## **Student Outreach and Academic Support Services**

### **Student Advising Program**

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. Student Academic Support Services also coordinates the Program of Access to Support Services (PASS), an individualized plan of access to University resources designed to facilitate college success. 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. For more information call Student Academic Support Services at (209) 946-2177.

### **Retention Services**

Student Academic Support Services-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. For more information, call Retention Services at (209) 946-2080.

### **Community Services**

The Center for Community Involvement (CCI) provides in-depth learning in Leadership, Advocacy, and Activism through service to the community. CCI provides students with opportunities and resources to contribute through community service and volunteer work with a diverse number of non-profit organizations. New students can choose to become involved in Reach Out Pacific during the Welcome Week or participate with returning students later in the fall semester. During these experiences, students are able to visit and experience working with our community partners. During the academic year Pacific students tutor youth, conduct on-campus enrichment programs, conduct blood drives, and volunteer at many non-profits including Children’s Home of Stockton, Delta Human Society, Big Brothers Big Sisters, St. Mary’s Interfaith and Community Services, Stockton Arts Commission, Stockton Shelter for the Homeless, the Women’s Center and many more. Campus community involvement events have included: students from the School of Education teaching youth to construct balloons and pin wheels during the annual Balloon Fest, Physical Education students teaching swimming to the disabled; Spanish-speaking students teaching adult Mexican-Americans to speak and read English. In addition, Pharmacy students are actively involved in the community through the Academy of Students of Pharmacy. Programs sponsored by the students include the Aids Awareness, Diabetes Education, the Drug Awareness Children’s Carnival and Immunization Certificate programs. The prominence of the Pharmacy students in these areas has manifested itself over the years by the accumulation of awards and grants.

### **Community Involvement Program**

The Community Involvement Program (CIP), established in 1969, is designed to serve the educational needs of local students who demonstrate a historically low family income and a disadvantaged background. The Community Involvement Program is only for new incoming University of the Pacific students. Once in the program students are offered leadership training and various opportunities for students to return to the community as leaders and agents of social change.

Students in the Community Involvement Program are selected based on their participation in the Stockton community, maturity, and potential to contribute his/her time and energy to the Community Involvement Program. CIP students contribute a significant amount of time in the Stockton community through volunteering at various community organizations.

### Multicultural Affairs

Multicultural Affairs works with the University of the Pacific campus and the community to promote cultural diversity and awareness by promoting interaction and engagement among students, faculty staff, and community members. The office promotes programs, services, and activities to encourage increased awareness, collaboration, education and relationships among and within diverse groups. Multicultural Affairs oversees the PRIDE Resource Center, the Womens' Resource Center and the Multicultural Center. The Multicultural Center located in the McCaffrey Center provides space for all students across campus. The Multicultural Center is home to the United Cultural Council (UCC) which is a governing body for all cultural student organizations on campus. The Multicultural Affairs office provides leadership opportunities for all students through the Multicultural Leadership Retreat, Diversity Retreat, Celebrate Diversity Calendar, International Spring Festival, and a multitude of other programs and activities.

The PRIDE Center supports a campus environment that is free from prejudice, harassment, and violence towards LGBTQIA individuals and organizations. Opening its doors to students, faculty and community members in Spring 2003, the Pacific PRIDE Center provides an abundance of resources for the lesbian, gay, bisexual, transgender, and intersex (LGBTI) community as well as allies and those who are questioning their sexual and/or gender identity. The PRIDE Center welcomes a diversity of ethnic, religious, political and cultural values while promoting understanding and acceptance for those marginalized as a result of sexual/gender orientation. The PRIDE Center is located in the Multicultural Center.

### Housing

Residential Communities are central to student life at Pacific. The University considers the residential living experience to be an important part of its educational opportunities, and recognizes that living on campus contributes significantly to a student's development and to the learning process. The University requires all students who are of freshmen or sophomore class standing (earning less than 56 units) to live on campus. The only exceptions are for students who reside with their parent(s) or legal guardian(s) at their permanent address within the 50 miles of the University, or who are over the age of 23 (twenty-three). Additional information of this policy is available in the Tiger Lore and from the Housing and Greek Life Office.

The residence system provides living accommodations in residence halls, fraternities, sororities and apartment facilities for

approximately 2,200 students. All University-operated Greek houses, residence halls and apartments are staffed by professional and graduate student staff.

Each of the University's residence halls and apartments is coeducational, where men and women reside within the same facility, but not in the same room or apartment. All students living in the residence halls, apartment communities, and some fraternities and sororities are required to purchase a meal plan.

Some residence halls are reserved for new freshmen interested in Learning Communities, such as Academic Honors Program (by invitation only) and other Residential Learning Community programs. University apartments are reserved for students who have either a junior or senior standing. The Tower View Apartments are for married students or students with a domestic partner, and/or a child under the age of three (3). 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 by the Housing and Greek Life Office. Students already enrolled apply directly to the Housing and Greek Life Office. Upon acceptance to the University, an applicant will be sent a packet of information with the a brochure describing Pacific's living options, the student housing contract for housing and dining services, and rates. The student housing and dining contracts are for the complete academic year including both the fall and spring semesters for general university students and the fall, winter and spring terms for Pharmacy students. The residence halls and dining halls are not open during the winter break recess period.

### Dining Services

The Dining Service Program is provided by Bon Appetit, the premier name in university dining. Menus are created by the on-site Executive Chef with an emphasis on taste and quality using only the freshest ingredients. The program requires students residing in the residence halls and apartments to participate. Multiple student dining options are found at the University Center with "Grab and Go" alternatives available in the Grove.

Pacific utilizes a declining balance meal plan. This plan works like a debit card and is useable at the eating venues in the University Center and at other campus dining locations. Each time a student makes a purchase at one of the many dining options throughout campus, the amount

is deducted from the balance. A receipt will be provided with amount used and the remaining balance left on the account.

Students are able to use their new meal plan account in a variety of dining locations through the University Center including the Marketplace (our main dining hall), The Lair (the pub), and the Calaveras Coffee House. In addition, students will also be able to use their Dining Dollars at the Davy's Café (located in the Library), the Health Sciences Café (located in the Health Sciences Learning Center), and the Grove, a University Convenience Store (located in the McCaffrey Center). The Grove offers items such as detergent, household cleaning supplies, toiletries, as well as "grab and go" food options such as fresh made salads, coffee, soups, sandwiches, and desserts.

The Marketplace features a variety of stations to choose from including a *Taqueria* station focusing on meals from many countries in South America, a *Classics* station featuring home-style items and comfort foods, a *Pacific Rim* station offering specialties from throughout the Asian region, a *Exhibition* station focusing on grill menu options, and other menu options including such things as a salad bar, deli station, home-style soups, freshly baked desserts, and beverages. At least one vegetarian entrée is featured at each meal.

For more information on meal plan, please contact Housing and Greek Life at 209-946-2331 or iamhome@pacific.edu.

### Cowell Wellness Center

Cowell Student Wellness Center houses both health and counseling services. The facility is located north of the footbridge, at 1041 Brookside Road, in Stockton. Services are available to students who have paid the student health fee and are enrolled at any of Pacific's campuses. Students are required to submit documentation of an entrance physical, health insurance coverage, and meet the immunization and TB clearance requirements. Health and Counseling services are provided on an appointment basis, Monday through Friday from 8:00 a.m. to 6:00 p.m. during the regular school year. Walk in appointments are seen on a case by case basis determined by the urgency of the presenting condition. During the summer, the Counseling and Health Services follow hours that are set forth by the University. The Center is closed on weekends and holidays. When services are unavailable, students may access a Nurse Advice Line to receive instructions or recommendations for treatment options. Students using the advice line must be currently enrolled and provide their student identification

numbers. Professional staff will also provide follow-up as needed on the next operational day.

### Health Services

Health care providers consist of full time Nurse Practitioners/Physician Assistants a Physician consultant and Medical Assistants. Health care delivery and medical record management are protected by privacy and confidentiality regulations.

Health services include the management of common health problems such as acute minor illnesses and injuries, and preventative care. Routine gynecological care (Pap smears), contraceptive maintenance, STD testing, immunizations, routine physicals, and health education are well-utilized preventative care services. Prescription medications are made available as indicated. Several categories of medication are provided directly through the Center, otherwise prescriptions are filled at local pharmacies. Laboratory services include limited in-house testing and full service processing through local labs.

Management of chronic conditions is provided on a case-by-case basis. Typically, students are referred to local specialists for this care and as the need arises. Hospitalization and emergency treatment for life-threatening conditions are not managed in the Center. In those circumstances care is referred to one of three local hospitals. Staff may arrange for ambulance transport as indicated.

The Wellness Center fee pays for unlimited visits to the Center. Further costs are incurred with the purchase of medication, diagnostic testing, or referrals to off campus health care providers. Students can elect to pay these additional costs associated with their care at time of service or bill their health insurance plans.

### Health Insurance

The University has a mandatory health insurance policy with a hard waiver. This requires all students to submit a copy of their health insurance card to the Cowell Wellness Center prior to registering for classes. Students may also choose to complete this waiver on-line by going to [www.Chickering.com](http://www.Chickering.com). Once at the Chickering website students should click on "Find Your School" and enter University of the Pacific in the designated space on the form. Once the University of the Pacific insurance homepage is located, the insurance waiver will be found among the links on the left hand side of the page. Students have the option to enroll in the University of the Pacific student health insurance plan offered through Chickering, select an outside plan, or be covered under their families policy. Beginning in fall 2009, students

who do not complete the waiver will automatically be enrolled in the Chickering plan to ensure that their health needs are covered.

### Counseling Services

Counseling Services assists currently enrolled Pacific students who may be experiencing situational, psychological or interpersonal difficulties. The goal of Counseling Services is to enable students to benefit from, and maximize their educational experience at Pacific. Located in the Cowell Wellness Center, Counseling Services offers individual and group counseling focusing on a variety of issues. These include: dating, family relationships, depression, anxiety, grieving, sexuality, self-esteem and self-image, eating disorders and body image, 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. Assessments for learning disabilities and Attention-Deficit/Hyperactivity Disorder (ADHD) are offered at a reduced cost.

Counseling Services consults with other campus offices regarding mental health related concerns. In addition, Counseling Services offers educational outreach programs to the university community.

The Counseling Services staff includes licensed psychologists and a marriage and family therapist. Experienced pre-doctoral interns may work under licensed supervision. Counseling sessions are confidential and free of charge.

After-hours emergency crisis consultation is available by contacting the Department of Public Safety at (209) 946-3911, and requesting university assistance.

### The Student Victim Advocate Program

The Student Victim Advocate Program is housed within Public Safety. The Student Victim Advocate provides free and confidential information, advocacy and support to students who may be victims or survivors of crime, violence or abuse. This includes but is not limited to battery, theft, assault, stalking, sexual battery, rape (acquaintance/date/stranger), attempted sexual assault, and sexual harassment. The Student Victim Advocate can be reached on a 24 hour basis. The Student Victim Advocate is also available to speak to classes, student groups and residential communities on topics such as: sexual assault awareness, healthy relationships, personal safety and self defense.

### Career Services

The Career Resource Center (CRC), located in Hand Hall, provides a wide range of career services for students and alumni that facilitate goal setting, academic and non-academic internship search, graduate and professional school assistance and post graduate employment efforts, to name a few. The CRC provides services and events that assist students and alumni in developing the skills required to obtain part-time, full-time, work study, summer jobs or graduate school admission. Students, even as freshman, are encouraged to participate in CRC programs, services and events. Staff is available to support students and alumni who are in all parts of the process of identifying activities and steps necessary to achieve employment and academic goals. Emphasis is placed on individuals participating in active career exploration and skill building through internship opportunities and other experiential learning opportunities.

The CRC also sponsors and coordinates on-campus recruitment events as well as career fairs, etiquette dinners and graduate and professional school information sessions. These events bring over 100 diverse companies and organizations to campus to interact with job seekers and career explorers. Additionally, the CRC provides access to a variety of hard copy and electronic resources related to career exploration and job search. Employment and internship opportunities are easily accessed through postings on TigerJobs, allowing students to search twenty four hours a day, seven days a week from the convenience of any computer with internet access.

The Career Resource Center is a comprehensive career center offering services to students and alumni seeking to establish and accomplish employment and graduate education goals. Through personalized career counseling, interest assessments and job search assistance, as well as many other offerings, the CRC is here to meet the career related needs of students and alumni.

### DeRosa University Center

The University Center at Pacific is a student centered extension of the University's mission which highlights personal and academic excellence. Constructed in the heart of the beautiful Stockton campus, the University Center serves as a powerful example of Pacific's commitment to sustainable design, green construction practices and environmental stewardship.

The University Center consists of many interrelated spaces that have been designed to

encourage and support a diverse menu of social and educational programs.

The building offers:

- Pacific's first green building
- Full service pub
- Entertainment venues
- Hi tech meeting rooms
- New student bookstore
- Multiple dining spaces
- Customized media network
- Ultra gaming lounge
- Exterior seating and social spaces
- Pacific Marketplace, Pacific Commons (dining hall), Calaveras Coffee Co. (coffee shop), The Lair (pub), The Brickyard (pub performance space), The River Room (formal dining room)

### **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 (SSS) 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. Specifically, 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. For more information contact the SUCCESS Office at: Bannister Hall, first floor. Telephone: (209) 946-2439; FAX: (209) 946-2984; e-mail: [abautist@pacific.edu](mailto:abautist@pacific.edu).

### **Religious and Spiritual Life**

The University offers students a variety of opportunities to explore issues of faith, to deepen knowledge and understanding of their faith and to express commitment through community worship and service. Whether the student is a person of faith or is a person of no particular faith; whether they consider themselves religious, spiritual or simply open to learning about what and how others believe, the University Chaplain's Office is committed to support and encourage the students on their journey. Pacific has many active faith based groups and organizations including: Hillel (Jewish Students), Chi Alpha, Newman House, Intersarsity Christian Fellowship, Muslim Students Association, Buddhist Students, Pacific Pagan Council, Canterbury Club, Hindu Students, Sikh Students, Fellowship of Christian Athletes, Coptic Christians, and more.

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 serviced 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 Public Safety programs include: date rape prevention, self protection, crime prevention, emergency phones, Ride Along Program, and special event planning. The office also oversees the S.T.R.I.P.E program which is a safety escort service managed by students. For any further information or questions that you may have, phone Public Safety at (209) 946-2537 or visit our web site link under Student Life at [www.pacific.edu](http://www.pacific.edu).

### **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 is the student government of the University of the Pacific (ASUOP). ASUOP is completely operated and funded by the University of the Pacific students.

The organization houses five different entities which are the ASUOP Government, Arts and Entertainment, Retail, Communications, and Digital Productions. 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 that enrich the social, cultural, and educational aspects of university life.

A per semester fee is automatically assessed to every undergraduate or professional student registered with more than 8.5 units including 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 Pacific students. 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), Hal Nelson Tennis Courts, the 6,000-seat Alex G. Spanos Center, and the Klein Family Field (baseball).

### **Campus Recreation**

The Department of Campus Recreation offers facilities and programs to improve the quality of life for students, faculty, staff, and alumni. Students, faculty, staff, and alumni are encouraged to take the time to explore the recreational opportunities and participate in the programs.



The Department of Campus Recreation is comprised of the Main Gym, Baun Fitness Center, Hal Nelson Tennis Courts, Brookside and Zuckerman Fields, and Raney Recreation Area.

With more than 75 percent of Pacific's student body annually participating in Campus Recreation activities, the Department of Campus Recreation has a strong following. Students will find diverse program offerings from Yoga, informal basketball, competitive Intramural Sports, and Sport Clubs. Students can connect with nature and the wilderness with Outdoor Connection or utilize a full service Fitness Center.

#### *Baun Fitness Center*

The Baun Fitness Center was completed in August of 2003. A signature feature of the 18,000 sq. ft. building is a 32-foot high rock climbing wall that can be viewed through the glass tower entrance.

The center includes areas for free and machine weights, a variety of cardiovascular equipment, two racquetball courts, group exercise rooms, outdoor rental equipment and locker rooms and showers. All fee paying undergraduate Pacific students are eligible to use the facility free of charge. Memberships to the Center are also available at a fee to other students, faculty, staff, and alumni.

#### *Outdoor Connection*

The Pacific Outdoor Connection program hosts four components; an indoor climbing wall, outdoor adventure trips, outdoor equipment rentals, and a resource center with guide books, magazines, and maps all conveniently located in one area. The overall goal of the Pacific Outdoor Connection is to provide outdoor opportunities for the whole campus community.

#### *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.

#### *KPAC (Pacific Student Radio)*

Students have the opportunity to participate in the activities of KPAC, a student operated radio station. The station allows students to gain practical experiences and test classroom theory. KPAC utilizes a low-powered FM signal that broadcasts to the Pacific and surrounding communities.

#### *ASUOP Productions*

ASUOP Productions is dedicated to the digital preservation of student life at the University of the Pacific. A comprehensive program, it includes digital still photography, digital video, editing, and media presentation production. ASUOP Productions is an educational environment in which students gain hands-on experience with state of the art equipment.

#### *ASUOP Arts & Entertainment (A&E)*

ASUOP Arts & Entertainment entertains, enriches, and educates the University of the Pacific and the City of Stockton with a variety of events. A&E comprises a talented event planning staff whose mission is to further enhance the social, cultural, and educational aspects of student life while expanding students' knowledge and building leadership skills. With an off-campus trips series that takes students all over California, to an independent and foreign film series, A&E gives new perspective and new experiences to students at Pacific. A&E also produces the annual Homecoming Festival and the International Spring Festival. Past major events include: CAKE: In Concert, Third Eye Blind, Spike Lee, Reel Big Fish, Politically Incorrect with Bill Maher, Save Ferris, Wayne Brady & Friends, Margaret Cho, David Sedaris, and Terri McMillan.

#### *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 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 it is published three times a year by the Office of Marketing and University Relations. Its purpose is to inform alumni, parents, students and friends about the University, its people and its events.

#### *Center for Community Involvement*

The Center for Community Involvement (CCI) is a student-centered learning environment that provides quality, innovative programming which, through student leaders, forms a link between the campus and our Stockton community, where evolving programs provide the spark for education, action and service. The purpose of the CCI is to inspire, support and prepare students to successfully address their concerns through service to their community and the society in which they live.

The Center for Community Involvement is the former Anderson Y Center which has been an important part of the University of the Pacific for over a hundred years. Thousands of students, staff and board members have influenced countless lives within the Stockton community through various clubs and organizations the AYC has sponsored.

The Center for Community Involvement provides private one-on-one tutoring to students K-12 and adult learners at the center. CCI also assist in staffing educational support programs throughout the community. Additionally, the CCI is becoming Pacific's Volunteer Center.

The Center for Community Involvement is part of the Career Resource Center and the Division of Student Life. CCI receives support from ASUOP, United Way and numerous other supporters and donors.

### *National Honor Societies*

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

Alpha Sigma Lambda. For adult learners.  
Beta Alpha Psi. For accounting students.

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.

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

Omicron Kappa Upsilon. For honor students in dentistry.

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

Phi Beta Kappa. For honor students in liberal arts and sciences.

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.

Pi Kappa Lambda. For music students.

Sigma Delta Pi. For honor students in Spanish Language and Literature.

Sigma Gamma Epsilon. For honor students in Earth Sciences.

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.

Tau Kappa Omega. For honor students in dentistry.

Theta Alpha Phi. For students in theater arts.

### *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.

Mu Phi Epsilon. Mu Eta Chapter for music major students.

Phi Alpha Delta. Largest legal fraternity composed of pre-law members.

Phi Delta Chi. Alpha Psi Chapter for male pharmacy students.

Rho Pi Phi. Pharmaceutical fraternity. Lambda Sigma Delta Chapter.

Sigma Alpha Iota. International female music fraternity.

### *Academic Organizations*

Accounting Society

American Institute of Graphic Arts

American Society of Mechanical Engineers

Associated Students of Civil Engineers

Associated Students of Engineering Management

Association for Supervision and Curriculum Development

Association of Computing Machinery  
in honors sectionBiomedical Engineering Society

Conservatory Composers Club

Institute of Electrical and Electronic Engineering

National Society of Black Engineers

Pacific American Marketing Association

Pacific Historical Society

Pacific Humanities Center

Pacific Model United Nations

Pacific Music Management

Pacific Music Therapy Association

Pacific Speech and Debate Society

Pacific Sport Management ClubPacific Student Athlete Council

Pacific Student Athletic Training Club

Pacific Student Radio KPAC

Pacific Pre-Dental Club

Pacific Pre-Med Club

Pacific Pre-Physical Therapy Club

Public Relations Student Society of America

School of Education Student Association

Society of Hispanic Engineers

Society of Women Engineers

### *Social Fraternities*

Delta Upsilon

Omega Delta Phi

Pi Kappa Alpha

Sigma Chi

Theta Chi

Xi Chi Sigma

### *Social Sororities*

Alpha Phi

Delta Delta Delta

Delta Gamma

Delta Sigma Theta

Gamma Alpha Omega

Kappa Alpha Theta

Rho Delta Chi

### *Student Governance/Political*

Academy of Pharmacy Students (ASP)

Associated Students of the University of the Pacific (ASUOP)

Association of Engineering Students (ASE)

College of the Pacific Student Association (COPA)

College Panhellenic Council

Conservatory Student Senate

Eberhardt School of Business Student Association

Interfraternity Council

Master of Business Administration Student Assembly

Multicultural Greek Council

Multi Cultural Student Association

Open Assembly for the School of International Studies (OASIS)

Pacific College Republicans

Pacific College Democrats

Pharmaceutical and Chemical Science Graduate Student Association

Professional Fraternity Council (PFC)

Residence Hall Association (RHA)

School of Education Student Association

### *Clubs and Organizations*

#### *Cultural*

Association of Latin American Students (ALAS)

BlackStudent Union

Cambodian Student Association

Hawaii Club

Hmong Student Association  
 International Chinese Student Union  
 International Club  
 Kilusan Pilipino  
 Latino Student Council  
 League of United Latin American Citizens (LULAC)  
 Martial Arts Club  
 Matsuri Japan Club  
 M.E.Ch.A.  
 Muslim Student Association  
 Nikkei Student Union  
 Pacific Korean Students Association  
 Pride Alliance  
 South Asian Student Association (SASA)  
 United Cultural Council  
 Vietnamese Student Association  
 VN Cares

**Recreational**

Badminton  
 Club Baseball  
 Club Flag Football  
 Club Tennis  
 Pacific Climbing Club  
 Pacific Dance  
 Pacific Men's Lacrosse  
 Pacific Men's and Women's Crew  
 Pacific Running Club  
 Pacific Rugby Club  
 Pacific Swim Club  
 Pacific Wrestling club  
 Sports Club Council  
 Taekwondo Sparring Club  
 Women's Club Soccer

**Religious**

Bishops Scholars  
 Black Campus Ministries  
 Christian Pharmacists Fellowship International  
 Coptic Club  
 Fellowship of Christian Athletes  
 Health Science Christian Fellowship  
 Hillel Foundation  
 Interfaith Council  
 Muslim Student Association

Newman House  
 Pacific Christian Fellowship/Intersarsity

**Special Interest**

Alpha Phi Omega  
 Anime Club  
 Arabic Language Learning  
 Artistic Connections  
 Celebrate Diversity  
 Circle K International  
 Club Scope  
 Knitting for Charity  
 League of Extraordinary Geologists  
 Optimists Club  
 Pacific Admissions Welcoming Service  
 Pacific Ceramics Club (Clay Slingsers)  
 Pacific Feminists  
 Pacific Mixers (DJ's)  
 Pacific Up 'Til Dawn  
 PALS (Pacific Adult Learners)  
 Rhythm, Inc.  
 Rotaract Club  
 Shadow Cast of Pacific  
 Social Justice Community  
 Student Veterans organization  
 Students for Environmental Action  
 The Invisible Children Organization  
 The Orange Army  
 The Pacifican

**Traditional Events at the University**

**Celebrate Diversity**

A year-round educational campaign designed to promote understanding and sensitivity toward diversity in ability, age, ethnicity, gender, religion, sexual orientation, size, socioeconomic class and other dimensions of human difference. 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.

**Student Employment Expo**

The Student Employment Expo, a Career Resource Center event, is designed to make search for Work Study, on-campus, and volunteer opportunities within the Stockton Community easier for students. While intended primarily for students who are work study

eligible, the Student Employment Expo offers opportunities for all students in all majors.

**“Meet Your Future”**

“Meet Your Future” is a two week program that consists of Resume Reviews, Mock Interviews and Employer Panels Presentations. The purpose of this event is to provide students with relevant, first-hand information about their resumes, interviewing skills, employer information, and industry trends. This is also an opportunity for employers to identify potential talent for their current and future hiring needs. The annual “Meet Your Future” event will be held in the spring semester as a preparation for the Career Faire.

**Spring Career Faire**

The annual Spring Career Faire is an event that brings more than 100 organizations, representing a wide range of industries to Pacific's campus. The Career Faire is an excellent opportunity for students from all majors to network and explore full-time, part-time, internships, and co-op opportunities. This is an excellent venue for students to learn more about career opportunities that exist within each organization and how to apply to those they wish to pursue.

**Homecoming/Parents Weekend/Fall Festival**

Homecoming/Parents Weekend provides an October weekend of excitement for students and their parents. A variety of activities take place to celebrate Pacific and the culmination of Greek Week and RHA Spirit Week. The weekend includes concerts, athletic and fine arts events, and the Annual Fall Festival.

**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 Solstice 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 music, games and giveaways.

## University Standards

### Academic Standards

#### Judicial Affairs

The Office of Judicial Affairs manages the student judicial process for students on the Stockton campus. Pacific has developed policies and procedures to clarify the expectations and standards for students. Each student is responsible for knowing and adhering to all University policies and procedures. The policies are outlined specifically in the TIGER LORE Handbook and on the web site at [www.pacific.edu.x3957.xml](http://www.pacific.edu.x3957.xml)

#### Honor Code

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. The Honor Code calls each student to be responsible for observing high ethical conduct. While the Honor Code recognizes that its vitality rests with the individual student as the community structure of controls and judiciary procedures to make the Honor Code effective is outlined in the Tiger Lore.

#### Violating the Student Code of Conduct, University Policies and/or Local, State or Federal Laws

The violation of established policies or procedures and/or local, state or federal laws may constitute a violation of the honor code. Such violations may include conduct that occurs off-campus when students are participating, attending or in some manner connected to a University related activity.

#### 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 abide by the Student Code of Conduct and university policies. 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.

University policies and regulations are published in the Tiger Lore and distributed annually to all students. Statements pertaining to or clarification of student rights are also published in this document.

### Alcohol and Other Drugs Policy

Students, faculty and staff will comply with all federal, state and local laws and University policies governing the consumption, possession, distribution and sale of alcoholic beverages and drugs on University property; at any activity or event on and off the campus sponsored by Pacific; or where a campus community member is representing Pacific as part of an off-campus program, activity or event.

More detailed policy information regarding the consumption, possession, distribution and sale of alcohol can be found on the Tiger Lore website link at [www.pacific.edu](http://www.pacific.edu).

Except as legally prescribed, drugs are prohibited. Additionally, the unlawful manufacture, distribution, dispensing, possession or use of any controlled substance, including marijuana, is prohibited.

### 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 that he/she holds office. Except for any professional school policy, exceptions to these standards may be considered by the Office of Student Life.

## University Programs and Services

### Aerospace Studies (Air Force ROTC)

Air Force Reserve Officer Training Corps is available to University of the Pacific students through a program offered at California State University, Sacramento. 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

to 16 semester units) is completed on the CSUS campus. Leadership Laboratory, physical fitness training, and lecture are normally offered during the early morning hours Monday through Friday. Field training is conducted during part of the summer at an active duty 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 as 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 to active duty to continue their education or may apply for Air Force-sponsored graduate study to begin immediately upon entry on active duty.

Air Force ROTC 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 Air Force ROTC program, students are encouraged to work closely with their academic advisers in planning this academic program. Application to the Air Force ROTC program should normally be no later than 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) 278-7783, for information on the program or the entry process.

### Testing Services

The Testing Office in the Benerd School of Education is an officially designated national testing center for the Graduate Record Examination in subject matter only.

### Clinical Services

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 working 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 Pacific students prepare themselves for their own career journey, the value of work experience in each student's field of interest has never been greater. Today's employers are more likely to hire students who combine appropriate classroom training with meaningful experience in the working world.

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 Resource 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 Resource Center (CRC) office at (209) 946-2361.

### *Office of Services for Students with Disabilities in the Educational Resource Center*

The University does not discriminate against students and applicants on the basis of disability, in the administration of its educational and other programs. The University will reasonably accommodate qualified students (including applicants) with disabilities as defined by applicable law, if the individual is otherwise qualified to meet the fundamental requirements and aspects of the program of the University, without undue hardship to the University. Harassment on the basis of disability issues is prohibited by the University's policies.

For purposes of reasonable accommodation, a student or applicant with a disability is a person who: (a) has a physical or mental impairment which limits one or more major life activities

(such as walking, seeing, speaking, learning, or working); or (b) has a record with the University by which the University has officially recognized such impairment. To be eligible to continue at the University, the student or applicant must meet the qualifications and requirements expected generally of its students, and must also be able to perform the requirements of the individual major or program in which s/he is enrolled.

A qualified student or applicant is an individual with a disability as defined by this policy and applicable law who meets the academic and technical standards requisite to admission and participation in the educational program or activity. Accommodations are such modifications to the course, program or educational requirements as are necessary and effective for the individual, if reasonable to provide at the University and do not alter the fundamental nature of programs. Accommodations do not include exemption from academic evaluation standards or from the code of student conduct.

Pacific expects that, if you are a student with a disability, you will give sufficient notice of your need for assistance (preferably prior to the start of the semester) although the University will consider the merits of each request at the time it is received. Upon receiving a request for assistance as well as appropriate documentation, the Coordinator of the Office of Services for Disabilities considers the student's need for assistance as it relates to the documented disability. If appropriate, the University may choose to consult with such individuals, internal or external to the University, to provide further assistance needed to evaluate the request for accommodation. The following list is an example of the types of reasonable accommodations and services that university may provide, on a case-by-case basis, to assure equal access:

- Academic adjustments and curricular modifications
- Assistive technology
- Consultation with faculty and staff
- Registration assistance and classroom rescheduling
- Readers, scribes, note-taking, and library assistance
- Test proctoring services

Please note the university does not provide or subsidize personal care devices or services such as ambulatory devices or assistance with bathing, dressing, laundry, etc. Referrals to external agencies, however, are available upon request.

For additional information, please contact:

Daniel Nuss, Coordinator  
Office of Services for Students with Disabilities  
Bannister Hall, Room 101  
Phone: (209) 946-2879  
E-mail: dnuss@pacific.edu

More detailed information as well as our Policy Manual for Students with Disabilities is available on the web at: <http://www.pacific.edu/education/ssd>

### *Tutorial Program*

Administered by the Educational Resource Center, the University of the Pacific's Tutorial Program offers free one-on-one tutoring to all enrolled students. This is a peer-tutoring program; tutors are those students who have achieved success in their subject areas. Students interested in our tutoring services should come Bannister Hall, Room 106, to schedule an appointment. The Tutoring Center's hours during the Fall and Spring semesters are Monday through Thursday, 8:30 a.m. to 9:00 p.m. and Friday, 8:30 a.m. to 5:00 p.m. Tutors in most subjects are available; however, students are urged to contact the office early in the semester, so that tutors can be sought. The Tutorial Program will make every attempt to locate tutors; however, sometimes tutors may not be readily available in some subjects. Any student interested in becoming a tutor is also welcome to contact the office. For more information, please contact us by calling (209) 946-2437 or via email: [erctutorial@pacific.edu](mailto:erctutorial@pacific.edu).

### *University Honors Program*

Pacific's Honors Program supports excellence in academic and co-curricular endeavors and encourages Pacific's strongest students to take leadership and service roles during their undergraduate years and beyond. Participation is by invitation. Freshmen students are invited based on high school performance. Factors considered include Advanced Placement courses, general curriculum, SAT or ACT scores and GPA. Sophomore students are invited on the basis of freshman year grades.

The honors curriculum consists of honors general education courses, honors seminars, and a senior project. Requirements and timing vary with a student's choice of school and program. Additionally, freshman honors students are required to attend eight events from our calendar of "colloquia" events. Students who complete the program will receive appropriate annotation on their official transcripts.

Freshman honors students may elect to live in John Ballantyne Hall or Carter House. These adjacent residence halls constitute an academic

living community reserved for freshman honors students and a number of sophomore “peers” chosen to help freshmen make the adjustment to college life. The Honors Program Director, whose office is located in John Ballantyne 113, works with the residential life staff to coordinate extra-curricular programming. Honors Program residents traditionally have taken leadership roles in campus politics, social activities and scholarship.

For further information, e-mail the Honors Director, George Randels, at [grandels@pacific.edu](mailto:grandels@pacific.edu), or call (209) 946-2283. <http://honors.pacific.edu>.

### **Fellowship Office**

The Fellowship Advisor is available to assist students across the university in pursuing national awards that support undergraduate research and graduate study. Scholarships and fellowships may fund tuition in the U.S. or study abroad, sponsor research projects or internships, and provide mentoring in the recipient’s chosen field of graduate study. Students considering graduate school or post-baccalaureate research projects abroad are encouraged to contact the Fellowship Advisor early in their academic careers, ideally at the beginning of sophomore year. For news and events, and to begin your search for fellowships and scholarships, see the Fellowship Office website: <http://web.pacific.edu/x21104.xml>.

For further information, email the Fellowship Advisor, Susan Weiner, at [sweiner@pacific.edu](mailto:sweiner@pacific.edu), or call (209) 946-2406.

### **International Programs and Services (IPS)**

Located in the Bechtel International Center (BIC) between Casa Jackson and Jessie Ballantyne Halls, IPS offers comprehensive services for Pacific international students and scholars coming to the United States as well as for Pacific students wanting to study, intern or volunteer abroad. IPS serves as the liaison between University schools, departments and offices, collaborating with them to enhance international and global education across the campus.

### **Bechtel International Center**

The Bechtel International Center functions not only as home to International Programs and Services, but also as a gathering place for all Pacific students. BIC is open for office hours from 8:30 a.m. – 5:00 p.m., and from 5:00 pm – 10:00 p.m. Monday through Thursday nights, when classes are in session, as a study center and for student group meetings. The Center may be reserved by student and university groups for a variety of international and global functions.

### **International Students and Scholars Services**

IPS offers a comprehensive package of services for all international students and scholars at Pacific. This includes, but is not limited to, counseling about immigration, academic, financial, and personal issues. IPS also works with Pacific’s J-1 Exchange Visitor Program. This program serves both students (exchange) and scholars (visiting professors and researchers) in the J-1 visa category. For more information call (209) 946-2246.

### **Education Abroad**

The University of the Pacific offers students the opportunity to study, intern or volunteer abroad for a semester, an academic year or summer in a variety of Pacific-sponsored programs around the world. Students are encouraged to consider this option to enrich their lives, add an essential dimension to effective study at Pacific, and further career preparation in an increasingly global world.

In addition to its own direct exchange and direct enrollment options, IPS sponsors programs through other universities and consortia. Credit earned on Pacific Abroad is awarded through University of the Pacific. For all Pacific-sponsored education abroad programs, students pay Pacific tuition, which covers all program tuition, and all scholarships and federal loans apply. Students may only participate in Pacific-sponsored education abroad programs and the general requirements for pre-approval are sophomore standing and a 2.75 overall gpa. Education abroad course cannot be taken as pass/fail.

The foreign language requirements for Pacific education abroad programs vary, but viable options exist for every major on campus. Most students choose to participate in their sophomore or junior or years. However, interested students should investigate study abroad choices as early as possible in their academic careers to ensure eligibility. Many programs require prerequisite courses (e.g., a certain level of language proficiency) and all require a minimum grade-point average. Additionally, most programs incorporate home stays with local families and some the opportunity for independent study and/or travel.

Many education abroad sites offer a broad 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 most sites. All Pacific-sponsored programs offer students the challenges and

benefits of studying and immersing themselves in a culture different from their own.

An orientation course is offered by the School of International Studies (SIS) to prepare students for their experience abroad. The course, INTL 151-Cross-Cultural Training I, is required for all students studying abroad for a semester or full year. A companion course, INTL 161-Cross-Cultural Training II, also is available for students returning from an education abroad experience. Both courses are two-unit offerings.

The enrollment courses for Education Abroad and School of Record students is listed under SABD 000, 093a-z, and 193a-z.

For more information on education abroad, please call (209) 946-2592, or visit [web.pacific.edu/x4291.xml](http://web.pacific.edu/x4291.xml).

### **Library Services and Collections**

The University Library delivers its services from two facilities. The main library, the William Knox Holt Memorial Library, provides resources in the humanities, fine arts, social sciences, music, business, education, natural and physical sciences, international studies, engineering and computer science, and speech language pathology. Academic disciplines represented in the Health Sciences Branch Library include pharmacy, physical therapy, and dental hygiene. Both facilities offer a variety of services and study settings, including carrels, large tables, lounge areas, and group study rooms.

In addition to more than 400,000 print and multimedia items in its collections, the University Library continues to increase online availability to thousands of electronic full-text journals, electronic books, and streaming audio and video resources. In addition, more than 100 databases targeted toward the academic disciplines taught at Pacific are now accessible at any time to students and faculty wherever they have access to an Internet connection, on or off campus.

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 specialized classes and workshops designed to help students and faculty use library resources and research tools effectively. Most of this instruction includes hands-on learning at computer workstations in our electronic classrooms.

### **Fletcher Jones Information Commons**

An integration of computer lab and library reference services, the main library’s Fletcher Jones Information Commons currently provides

more than 70 computer workstations and laptops. Students can combine information and data culled from library resources and web-based materials with tools such as word processing, spreadsheets, scanning, and presentation software that enhance and improve their academic research and presentations. The Commons is staffed with a reference librarian who assists with research and information questions and an Information Commons student assistant who provides technical help with workstations, printers, and software tools. The Rite-Aid Information Commons, in the Health Sciences Branch Library, provides 20 computer workstations, a print station, and a scanner.

### **Multimedia Studio**

The Multimedia Studio is located on the main floor of the library next to the Information Commons. Its six workstations provide the Pacific community with specialized software and hardware for the completion of multimedia-infused projects. Designed to accommodate the increasing importance of multimedia technology within the educational process, the Multimedia Studio welcomes any Pacific student, faculty, and staff member to take advantage of its advanced design tools.

### **Roger A. and Elizabeth Davey Café**

The Roger and Elizabeth Davey Café, more commonly referred to as the Davey Café, is located on the main floor of the University Library. The Davey Café is open early morning to late evening, Monday-Friday and Sunday. Stop by this popular library meeting place for your favorite coffee drink and pastry or a light lunch.

### **Instant Messaging**

Members of the Pacific community can now receive reference and directional assistance by way of our AskPacific Instant Messaging service. Our IM screen name (AskPacific) works with all major IM service providers. For more information, see <http://library.pacific.edu/refdesk.asp>

### **The University Library Website:**

<http://library.pacific.edu>

The University Library's website provides a portal to its materials, research tools, and services. Here you will find PacifiCat, the University Library's online catalog listing print and electronic books, sound recordings, films, and music scores. In addition, you can connect to an academic database that leads to journal references on a particular topic. And once you know what journals you're looking for, it will lead you to those journals in print or electronic full-text format. From the website you can chat

with a librarian, request a book through interlibrary loan, check on the University Library's hours, renew your books, and much more. The University Library's website is an excellent starting point when looking for library materials and assistance!

### **Holt-Atherton Special Collections**

The Holt-Atherton Special Collections Department embodies Pacific's sense of distinctiveness. It houses over 400 unique manuscript collections that document the history of California, as well as a Western Americana book collection dating to the 18th century, and the University's archival records. The most significant manuscript materials include the John Muir Papers, the Brubeck Collection, several collections of original documents from Japanese-American internment camps in World War II, and extensive holdings on the history of Stockton and San Joaquin County. Because these collections can only be found at Pacific, they draw scholars and researchers from around the world and offer unique research opportunities to Pacific students.

### **Pacific Alumni Association**

The Pacific Alumni Association (PAA) includes all alumni of the University of the Pacific. There is no membership fee and services are available to all members. An elected Board of Directors (30) develops programs and benefits with the Office of Alumni Relations staff. Opportunities provided to alumni through PAA include Regional Pacific Clubs, class reunions, special events, communications and a variety of benefits. The Pacific Alumni Association encourages all alumni to maintain their relationship with the University of the Pacific and with one another. For more information call (209) 946-2391.

### **University Book Store**

Students will find the University Book Store, owned and operated by Barnes and Noble, an excellent source for living and learning needs. It provides students with a wide range of products and services for classroom and extracurricular activities. In addition to required and recommended textbooks, a selection of titles is maintained in both academic and general subject areas.

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

## **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.

11. Services for Students with Disabilities

Educational, psychological and medical evaluations/reports as well as diagnostic testing informations, including Individualized Education and Transition Plans/Coordinator.

a. 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

Pacific's general education program introduces students broadly to the liberal arts and prepares them for a lifetime of reflection. It liberates the individual and energizes the citizen. Students are exposed to various ways critical thought is organized and develop fundamental skills—such as writing, analytical thinking, critical reading, quantitative analysis, and oral presentation skills—that are transferable to any kind of study. The exposure to different areas of study and the development of intellectual and practical skills promote the mission of Pacific's general education: self-understanding, citizenship, and career development.

## Mission

### *Self-Understanding*

One goal of Pacific's general education program is fundamentally personal: to enrich students' self-understanding and expand their interests in preparation for a fulfilling life. Students are exposed to new intellectual, moral, spiritual, and aesthetic possibilities. Through the interaction with others from different backgrounds and the study of different disciplines, students come to understand who they are and the sources of their beliefs. They thus gain the skills to identify, express and analyze their beliefs and to fashion a philosophy of life that can guide them in their future endeavors. Students may also find life-long pleasure in learning, self-reflection, and conversation.

### *Citizenship*

Another goal is to produce engaged and informed citizens who advance a democratic society by contributing to political and civil life and by committing themselves to the service of others. General education fosters the skills to evaluate complex social and political issues and teaches the moral and political grounds that inform political action and service in a democracy. The health of a society depends on informed and active citizens who do what is right and value the public good over narrow self-interest.

### *Career Development*

Finally, the general education program prepares students to enter professional life by developing practical skills that are valuable to employers and essential to civil society. These skills include the abilities to express oneself clearly and coherently in writing and orally, to be diligent and careful in the preparation of one's work, to interpret and evaluate information, to think cre-

atively in order to solve problems, to work independently as well as collegially in groups with a sensitivity toward cultural differences, to use technology, and to treat others ethically in their professional interactions.

## Outcomes

Pacific's general education mission of fostering self-understanding, citizenship and career development is advanced by the completion of three Pacific Seminars and the breadth program courses, all of which introduce students to the natural sciences, social sciences, humanities and arts and which develop the following intellectual and practical skills:

- written communication
- oral communication
- critical thinking
- quantitative thinking
- cross-cultural awareness
- ethical reasoning
- civic responsibility & engagement
- aesthetic judgment

## Coursework

The course of study described below is required for all students completing a bachelor's degree or a first professional degree from the University. Students must complete three Pacific Seminars and a breadth program that ranges from six to nine courses, depending on the academic unit. Students must also satisfy the fundamental skills requirements in writing, reading, and quantitative analysis.

*"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

## The Pacific Seminars

The Pacific Seminars are the distinctive feature of Pacific's general education program and have received national attention by the Association of American Colleges and Universities (AAC&U). They focus on the question, "What is a Good Society"? The seminars are taught by faculty from all academic divisions (humanities, social sciences, and natural sciences) and academic units. Pacific Seminars 1 and 2 are taken in sequence during the first year, and Pacific is one of only a few universities in the nation that has a full first-year general education experience. Pacific Seminar 3 is taken in the senior year and serves as a culminating general education experience.

### *Pacific Seminar 1: What is a Good Society? (4 Units)*

During the first semester of the freshman year, all students must take **Pacific Seminar 1: What is a Good Society?** The course is a broad introduction to the fundamental issues of a good society, such as the purposes of education, the role of the family, the nature of work and the economy, the purposes of law and government, the rights and responsibilities of the citizen, and the place of humans in the natural world. Pacific Seminar 1 is a shared intellectual experience since there is a common course syllabus and a common reader. Students meet in small sections to examine and expand their beliefs about a good society through the process of critical thinking, which is promoted by careful reading, intensive writing, and class discussion.

### *Pacific Seminar 2: Topical Seminars (4 Units)*

In the second semester of the freshman year, all students must take a **Pacific 2 Topical Seminar**. Whereas Pacific Seminar I introduces students generally to issues of a good society, the Pacific 2 Topical Seminars focus in more depth on a particular issue or issues from Pacific Seminar 1. Some sample seminars are "Pseudo, Voodoo and Junk Science," "Crime, Responsibility, Punishment," "Divided By Faith," "Mass Media and Popular Culture," "The Good City," "Shaping our Energy Future," and "The Value of Truth." The seminars are offered from virtually every department and academic unit on campus and are some of the most innovative courses at Pacific. Students meet in small sections to examine and expand their beliefs about a good society through the process of critical thinking, which is promoted by careful reading, intensive writing, and class discussion. All sections require informal and formal writing assignments—including a scholarly research project—and an oral presentation.

### *Pacific Seminar 3: Family, Work, Citizenship (3 Units)*

In their senior year, students take **Pacific Seminar 3: The Ethics of Family, Work, and Citizenship**. *Students can take this course only if they have completed 92 or more units.* This course is a culminating general education experience. Students learn about ethical concepts and theories in order to identify their individual ethical values and ethical paradigm and to analyze ethical issues within the contexts of family/friends, work, and political life. Narrative is used—in particular, film and biographies—to illustrate ethical issues for discussion. Students will write an ethical and intellectual autobiography in order to reflect back on their ethical and intellectual development at the university and to look forward to their future roles as family members and friends, as part of the workforce, and as citizens and members of communities ranging from the local to the national and global.

**Pacific Seminar Exemption Policy:** All students must take Pacific Seminar 3; however, students who enter the University having completed 28 or more units of transferable, classroom college level work that appear on a college transcript are exempt from taking Pacific Seminars 1 and 2. Freshman students admitted to the honors program are required to complete Pacific Seminars 1 and 2 regardless of the number of college units completed.

*Students are not allowed to drop Pacific Seminar 1 or 2 for any reason, even if they plan to transfer to another college or university. Freshmen entering in the spring semester begin the Pacific Seminar sequence the following fall. Students who would benefit from special attention to reading and writing skills are deferred from the Pacific Seminar sequence until their sophomore year.*

*Students must pass Pacific Seminar 1 ("D" or better) in order to take Pacific Seminar 2. Students who have an incomplete (1 grade) in Pacific Seminar 1 must clear the "I" before the first Friday of the Spring semester in order to take Pacific Seminar 2. Students can repeat a different Pacific Seminar 2 course.*

*Students who fail Pacific Seminar 1 or 2 are subject to academic probation and must repeat them in the next academic year. If students do not pass Pacific Seminars 1 or 2 in their first four semesters, they are subject to disqualification and must complete an additional course in the general education breadth program as determined by the student's general education unit coordinator.*

*The Pacific Seminars cannot be repeated if students earn a "D" or higher.*

*The Pacific Seminars must be taken for a letter grade.*

*All transfer and post baccalaureate students must complete Pacific Seminar 3.*

## The Breadth Program 6-9 Courses (3 or 4 Units Each)

The general education program beyond the Pacific Seminars provides students with consider-

able choice but within a framework that ensures they gain essential knowledge and skills in order to meet the personal and professional challenges after graduation. With the help of their advisers, students choose courses in the breadth program that interest them or that relate to other courses in their planned course of study.

The Breadth Program requirements vary from School or College (see the table following the listing of the categories and sub-categories). All students must complete at least six courses, two from each of the three main categories listed below (I, II, and III); however, only one class can come from each subcategory or area (A, B, and C), and all students must complete a course in area III-A and in area III-B.

For those enrolled in the College of the Pacific, students can satisfy subcategory IIIC by taking a second course in subcategory IIIA.

Students can take a maximum of 8 units from a single department (as defined by subject code, e.g., HIST or ENGL or MPER) to satisfy the breadth requirement. Courses in the breadth program component of the general education program will normally have a value of three or four units. *There is an important exception in category II-C Visual and Performing Arts. In this area students may take three 1-unit courses in applied music or dance in the same discipline to meet the requirement.*

International students who have completed the last two years of high school in a language other than English have satisfied area IIA.

The structure of the breadth program is as follows:

### I. Social and Behavioral Sciences

- I.A. Individual and Interpersonal Behavior
- I.B. U.S. Studies
- I.C. Global Studies

### II. Arts and Humanities

- II.A. Language and Literature
- II.B. Worldviews and Ethics
- II.C. Visual and Performing Arts

### III. Natural Sciences and Mathematics

- III.A. Natural Sciences
- III.B. Mathematics and Formal Logic
- III.C. Science, Technology and Society

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

The breadth program requirements for each School or College are listed in the table below. Contact the General Education Unit Coordinator in your unit for more information.

Category/Sub-category	BUSI	CONS	COP	EDU	ENGR	COMP	PH	SIS
I.A. Individual and Interpersonal Behavior	X	Two of three	X	Two of three	Two of three	Two OR three	X	X
I.B U.S. Studies	X	areas	X	areas	areas	areas	X	X
I.C Global Studies			X				X	
II.A Language and Literature	X	Two of three areas	X	Two of three areas	Two of three areas	Two OR three areas	X	X
II.B Worldviews and Ethics	X		X				X	
II.C Visual and Performing Arts	X		X				X	
III.A Laboratory Sciences	X	X	X	X	X	X	X	X
III.B Mathematics & Formal Logic	X	X	X	X	X	X	X	X
III.C Science, Technology, Society			X	X			X	

Beginning Fall 2008, students can satisfy GE requirements with a 4 or higher for Advanced Placement and a 5 or higher for Higher Level International Baccalaureate. A maximum of 28 units total from Advanced Placement, International Baccalaureate DANTES and/or CLEP test results may be applied toward a Pacific degree, including General Education breadth areas.

### 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 new student orientation or shortly thereafter.

*Students can meet these fundamental skills by taking course work to improve their skills as follows:*

- To show competency in quantitative analysis (math), students must successfully complete MATH 005 (Intermediate Algebra) or MATH 035 (Statistics) with a grade of C- or better, or complete an equivalent course from another accredited college or university with a grade of C or better during the first full year of study including summer sessions.
- To show competency in writing, students must successfully complete WRIT 021 (Writing for College) with a grade of C- or better or complete an equivalent course from another accredited college or university with a grade of C or better during the first full year of study including summer sessions.
- To show competency in reading, students must successfully complete READ 031 (Reading for College) with a grade of C- or better during the first full year of study including summer sessions.

- Successful completion of course work in quantitative analysis, writing and reading at Pacific requires a grade of C- or better. Course work taken in quantitative analysis or writing at another college or university requires a grade of C or better and must be approved in advance via a Transfer Course Appraisal form.
- Failure to make progress toward fulfilling Pacific's basic skills requirements during the first year of study will be grounds for being placed on academic probation. Failure to satisfy the basic skills requirements (as summarized in the three points above) by the end of four semesters of full-time study at the University will be grounds for academic disqualification.
- Students with documented disabilities that directly affect their mastery of these skills or students concurrently enrolled in an approved English-as-a-Second-Language (ESL) Program of instruction in reading and writing may seek a written extension 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

Transfer students from California who have completed the IGETC or CSU Breadth General Education requirements at their previous institutions prior to enrolling at Pacific will satisfy Pacific's General Education program but must complete Pacific Seminar 3.

#### Fundamental Skills Requirements

Fundamental skills requirements for transfer students include reading, writing and quantitative analysis (math). All transfer students take the fundamental skills reading assessment upon entry to the University, regardless of coursework taken in reading while at their previous institution. Transfer students are exempted from taking

the skills tests in writing and math if they completed approved transferable courses in these areas with a grade of C or better. Placement tests taken by transfer students at their previous institution will not replace Pacific's assessments.

#### Breadth Program Requirements

Transfer students from California who have completed the IGETC or CSU Breadth General Education requirements at their previous institutions prior to enrolling at Pacific will satisfy Pacific's General Education program but must complete Pacific Seminar 3.

Transfer students who have not completed IGETC or CSU Breadth General Education requirements will have their transcripts for breadth program requirements examined upon entry to the University. General education courses taken by these students at their previous institutions which are of the same quality and equivalency as courses offered at Pacific will be applied for breadth program requirements at Pacific.

#### Pacific Seminar Requirements

Transfer students must only complete Pacific Seminar 3.

Individual schools and colleges may impose general education graduation requirements, including skills requirements, beyond the University's general education program.

Transfer students who entered the University prior to the 1993-94 academic year and who desire an evaluation of their records in regard to general education should contact the General Education Unit Coordinator of their school and college.

### Requirements for Post Baccalaureate Students

Students who completed a Bachelor's degree elsewhere and who are seeking an additional Bachelor's degree at Pacific must only complete Pacific Seminar 3 to satisfy the GE requirements.

## Breadth Course List for General Education

The courses listed below are approved as counting toward the breadth program requirement in each of the nine areas of the program. Students satisfying II-C with one-unit dance or applied music courses must complete three courses in the same discipline. Although not always 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 using the search for class by attribute function on Inside Pacific.

### *I-A. Individual and Interpersonal Behavior*

COMM 043	Introduction to Interpersonal Communication
ECON 053	Introductory Microeconomics
EDUC 100	Introduction to Language
ENGL 122	Literature and Psychology
GEND 011	Introduction to Gender Studies
PSYC 029	Child Development
PSYC 031	Introduction to Psychology
PSYC 066	Human Sexuality
PSYC 110	Psychoactive Drugs and Behavior
PSYC 111	Abnormal Psychology
PSYC 131	Adolescence and Young Adulthood
PSYC 133	Adulthood and Aging
SLPA 051	Introduction to Speech-Language Pathology
SOCI 031	Deviant Behavior
SOCI 133	Criminology

### *I-B. U.S. Studies*

BUSI 053	Legal and Ethical Environment of Business
COMM 031	Media and Society
ECON 051	Economic Principles and Problems
ECON 055	Introductory Macroeconomics
ENGL 051	American Literature Before 1865
ENGL 053	American Literature After 1865
ENGL 161	Topics in American Ethnic Literature
ETHN 011	Introduction to Ethnic Studies
HIST 020	US History I
HIST 021	US History II
HIST 133	Women in US History
HIST 134	African-American History
POLS 041	US Government and Politics
POLS 134	American Political Thought
RELI 070	Religion and American Culture
SOCI 021	Culture and Society

SOCI 051	Introduction to Sociology
SOCI 093	Social Problems
SPTS 141	Sport in America

### *I-C. Global Studies*

ANTH 053	Cultural Anthropology
CHIN 023	Intermd. Chinese, 3rd Sem
CHIN 025	Intermd. Chinese, 4th Sem
CLAS 051	Classical Mythology
CLAS 100	History of Ancient Greece
CLAS 102	History of Ancient Rome
COMM 143	Intercultural Communication
ENGL 063	Masterpieces of World Literature
FREN 023	Intermd. French, 3rd Sem.
FREN 025	Intermd. French, 4th Sem.
FREN 122	La Francophonie
GERM 023	Intermd. German, 3rd Sem.
GERM 025	Intermd. German, 4th Sem.
HIST 030	East Asian Civilization I
HIST 031	East Asian Civilization II
HIST 040	Colonialism in Latin America
HIST 041	The Problem With Latin America
HIST 061	Global History of Food
HIST 105	History of Ancient Greece
HIST 106	History of Ancient Rome
HIST 111	Europe in Turmoil, 1900-1945
HIST 113	Europe Since 1945
HIST 120	Native American History
HIST 132	American Immigration
HIST 141	Pre-Modern China to 1840
HIST 151	People's History of Mexico
INTL 123	Literature Across Cultures
JAPN 023	Intermd. Japanese, 3rd Sem
JAPN 025	Intermd. Japanese, 4th Sem
MHIS 006	Music of the World's People
POLS 011	Introduction to Political Science
POLS 051	International Politics
POLS 148	Politics of the Middle East
POLS 152	Politics of Asia
RELI 035	Judaism
RELI 102	History of Ancient Egypt and the Near East
RELI 124	Ancient Judaism
RELI 130	The Christian Tradition
RELI 134	World Religions
RELI 135	Asian Religious Traditions
RUSS 023	Intermd. Russian, 3rd Sem
RUSS 025	Intermd. Russian, 4th Sem
RUSS 073	Russian Culture and Civilization
SOCI 108	Food, Culture and Society
SPAN 023	Intermd. Spanish, 3rd Sem
SPAN 025	Intermd. Spanish, 4th Sem
XSPG 023	Intermd. Spanish, 3rd Sem in Guatemala
XSPG 025	Intermd. Spanish, 3rd Sem in Guatemala

### *II-A. Language and Literature*

ARAB 193A	First-Year Arabic, 1st Sem
ARAB 193B	First-Year Arabic, 2nd Sem
CHIN 011A	First-Year Chinese, 1st Sem
CHIN 011B	First-Year Chinese, 2nd Sem
CLAS 110	Greek Literature in Translation
CLAS 112	Roman Literature in Translation
COMM 027	Public Speaking
CURR 123	Intro to Syntax and Semantics
ENGL 025	English 25
ENGL 041	British Literature Before 1800
ENGL 043	British Literature After 1800
ENGL 131	Shakespeare
FREN 011A	First-Year French, 1st Sem
FREN 011B	First-Year French, 2nd Sem
FREN 051	French Literature in English
GERM 011A	First-Year German, 1st Sem
GERM 011B	First-Year German, 2nd Sem
GERM 128	German Poetry
GREK 011A	First-Year Ancient Greek, 1st Sem
GREK 011B	First-Year Ancient Greek, 2nd Sem
HBRW 011A	First-Year Classical Hebrew, 1st Sem
HBRW 011B	First-Year Classical Hebrew, 2nd Sem
JAPN 011A	First-Year Japanese, 1st Sem
JAPN 011B	First-Year Japanese, 2nd Sem
LATN 011A	First-Year Latin, 1st Sem
LATN 011B	First-Year Latin, 2nd Sem
RUSS 011A	First-Year Russian, 1st Sem
RUSS 011B	First-Year Russian, 2nd Sem
SLPA 053	Sign Language I
SPAN 011B	First-Year Spanish, 2nd Sem
SPAN 103	Introduccion a la literatura hispanica
SPAN 133	Don Quixote in Translation
THEA 113	Theatre Heritage I
THEA 115	Theatre Heritage II
XITL 011A	1st Year Italian, 1st Semester
XITL 011B	1st Year Italian, 2nd Semester
XSPG 011B	1st Year Spanish, 2nd Semester

### *II-B. Worldviews and Ethics*

CLAS 120	Sexuality in Greek Society
CLAS 122	Sexuality in Roman Society
ENGL 141	Topics in British Literature pre 1800
ENGR 030	Engineering Ethics and Society
HIST 010	Western Civilization I
HIST 011	Western Civilization II
HIST 050	World History I
HIST 051	World History II
HIST 052	John Muir's World: Origins of the Conservation Movement
HIST 060	History of Medicine
HIST 062	History of Warfare
HIST 100	Renaissance and Reformation
HIST 135	Women in Time and Place
INTL 081	Perspectives on World History

PHIL 011	Introduction to Philosophy
PHIL 021	Moral Problems
PHIL 025	The Meaning of Life
PHIL 027	Fundamentals of Ethics
PHIL 035	Environmental Ethics
PHIL 047	Philosopher in Depth
PHIL 053	Ancient and Medieval Philosophy
PHIL 055	History of Modern Philosophy
PHIL 124	Philosophy of Religion
PHIL 145	Biomedical Ethics
POLS 130	Ancient to Medieval Political Theory
POLS 132	Modern to Contemporary Political Theory
RELI 023	Hebrew Bible
RELI 025	New Testament and Christian Origins
RELI 027	Portraits of Jesus
RELI 030	Western Religious Traditions
RELI 034	Introduction to Religion
RELI 043	Social Ethics
RELI 044	Sex, Sin and Salvation
RELI 142	Business Ethics
RELI 145	Biomedical Ethics

**II-C. Visual and Performing Arts**

ARTH 007	Survey of World Art to 1400
ARTH 009	Survey of World Art After 1400
ARTH 101	Introduction to Graphic Design
ARTH 108	Renaissance Art and Architecture
ARTH 114	20th Century Art and Film
ARTH 116	Contemporary World Art 1945-Present
ARTH 118	Art in the US 1865-1945
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 003	Visual Arts Exploration
ARTS 005	Drawing
ARTS 007	2-D Design & Color
ARTS 009	3-D Design
ARTS 035	Ceramics
ARTS 037	Sculpture
ARTS 045	Digital Photography
ARTS 047	Digital Media Survey
ASIA 120	Asian Cinemas
CLAS 130	Greek Art and Architecture
CLAS 132	Roman Art and Architecture
CURR 145	Visual Art in Education
ENGL 031	Aesthetics of Film

ENGL 121	Major Filmmakers
ENGL 123	Film. Literature and the Arts
FREN 120	Le Cinema Francais/French Cinema in English
MCOM 002	Fundamental Structures
MHIS 005	Music Appreciation
MHIS 008	History of Jazz
MPER 066	Jazz Ensemble (Note: 1 unit course)
MPER 070	University Symphony Orchestra (Note: 1 unit)
MPER 072	Symphonic Wind Ensemble (Note: 1 unit)
MPER 073	Concert Band (Note: 1 unit)
MPER 082	Oriana Choir (Note: 1 unit)
MPER 083	University Chorus (Note: 1 unit)
MPER 084	Pacific Singers (Note: 1 unit)
RELI 171	Religion and Cinema
RUSS 120	Contemporary Russian Film
SPAN 114	Hispanic Film
THEA 011	Introduction to Theatre
THEA 051A	Ballet (Note: 1 unit course)
THEA 051B	Jazz (Note: 1 unit course)
THEA 051C	Modern Dance (Note: 1 unit course)
THEA 051D	Tap (Note: 1 unit course)
THEA 071	Beginning Acting
THEA 075	Expressive Movement
THEA 130	Puppetry & Mask Making

**III-A. Natural Sciences**

BIOL 011	Human Anatomy and Physiology
BIOL 041	Introduction to Biology
BIOL 051	Principles of Biology
BIOL 061	Principles of Biology
BIOL 074	Biology of Insects
BIOL 079	California Flora
CHEM 023	Elements of Chemistry
CHEM 025	General Chemistry
CHEM 027	General Chemistry
GEOS 051	Dynamic Planet
GEOS 053	Earth and Life Through Time
GEOS 057	Earth Systems Science
GEOS 061	Geology of California
GEOS 065	Regional Geology
PHYS 017	Concepts of Physics
PHYS 023	General Physics I
PHYS 025	General Physics II
PHYS 039	Physics of Music
PHYS 041	Astronomy
PHYS 053	Principles of Physics I
PHYS 055	Principles of Physics II

III-B. Mathematics and Formal Logic	
COMP 025	Computers and Information Processing
COMP 047	Discrete Mathematics for Computer Science
COMP 051	Intro to Computer Science
MATH 033	Elements of Calculus
MATH 035	Elementary Statistical Inference
MATH 037	Introduction to Statistics and Probability
MATH 039	Probability with Applications to Statistics
MATH 041	Pre-calculus
MATH 045	Introduction to Finite Mathematics and Calculus
MATH 051	Calculus I
MATH 053	Calculus II
MATH 055	Calculus III
MATH 072	Operation Research Models
PHIL 037	Introduction to Logic
PSYC 103	Statistical Inference in Behavioral Sciences

**III-C. Science, Technology and Society**

ANTH 112	Physical Anthropology
BIOL 035	Environment: Concepts and Issues
COMP 041	Great Ideas in Computing
ENGL 128	Science and Literature
GEOS 041	Environmental Geology
GEOS 043	Environmental Science: Informed Citizens
GEOS 045	Soil, Water and War
HIST 063	History of Science and Technology
PHIL 061	Philosophy of Science
RELI 146	Technology, Ethics and Religion
SPTS 041	Heart, Exercise and Nutrition
SPTS 045	Science of Nutrition

# college of the pacific

Phone: (209) 946-2141

Location: Wendell Phillips Center 110, 111

Website: <http://www.pacific.edu/college/>

Tom Krise, Dean

Edie Sparks, Senior Associate Dean

Lou Matz, Associate Dean for General Education

Cynthia Dobbs, Assistant Dean

## Departments and Programs

Biological Sciences

Chemistry

Communication

Earth & Environmental Sciences

Economics

English

Ethnic Studies

Film Studies

Gender Studies

History

Jacoby Center

Mathematics

Modern Language and Literature

Philosophy

Physics

Political Science

Psychology

Religious and Classical Studies

Sociology

Sport Sciences

Theatre Arts

Visual Arts

Cross-Disciplinary Programs

*The home of the arts and sciences at the University of the Pacific, featuring over 60 majors and minors and opportunities for interdisciplinary and experiential study.*

## Mission

The College of the Pacific's mission is to prepare students to lead successful lives as engaged members of their communities, both professional and civic, through discovery-based learning that teaches them to think critically and work collaboratively.

For students in College of the Pacific, the arts and sciences or "liberal arts" college of the university, liberal learning is not a mere addition to professional preparation, but rather its foundation. We believe that grounding in the arts, humanities, social and natural sciences informs and liberates students' understanding of difficult issues and transforms them to become, first and foremost, self-reflective, knowledgeable, and ethical persons. Subsequently they are able to command a broad perspective in their professional careers, committed to the welfare of their communities and well prepared to assume the responsibilities of leadership.

For both arts and sciences students pursuing degrees and pre-professional students completing coursework in the College, we provide a personalized learning environment that supports student success through broad access to our faculty. Students in the College of the Pacific study with nationally and internationally recognized scholars who are committed undergraduate teachers. Learning takes place both in the class and outside it as students and faculty interact in directed and collaborative inquiry. Active learning strategies in the classroom, extensive experiential learning opportunities alongside faculty researchers/practitioners, and one-on-one faculty advising together give students exceptional opportunities to benefit from faculty expertise as teachers and scholars.

The College challenges students to engage in exploration, inquiry, and discovery: exploration of the world around them and of themselves and inquiry into philosophical, social, and natural phenomena that leads to different types of meaningful discovery.

With the assistance of faculty advisers, students in the College plan their academic programs to include general education courses, courses required by the majors and minors they have selected, and courses that satisfy each student's individual interests.

## General Education Requirements

In addition to participation in three Pacific 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 42 units. Students must take three courses listed under Category I- Social and Behavioral Sciences (one in each subcategory), and three courses listed under Category II- Arts and Humanities (one in each subcategory). In Category III- Natural Sciences and Mathematics, students have the option of taking one course from each of the three areas, or two courses from area A- Natural Sciences, and one course from area B- Mathematics and Formal Logic.

Restrictions:

1. No more than eight units from a single department as defined by subject code (e.g., "HIST", "MPER", etc.) may be applied to meet the requirements of the general education program.
2. Units earned by correspondence, extension, or independent study may not count in general education except with the permission of the Assistant Dean of the College. Coursework in directed research, field experience or similar activities such as internships, practicums, and cooperative education cannot be used to meet general education requirements.
3. Beginning Fall 2008, Pacific accepts a 4 or higher for Advanced Placement and a 5 or higher for Higher Level International Baccalaureate and a maximum of 28 units total from Advanced Placement, International Baccalaureate DANTES and/or CLEP test results may be applied toward a Pacific degree including General Education and major requirements.

Further, 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 of the 12 course/42 unit minimum requirement. Students pursuing a degree in another school of the University may elect to complete a second major in the College of the Pacific without fulfilling the specific general education requirements of the College.

### *Phi Beta Kappa*

The College of the Pacific houses a chapter of *Phi Beta Kappa*, the nation's oldest academic honor society. Only ten per cent of American colleges and universities have *PBK* chapters, and each year each chapter chooses no more than the top ten per cent of its graduates for the honor of membership. *Phi Beta Kappa* honors students who have distinguished themselves in their studies of the liberal arts and sciences. To be eligible for invitation, a student must demonstrate breadth in the liberal arts and sciences, including, specifically, at least one course in literature, intermediate competence in a second language (equivalent to two years of college language study), and competence in mathematics equal to pre-calculus.

## College of the Pacific Language Requirement

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 (BA) degree. Students who transfer to University of the Pacific from another college or university with sophomore standing or above, or who seek a Bachelor of Science (BS) degree or a Bachelor of Fine Arts (BFA) degree in the college, are exempt from this requirement. Students who have completed their secondary education and received a diploma in a language other than English may be exempt from the language requirement with the approval of the assistant dean of the College of the Pacific.

The College language 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 at Pacific (or a C or better in transfer) must be obtained in the second semester 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.

Because students interested in qualifying for Phi Beta Kappa, the national honors society for liberal arts and science students, must demonstrate at least intermediate proficiency in another language, equivalent to two years of college-level coursework,

all BS, BFA, and BA students who believe they may qualify for this academic distinction are urged to pursue the study of a language other than English as part of their coursework at Pacific.

While the University makes every effort to meet student interests and needs, it does not guarantee that every student will be able to fulfill this requirement by studying his or her first choice of a language. The University also does not guarantee that students studying languages other than those offered through the Pacific Department of Modern Language and Literature will have access to the courses needed to complete the requirement. In some cases, a student taking language courses not offered by the Department of Modern Language and Literature may also need to pass an approved competency examination in addition to his or her course work. As with all subjects, students must get prior approval before taking course work outside of the University that they intend to use toward completion of their Pacific degree.

## 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 Spanish, history or mathematics. The College of the Pacific also has cross-disciplinary majors combining two areas of study, such as chemistry/biology and multi-disciplinary majors which combine the resources of several departments, such as liberal studies. The Self-designed major and Thematic Minor offered through the College allow students to create their own program of study by combining the course offerings of any variety of departments and programs on campus. Most of these majors can be combined with pre-professional programs such as our Pacific Legal Scholars Program which prepares students for law school. In addition, students of The College of the Pacific may take advantage of the courses and programs offered by the other schools on the University campus. In fact, a student may elect to pursue two majors in different schools and may take any undergraduate course in the University provided that the course prerequisites are met. Students must maintain a minimum GPA of 2.0 in a major program and complete a minimum 16 units in residence at Pacific.

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 discipline or interdisciplinary area. Minors require 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. 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.

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

### *Declaring a Major or Minor*

To declare or add a major or minor, students must complete a Program Change form, available on the Office of the Registrar's web site and submit it to the Academic Affairs Office of The College (WPC 111) with all required faculty signatures. Students must have a faculty advisor for each major and minor; advisors may be assigned by the department chair or program director offering the program or a student may request a particular faculty member in the department and ask him or her directly to serve as his/her major or minor adviser.

Students are encouraged to officially declare their majors and minors as soon as they decide to pursue them. This helps ensure that a student's progress to degree is being tracked accurately and that he/she is being advised appropriately. For students who enter The College as "exploratory" or undecided about their major, it is important to declare a major program of study by the end of their sophomore year or fourth semester. Some major programs, especially in the natural sciences, that have a series of pre-requisite courses, require that a student begin pursuing the necessary coursework early. Students interested in the natural sciences who are undecided about a specific major should declare "Exploratory BS" to indicate that they intend to declare a natural science major. This will ensure that they are advised appropriately and permit them to enroll in foundation science courses right away.

Students must meet with all of their faculty advisers for both majors and minors each advising period to ensure that the courses they enroll in are appropriate for their degree objectives.

## Special Programs

### Education Abroad

College of the Pacific students have the opportunity to study, intern or volunteer abroad during their sophomore, junior or senior years with more than 100 programs in more than 50 different countries. The duration of education abroad programs varies from one summer, one semester, or one year. The countries include: Austria, Belgium, 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, South Korea, the Philippines and Thailand in Asia; Australia, Fiji and New Zealand in the South Pacific; Cameroon, Egypt, Ghana, Kenya, Morocco, Nigeria, Rwanda, 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 education abroad opportunities, contact the Office of International Programs and Services in the Bechtel International Center.

### The Washington Semester Program

The Washington Semester program is a joint project of Pacific and American University in Washington, D.C. The program includes an internship in a U.S. government agency, lobbying organization, political party, media organization, foreign embassy, or non-profit agency. Students select one of 13 areas of concentration such as American politics, economic policy, international business and trade, foreign policy, or journalism, among others. Some concentrations include an overseas travel segment. Students participate in a semester-long seminar including discussions with public officials, political figures, lobbyists, think-tank scholars, and the media. They also undertake a research project or take an elective course at American University. Students normally earn 16 academic credits which are easily transferred to Pacific. By living on the AU campus, students have full access to campus life including dining halls, athletic facilities, and libraries. For application information, contact Dr. George Condon, Pacific's representative for Washington Semester, Room 128 Wendell Phillips Center, phone (209) 946-7405, email: gcondon@pacific.edu

### The Sacramento Experience Internship Program

The Sacramento Experience program has two components. One is an internship in either a state agency or a lobbying organization for two days per week. Students have staff assignments

including legislative research, monitoring and reporting on public hearings, helping arrange high level meetings, and taking part in legislative strategy sessions. Satisfactory completion generates four units of academic credit. In addition, students take part in policy seminars featuring officials of state government and senior members of the lobbying and media communities in Sacramento. Two units of academic credit are earned through participation in the seminars. Students have interned in the Office of the Governor, legislators' offices, the League of Women Voters, the Planning and Conservation league, the Council of State Governments, and the League of California Cities, among others. All undergraduates are eligible to apply. For information and applications, contact Dr. George Condon, Director of the Sacramento Experience program, Room 128 Wendell Phillips Center, phone (209) 946-7405, email: gcondon@pacific.edu.

### Student Government in the College

Students are invited to participate in determining the academic and social policies of the College. They can become voting members of virtually all College standing committees where important questions of policy are discussed.

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 and the appointment of representatives to College and University committees.

### Degrees Offered

Bachelor of Arts  
Bachelor of Science  
Bachelor of Fine Arts

### Majors Offered

Applied Mathematics (BS)  
Art (BA)  
Asian Language and Studies Major (BA)  
Athletic Training (BS)  
Biochemistry (BS)  
Biological Sciences (BA, BS, MS)

Chemistry (BA, BS) (MS, PhD)  
Pharmaceutical/Chemical Sciences  
Chemistry-Biology (BS)  
Chemistry Major with a Concentration in Medicinal Chemistry (BS)  
Communication (BA, MA)  
Economics (BA, BS)  
English (BA)  
Environmental Studies (BA)  
Environmental Science (BS)  
French (BA)  
Geology (BA, BS)  
Graphic Design (BFA)  
History (BA)  
Liberal Studies (BA)  
Mathematics (BA, BS)  
Philosophy (BA)  
Physics (BA, BS)  
Political Science (BA)  
Psychology (BA, MA)  
Religious Studies (BA)  
Self-Designed (BA))  
Social Sciences (BA)  
Sociology (BA)  
Spanish (BA)  
Sport Sciences (BA, MA)  
Studio Art (BFA)  
Theatre Arts (BA)

### Minors Offered

Applied Mathematics  
Art History  
Biological Sciences  
Chemistry  
Child Psychology  
Chinese Studies  
Civic Leadership  
Classical Studies  
Communications  
Economics  
English  
Environmental Studies  
Ethnic Studies  
Film Studies  
French  
Gender Studies  
Geology  
Graphic Design  
History  
Japanese  
Lifespan Development  
Mathematics  
Philosophy  
Physics  
Political Science

Pre-Law  
 Psychology  
 Religious Studies  
 Russian Area Studies  
 Sociology  
 Spanish  
 Sport Sciences  
 Statistics  
 Studio Art  
 Theatre Arts  
 Thematic

## General Academic Regulations

### Requirements for Graduation

1. 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 at University of the Pacific and in all courses taken as part of the major program. The Bachelor of Fine Arts degree requires 136 units.
2. Students must complete an approved major program of study within the College to fulfill the requirements for a baccalaureate degree. For all courses in the major (including cognate courses) students must achieve a grade point average of 2.0 or better. Courses for the major must be taken for letter grades with exceptions made for internships, fieldwork, and practicums.
3. In order to receive a BA or BS degree in The College, students must complete a minimum of 64 units outside the discipline of their first major, regardless of the department offering the course or courses. In order to receive a BFA degree, students must complete a minimum of 53 units outside the discipline of their first major, regardless of the department offering the course or courses.
4. Students must complete the 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.
5. Students are encouraged to consult with their advisers or the College Academic Affairs Office if they have any questions or problems regarding General Education or their majors.

### Special Additional Requirements for Transfer Students

1. All transfer students must fulfill the requirements of the College of the Pacific general education program including PACS 003 in their senior year. Only courses with a minimum grade of C and three or more semester units, or four or more quarter units, of credit will be accepted in the program. The Associate Dean and Director of General Education, in conjunction with the Articulation Specialist and the Assistant Dean of the College, determines which courses completed at other institutions will satisfy General Education requirements.
2. Based on university-wide articulation agreements with other colleges and universities, each academic program adviser evaluates transfer courses to determine if they satisfy any of the major or minor course requirements. Some departments limit the number of courses they will accept for the major or minor from other institutions.

### Policies and Grading in the College of the Pacific

1. With few exceptions, courses taken in the major must be on a letter grade basis. Students are permitted to take up to three courses outside their major 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.
2. In cooperation with the Senior Associate 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. Courses numbered 087/187 (Internship), 089/189 (Practicum) and 092/192 (Cooperative Education) must be graded on a pass/no credit basis only. Activity courses (ACTY) in the Department of Sport Sciences are deemed Physical

Education Activity and Intercollegiate Athletics classes respectively, and are graded on a pass/no credit basis only. Fieldwork courses are normally graded on a pass/no credit basis also.

### Course Numbering Policies and Unit Restrictions

1. Courses numbered 092/192 indicate cooperative education study and may be offered by departments or on a college-wide basis without specific departmental designation. Courses carrying the 092/192 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 092/192 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 092, in the second, 192. Students may not exceed the 20-unit limitation stipulated in #5 below.
2. Courses numbered 087/187 and 089/189 indicate internship and practicum study when included in the course number of departments in the College of the Pacific. Courses numbered 087/187 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 089/189 designate work experiences conducted usually on campus, under the direct supervision of a College of the Pacific faculty member. Courses numbered 087/187 and 089/189 may be taken for two, three or four units of credit. If a department's 087/187 and/or 089/189 courses carry alphabetic subscripts designating different categories of study experiences, then the 087/187 or 089/189 course may be repeated for credit as long as the student does not repeat a category (subscript) or exceed the 20-unit limitation (see "5" below). In some cases, the department may indicate special restrictions.

3. Activity courses (ACTY) and THEA 005 in the Theatre Arts Department are considered Activity courses. Courses numbered ACTY 001-049 are General Activity courses and courses numbered ACTY 050-099 are Intercollegiate Sports courses. Students will be able to apply no more than a total of eight units in Activity and Intercollegiate Sports courses toward graduation. A one-unit General Activity class can be repeated only once. No two-unit General Activity class may be repeated for credit. All Activity and Intercollegiate Sports classes will be evaluated on the pass/no credit basis.
4. 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. An exception to this policy allows students to receive up to 8 extension units in a single term, and up to 8 additional extension units to count towards graduation, only upon completion of the joint MLL/CPCE summer courses coded XSPG (Guatemala) or XITA (Italy). Completion of the Italy program will meet the one-year COP BA language requirement.
5. No more than 20 units of Cooperative Education (092/192), Internship (087/187), Practicum (089/189), General Activity (ACTY 002-049), Theatre Activity (THEA 005), Dance Team (ACTY 001) and Intercollegiate Sports (ACTY 050-099) courses in any combination may be applied to the units required for a baccalaureate degree. See Communications Department for further restrictions on Communication internships.
6. Courses numbered 201 to 299 carry credits for graduate degrees and courses numbered above 300 are exclusively for students admitted to a doctoral program.
7. 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 093 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.
8. 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. In some departments, courses numbered 191 or 197 may be offered for a minimum of two units. No independent study or undergraduate research course may exceed four units.

## Biological Sciences

Phone: (209) 946-2181

Location: Biology Building, South Campus

Website: [www.pacific.edu/college/biology](http://www.pacific.edu/college/biology)

Gregg Jongeward, Chair

Craig Vierra, Assistant Chair

### Degrees Offered

Bachelor of Arts

Bachelor of Science

Master of Science (see Graduate Catalog for information)

### Majors Offered

Biological Sciences (BA, BS, MS)

Biological Sciences for Teaching Credential Candidates (BS)

Chemistry-Biology (BS)

### Minors Offered

Biological Sciences

### 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.

### Bachelor of Arts Major in Biological Sciences

In order to earn the bachelor of arts degree with a major in biological sciences, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

#### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

IIA. Language and Literature

IIB. Worldviews and Ethics

IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics \*

IIIA. Natural Sciences

IIIB. Mathematics and Formal Logic

IIIC. Science, Technology, and Society

or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program. 3) \* Fulfilled by courses required in the major

#### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

#### III. Fundamental Skills

Demonstrate competence in:

Reading

Writing

Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

#### IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

#### V. Major Requirements

Minimum 66 units, including:

BIOL 051	Principles of Biology	4
BIOL 061	Principles of Biology	4
BIOL 101	Genetics	4
BIOL 179	Evolution	4
	One of the following courses:	4

	BIOL 175	Ecology	
	BIOL 176	Ecology and Conservation Biology	
BIOL	Electives (3 additional courses above BIOL 061 excluding 089, 093, and 191. 2 courses must include a laboratory component.)		12
	CHEM 025	General Chemistry	5
	CHEM 027	General Chemistry	5
	One of the following groups:		10
	a.	PHYS 023	General Physics I
		PHYS 025	General Physics II
	b.	PHYS 053	Principles of Physics I
		PHYS 055	Principles of Physics II
MATH	Electives (2 courses from MATH 033 or above.)		8

**Note:** 1) One course in statistics is recommended. 2) Credit will not be given for both MATH 033 and MATH 051. 3) MATH 051 is a prerequisite for MATH 053. 4) Physics 023 and 053 have specific math prerequisites which must be met

Electives 2 additional courses in Biological Sciences, Chemistry, or Geosciences 8

**Note:** 1) One of these electives must include a lab. 2) Biology electives above BIOL 061 excluding 089, 093 and 191. 3) Chemistry electives above CHEM 121, excluding 191 and 197. 4) GEOS 191 and 197 do not count towards these electives.

## Bachelor of Science Major in Biological Sciences

In order to earn the bachelor of science degree with a major in biological sciences, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics \*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program. 3) \* Fulfilled by courses required in the major

### II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### IV. Major Requirements

Minimum 76 units, including:

BIOL 051	Principles of Biology	4
BIOL 061	Principles of Biology	4
BIOL 101	Genetics	4

BIOL 179	Evolution	4
One of the following courses:		4
BIOL 175	Ecology	
BIOL 176	Ecology and Conservation Biology	
BIOL	Electives (5 additional courses above BIOL 061 excluding 089 and 093. 3 courses must include a laboratory component.)	

**Note:** 1) 4 units of BIOL 191 or 197 may count as electives. 2) Students will not receive credit for both BIOL 071 and BIOL 111, nor will students receive credit for both BIOL 081 and BIOL 111

CHEM 025	General Chemistry	5
CHEM 027	General Chemistry	5
CHEM 121	Organic Chemistry	5
CHEM 123	Organic Chemistry	5
One of the following groups:		10
a.	PHYS 023 General Physics I	
	PHYS 025 General Physics II	
b.	PHYS 053 Principles of Physics I	
	PHYS 055 Principles of Physics II	
MATH	Electives (2 courses from MATH 033 or above.)	8

**Note:** 1) One course in statistics is recommended. 2) Credit will not be given for both MATH 033 and MATH 051. 3) MATH 051 is a prerequisite for MATH 053. 4) Physics 023 and 053 have specific math prerequisites which must be met

## Bachelor of Science Major in Chemistry-Biology

In order to earn the bachelor of science degree with a major in chemistry-biology, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics \*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program. 3) \* Fulfilled by courses required in the major

## II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

## III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

## IV. Major Requirements

Minimum 82 minimum, including:

BIOL 051	Principles of Biology	4
BIOL 061	Principles of Biology	4
BIOL 101	Genetics	4

One of the following courses: 4

- BIOL 175 Ecology
- BIOL 179 Evolution

BIOL Electives (3 additional courses above BIOL 061, excluding BIOL 089, 093, 191, and 197) 12

CHEM 025	General Chemistry	5
CHEM 027	General Chemistry	5
CHEM 121	Organic Chemistry	5
CHEM 123	Organic Chemistry	5

One of the following courses: 4

- CHEM 161 Physical Chemistry
- CHEM 169 Elements of Physical Chemistry

CHEM Electives (2 additional courses above CHEM 123 excluding CHEM 191 and 197) 10

One of the following groups: 10

- a. PHYS 023 General Physics I
- PHYS 025 General Physics II
- b. PHYS 053 Principles of Physics I
- PHYS 055 Principles of Physics II

MATH 051 Calculus I 4

MATH 053 Calculus II 4

## Bachelor of Science Major in Biological Sciences for Teaching Credential Candidates

In order to earn the bachelor of science degree with a major biological sciences for Teaching Credential Candidates, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

### Natural Sciences and Mathematics \*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program. 3) \* Fulfilled by courses required in the major

## II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

## III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

## IV. Major Requirements

Minimum 82 units, including:

BIOL 051	Principles of Biology	4
BIOL 061	Principles of Biology	4
BIOL 101	Genetics	4
BIOL 153	Cell Biology	4
BIOL 175	Ecology	4
BIOL 179	Evolution	4
CHEM 025	General Chemistry	5
CHEM 027	General Chemistry	5
CHEM 121	Organic Chemistry	5
CHEM 123	Organic Chemistry	5
PHYS 023	General Physics I	5
PHYS 025	General Physics II	5
PHYS 041	Astronomy	4
MATH	Electives (2 courses from MATH 033 or above.)	8

One Anatomy course from the following: 4

- BIOL 071 Human Anatomy
- BIOL 162 Comparative Vertebrate Anatomy
- BIOL 165 Embryology and Development

One Physiology course from the following: 4

- BIOL 081 Human Physiology
- BIOL 234 Comparative Physiology

One Botany course from the following:	4
BIOL 079    California Flora	
BIOL 130    Plant Kingdom	
One Zoology course from the following:	4
BIOL 072    Vertebrate Biology	
BIOL 074    Biology of Insects	
BIOL 077    Marine Birds and Mammals	
BIOL 185    Comparative Animal Behavior	

*Note:* 1) One course in statistics is recommended. 2) Credit will not be given for both MATH 033 and MATH 051. 3) MATH 051 is a prerequisite for MATH 053. 4) Physics 023 and 053 have specific math prerequisites which must be met

GEOS 051    Physical Geology	4
GEOS 053    Geologic Evolution of the Earth	4

## Minor in Biological Sciences

In order to earn a minor in biological sciences, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

### Minor Requirements:

BIOL 051    Principles of Biology	4
BIOL 061    Principles of Biology	4
BIOL        Electives (3 courses above BIOL 061 excluding BIOL 089, 093, 191, and 197)	12

*Note:* 1) 3 of the 5 courses must be taken at Pacific.

## Experiential Learning Opportunities

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.

## Course Offerings

<b>BIOL 011.    Human Anatomy and Physiology</b>	<b>(4)</b>
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.	
<b>BIOL 035.    Environment: Concepts and Issues</b>	<b>(4)</b>
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.	
<b>BIOL 041.    Introduction to Biology</b>	<b>(4)</b>
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.	
<b>BIOL 051.    Principles of Biology</b>	<b>(4)</b>
A lecture and laboratory introduction to plant and animal diversity and development, and evolution. Preparation for continued studies in biological science. <i>Prerequisite:</i> passed <i>Fundamental Skills Reading requirement</i> or completion of <i>READ 031</i> .	

**BIOL 061.    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 071.    Human Anatomy** **(4)**  
A study of the structure of the organ systems of humans. Credit will not be given if a student has taken BIOL 111. *Prerequisites:* BIOL 051, 061.

**BIOL 072.    Vertebrate Biology** **(4)**  
Taxonomy, life history, ecology and evolutionary history of vertebrates. *Prerequisites:* BIOL 051, 061.

**BIOL 074.    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.

**BIOL 076.    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 051, 061.

**BIOL 077.    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 079.    California Flora** **(4)**  
The identification and classification of flowering plants, gymnosperms, ferns and fern allies as represented in Northern California.

**BIOL 081.    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 111. *Prerequisites:* BIOL 051, 061, and CHEM 025; one semester of genetics suggested.

**BIOL 089.    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 093.    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 051, 061.

**BIOL 111.    Anatomy and Physiology** **(4)**  
A lecture and laboratory course which covers the structure and function of the major physiological systems of the human body. Intended primarily for students in the Dental Hygiene program. Students taking BIOL 111 will not receive credit for either BIOL 071 or BIOL 081. *Prerequisites:* BIOL 051, 061.



- BIOL 122. Principles of Immunology (4)**  
A study of the fundamental properties of antigens and antibodies, with an emphasis on the theories of antibody production, tolerance, transplantation immunity, autoimmunity and tumor immunology. *Prerequisites: BIOL 101 and CHEM 121.*
- BIOL 128. Histology (4)**  
A study of the tissues which comprise the organs of the body. This course is limited to human tissues. Thin sections of organs will be studied and their structure related to function. Credit only given once for BIOL 128 or 129. *Prerequisites: BIOL 051, 061.*
- BIOL 129. Histology Online (4)**  
A non-lab, online version of BIOL 128. Credit only given once for BIOL 128 or 129. *Prerequisites: BIOL 051, 061.*
- 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 051, 061.*
- BIOL 145. Microbiology (4)**  
The biology of microorganisms with emphasis on viruses, bacteria and fungi including techniques of cultivation and identification. *Prerequisites: CHEM 025, 027; BIOL 051, 061.*
- 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 145 and CHEM 121 with a C- or higher or permission of the instructor.*
- 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 051, 061, 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 051, 061, 101 and CHEM 025, 027. 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 051, 061, CHEM 025, 027; 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 cloning. *Prerequisites: BIOL 051, 061, 101, CHEM 121.*
- BIOL 158. Computerized Data Acquisition (4)**  
A lecture and laboratory course training students in experimental design and protocol. Students will be trained in the programming and use of the computer data acquisition program LabVIEW, then apply the program to an intensive, team-based research project studying amphibian reproductive behavior. The class will end with a symposium-style presentation of each team's experiments and results. *Prerequisites: BIOL 051, 061.*
- BIOL 159. Molecular Biological Techniques (4)**  
An advanced laboratory course in the methods of molecular biology, with emphasis on modern techniques and their application in the laboratory. Topics covered include gene cloning, protein expression systems, nucleic acid isolation and purification, and basic methods of bioinformatics. *Prerequisites: BIOL 101 and CHEM 121 with a C- or higher.*
- BIOL 162. Comparative Vertebrate Anatomy (5)**  
The evolution of vertebrate organ systems as revealed by comparative morphology. *Prerequisites: BIOL 051, 061; 101 recommended.*
- BIOL 165. Embryology and Development (4)**  
A laboratory course that focuses on the events that occur as a single-celled embryo develops into an adult organism. Developmental processes will be studied at the descriptive and mechanistic levels, leading to an understanding of how and why complex structures are produced. Major emphases will be placed on animal embryology (both vertebrate and invertebrate) leading to the production of tissues, organs and organ systems. Later developmental processes also will be studied, as will sex determination. Additional topics will include cancer and evolution as seen in the context of development. *Prerequisites: BIOL 051, 061, 101.*
- BIOL 169. Elements of Biochemistry (4)**  
A non-lab course that surveys the field of biochemistry and is designed as a preparation for students who will attend a Pharmacy or Dental School. Topics include nucleic acid and protein structure and synthesis, intermediary metabolism, enzyme action, and synthesis and degradation of important biological molecules. The relationship of biochemistry, nutrition, and human disease will be discussed. This course does not count for the Biochemistry major. *Prerequisites: BIOL 051, 061, 101; CHEM 123 with a C- or higher.*
- BIOL 175. Ecology (4)**  
The structure and dynamics of populations, biotic communities and ecosystems, with emphasis upon relationships of organisms to their environments. *Prerequisites: BIOL 051, 061.*
- BIOL 176. Ecology and Conservation Biology (4)**  
This course introduces principles of ecology and considers threats and disruptions to ecological systems from the level of local populations through ecosystems, landscapes, and global processes. Ecological principles will be used to help understand these systems, to make predictions for the future or for other systems, and to evaluate possible solutions. The class will consider the importance of economic and demographic forces in causing conservation problems and in shaping conservation strategies, and students will practice planning conservation areas. *Prerequisite: BIOL 051.*
- BIOL 179. Evolution (4)**  
Lectures and readings on the mechanisms of evolutionary change in organisms. *Prerequisites: BIOL 051, 061. BIOL 101 recommended.*
- BIOL 182. Medical Endocrinology (4)**  
This lecture and laboratory course presents the fundamentals and current topics in human endocrinology. The subject is examined from a medical and clinical perspective, including "virtual" patients. *Prerequisites: BIOL 051, 061, 101; CHEM 025, 027. BIOL 071, 081 recommended.*
- 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 051, 061, junior standing in Biological Sciences or Psychology.*
- BIOL 186. Hormones and Behavior (4)**  
A lecture/discussion course focusing on the bi-directional interactions between an animal's behaviors and its endocrine system. Topics include: overview of the vertebrate endocrine system, courtship and sex behaviors, parenting behavior, pheromonal communication, aggression and other social behaviors, learning and memory, hunger, stress, and biological rhythms. *Prerequisites: BIOL 051, 061, 101.*

- BIOL 191. Independent Study**  
**BIOL 193. Special Topics**  
*Prerequisites: BIOL 051, 061.*  
**BIOL 197. Undergraduate Research**

## Graduate

See Graduate Catalog for course descriptions.

- |  |          |
|--|----------|
| BIOL 222. Immunology                     | (4)      |
| BIOL 224. Cancer Biology and DNA Repair  | (4)      |
| BIOL 234. Comparative Physiology         | (4)      |
| BIOL 244. Developmental Biology          | (4)      |
| BIOL 247. Medical Microbiology           | (4)      |
| BIOL 251. Parasitology                   | (4)      |
| BIOL 253. Cell Biology                   | (4)      |
| BIOL 255. Biological Electron Microscopy | (4)      |
| BIOL 279. Evolution                      | (4)      |
| 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) |

## (2-4) Chemistry

(3 or 4)

Phone: (209) 946-2271

Location: Classroom Building, South Campus

Website: [www.pacific.edu/college/chemistry](http://www.pacific.edu/college/chemistry)

Larry Spreer, Chair

## Degrees Offered

Bachelor of Arts

Bachelor of Science

## Majors Offered

Chemistry (BA, BS)

Chemistry (BS)

Medicinal Chemistry

Chemistry-Biology (BS)

Biochemistry (BS)

Pharmaceutical/Chemical Science (MS, PhD) (see Graduate Catalog)

## Minors Offered

Chemistry

## Objective

Chemistry is the study of everything interesting in the everyday world around us. Chemists explore the world of atoms and molecules seeking to understand the structures, bonding and properties and how these structures are transformed in chemical reactions. Everything from a block of wood to a silicon computer chip to the protoplasm of a living cell is of interest in chemistry. An understanding and appreciation of underlying chemistry is becoming increasingly important for our lives and the future of our small planet. The emphasis in all chemistry classes is to develop a basic and thorough understanding of concepts and to gain knowledge in how to apply these concepts in a logical fashion to solve real world problems. Students can choose among a wide variety of degree programs designed to meet a range of career goals. The Chemistry Department has a long history of success in placing students into excellent medical, dental, pharmacy and graduate school programs. They are also well prepared for careers in industry, government service and private business. The Bachelor of Science Degrees in Chemistry is certified by the American Chemical Society (ACS). The B.S. Biochemistry program follows national guidelines.

The Bachelor of Arts degree is designed to give the student a broad understanding of chemistry and to provide a preparation for careers in medicine, dentistry and teaching.

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.

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 conducting independent research projects as part of a Master of Science or a Ph.D. program.

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. The major is only open to students in the 3 + 3 Pre-Pharmacy Advantage Program or those in the 2 + 3 who extend a year (see pre-pharm requirements). The COP courses are to be completed prior to entry into the Pharm.D. program. The TJLSPHS courses may only be completed as part of the Pharm.D. degree plan.

## Bachelor of Arts Major in Chemistry

In order to earn the bachelor of arts degree with a major in chemistry, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics \*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a discipline may be applied to meet the requirements of the general education program. 3) \* Fulfilled by courses required in the major

### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

### III. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### V. Major Requirements

Minimum 54 units and 12 courses, including:

CHEM 025	General Chemistry	5
CHEM 027	General Chemistry	5
CHEM 121	Organic Chemistry I	5
CHEM 123	Organic Chemistry II	5
CHEM 141	Analytical Chemistry	4
	One of the following courses:	4
	CHEM 159 Biophysical Chemistry	
	CHEM 161 Physical Chemistry I	
CHEM	Electives (2 additional courses)	8
	One of the following groups:	10
	a. PHYS 023 General Physics I	
	PHYS 025 General Physics II	
	b. PHYS 053 Principles of Physics I	
	PHYS 055 Principles of Physics II	
MATH 051	Calculus I	4
MATH 053	Calculus II	4

**Note:** 1) At least 4 of your major required courses must be taken at Pacific.

## Bachelor of Science Major in Chemistry

In order to earn the bachelor of science degree with a major in chemistry, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics \*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program. 3) \* Fulfilled by courses required in the major

**II. Fundamental Skills**

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

*Note: 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.*

**III. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

**IV. Major Requirements**

Minimum 74 units and 17 courses, including:

CHEM 025	General Chemistry	5
CHEM 027	General Chemistry	5
CHEM 121	Organic Chemistry I	5
CHEM 123	Organic Chemistry II	5
CHEM 141	Analytical Chemistry	4
CHEM 143	Instrumental Analysis Laboratory	4
CHEM 151	Biochemistry	4
CHEM 161	Physical Chemistry I	4
CHEM 163	Physical Chemistry II	4
CHEM 167	Experimental Physical Chemistry	4
CHEM 171	Advanced Inorganic Chemistry	4
PHYS 053	Principles of Physics I	5
PHYS 055	Principles of Physics II	5
MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4
One of the following courses:		4
MATH 057	Applied Differential Equations	
MATH 145	Applied Linear Algebra	

*Note: 1) At least 4 of your major required courses must be taken at Pacific. 2) Students are strongly recommended to engage in undergraduate research as an elective.*

## Bachelor of Science Major in Chemistry, Concentration in Medicinal Chemistry

In order to earn the bachelor of science degree with a major in chemistry, concentration in medicinal chemistry, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

**I. General Education Requirements**

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

One course from each subdivision below:

*Social and Behavioral Sciences*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

*Natural Sciences and Mathematics \**

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIC. Science, Technology, and Society
- or a second Natural Science

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program. 3) \* Fulfilled by courses required in the major*

**II. Fundamental Skills**

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

*Note: 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.*

**III. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

**IV. Major Requirements**

Minimum 77 units and 18 courses, including:

CHEM 025	General Chemistry	5
CHEM 027	General Chemistry	5
CHEM 121	Organic Chemistry I	5
CHEM 123	Organic Chemistry II	5
CHEM 141	Analytical Chemistry	4
CHEM 151	Biochemistry I	4
One of the following courses:		4
CHEM 159	Biophysical Chemistry	
CHEM 161	Physical Chemistry I	
CHEM 197	Independent Research	4
PHRM 124	Drug Metabolism & Disposition	3
PHRM 135	Pharmacology & Medicinal Chemistry I	4
BIOL 051	Principles of Biology	4
BIOL 061	Principles of Biology	4
BIOL 071	Human Anatomy	4
BIOL 145	Microbiology	4
MATH 051	Calculus I	4
MATH 053	Calculus II	4
One of the following groups:		10
a. PHYS 023	General Physics I	
PHYS 025	General Physics II	
b. PHYS 053	Principles of Physics I	
PHYS 055	Principles of Physics II	

## Bachelor of Science Major in Chemistry-Biology

In order to earn the bachelor of science degree with a major in chemistry-biology, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics \*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program. 3) \* Fulfilled by courses required in the major

### II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### IV. Major Requirements

Minimum 78 units and 18 courses, including:

BIOL 051	Principles of Biology	4
BIOL 061	Principles of Biology	4
BIOL 101	Genetics	4

One of the following courses:		4
BIOL 175	Ecology	
BIOL 179	Evolution	

BIOL	Electives (3 additional courses above BIOL 061, excluding BIOL 089, 093, 191, and 197)	12
CHEM 025	General Chemistry	5
CHEM 027	General Chemistry	5
CHEM 121	Organic Chemistry	5
CHEM 123	Organic Chemistry	5
One of the following courses:		4
	CHEM 159 Biophysical Chemistry	
	CHEM 161 Physical Chemistry	
CHEM	Electives (2 additional courses above CHEM 123 excluding CHEM 191)	8
One of the following groups:		10
a.	PHYS 023 General Physics I	
	PHYS 025 General Physics II	
b.	PHYS 053 Principles of Physics I	
	PHYS 055 Principles of Physics II	
MATH 051	Calculus I	4
MATH 053	Calculus II	4

## Bachelor of Science Major in Biochemistry

In order to earn the bachelor of science degree with a major in biochemistry, students must complete a minimum of 124 credits with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PASC 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics \*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program. 3) \* Fulfilled by courses required in the major

## II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

## III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

## IV. Major Requirements

Minimum 77 units and 18 courses, including:

CHEM 025	General Chemistry	5
CHEM 027	General Chemistry	5
CHEM 121	Organic Chemistry I	5
CHEM 123	Organic Chemistry II	5
CHEM 141	Analytical Chemistry	4
CHEM 151	Biochemistry I	4
CHEM 153	Biochemistry II	3
CHEM 157	Biochemistry Laboratory	4
One of the following courses:		4
CHEM 159 Biophysical Chemistry		
CHEM 161 Physical Chemistry I		
CHEM	Elective (1 additional course)	4
BIOL 051	Principles of Biology	4
BIOL 061	Principles of Biology	4
BIOL 101	Genetics	4
One of the following courses:		4
BIOL 145 Microbiology		
BIOL 153 Cell Biology		
MATH 051	Calculus I	4
MATH 053	Calculus II	4
One of the following groups:		10
a. PHYS 023 General Physics I		
PHYS 025 General Physics II		
b. PHYS 053 Principles of Physics I		
PHYS 055 Principles of Physics II		

**Note:** 1) At least 4 of your major required courses must be taken at Pacific. 2) In addition, students are encouraged to complete at least one other course in biology and at least one semester of research.

## Minor in Chemistry

In order to earn the minor in chemistry, students must complete a minimum of 23 units and 5 courses with a Pacific minor grade point average of 2.0.

### Minor Requirements

CHEM 025	General Chemistry	5
CHEM 027	General Chemistry	5
CHEM 121	Organic Chemistry	5

Two of the following courses: 8-9

- CHEM 123 Organic Chemistry I
- CHEM 141 Analytical Chemistry
- CHEM 151 Biochemistry I
- CHEM 159 Biophysical Chemistry
- CHEM 161 Physical Chemistry I

**Note:** 1) At least 2 courses must be taken at Pacific.

## Course Offerings

*Prerequisite Policy:* Only courses passed with a grade of C- or better meet prerequisite requirements.

Students are assessed laboratory use fees that vary with the level of the laboratory class to cover the cost of expendable materials, chemicals, and other items required to operate the laboratories.

**CHEM 023. 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 025. General Chemistry (5)**  
The important general principles, theories and concepts of chemistry are studied, including fundamentals of chemistry and equilibrium. 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. CHEM 023, Chemistry Subject Test, or appropriate score on Pacific Diagnostic Chemistry test.

**CHEM 027. General Chemistry (5)**  
More important general principles, theories, and concepts of chemistry are studied including modern applications of quantum mechanics, bonding, chemical kinetics, liquids, solids, and properties of solutions. Additional special topics include coordination compounds, nuclear chemistry, organic chemistry and biochemistry. Three class periods and two three-hour laboratory periods a week are required. *Prerequisite:* At least one year of high school chemistry is recommended. CHEM 023, Chemistry Subject Test, or appropriate score on Pacific Diagnostic Chemistry test.

**CHEM 033. Elements of Organic Chemistry (3)**  
This is an introductory course for students who will not major in the chemistry or biological sciences, but whose main interest—dental hygiene, medical technology, nursing, nutrition, pharmacy technician, and more—requires some knowledge of organic chemistry. The course provides familiarity with nomenclature and functional groups with special emphasis on practical applications of organic chemistry to everyday life and to biological processes. Does not count towards a major in Chemistry or Biological Sciences. Course is required for Dental Hygiene Program. *Prerequisite:* CHEM 025 and CHEM 027.

**CHEM 035. Organic Chemistry Primer (3)**  
This course is designed to prepare students for a regular one year course in Organic Chemistry. It links and applies the concepts learned in General Chemistry to organic systems, provides familiarity with Organic Chemistry nomenclature and functional groups, emphasizes pattern recognition and introduces basic elements of reaction mechanisms. The course fulfills the Organic Chemistry requirements of the Dental Hygiene program. ONLINE. *Prerequisite:* CHEM 027.

**CHEM 093. Special Topics (3 or 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: CHEM 027 or CHEM 121.*

**CHEM 141. Analytical Chemistry (4)**

The roots of analytical chemistry and the principles used in modern instruments come from traditional techniques. These techniques including gravimetry, acid-base, complexometric, and redox titrations form the backbone of the course, which covers most major areas of modern quantitative analysis. The theory behind the techniques is covered through many numerical examples and their applications in biochemical and forensic analyses are emphasized. Standard procedures used in analytical laboratories are introduced, including error reporting, statistics, and quality assurance. *Prerequisite: CHEM 027.*

**CHEM 143. Instrumental Analysis Lab (4)**

Advanced analytical methodology involving electronic instrumentation is offered with emphasis on practical application and "hands-on" experience. The theory of instrumental operation is covered. Examples from modern spectroscopy, mass spectrometry, NMR, chromatography and other methods of analysis are included. *Prerequisite: CHEM 141.*

**CHEM 151. Biochemistry I (4)**

Structure, function, physical and chemical properties, organization and transformation (metabolism) of the major classes of biological molecules. The emphasis will be on protein structure and function and on carbohydrate metabolism. Lipids and nucleic acids will be discussed briefly. *Prerequisites: CHEM 123; CHEM 159 or CHEM 161, or permission of the instructor.*

**CHEM 153. Biochemistry II (3)**

The chemical structure and transmission of biological information. Structure, function and metabolism of nucleic acids. Recombinant DNA/molecular techniques. DNA transcription, translation, replication and repair. Other examples of biological information flow. *Prerequisites: CHEM 151 or permission of the instructor.*

**CHEM 157. Biochemistry Laboratory (4)**

Standard techniques for isolation and analysis of biological molecules. Protein purification, column chromatography, electrophoresis, western blotting, nucleic acid isolation and manipulation, use of relevant databases. *Prerequisites: CHEM 141 and either CHEM 151 or BIOL 169.*

**CHEM 159. Biophysical 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 051, CHEM 027, PHYS 055 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 027, MATH 055, and PHYS 055, or permission of the instructor.*

**CHEM 163. Physical Chemistry II (4)**

A continuation of physical chemistry including quantum chemistry and applications, bonding, symmetry and group theory, atomic and molecular spectroscopy, and chemical kinetics. Three class periods a week are required. *Prerequisites: 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 159 or 169.*

**CHEM 171. Advanced 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. Four hours of laboratory per week. *Prerequisite: CHEM 163 or permission of the instructor.*

**CHEM 191. Independent Study (2-4)****CHEM 193. Special Topics (3 or 4)****CHEM 197. Independent Research (2-4)**

*Prerequisite: CHEM 025.*

## Communication

Phone: (209) 946-2505

Location: Psychology/Communication Building

Website: <http://www.pacific.edu/college/communication/>

Qingwen Dong, Chair

### Degrees Offered

Bachelor of Arts

Master of Arts (see Graduate Catalog for information)

### Majors Offered

Communication

### Minors Offered

Communication

### Mission

The mission of the Department of Communication is to prepare students in the strategic use of communication for the public good as leaders in their local and global communities. Students develop a better understanding of communication theory and research methodologies as well as their proficiency in oral, written and mediated communication.

### Career Opportunities

Coursework in the Department of Communication provides preparation for careers in public relations, broadcasting, journalism, media management, teaching, speech writing, law, labor relations, personnel development, international relations, and many other professional areas.

### Communication Major

The major is designed to encompass a balance of communication theory and application courses. Fundamental skill-building courses are the foundation of the major program, so that students work toward the improvement of their communication competencies, while increasing their knowledge and experience in preparation for communication professions.

### Experiential Learning Opportunities

Pacific Speech and Debate Society. For over seven decades, Pacific has competed with distinction in intercollegiate speech and debate. The Pacific teams regularly compete on the regional, national and international level, and have compiled enviable records. The Communication Department offers forensics scholarships to students who have demonstrated a high level of performance proficiency and require financial assistance.

Broadcasting: *KPAC 89.7 FM* is the student-operated low wattage radio station on campus. *Pacific TV 2* is the closed circuit television station on campus. Both stations offer students experience in advertising sales, announcing, producing, and directing for a student audience.

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), founded in 1980. Serious public relations students meet monthly to hear professionals, invited from

San Francisco and other major market areas, to discuss contemporary public relations topics. Members also form teams, to enter competition, and attend the national PRSSA conference. PACIFIC PRSSA teams have distinguished themselves over the years by placing in national competition.

### Internships and Practica

A Communication major is required to complete an internship or practicum. The Department believes that practica and internships are important adjuncts to learning. These experiences are available both on and off campus in the communication areas of radio, television, public relations, journalism, organizational communication and forensics. Internships and practica are taken for pass/no credit.

### Internship and Practica Requirements

Students undertaking an internship or a practicum 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 87/187, to count toward the major; otherwise, (2) students with a minimum overall cumulative GPA of 2.0, may be placed in practicum, Comm 89/189, to serve in an on-campus setting; (3) students should complete the appropriate 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 87/187 (Internships) and/or Practica, Comm 89/189. Students must participate in the mandatory internship seminar sessions, and a site-visit with the faculty supervisor.

### 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 successfully complete all major requirements. Grades in Communication courses below C- are not accepted toward completion of the major or minor.

### Bachelor of Arts Major in Communication

In order to earn the bachelor of arts degree with a major in communication, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

#### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*



One course from each subdivision below:

*Social and Behavioral Sciences*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

## II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

## III. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

## IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

## V. Major Requirements

Minimum 44 units, including:

Take all core courses:

COMM 027	Public Speaking	3
COMM 031	Media & Society	3
COMM 043	Introduction to Interpersonal Communication	3
COMM 050	Introduction to Communication Technologies	3
COMM 145	Human Communication Theory	4
COMM 160	Communication Research Methods	4

**Note:** Students must earn a 2.5 average in COMM 027, 031 and 043, in order to meet the prerequisites for COMM 160.

Two of the following theory courses: 8

- COMM 116 Rhetorical Theory & Criticism
- COMM 133 Documentary Film as Persuasive Communication
- COMM 139 Theory of Mass Communication
- COMM 143 Intercultural Communication
- COMM 147 Nonverbal Communication
- COMM 149 Introduction to Organizational Communication
- COMM 155 Persuasion

Two of the following applied courses: 8

- COMM 114 Argumentation and Advocacy
- COMM 131 Media Production
- COMM 132 Writing for Media
- COMM 135 Principles of Public Relations
- COMM 137 PR Case Studies & Problems
- COMM 140 Writing for Public Relations
- COMM 152 Public Relations Administration

Minimum 2 units of internship or practicum: 2-4

- COMM 087 Internship
- COMM 187 Internship
- COMM 089 Practicum
- COMM 189 Practicum

Take both Capstone courses:

- COMM 150 Ethical and Legal Issues in Communication 4
- COMM 151 Community Based Learning Project 2

**Note:** Courses must be graded C- or higher to count towards the major.

## Minor in Communication

In order to earn the minor in communication, students must complete a minimum of 21 units with a Pacific minor grade point average of 2.0.

### Minor Requirements

COMM 027	Public Speaking	3
COMM 031	Media and Society	4
COMM 043	Intro to Interpersonal Communication	3
COMM 145	Human Communication Theory	4
COMM 160	Communication Research Methods	4
COMM	Elective (1 additional course)	4

**Note:** 1) Courses must be graded C- or higher to count toward minor. 2) Students must earn a 2.5 average in COMM 027, 031, and 043 in order to meet the prerequisites for COMM 160.

## Course Offerings

### COMM 027. Public Speaking (3)

A study of the basic principles of public speaking. This course is one of the four lower core courses for the communication major.

### COMM 031. Media and Society (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 four lower core courses for the communication major.

### COMM 043. 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, listening, perception, language, nonverbal communication, conflict, social influence, and communication competence. Focus is to develop an increasing student awareness of the complexities of interpersonal relationships. This course is one of the four lower core courses for the communication major.

**COMM 050. Introduction to Communication Technologies (3)**

This course provides an introduction to the nature, design, and use of communication technologies, including networks, email, web pages, presentation tools, and groupware. Social impacts and diffusion of new technologies is discussed. Students learn production skills that will be useful in upper division communication courses, and that will facilitate the department's portfolio assessment program. This course is one of the four lower core courses for the communication major.

**COMM 087/187. 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 087 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 087 course and a total of four in a COMM 187 course). Pass/no credit grading only.

**COMM 089/189. Practicum (1-4)**

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. Courses numbered 189 are similar contexts with a more advanced level of performance and learning expectations compared to courses numbered 089. COMM 089 is the prerequisite for COMM 189.

**COMM 114/214. Argumentation and Advocacy (4)**

This course introduces students to the theory and practice of argumentation, which is a method of decision-making emphasizing reason giving and evidence. The course includes instruction in debating, research, and critical writing, as well as advanced topics in the study of public deliberation. *Prerequisites: COMM 027, 031, 043, or 050 with a grade of C or higher.*

**COMM 116/216. Rhetorical Theory and Criticism (4)**

This course strives to help students derive insight into how symbolic processes affect human awareness, beliefs, values, and actions. The course treats criticism and analysis as methods of inquiry into the nature, character, and effects of human communication. It addresses various methods of rhetorical criticism in terms of their central units of analysis and typical intellectual concerns. *Prerequisite: COMM 160 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 031 or permission of the instructor. Lab fee required.*

**COMM 132. Writing for Media (4)**

Examination and production of electronic and print writing techniques. Emphasis on writing news, information, and entertainment messages for the electronic and print industries. Some work in student media facilities involved. *Prerequisite: COMM 031. Lab fee required.*

**COMM 133. Documentary Film as Persuasive Communication (4)**

This is a survey course of documentary film, beginning at the turn of the century and continuing through contemporary productions. The class explores documentary film's origins and traces its development and use as persuasive communication. Various critical approaches are studied in order to interpret the films as representations of historic actuality and analyze their influence on society. Through screenings, lectures, written assignments, and exams, students become familiar with the history of documentary film, the evolution of the form, its rhetorical construction and its cultural influences. *Prerequisite: COMM 031 or permission of instructor.*

**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 031.*

**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 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 gratification's 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 143. Intercultural Communication (4)**

Analysis of the major variables affecting interpersonal communication between persons of differing cultural backgrounds.

**COMM 145/245. Human Communication Theory (4)**

A study of contemporary understandings of human interaction. Beginning with epistemological issues as a framework, the course examines theory building, foundation theories of our discipline, and contextual theories.

**COMM 147/247. Nonverbal Communication (4)**

The course examines major dimensions of nonverbal behavior exhibited by human beings in social interactional contexts. Special emphasis is given to such areas as human , proxemics, kinesics and vocalics, haptics, and artifactual codes. *Prerequisite: COMM 043 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 027, 043, or permission of the instructor.*

**COMM 150. Ethical Issues in Communication (4)**

This course is a senior-level seminar devoted to situating what students have learned in the Communication Major within a broader social and ethical context, and preparing students to move forward with confidence into a world where valuing and learning never stop. Topics include the role of communication in sustaining community, standards for ethical communication, communication's role in moral decision making, and other topics of interest to the students and the instructor. *Prerequisites: Senior standing.*

**COMM 151. Community Based Learning (2)**

This senior-level capstone course provides students with a supervised learning experience in an off-campus, community-based organization. Students will apply their knowledge of communication theories and skills to the needs of local organizations, allowing them to contribute to the public good. *Prerequisite: Senior standing.*

**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)**

This course is a survey of social psychological and communication approaches to social influence. Both past and contemporary theorizing will be explored, and the methods of empirical research will be discussed. *Prerequisite:* COMM 027 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 027, 031, and 043 with a C+ or better.

**COMM 191/291. Independent Study (2-4)****COMM 193/293. Special Topics (1-4)****COMM 197. Independent Research (2-4)****Graduate**

See Graduate Catalog for course descriptions.

COMM 270. Introduction to Graduate Study	(4)
COMM 271. Graduate Seminar in Rhetorical Thought	(4)
COMM 272. Graduate Seminar in Interpersonal Communication	(4)
COMM 273. Graduate Seminar in mass Communication Theory	(4)
COMM 274. Graduate Seminar in Statistical Application	(4)
COMM 275. Graduate Seminar in Public Relations	(4)
COMM 276. Graduate Seminar in Communication in Learning Settings	(4)
COMM 277. Graduate Seminar in Media Relations	(4)
COMM 278. Graduate Seminar in Political Communication	(4)
COMM 287. Graduate Internship	(2 or 4)
COMM 289. Graduate Practicum	(2 or 4)
COMM 291. Independent Graduate Study	(2-4)
COMM 293. Special Topics	(1-4)
COMM 297. Graduate Research	(1-4)
COMM 299. Thesis	(2 or 4)

**Earth & Environmental Sciences**

Phone: (209) 946-2482

Location: Geosciences Building, South Campus

Website: [www.pacific.edu/college/Earth+EnvSci](http://www.pacific.edu/college/Earth+EnvSci)

Lydia Fox, Chair

**Degrees Offered**

Bachelor of Arts

Bachelor of Science

**Majors Offered**

Geology (BA, BS)

Geology – Geoscience Teaching Track (BS)

Environmental Science (BS)

Environmental Studies (BA)

**Minors Offered**

Geology

Environmental Studies

The Bachelor of Arts in Geology is for liberal arts students with a strong interest in the earth and its environments, but who are not planning to pursue a career in geology. The breadth of a B.A. in geology is ideal for preparing students for professional degrees and successful careers in law, business, administration, or international relations. The Bachelor of Science in Geology prepares the student for graduate study or professional employment in geology. Students earning a B.S. in geology can obtain competitive jobs in a number of geoscience areas, including geotechnical consulting, where they assess geologic hazards and environmental impacts. Other career paths include working as a geologist involved with the exploration and production of fossil fuels and other important mineral resources. An increasing emphasis on environmental issues and growing demand for natural resources, in addition to recent retirement patterns in the geosciences, are creating a considerable demand for well-trained geoscientists. According to the American Geological Institute, Masters and Ph.D.-level geoscientists have experienced effectively zero unemployment during the past 20 years. The Bachelor of Science in Geology-Geoscience Teaching Track covers subject areas required of students seeking the California Single-Subject Teaching Credential in Science. Students who began this track before July 1, 2005 need to complete the program by July 1, 2009. Students beginning this track after June 30, 2005 will be under new program requirements, contact the Dept. Chair for details.

The Bachelor of Science in Environmental Science major is designed to impart students with the practical skills and knowledge required to critically evaluate environmental problems and issues and provide applied solutions. The major is decidedly interdisciplinary in nature, focusing on the underlying natural processes relating to the environment and understanding and employing the scientific method. The need for broadly trained scientists in the area of environmental science is critical and the understanding of the importance of this field provides many employment opportunities. A BS in Environmental Science can lead to numerous employment opportunities with many different agencies and areas. Typical employment could involve working for consulting firms performing environmental restoration, producing environmental impact studies for both governmental agencies and private firms, and additional vital biological services. Other types of employment can be found with regulatory agencies seeking to ensure compliance with environmental

regulations and laws, with environmental law firms, or public health agencies. The Bachelor of Arts in Environmental Studies is for liberal arts students with an interest in environmental issues. It is a multi-disciplinary approach to environmental issues and concerns.

## Bachelor of Arts Major in Geology

In order to earn the bachelor of arts degree with a major in geology, students must complete a minimum of 124 units with a cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

- IIIA. Natural Sciences
- IIIB. Mathematics and Formal Logic
- IIC. Science, Technology, and Society  
or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

### III. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### V. Major Requirements

One of the following courses: 4

- GEOS 051 Dynamic Planet
- GEOS 053 Earth & Life Through Time
- GEOS 061 Geology of California
- GEOS 065 Regional Geology

All of the following courses:

GEOS 100	Mineralogy	5
GEOS 102	Spatial Analysis & GIS	4
GEOS 110	Igneous & Metamorphic Petrology	4
GEOS 112	Sedimentary Petrology	4
GEOS 114	Structural Geology	4
GEOS 161	Geologic Field Methods	4

One of the following courses emphasizing earth history 4

- GEOS 053 Earth & Life Through Time (if not chosen above)
- GEOS 120 Paleontology

One of the following applied geology courses: 4

- GEOS 142 Geochemistry
- GEOS 144 Geomorphology
- GEOS 145 Engineering Geology
- GEOS 148 Hydrogeology

One of the following chemistry courses: 4-5

- CHEM 023 Elements of Chemistry
- CHEM 025 General Chemistry

## Bachelor of Science Major in Geology

In order to earn the bachelor of science degree with a major in geology, students must complete a minimum of 124 units with a cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### The Individual and Society

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Human Heritage

- IIA. Literature, Letters and Language
- IIIB. Fundamental Human Concerns
- IIC. Practice and Perspective in the Visual and Performing Arts

#### Natural World and Formal Systems of Thought

- IIIA. Life and Physical Natural Sciences
- IIIB. Formal Systems of Thought
- IIC. Science, Technology, and Society  
or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

## II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

## III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

## IV. Major Requirements

- |   |     |
|---|-----|
| One of the following courses:                                   | 4   |
| GEOS 051 Dynamic Planet   |     |
| GEOS 053 Earth & Life Through Time                              |     |
| GEOS 061 Geology of California                                  |     |
| GEOS 065 Regional Geology                                       |     |
| All of the following courses:                                   |     |
| GEOS 100 Mineralogy   | 5   |
| GEOS 102 Spatial Analysis & GIS                                 | 4   |
| GEOS 110 Igneous & Metamorphic Petrology                        | 4   |
| GEOS 112 Sedimentary Petrology                                  | 4   |
| GEOS 114 Structural Geology                                     | 4   |
| GEOS 161 Geologic Field Methods                                 | 4   |
| One of the following courses emphasizing earth history:         | 4   |
| GEOS 053 Earth & Life Through Time(if not chosen above)         |     |
| GEOS 120 Paleontology   |     |
| Two of the following applied geology courses:                   | 8   |
| GEOS 142 Geochemistry   |     |
| GEOS 144 Geomorphology  |     |
| GEOS 145 Engineering Geology                                    |     |
| GEOS 148 Hydrogeology   |     |
| All students must complete:                                     |     |
| GEOS Electives (1 additional course excluding GEOS 105 and 193) | 4   |
| Two of the following chemistry courses:                         | 10  |
| CHEM 025 General Chemistry                                      |     |
| CHEM 027 General Chemistry                                      |     |
| GEOS 142 Geochemistry   |     |
| One of the following groups:                                    | 10  |
| a. PHYS 023 General Physics I                                   |     |
| PHYS 025 General Physics II                                     |     |
| b. PHYS 053 Principles of Physics I                             |     |
| PHYS 055 Principles of Physics II                               |     |
| All of the following:   |     |
| MATH 051 Calculus I   | 4   |
| MATH 053 Calculus II  | 4   |
| One of the following experiential learning courses:             | 3-4 |
| GEOS 187 Internship in Geosciences                              |     |
| GEOS 197 Undergraduate Research                                 |     |

## Bachelor of Science Major in Geology Geoscience Teaching Track

In order to earn the bachelors of science degree with a major in geology (geoscience teaching track), students must complete a minimum of 124 credits with a cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

- The Individual and Society*
- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies
- Human Heritage*
- IIA. Literature, Letters and Language
- IIB. Fundamental Human Concerns
- IIC. Practice and Perspective in the Visual and Performing Arts
- Natural World and Formal Systems of Thought*
- IIIA. Life and Physical Natural Sciences
- IIIB. Formal Systems of Thought
- IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

### II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### IV. Major Requirements

GEOS 051	Dynamic Planet	4
GEOS 053	Earth & Life Through Time	4
GEOS 100	Mineralogy	5
GEOS 110	Igneous & Metamorphic Petrology	4
GEOS 112	Sedimentary Petrology	4
GEOS 114	Structural Geology	4
GEOS 120	Paleontology	4

GEOS 144	Geomorphology	4
GEOS 161	Geologic Field Methods	4
BIOL 051	Principles of Biology	4
BIOL 061	Principles of Biology	4
CHEM 025	General Chemistry	5
CHEM 027	General Chemistry	5
One of the following groups:		10
a.	PHYS 023 General Physics I	
	PHYS 025 General Physics II	
b.	PHYS 053 Principles of Physics I	
	PHYS 055 Principles of Physics II	
All of the following:		
PHYS 041	Astronomy	4
MATH	Electives (2 courses above MATH 037)	8
One of the following computer courses:		4
COMP 025	Computers and Information Processing	
COMP 051	Computer Science I	
GEOS 102	Spatial Analysis & GIS	

**Bachelor of Science  
Major in Environmental Science**

In order to earn the bachelor of science degree with a major in environmental science, students must complete a minimum of 124 units with a cumulative and major/program grade point average of 2.0.

*I. General Education Requirements*

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*

One course from each subdivision below:

*The Individual and Society*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Human Heritage*

- IIA. Literature, Letters and Language
- IIB. Fundamental Human Concerns
- IIC. Practice and Perspective in the Visual and Performing Arts

*Natural World and Formal Systems of Thought*

- IIIA. Life and Physical Natural Sciences
- IIIB. Formal Systems of Thought
- IIIC. Science, Technology, and Society  
or a second Natural Science

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.*

*II. Fundamental Skills*

- Demonstrate competence in:
- Reading
  - Writing
  - Quantitative analysis

*Note: 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.*

*III. Breadth Requirement*

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

*IV. Major Requirements*

GEOS 043	Environmental Science for Informed Citizens	4
GEOS 102	Spatial Analysis and GIS	4
GEOS 103	Global Change	4
GEOS 106	Earth Materials and the Environment	4
GEOS 142	Geochemistry	4
GEOS 144	Geomorphology	4
GEOS 148	Hydrogeology	4
GEOS 163	Environmental Field Methods	3
MATH 037	Introduction to Statistics & Probability	4
CHEM 025	General Chemistry	5
CHEM 141	Analytical Chemistry	4
BIOL 051	Principles of Biology	4
BIOL 061	Principles of Biology	4
One of the following organismal biology courses:		4
BIOL 072	Vertebrate Biology	
BIOL 074	Biology of Insects	
BIOL 076	Marine Biology	
BIOL 077	Marine Birds & Mammals	
BIOL 079	California Flora	
BIOL 130	Plant Kingdom	
One of the following courses:		4
BIOL 175	Ecology	
BIOL 176	Ecology & Conservation Biology	
One of the following environmental policy/resource management courses:		3-4
GEOS 045	Soil, Water & War	
CIVL 171	Water and Environmental Policy	
ECON 071	Global Economic Issues	
ECON 157	Environmental and Natural Resource Economics	
ITNL 174	Global Environmental Policy	
One of the following humanities courses:		4
PHIL 035	Environmental Ethics	
HIST 052	John Muir's World: Origins of the Conservation Movement	
HIST 136	American Environmental History	
One of the following experiential learning courses:		4
GEOS 187	Internship in Geosciences	
GEOS 197	Undergraduate Research	
BIOL 197	Undergraduate Research	
CHEM 197	Undergraduate Research	
GEOS 185	Capstone Seminar in Environmental Sciences	3

## Bachelor of Arts Major in Environmental Studies

In order to earn the bachelor of arts degree with a major in environmental studies, students must complete a minimum of 124 units with a cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### *The Individual and Society*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### *Human Heritage*

- IIA. Literature, Letters and Language
- IIB. Fundamental Human Concerns
- IIC. Practice and Perspective in the Visual and Performing Arts

#### *Natural World and Formal Systems of Thought*

- IIIA. Life and Physical Natural Sciences
  - IIIB. Formal Systems of Thought
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

### III. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### V. Major Requirements

One of the following chemistry courses:	4-5
CHEM 023 Elements of Chemistry	
CHEM 025 General Chemistry	

Two of the following biological sciences courses:	8
BIOL 035 Environment: Concepts and Issues	
BIOL 041 Introduction to Biology	
BIOL 051 Principles of Biology	
BIOL 061 Principles of Biology	
BIOL 077 Marine Birds and Mammals	
BIOL 079 California Flora	
BIOL 130 Plant Kingdom	

Two of the following earth science courses:	8
GEOS 041 Environmental Geology	
GEOS 043 Environmental Science for Informed Citizens	
GEOS 051 Dynamic Planet	
GEOS 053 Earth & Life Through Time	
GEOS 055 Physical Geography	
GEOS 061 Geology of California	
GEOS 065 Regional Geology	
GEOS 144 Geomorphology	
GEOS 145 Engineering Geology	

Three of the following environmental policy and resource management courses:	11-12
CIVL 171 Water and Environmental Policy	
ECON 071 Global Economic Issues	
ECON 157 Environmental and Natural Resource Economics	
ECON 171 Political Economy	
GEOS 045 Soil, Water, and War	
INTL 174 Global Environmental Policy	

**Note:** 1) ECON 157 has a prerequisite of ECON 053. 2) ECON 171 has a prerequisite of ECON 051 or 055. 3) No prerequisite of POLS 051 required for INTL 174.

Two of the following humanities courses:	8
HIST 052 John Muir's World	
HIST 136 American Environmental History	
PHIL 035 Environmental Ethics	

One of the following Practicum courses:	3-4
GEOS 187 Internship in Geosciences	
GEOS 197 Undergraduate Research	
BIOL 197 Undergraduate Research	

Concentration: (policy, geosciences, or biology) Elective	9-12
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**Note:** 1) This concentration must be approved by the student's adviser.

## Minor in Geology

In order to earn the minor in geology, students must complete a minimum of 20 units with a Pacific minor grade point average of 2.0.

### Minor Requirements:

One of the following courses:	4
GEOS 051 Dynamic Planet	
GEOS 053 Earth & Life Through Time	
GEOS 055 Physical Geography	
GEOS 057 Earth System Science	
GEOS 061 Geology of California	
GEOS 065 Regional Geology	
GEOS Electives (4 additional courses GEOS 100 and above excluding GEOS 105)	16

## Minor in Environmental Studies

In order to earn the minor in environmental studies, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

### Minor Requirements:

Two of the following natural science courses:	8-10
GEOS 041 Environmental Geology	
GEOS 043 Environmental Science for Informed Citizens	
GEOS 061 Geology of California	
GEOS 065 Regional Geology	
BIOL 035 Environment: Concepts and Issues	
BIOL 079 California Flora	
CHEM 023 Elements of Chemistry	
CHEM 025 General Chemistry	

*Note: 1) These course must be different then courses taken in the major. 2) At least one of these courses needs to contain a lab.*

Two of the following environmental policy/resource management courses:	7-8
ECON 071 Global Economic Issues	
ECON 157 Environmental and Natural Resource Economics	
GEOS 045 Soil, Water, and War	
INTL 174 Global Environmental Policy	
CIVL 171 Water and Environmental Policy	

*Note: 1) ECON 157 has a prerequisite of ECON 053. 2) No prerequisite of POLS 051 required for INTL 174.*

One of the following humanities courses:	4
ENGL 153 Topics in American Literature after 1865 (Nature Writing)	
PHIL 035 Environmental Ethics	
HIST 052 John Muir's World: Origins of the Conservation Movement	
HIST 136 American Environmental History	

## Course Offerings

**GEOS 041. Environmental Geology (4)**  
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 043. Environmental Science for Informed Citizens (4)**  
An interdisciplinary course focusing on the analysis of policy-relevant environmental problems in four domains: water, energy, climate, and land use – with an emphasis on human interactions. This course includes laboratory and field work.

**GEOS 045. Soil, Water, and War (4)**  
This course links limited natural resources and human conflict. Historical and current conflicts will drive discussion. Analysis of these conflicts will allow achievement of understanding of the following: 1) water resources; 2) soil formation; 3) links between the environment and natural resources. The course involves field work.

**GEOS 051. Dynamic Planet (4)**  
Nature and origin of earth materials, the processes and forces which create and shape the surface of the earth and affect its internal structure within the context of deep time. A study of earth resources and human interactions with the environment. The course includes laboratory and field work.

**GEOS 053. Earth and Life Through Time (4)**  
An introduction to the geologic history of the earth as interpreted through analysis of 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 055. 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 057. 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 061. Geology of California (4)**  
A field-oriented study of important geologic materials, processes, features and events of California's major provinces. Particular emphasis is placed on origins of rocks, geologic time, mountain building and plate tectonics, geologic hazards, landform evolution, climate change, and environmental stewardship. The course includes laboratory work and several multiple-day camping trips.

**GEOS 065. Regional Geology (4)**  
A field intensive study of a geologically relevant area including investigations of plate tectonics, the formation of rocks and minerals, the hydrologic cycle, formation of landforms, geologic time, and climate change. Possible study regions include Hawaii, the Colorado Plateau, Costa Rica, and Alaska. This course includes laboratory work and a multi-day field trip during spring break.

**GEOS 093. Special Topics in Geosciences (3-4)**

**GEOS 100. Mineralogy (5)**  
The study of minerals through crystallography, crystal chemistry and crystal structure. This course focuses on the major groups of rock-forming minerals, their associations and origin and on mineral identification by physical properties, optical techniques, and x-ray methods. *Prerequisites: CHEM 023 or 025; GEOS 051 or 053 or 061 or 065*

**GEOS 102. Spatial Analysis and GIS (4)**  
This general education course familiarizes the student with methods of spatial analysis. The learning objectives include: identifying and describing georeferenced data (i.e. linked to a specific location); describing the variability of georeferenced data; observing, designing, and performing spatial data research; comparing maps at different scales and in different projections; using spatial data to answer questions and make management decisions; using methods of spatial data collection and analysis, including geographic information systems (GIS), geographic positioning systems (GPS) and surveying equipment. This course includes laboratory and field work in support of a research project.

**GEOS 103. Global Change (4)**  
Interdisciplinary study of Earth's dramatic and abrupt changes in the past and their tremendous environmental repercussions with an emphasis on human interactions and future changes. This course includes laboratory work *Prerequisite: An introductory GEOS course and CHEM 023 or 025 or 027.*



- GEOS 105. Field Studies (1-2)**  
Field study of geological phenomena in western North America. Involves minimum of three continuous days on a department-supervised field trip. Students can repeat this course for up to 4 units of credit. *Prerequisites: an introductory course in geosciences and permission of the instructor.*
- GEOS 106. Earth Materials and the Environment (4)**  
A study of the origin, occurrence, identification, and environmental significance of earth materials (minerals, rocks, soils). Laboratory work will include the study of minerals and rocks in hand sample, as well as in thin section and with X-ray diffraction analysis. Environmental aspects such as the health effects of minerals, engineering properties of soil, acid mine drainage, etc. will also be addressed. This course includes laboratory and field work. *Prerequisite: an introductory GEOS course.*
- 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 and field 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 and field work. *Prerequisite: GEOS 100 or permission of the instructor.*
- GEOS 114. Structural Geology (4)**  
A study of the character and causes of the geologic structures that deform Earth's crust within the context of whole-Earth structure, geotectonic processes and environments, and rock mechanics. The course includes laboratory work and a required multi-day field trip. *Prerequisite: GEOS 051 or permission of 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. The course includes laboratory work. *Prerequisite: GEOS 053 or permission of instructor.*
- GEOS 136. Petrography (4)**  
Identification, classification, and interpretation of igneous, sedimentary, and metamorphic rocks using the petrographic microscope. The course includes laboratory work. *Prerequisites: GEOS 110 and 112.*
- GEOS 142. Geochemistry (4)**  
The application of chemical principles to the study of geological processes. This course involves laboratory and field work. *Prerequisites: an introductory GEOS course; CHEM 025 and MATH 041.*
- 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 and field work. *Prerequisite: An introductory GEOS course.*
- 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 and field work. *Prerequisite: GEOS 051 or 061 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 with the environment, and water as a human resource. Laboratory exercises and field work involve methodologies and principles used in research and practical applications. *Prerequisites: an introductory GEOS course and MATH 051 and CHEM 025 with a grade of C or better.*
- GEOS 161. Geologic Field Methods (4)**  
Introduction to the basic methods and techniques of geologic field work, including measuring, describing, and interpreting stratigraphic sections and constructing geologic maps and cross sections. Particular emphasis is placed on the collection, analysis, and interpretation of geologic data; developing scientific writing and oral presentation skills; and the effective use of computer-generated graphics. The course involves one-day and multi-day field trips. *Prerequisite: an introductory GEOS course, GEOS 110, 114 or permission of instructor.*
- GEOS 163. Environmental Field Methods (3)**  
An introduction to the field methods of environmental science. *Prerequisite: Senior standing in the Environmental Science major or permission of the instructor.*
- GEOS 185. Capstone Seminar in Environmental Science (3)**  
A seminar focused on local/regional environmental issues. Informed members of the community/region will present the issues and then students will work in teams to address scientific aspects of selected environmental problems. *Prerequisites: GEOS 163 and senior standing in the Environmental Science major.*
- GEOS 187. Internship in Geosciences (2-4)**
- GEOS 191. Independent Study (2-4)**
- GEOS 193. Special Topics (4)**
- GEOS 197. Undergraduate Research (2-4)**

## Economics

Phone: (209) 946-2258

Location: WPC 212

Website: [web.pacific.edu/x8145.xml](http://web.pacific.edu/x8145.xml) Peter Meyer, Chair

### Degrees Offered

Bachelor of Arts

Bachelor of Science

### Majors Offered

Economics (BA)

General Social Science

Political Economy

International

Economics (BS)

Social Science

Applied Economics

Mathematical Economics

### Minors Offered

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.

### Bachelor of Arts Major in Economics

In order to earn the bachelor of arts degree with a major in economics, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

#### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

IA. Individual and Interpersonal Behavior

IB. U.S. Studies

IC. Global Studies

#### Arts and Humanities

IIA. Language and Literature

IIB. Worldviews and Ethics

IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

IIIA. Natural Sciences

IIIB. Mathematics and Formal Logic

IIIC. Science, Technology, and Society

or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

#### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

#### III. Fundamental Skills

Demonstrate competence in:

Reading

Writing

Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

#### IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

#### V. Major Requirements

ECON 053	Introductory Microeconomics	4
ECON 055	Introductory Macroeconomics: Theory and Policy	4
ECON 101	Intermediate Microeconomic Analysis	4
ECON 103	Intermediate Macroeconomic Analysis	4
One of the following courses:		4
MATH 037	Introduction to Statistics and Probability	
MATH 039	Probability with Applications to Statistics	

#### VI. Complete one of the following tracks:

##### General Social Science Track:

ECON 111	History of Economic Thought	4
ECON 161	Computer Applications in Economics	4
ECON	Electives (4 additional courses ECON 071 or higher, excluding ECON 101L, 103L & 191)	16

##### Political Economy Track:

ECON 111	History of Economic Thought	4
ECON 171	Political Economy	4
POLS 011	Introduction to Political Science	4

POLS 132	Modern Political Theory	4
ECON	Electives (2 additional courses ECON 071 or higher, excluding ECON 101L, 103L & 191)	8
POLS	Electives (2 approved Political Science electives)	8
<i>International Track:</i>		
ECON 111	History of Economic Thought	4
ECON 121	International Trade	4
ECON 123	International Finance	4
ECON 125	Economic Development	4
ECON 161	Computer Applications in Economics	4
Two of the following international courses:		8
BUSI 163	International Financial Management	
ECON 118	Globalization History: Economic, Environmental, and Demographic Interactions	
INTL 174	Global Environmental Policy	
POLS 164	International Political Economy	

*Note: 1) Other international electives can be approved by the Economics Department*

LANG 025	Four (4) semesters of one (1) non-English language, or proven competence at the 4th semester level.	
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## Bachelor of Science Major in Economics

In order to earn the bachelor of science degree with a major in economics, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*

One course from each subdivision below:

#### *Social and Behavioral Sciences*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### *Arts and Humanities*

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### *Natural Sciences and Mathematics*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.*

### II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

*Note: 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.*

### III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### IV. Major Requirements

ECON 053	Introductory Microeconomics	4
ECON 055	Introductory Macroeconomics: Theory and Policy	4
ECON 101	Intermediate Microeconomic Analysis	4
ECON 103	Intermediate Macroeconomic Analysis	4
One of the following courses:		4

- MATH 037 Introduction to Statistics and Probability
- MATH 039 Probability with Applications to Statistics

### V. Complete one of the following tracks:

#### *Social Science track:*

ECON 111	History of Economic Thought	4
ECON 190	Econometrics	4
ECON	Electives (6 additional courses ECON 071 or higher, excluding ECON 101L, 103L & 191)	24

#### *One of the following groups:*

- a. MATH 033 Elements of Calculus 4
- b. MATH 051 Calculus I 4
- MATH 053 Calculus II 4
- MATH 055 Calculus III 4

#### *Applied Economics track:*

One of the following courses:		4
ECON 161	Computer Applications in Economics	
ECON 190	Econometrics	
One of the following courses:		4
MATH 033	Elements of Calculus	
MATH 045	Introduction to Finite Mathematics and Calculus	
ECON	Electives (4 additional courses numbered ECON 071 or higher, excluding 101L, 103L & 191)	16
BUSI 031	Principles of Financial Accounting	4
BUSI 053	The Legal and Ethical Environment of Business	4
BUSI	Elective (1 additional approved course)	4

*Note: 1) Students completing a concentration in Finance in the ESB need only complete 3 ECON electives.*

#### *Mathematical Economics track:*

ECON 101L	Intermediate Microeconomic Analysis Laboratory	1
ECON 190	Econometrics	4
ECON	Electives (2 additional courses numbered ECON 071 or higher excluding 191)	8
MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4

One of the following courses:	4
MATH 072 Operations Research Models	
MATH 074 Discrete and Combinatorial Mathematics	
One of the following courses:	4
MATH 141 Linear Algebra	
MATH 145 Applied Linear Algebra	
MATH Elective (1 additional approved course)	4

## Minor in Economics

In order to earn the minor in economics, students must complete a minimum of 6 courses at Pacific with a Pacific minor grade point average of 2.0.

### Minor Requirements:

ECON 053	Introductory Microeconomics	4
ECON 055	Introductory Macroeconomics: Theory and Policy	4
ECON	Electives (4 additional courses numbered ECON 071 or higher excluding ECON 101L, and 191)	16

*Note:* 1) 10 units must be completed at Pacific. 2) ECON 101 is strongly recommended. It is a prerequisite to several upper division courses. 3) BUSI 031 (Principles of Financial Accounting, 4 units) and BUSI 033 (Principles of Managerial Accounting, 4 units) together can substitute for one of the economics electives.

## Course Offerings

### ECON 051. 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 051 may substitute for the ECON 055 requirement. Students can receive departmental credit for ECON 051 only if it is taken prior to both ECON 053 and ECON 055.

### ECON 053. 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:* Algebra skills, as evidenced by a passing score on the General Education quantitative skills examination or the equivalent SAT Subject Test in Math, or Math 005, 007, 033, 041, 045, 051, 053, or 055, or a 4 or higher on the AP Calculus AB or BC examination.

### ECON 055. 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. *Prerequisites:* Algebra skills, as evidenced by a passing score on the General Education quantitative skill-examination or the equivalent SAT Subject Test in Math, or Math 005, 007, 033, 041, 045, 051, 053, or 055, or a 4 or higher on the AP Calculus AB or BC examination

### ECON 071. 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, globalization, economic development of the poor countries, world population problems, international environmental economics, and transition

economies. *Prerequisites:* ECON 053 and 055 or 051. (ECON 071 cannot be taken for credit if the student has taken or is concurrently enrolled in ECON 121 or 123. ECON 071 is also listed as an SIS course.)

### ECON 093. Special Topics (4)

### 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 053.

### ECON 101L. Intermediate Microeconomic Analysis Laboratory (1)

This addition to ECON 101 will present microeconomic theory in a more rigorous, formal and mathematical way. It is necessary for students completing the Bachelor of Science – Mathematical Economics Track or planning to attend graduate school in Economics. *Prerequisite:* ECON 053 and Calculus (MATH 033, MATH 051 or a 4 or a 5 on AP Calculus AB).

### 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 053 and 055.

### ECON 103L. Intermediate Macroeconomic Analysis Laboratory (1)

This addition to ECON 103 will present macroeconomic theory in a more rigorous, formal and mathematical way. It is necessary for students completing the Bachelor of Science – Mathematical Economics Track or planning to attend graduate school in Economics. *Prerequisite:* ECON 053, ECON 055 and Calculus (MATH 033, MATH 051 or a 4 or a 5 on AP Calculus AB).

### ECON 111. History of Economic Thought (4)

The rise and fall of schools of economic thought around the world, as well as specific ideas, theories, doctrines, applications and policies. The course will connect the history of economic thought with the history of the underlying economies. We will examine the effects of economic evolution, economic revolution and changes in technology resources, as well as contemporary political, social and religious developments. Expect lively discussions, particularly of the political influences affecting individual economists and the implications of their work. We will read works about and by Adam Smith, David Ricardo, Thomas Malthus, John Stuart Mill, Karl Marx, modern microeconomists, Veblen, Keynes, and others. *Prerequisite:* ECON 053 and 055 or permission of the instructor.

### ECON 118. Globalization History: Economic, Environmental, and Demographic Interactions (4)

'Globalization' is conveniently considered a recent, even post-World War II, phenomenon. This conventional notion is challenged in this course, where we analyze new research that states that deep worldwide connections have existed for many centuries. The course is divided into three sections. Part I examines geographical and environmental factors that determined living standards in specific regions throughout the world during the past 13,000 years. Part II focuses on the birth of global trade beginning in the 16th century. Dynamics within China played a crucial role, while Europeans were middlemen (rather than prime movers) in this process. In Part III of the course, the Industrial revolution in Europe is compared with industrial condition within China, Japan, and elsewhere simultaneously. A debate is discussed concerning whether industrialization occurred first in northwest Europe because of internal conditions within a European core, versus a view that environmental constraints at a global level played a key role in determining why industrialization first appeared within northwest Europe. *Prerequisites:* ECON 053 and 055, or permission of the instructor.

**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 053 and 055. (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 053 and 055. (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 053 and 055 or permission of the instructor. (Course also listed among SIS courses.)*

**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 053 and 055 or 051.*

**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 053 and 055, 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 053.*

**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 053; 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 053.*

**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 033, or permission of the instructor.*

**ECON 161. Computer Applications 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 053, 055; MATH 037 or 039 or 130 or 131 or permission of the 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 053 or 051.*

**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 053. (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 053 and 055 (or 051) and MATH 037 or 039 or 130 or 131.*

**ECON 191. Independent Study (2-4)****ECON 093, 193. Special Topics (4, 4)**

## English

Phone: (209) 946-2121

Website: [www.pacific.edu/college/english](http://www.pacific.edu/college/english)

Camille Norton, Chair

### Degrees Offered

Bachelor of Arts

### Majors Offered

English

### Minors Offered

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.

### Concentrations Offered

Creative Writing

Professional Writing

English Literature

American Literature

World Literature

Film Studies

Interdisciplinary Studies

Language and Critical Theory

Gender Studies

### Degrees in English

Undergraduate majors may focus their elective courses to emphasize writing, literature, language, or film studies, with additional concentrations listed above. The department offers a minor in English for students committed to a different academic major.

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.

### Bachelor of Arts Major in English

In order to earn the bachelor of arts degree with a major in English, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

#### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

IA. Individual and Interpersonal Behavior

IB. U.S. Studies

IC. Global Studies

#### Arts and Humanities

IIA. Language and Literature

IIB. Worldviews and Ethics

IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

IIIA. Natural Sciences

IIIB. Mathematics and Formal Logic

IIIC. Science, Technology, and Society

or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

#### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

#### III. Fundamental Skills

Demonstrate competence in:

Reading

Writing

Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

#### IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

#### V. Major Requirements

Minimum 40 units or 11 courses, including:

Lower Division Core Courses:

ENGL 025 Any section 4

ENGL 041 British Literature before 1800 4

Two of the following survey courses: 8

ENGL 043 British Literature after 1800

ENGL 051 American Literature before 1865

ENGL 053 American Literature after 1865

ENGL 063 Masterpieces of World Literature

Upper Division Courses:

One of the following Critical theory courses: 4

ENGL 125 Critical colloquium

ENGL 127 Contemporary Critical Issues

One of the following Upper-Division writing courses: 4

ENGL 105 Technical Communications

ENGL 109 Writing in the Workplace

ENGL Electives (4 additional upper-division courses numbered above 100 excluding ENGL 193); one elective may be a lower division survey course of ENGL 031 (Aesthetics of Film) 16

### *VI Concentration Requirements*

Minimum 3 courses:

Complete a concentration below: These courses satisfy ENGL electives above.

#### Creative Writing

Complete 3 of the following:

ENGL 107  
ENGL 111  
ENGL 113  
ENGL 115

#### Professional Writing

Complete 3 of the following:

ENGL 082  
ENGL 105  
ENGL 109  
ENGL 182

#### English Literature

ENGL 043

Complete 2 of the following

ENGL 130  
ENGL 131  
ENGL 133  
ENGL 141  
ENGL 143

#### American Literature

Complete one of the following:

ENGL 051  
ENGL 053

Complete 2 of the following:

ENGL 135  
ENGL 151  
ENGL 153  
ENGL 161

#### World Literature

ENGL 063

Complete 2 of the following:

ENGL 122  
ENGL 123  
ENGL 125  
ENGL 127  
ENGL 126  
ENGL 128  
ENGL 163  
ENGL 164  
ENGL 166

#### Film Studies

Complete 3 of the following:

ENGL 031  
ENGL 115  
ENGL 117  
ENGL 121  
ENGL 122  
ENGL 123

#### Interdisciplinary Studies

Complete 3 of the following:

ENGL 122  
ENGL 123  
ENGL 125  
ENGL 126  
ENGL 127  
ENGL 128  
ENGL 164

#### Language and Critical Theory

Complete 3 of the following:

ENGL 082  
ENGL 122  
ENGL 125  
ENGL 127  
ENGL 182

*Note: ENGL 127 may be taken more than once*

#### Gender Studies

Complete 3 ENGL courses that are cross listed in Gender Studies

### 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 with a Pacific minor grade point average of 2.0.

#### *Minor Requirements:*

ENGL 025	Any section	4
Two of the following courses:		8
ENGL 041	British Literature before 1800	
ENGL 043	British Literature after 1800	
ENGL 051	American Literature before 1865	
ENGL 053	American Literature after 1865	
ENGL 063	Masterpieces of World Literature	
ENGL 031	Aesthetics of Film	
ENGL	Electives (3 additional courses numbered 100 or above excluding ENGL 187 and 193)	8

#### *Single Subject Credential in English*

Single Subject students will be required to take TWO upper-division writing courses from one of the following: ENGL 105 (Technical Communications), and ENGL 109 (Writing in the Workplace).

Students interested in pursuing certification to teach English at the secondary school level should consult with the English Department Credential Adviser, Dr. Amy Smith.

### Course Offerings

#### **ENGL 023. Business Communications (4)**

This course is designed to help students produce professionally-oriented writing that is clear, concise, and persuasive. For each assignment students will create documents with specific professional applications, such as resumes, memos, proposals, reports, and/or brochures. Students will be challenged to recognize the role audience and situation plays in designing any professional document. Since verbal communication is just as important as written, students will also present their work in class using PowerPoint. *Prerequisites: PACS 001, 002.*

**ENGL 025. English 25 (4)**

English 025 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: a passing score on the General Education writing skills examination or WRIT 021. Multiple and varied sections are listed by thematic focus title each semester.*

**ENGL 031. Aesthetics of Film (4)**

An introduction to the principles of artistic expressiveness of films; lighting, color, camera, 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 041. 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 043. 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 041, but that course is not a prerequisite.

**ENGL 051. 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 053. American Literature after 1865 (4)**

The second half of the American literature survey, beginning with the Realists (writers such as James, Twain, Crane and Chopin) and moving into the 20th century with such authors as H.D., Pound, Stevens, Eliot, Frost, Hemingway, Cummings, Faulkner, Williams and Hughes. Contemporary writers will include O'Hara, Ginsberg, O'Connor, Snyder, Morrison, Li-Young Lee, and Alice Walker.

**ENGL 063. Masterpieces of World Literature (4)**

This course explains selections from the western canon as well as other world cultures, with emphasis on the linkages of the great literary traditions; geographic, national, mythic/archetypal, generic, and thematic. The literary texts will be read through various critical prisms, exploring philosophical, political, psychological, and ethnic contexts. The sweep of the course will move across time and place. Some examples would include the study of classics with the Medieval and Early Modern. Readings in modern and contemporary writing will show how these texts have been influenced by the long heritage of world literature, significant for understanding current globalization, and both the unity and diversity of the human community.

**ENGL 082. How English Works (4)**

Studies the nature, use, and workings of English as a modern language. Considers word-formation (morphology), and phrase and clause structure (syntax) in relation to meaning (semantics), use (pragmatics), stylistics, and communication (discourse theory). Addresses significant issues such as standardization, dialects, language acquisitions, etc. The course is intended for prospective teachers, writers, lawyers, and other professionals who work with language.

**ENGL 087/187. 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 093. Special Topics (4)****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 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. *Prerequisite: Junior Standing*

**ENGL 107. Writing Non-Fiction (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. Proof-reading 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 115. Screenwriting (4)**

In this comprehensive course, students study the art and craft of short subject and feature film screenwriting, including, but not limited to: theme, plot, story, structure, characterization, format, and dialogue via writing, lecture, discussion, close analysis, and instructor-peer critique. Time will be spent not only on idea generation and visual storytelling, but on how to meaningfully connect with the audience. Students will be required to write: two short film treatments (one original and one adaptation), a short film script, a detailed feature film treatment, and the first 10+ pages of a feature film screenplay.

**ENGL 117. Film Production (4)**

Students are introduced to the fundamental principles of motion picture production, emphasizing visual storytelling and auditory communication through demonstration, hands-on production and critical analysis. Students produce short films in small crews. Some equipment and materials are provided by the school, but approximately \$300 should be budgeted for miscellaneous expenses and lab fees.



**ENGL 121. Major Filmmakers (4)**

Focus is on the work of such major directors as Coppola, Fassbinder, Scorsese, 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 film, to the literary work and the 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 significant American and international films.

**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 formalist, psychoanalytic, structuralist, gender and feminist and deconstructionist in representative perspectives offered by designated English Department members and guest lecturers.

**ENGL 126. Literature and the Environment (4)**

This class will examine how literature reflects, represents, and constructs the "nature" of Nature both in scientific and cultural terms. In a time when the "dying planet" is foremost in our consciousness, we will look at literary texts that have idealized, demonized, engaged debate, or projected assumptions about the role of such topics as the wilderness and the frontier, the garden and the jungle, the desert and the city. We will consider the role of animals as creatures with whom we share the planet: how they play a psychological and philosophical function in our literary heritage. The course may focus on many topics: the role of memory and landscape, the Pastoral and Paradise; the ethical and legal constructions of Nature; Romanticism and its discontents; how poetry, the novel, memoir, and travel writing have shaped our understanding of the natural world and the built environment. We will consider the role of science, technology and the Post Human and Virtual Nature as modes of writing, research and thinking that reflect the emergent field of Ecocriticism.

**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, post-colonialism, 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 128. Science and Literature (4)**

This class will bridge the gap between the study of literature and the study of science as we explore the intersections between these two within the realm of human culture that they both share. We will explore how the practice of science is represented (or misrepresented) in literature and culture. We will study the effects that culture and literature have on science, on scientific revolutions and the acceptance of new theories. We will also examine how the

practice of science can be understood as "literary". Our readings will come from scientists like Newton and Darwin, from literary artists like Jonathan Swift and Connie Willis, and from the theorists that study the practice of science.

**ENGL 130. Chaucer and His Age (4)**

Focuses on Chaucer as the central figure of the medieval period, with in-depth study of *The Canterbury Tales*, *The Book of the Duchess*, *The House of Fame*, *The Parliament of Fowls*, and Chaucer's romance, *Troilus and Criseyde*. Introduces students to historical and cultural frameworks for the medieval world.

**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 once for credit with a different focus.

**ENGL 134. Jane Austen (4)**

This course allows students to see how a young girl writing stories for her family transforms into one of the best loved novelists of all time. Discussion covers her published novels, letters, and previously unpublished childhood stories. In addition, we'll consider why certain writers become "ageless" figures who remain alive and well in popular culture by viewing film versions of her novels and creative adaptations like *Clueless* and *Bridget Jones's Diary*. Responsibilities include quizzes, papers, and a major project, to be shared at the end-of-semester "Jane Austen Night" on campus.

**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 once for credit with a different focus.

**ENGL 141. Topics in British Literature Pre-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 once 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 once 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 once 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 once 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 once for credit with a different focus.

**ENGL 163. Topics in Transnational 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 once for credit with a different focus.

**ENGL 164. WAR (4)**

This course allows students to consider the various ways writers and filmmakers struggle to describe the indescribable—war. How does war affect the men and women who fight it, and those left behind? Who decides what the difference is between revolution and treason, between freedom fighters and terrorists? How can war provide us with the means to show our greatest strengths and capacity for self-sacrifice—yet also make us, somehow, less than human? Assignments include papers and in-class presentations.

**ENGL 166. Literature and the Law (4)**

Fictional texts are read against legal texts in the hope that they will be mutually illuminating and that they will enhance our understanding of law and justice. The course will provide you with everything you need to know as a lay person about the American legal system and contribute to your civic education. Justice is analyzed with respect to evidence, criminal intent, mitigating circumstances, punishment, oral performance of the lawyers, witnesses, prosecutors, etc. The course encourages students to identify and construct logical and strong arguments, an asset no matter what profession they choose.

**ENGL 182. History of the English Language (4)**

Studies the development and change of English language from the beginnings to the present day. Supports students' understanding of the language through historical and cultural analysis. Considers English phonology and orthography in connection with the study of texts in historical (Old, Middle, and Modern English) and regional English. Expands on the poetics and styl-

istics begun in English 082, and give special attention to the history of the book. Intended for English majors and others who will use linguistic knowledge in the analysis and production of texts.

**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.

## Ethnic Studies Program

Phone: (209) 946-2245; (209) 946-2611

Location: WPC 212 Social Science Hub; WPC 127

Zhou Xiaojing, Director

### Minors Offered

Ethnic Studies

Ethnic Studies is an interdisciplinary minor, incorporating courses offered in various schools and departments. It provides students with multiple models of critical theories and methodologies for examining the intersections of race, ethnicity, gender, culture, and class in the historical formations of the United States, with an emphasis on the experiences and perspectives of historically disenfranchised populations such as African Americans, Asian Americans, Latinos, and Native Americans.

Ethnic Studies broadens students' major fields of study, prepares students for interdisciplinary inquiries at the graduate level, and enhances students' employment opportunities in law, education, business, medicine, government, communication, and social services, among other professions.

### Mission Statement

The Ethnic Studies Program at the University of the Pacific is dedicated to integrated multidisciplinary learning which equips students with the conceptual and practical skills necessary for participating competently and responsibly in all aspects of civic life that contribute to advancing social equity, inclusive democracy, and global citizenship.

### Objectives

The Ethnic Studies Program's Goals and Objectives consist of the following: 1) to provide an opportunity for all students to gain a deeper understanding of the relationship between social structure and the experience of racial and ethnic difference; 2) to examine the problems of racial and ethnic inequality as a means of promoting the pursuit of social justice and equity 3) to investigate the intricate relationships among race, class, gender, and culture historically, and in contemporary society; 4) to facilitate the incorporation of scholarship on underrepresented racial and ethnic groups into the university curricula; 5) to equip students with historical frameworks and theoretical tools that will enable them to engage more productively in their respective areas of study, and to better prepare them for their leadership roles in a democratic society; and 6) to foster ties among all students of various racial and ethnic backgrounds, and between students and local communities in the larger communities.

### Minor in Ethnic Studies

In order to earn the minor in ethnic studies, students must complete a minimum of 20 units and 6 courses with a Pacific minor grade point average of 2.0.

#### Minor Requirements:

ETHN 011	Introduction to Ethnic Studies	4
Electives	5 additional courses from Ethnic Studies course offerings	16-20

*Note: 1) See the list at the end of ETHN course offerings. 2) At least two of these courses must be 100 or above. 3) These 5 courses have to be taken in more than one discipline.*

Students are not required to take a capstone course to complete the minor.

Optional: 4

ETHN 189 Experiential Learning Practicum

ETHN 197 Undergraduate Research

*Note: 1) Student must have a 2.5 GPA in order to take ETHN 197. 2) ETHN 011 is a prerequisite for the above capstone courses*

### Course Offerings:

#### ETHN 011. Introduction to Ethnic Studies (4)

This course introduces students to the theories and practices of Ethnic Studies, with a focus on the racial formation in the United States, and its impact on the experiences and social statuses of racialized groups, including, but not limited to, Blacks, Latinos, Native Americans, Asians, /Pacific Islanders, and Whites. Our primary course contents include histories, critical race theories, media representations and critical studies. While California serves as the major geographical location of racial formation in our study, the issues we explore are situated in national and global contexts. Through a critical examination of histories and contemporary issues regarding the social positions of racialized groups in the U.S., we seek to understand "the irreducibility of race in U.S. political and cultural life" (Winant 33). (At the same time, we will examine the forces and conditions for social change and cultural transformation. The contributions of historically marginalized "minority" Americans to the development of American democracy will be a major discussion and research topic.

#### ETHN 051. Introduction to Black Studies (4)

This course provides an introduction to the interdisciplinary field of African American Studies. The course will provide students with a substantive knowledge base of the historical, cultural, intellectual, social, political, and economic experiences of African Americans.

#### ETHN 142. Implementation for Social Change (4)

This course is designed to examine the rationale, general strategies, and procedures for effecting social change. The course will focus on planned change in which attempts to bring about change are conscious, deliberate, and intended. The focus of the change efforts will be with systems that directly and indirectly impact the social functioning of African Americans. People of "color" continue to be subjected to hostile and oppressive individual, organizational and environmental conditions.

#### ETHN 146. Cultural Contributions of African Americans (4)

This course will address the social, political, economic, psychological, aesthetic and cultural contributions of African Americans to America. America is truly "A Nation of Nations" (Walt Whitman). People of American ancestry represent one of these nations. "They are philosophers, scholars and human rights proponents from the era of slavery to the present", says Talmadge Anderson.

#### ETHN 164. Ghetto Life (4)

This course will address "Ghetto Life" from a historical and current perspective, the injustices-sociological, psychological, economical, and educational that people in the "Ghetto" are subjected to will be fully examined. Students will be challenged to reassess "The Meaning of Life" for some people who are forced to reside in a geographical area (community of physical space), and a psychological area (community of mind) that are void of life enhancing means for a quality of life that all human beings deserve. What are the underlying factors that create a "Ghetto"? We will answer this question.

#### ETHN 189. Service Learning Practicum (4)

As one of the capstone courses, the Service Learning Practicum offers students an opportunity to integrate and apply the skills, knowledge, and theories they have learned to community-based service learning projects related to their academic interests. Each student will work with a faculty supervisor, who will provide guidance for the student's experiential learning. While a capstone

course is strongly recommended, it is optional. Students can take an alternative course for completing a minor in Ethnic Studies. *Prerequisite: Completion of ETHN 011 and another course in Ethnic Studies.*

**ETHN 191. Independent Study (2-4)**

Undergraduate independent study. A student taking this course will be working with a faculty member approved by the Director of Ethnic Studies.

**ETHN 193. Special Topics (2-4)**

**ETHN 197. Undergraduate Research (4)**

This is one of the two capstone courses. It offers students an opportunity to integrate and apply the skills, knowledge, and theories they have learned to a particular research project in a field of their academic interest. Each student will work with a faculty supervisor who has expertise in the student's research topic. While this course is strongly recommended, it is optional. Students do not need to take this course for completing a minor in Ethnic Studies. *Prerequisites: Overall GPA 2.5 or above, completion of ETHN 011 and another course in Ethnic Studies.*

### Additional Ethnic Studies Courses:

#### Anthropology (SIS)

- ANTH 053. Introduction to Cultural Anthropology
- ANTH 054. Antropologia cultural (ANTH 053 in Spanish)
- ANTH 112. Physical Anthropology

#### Communication

- COMM 143. Intercultural Communication

#### Economics

- ECON 180. Labor Economics

#### Education

- CURR 129/229. Introduction to Bilingual Education
- CURR 137x. Teaching English Learners
- EADM 130/230. Cultural Basis of Conflict in Education

#### English

- ENGL 025. American Families
- ENGL 025. Between Two Worlds: Exile in Contemporary Lit. & Film
- ENGL 025. Black Women Writers
- ENGL 025. Gender, Race, and Representation in Film and Fiction
- ENGL 025. Multi-Ethnic American Literature: Space, Body, and Identity
- ENGL 025. Sports and Scandal
- ENGL 161. Topics in American Ethnic Literature

#### Ethnic Studies

- ETHN 011. Introduction to Ethnic Studies
- ETHN 051. Introduction to Black Studies
- ETHN 097. Prejudice and Racism
- ETHN 142. Implementation for Social Change
- ETHN 146. Cultural Contributions of African-Americans
- ETHN 164. Ghetto Life
- ETHN 189. Service Learning Practicum
- ETHN 191. Independent Study
- ETHN 193. Special Topic
- ETHN 193. Special Topics on Issues of Race and Ethnicity
- ETHN 197. Undergraduate Research

#### History

- HIST 120. Native American History
- HIST 121. Colonial America
- HIST 124. History of the American West
- HIST 130. History of California
- HIST 132. History of American Immigration from 1800 to 1900s
- HIST 134. African American History
- HIST 137. "His-panic" USA (approval in process)
- HIST 139. Borderlands: Life on the US-Mexico Border

#### Modern Languages and Literature

- SPAN 124. Hispanic Writers in the U.S.

#### Music

- MHIS 008. History of Jazz

#### Political Science

- POLI 104. Urban Government
- POLS 134. American Political Thought

#### Psychology

- PSYC 129. Developmental Psychology

#### Sociology

- SOCI 061. Urban Society and Policy
- SOCI 093. Social Problems
- SOCI 104. Sociology of Sport
- SOCI 108. Food, Culture, and Society
- SOCI 123. Sex and Gender
- SOCI 133. Criminology
- SOCI 141. Prejudice and Racism
- SOCI 172. Social Inequality

#### Speech-Language Pathology, School of Pharmacy and Health Sciences

- SLPA 143. Multicultural Populations

#### Sport Sciences

- SPTS 141. Sport in America

## Film Studies

Phone: (209) 946-2613

Location: Humanities Building

Website: <http://www.pacific.edu/college/film>

Diane Borden, Director

### Major Offered

Self-Designed

### Minor Offered

Film Studies

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, auteur theory and genre theory. 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 available with the assistance of faculty advisors. Candidates for the major in Self-Designed Film Studies are required to take a minimum of 9 courses including three required core courses, plus three more cognate courses.

*The Minor:* A minimum of five courses (or 20 units) including the required core course ENGL 031-Aesthetics of Film.

### Regular Offerings

ARTS 095	Computer Graphic Design II: Time Based Media
ARTH 114	20th Century European Art & Film
ARTH 116	Contemporary World Art
ARTH 118	Art in the United States: 1865-1945
ASIA 120	Asian Cinemas
COMM 193	Documentary Film as Persuasive Communication
ENGL 031	Aesthetics of Film
ENGL 115	Screenwriting
ENGL 117	Introduction to Film Production
ENGL 121	Major Filmmakers
ENGL 122	Literature and Psychology
ENGL 123	Film, Literature and the Arts
ENGL 124	Film History
ENGL 127	Contemporary Critical Issues (when taught by film faculty)
ENGL 131	Shakespeare
ENGL 191	Independent Study

ENGL 193	Special Topics such as: Alfred Hitchcock, Woody Allen, Film Noir, Contemporary World Cinema, Contemporary American Cinema
FREN 120	French Cinema
RELI 171	Religion and Cinema
RUSS 120	Contemporary Russian Film
SPAN 114	Latin American Women Directors

*One course toward the minor may be chosen from among the following pool of adjunct offerings.*

ARTS 011	Photography I
ARTS 045	Digital Photography
ARTS 095	Computer Graphic Design II: Time-Based Media
ARTS 141	Photography II
ARTS 143	Photography III
COMM 131	Media Production

### Course Offerings

#### 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 Film Studies minor.

#### ARTH 116. Contemporary World Art 1945-present (4)

This course will explore major artists, styles, and movements in world art from 1945 until the present. These include Abstract Expressionism, Pop, Land Art, Installation, Video, Performance, Feminist, Post Colonial, among others. At least five films will be shown that coincide with the aforementioned developments. Topics such as the use of new materials and media, the impact of popular culture and technology, the effects of censorship, and the relationship between art and gender issues will be discussed. We will explore art in the U.S., Europe, Japan, Africa, Australia, the Middle East, among others. This course satisfies the requirements for the Art History major and minor, the Film Studies major (self-designed) and minor, and the Gender Studies major (self-designed) and minor. There are no prerequisites, although ARTH 007, ARTH 009, or ARTH 114 is helpful.

#### ARTH 118. Art in the United States: 1865-1945 (4)

This course will explore major painters, sculptors, architects, and film makers in the U.S., 1865-1945. Topics such as depictions of race and immigration, the impact of technology upon visual representation, art and politics, and the impact of gender on art will be discussed. Expatriate art, the Ash Can School, the Stieglitz Group, the New Deal art projects and other significant styles will also be examined.

#### ARTS 045. Digital Photography (3)

This course provides a foundation for the historical, technical and aesthetics of digitally based photography through a series of applied assignments. Included are practical assignments for working with digital cameras, scanners and a selection of software for image editing and printing.

#### ARTS 095. Computer Graphic Design II: Time Based Media (3)

This course examines and develop projects using computer-generated imagery and time-based software applications. Applications include, but are not limited to digital video editing, interactive multi-media and the World Wide Web. *Prerequisite:* ARTS 075 or Instructor's permission.

**ARTS 141. Photography II (3)**

This is a highly experiential course designed to provide direct, high quality contact with professional resources (human and material) and involve photographers in a selection of assignments exemplary of the larger field of professional photography. This class will undertake four assignments that involve studio visits, extensive fieldwork and in-class activities that provide publication experience through the creation of press-ready and web-ready photographic materials. *Prerequisites: ARTS 045.*

**ARTS 143. 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 141.*

**ASIS 120. Asian Cinemas (4)**

How do contemporary films from China, Hong Kong, Taiwan, Japan, Korea, Vietnam and India represent their people, re-imagine their cultural identities, and negotiate the local and global, tradition and modernity? This course is an introduction of Asian cinematic narratives. The focus will be on trying to map the overall picture of each cinema, and then examine their major films. Possible topics include cinematic history of each country; relationships to literary and cultural discourses; different film genres; major directors, and various thematic concerns. The aims of this course are to expand your knowledge of both the broad cinematic and socio-historical contexts of Asian cinemas, as well as to enhance your critical thinking. Lectures and readings in English, all films have English subtitles; no prior background is required.

**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 031 or permission of the instructor. Lab fee required.*

**COMM 193. Documentary Film as Persuasive Communication (4)****ENGL 031. Aesthetics of Film (4)**

An introduction to the principles of artistic expressiveness of films: lighting, color, camera, 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 115. Screenwriting (4)**

In this comprehensive course, students study the art and craft of short subject and feature film screenwriting, including, but not limited to: theme, plot, story structure, characterization, format, and dialogue via writing, lecture, discussion, close analysis, and instructor-peer critique. Time will be spent not only on idea generation and visual storytelling, but on how to meaningfully connect with the audience. Students will be required to write: two short film treatments (one original and one adaptation), a short film script, a detailed feature film treatment, and the first 10+ pages of a feature film screenplay.

**ENGL 117. Film Production (4)**

Students are introduced to the fundamental principles of motion picture production, emphasizing visual storytelling and auditory communication through demonstration, hands-on production and critical analysis. Students produce short films in small crews. Some equipment and materials are provided by the school, but approximately \$300 should be budgeted for miscellaneous expenses and lab fees.

**ENGL 121. Major Filmmakers (4)**

Focus is on the work of such major directors as Coppola, Fassbinder, Scorsese, 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 film to the literary work and the 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 transitional developments. Screening and analysis of significant American and international films.

**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, post-colonialism, 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 131. Shakespeare (4)**

Eight to ten 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 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.

**FREN 120. 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 with no prerequisite. *Prerequisite for French version only; FREN 025 or equivalent.*

**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 Biblical and Western. The course intends to demonstrate the power of cinematic images to define, enrich and sometimes pervert the religious sensibility.

**RUSS 120. Contemporary Russian Film (4)**

A course designed for a general audience. No knowledge of Russian is required; lectures and readings are entirely in English. All the movies to be screened have English subtitles. This course is an overview of contemporary Russian film as representation and reflection of Russian cultural values and political and economic changes for the 1960s to the present. Students will see

and discuss works of major film directors in their social, political, historical, and cultural context. They will learn about new cultural trends, the relationship between culture and officialdom, as well as peculiarities of national self-perception (the Russian Idea), gender/ethnicity based interpretations, and artistic realities in Russian film.

**SPAN 114. Cine hispano/Hispanic Film (4)**

A study of the development of Latin American or Peninsular cinema through the analysis of themes, styles, and cinematic techniques. Themes might include Latin American women film directors or the films of Pedro Almodóvar, among others. In Spanish. Films in Spanish with English subtitles. Offered occasionally in English.

## Gender Studies

Phone: (209) 946-2573  
Gesine Gerhard, Director

### Minors Offered

#### Gender Studies

The Gender Studies Program at Pacific is a thriving interdisciplinary consortium of faculty and students committed to both a curricular and cultural environment supportive of the study of gender. We are interested in how gender intersects with definitions of nationality, race, ethnicity, and class; and how gender identities are constantly redefined over time. By exploring the relationship between gender identity and cultural meaning, we prepare students to think comparatively, structurally and critically about their experiences and impact on the world. The dialogue we foster among the liberal arts, natural sciences and the professions enriches the intellectual life of Pacific's students and faculty, as well as our surrounding community.

### Minor in Gender Studies

In order to earn a minor in gender studies, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

#### Minor Requirements:

GEND 011 Introduction to Gender Studies

Four of the following courses:

- ARTH 112 19th Century European Art
- ARTH 114 Twentieth Century European Art and Film
- ARTH 116 Contemporary World Art
- ARTH 118 Art in the United States
- ARTH 124 Sex, Gender, and the Arts
- BIOL 186 Hormones and Behavior
- CLAS 120 Sexuality in Greek Society
- CLAS 122 Sexuality in Roman Society
- ENGL 025 Desire/Power/Gender
- ENGL 025 Black Women Writers
- ENGL 025 Multiethnic American Literature
- ENGL 025 Sport and Scandal
- ENGL 041 British Literature Before 1800
- ENGL 122 Literature and Psychology
- ENGL 123 Film, Literature, and the Arts
- ENGL 125 Critical Colloquium
- ENGL 127 Contemporary Critical Issues
- ENGL 131 Shakespeare
- ENGL 135 Faulkner and Morrison
- ENGL 140 English Renaissance Literature
- ENGL 141 Medieval Women
- ENGL 161 Topics in American Ethnic Literature
- FRCH 128 Voices and Images of Women
- GEND 191 Independent Study
- HIST 065 Women and War
- HIST 133 Women in United States History
- HIST 135 Women in Time and Place
- HIST 169 Gender and the History of Science

PSYC 066	Human Sexuality
RELI 044	Sex, Sin, and Salvation
SPAN 114	Cine Hispano/Hispanic Film
SPAN 193	Latin America Film: Women Directors
SOCI 123	Sex and Gender
SPTS 141	Sports in America

*Note: 1) Only 2 of these courses can be taken in the same department. 2) There are special topics courses, frequently offered, which may be included toward the minor requirement.*

## Course Offerings

### GEND 011. Introduction to Gender Studies

This course explores the social construction of masculinities and femininities throughout history and in the contemporary world. Students will learn about the differences between sex and gender, the relationship of gender to power, and the ways in which gender is inscribed in various cultural discourses and practices. A multi-disciplinary analysis will be incorporated throughout the course.

Please see the appropriate departments for course descriptions of the following:

ARTH 112	19th Century European Art
ARTH 114	Twentieth Century European Art and Film
ARTH 116	Contemporary World Art
ARTH 118	Art in the United States
ARTH 124	Sex, Gender, and the Arts
BIOL 186	Hormones and Behavior
CLAS 120	Sexuality in Greek Society
CLAS 122	Sexuality in Roman Society
ENGL 025	Desire/Power/Gender
ENGL 025	Black Women Writers
ENGL 025	Multiethnic American Literature
ENGL 025	Sport and Scandal
ENGL 041	British Literature Before 1800
ENGL 122	Literature and Psychology
ENGL 123	Film, Literature, and the Arts
ENGL 125	Critical Colloquium
ENGL 127	Contemporary Critical Issues
ENGL 131	Shakespeare
ENGL 135	Faulkner and Morrison
ENGL 140	English Renaissance Literature
ENGL 141	Medieval Women
ENGL 161	Topics in American Ethnic Literature
GEND 191	Independent Study
HIST 065	Women and War
HIST 135	Women in Time and Place
HIST 133	Women in United States History
HIST 169	Gender and the History of Science
PSYC 066	Human Sexuality
RELI 044	Sex, Sin, and Salvation
SOCI 123	Sex and Gender
SPAN 114	Cine Hispano/Hispanic Film
SPAN 193	Latin America Film: Women Directors
SPTS 141	Sports in America

## History

Phone: (209) 946-2145

Location: WPC 210

Website: <http://web.pacific.edu/x8139.xml>

Caroline Cox, Chair

## Degrees Offered

Bachelor of Arts

## Majors Offered

History

Social Sciences

## Minors Offered

History

The History Department is comprised of a team of internationally recognized scholars committed to providing students with knowledge and skills necessary for success in many professions. We believe that the study of history is exciting, vibrant and vitally relevant to understanding the world in which we live. Through intense classroom contact, innovative pedagogical methods and extensive student research projects, we instill in our students human values, critical thinking skills and an appreciation for the complexities of issues that have been of perennial importance. As professional historians we have been particularly successful in disseminating these values to a broader audience, by lecturing publicly and publishing works for both academic and popular audiences.

## Recommended Progression of Study

Students should begin with two foundation courses in sequence from the options shown and proceed to take one course from each of the listed regional and temporal categories. Students must take HIST 070, Historical Imagination class, their sophomore year or as soon as possible after transferring into the program and take HIST 160, Pacific History Seminar, the capstone class, as seniors. Students may take independent study courses or special topics courses at any time.

## 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.

## Bachelor of Arts Major in History

In order to earn the bachelor of arts degree with a major in history, students must complete a minimum of 124 units with a cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4



PACS 003 Pacific Seminar 3: The Ethics of Family, Work, and Citizenship 3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002 but must take PACS 003 when they are seniors.

One course from each subdivision below:

*Social and Behavioral Sciences*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

**II. College of the Pacific BA Requirement**

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

**III. Fundamental Skills**

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

**IV. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.).

**V. Major Requirements**

Minimum 42 units and 11 courses, including:

Two foundation courses in sequence chosen from one of the following groups:

- a. HIST 010 Western Civilization I
- HIST 011 Western Civilization II
- b. HIST 020 United States History I
- HIST 021 United States History II
- c. HIST 030 East Asian Civilization I
- HIST 031 East Asian Civilization II
- d. HIST 040 Colonialism in Latin America
- HIST 041 The Problem With Latin America
- e. HIST 050 World History I
- HIST 051 World History II

**Note:** 1) Majors are required to complete the foundation requirement, in sequence, in their freshman year or within a year of transfer or declaration of major if comparable courses have not been taken at another institution

One of the following global courses: 4

- HIST 052 John Muir’s World: Origins of the Conservation Movement
- HIST 060 A History of Medicine
- HIST 061 A Global History of Food
- HIST 062 History of Warfare
- HIST 063 History of Science and Technology
- HIST 065 Women and War
- HIST 169 Gender and the History of Science

One of the following pre-modern Europe or classics courses: 4

- HIST 100 Renaissance and Reformation
- HIST 101 Tudor and Stuart England
- HIST 102 The Spanish Empire
- HIST 105 Ancient Greece
- HIST 106 Ancient Rome

One of the following 20th century Europe courses: 4

- HIST 111 Europe in Turmoil 1900-1945
- HIST 112 History of the Holocaust
- HIST 113 Europe Since 1945
- HIST 114 Modern Germany

One of the following Early North America courses: 4

- HIST 120 Native American History
- HIST 121 Colonial America
- HIST 122 Revolution and the New Nation
- HIST 123 Civil War Era
- HIST 124 History of the American West

One of the following United States courses: 4

- HIST 130 History of California
- HIST 132 American Immigration
- HIST 133 Women in United States History
- HIST 134 African-American History
- HIST 135 Women in Time and Place
- HIST 136 American Environmental History
- HIST 137 “His-panic” USA
- HIST 139 Borderlands

One of the following Asia courses: 4

- HIST 140 Southeast Asia and the West
- HIST 141 Pre-Modern China to 1840
- HIST 142 Modern Chinese History
- HIST 143 Modernization of Japan

One of the following Latin America courses: 4

- HIST 150 Women in Latin America
- HIST 151 A People’s History of Mexico
- HIST 040 Colonialism in Latin America
- HIST 041 The Problem with Latin America

When sophomores, students must take: 4

- HIST 070 Historical Imagination

When seniors, students must take: 4

- HIST 160 The Capstone (Pacific History Seminar)

**Note:** 1) Special Topic and Independent Study courses may satisfy category requirements with departmental approval.

## Minor in History

In order to earn the minor in history, students must complete seven courses and a minimum of 25 units with a Pacific minor grade point average of 2.0.

### Minor Requirements:

HIST	2 European courses from the pre-modern or 20th century Europe options. (See major listings)	8
HIST	2 United States courses from the United States or early North America options. (See major listings)	8
HIST	2 global or non-western course. (See major listings)	8
HIST 070	Historical Imagination	4

**Note:** 1) 10 units must be completed at Pacific. 2) 3 of the 7 courses must be HIST 100 or higher. 3) Special Topics courses may satisfy areas with departmental approval.

Below are the recommended coursework options for the B.A. in Social Sciences for preparation for the CSET-Social Sciences examinations.

## Bachelor of Arts Major Social Sciences

### with CSET-Social Sciences (California Subject Exams for Teachers)

This major appeals to students with a broad range of interests and those interested in pursuing a social science teaching credential. 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 or World History, 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.

## Bachelor of Arts Major in History, Political Science, Economics, or Sociology

### with CSET-Social Sciences

Students are encouraged to take courses in World History and/or Western Civilization, United States History, California History, and other courses, as are possible in one's bachelor's degree program, in the courses listed in option 1 listed above.

Students who do not major in social sciences, history, or political science but wish to earn a California Social Sciences Single Subject Credential may want to consider earning a minor in history to help prepare them for the CSET exams. Above are minor coursework options recommended for social sciences teacher preparation.

Students interested in getting a social science credential should contact the School of Education or the social science advisor to determine which pre-professional education courses are required for the Single Subject Credential (Department of Curriculum and Instruction):

## History Course Offerings

### Foundation Courses

These are designed to acquaint students with the basic tools necessary for historical inquiry at the college level: critical reading and interpretive skills, research methods, and an appreciation for the complexities of constructing a well-reasoned historical argument.

#### HIST 010. Western Civilization I (4)

An introductory survey of the history of Western Civilization, beginning with the emergence of classical Greek culture and ending with the Reformation in the sixteenth century. The political, social and religious ideas of ancient Rome and Greece have shaped European culture and formed an enduring legacy for our societies until today. The course will examine the life and interactions of men and women throughout the centuries and trace the development of political and social institutions in a geographic area that we know as Europe. Studying this fascinating history of war and peace, destruction and great achievements will help us understand what our present life has to do with the past.

#### HIST 011. Western Civilization II (4)

This course is an introductory survey of the history of Western Civilization from the sixteenth century to the present. We will explore some of the great political, social and economic transformations that led to the Western world as we know it today. The Scientific Revolution and the Enlightenment permanently changed humans' view of the world. Modern states and new forms of governments emerged as the French and Industrial Revolutions undermined the political and economic order. The rise of nationalism and totalitarianism led to catastrophes in the twentieth century. After the Cold War, we face new problems that push us to take stock of where we are at the beginning of the new millennium.

#### HIST 020. United States History I (4)

This is an introductory level course in U.S. history. It begins with Native American societies at the time of European contact and examines major social, political, and cultural issues in U.S. history through colonial settlement, the American Revolution, the early national period, the antebellum era, the Civil War, and Reconstruction. The course considers dominant cultural traditions and perspectives as well as minority cultures and dissent.

#### HIST 021. United States History II (4)

This is an introductory level course in U.S. history that considers the major social, economic, and cultural forces in American society from the Civil War to the present. It examines dominant cultural traditions and perspectives as well as minority cultures and dissent. Topics include the closing of the frontier, progressive reform, industrialization and urban life, the Great Depression, World War II, the Cold War, Civil Rights and social justice movements, the Vietnam War, and the Regan years. Central themes are the U.S.'s increasing role in international affairs, political realignments, reform movements, race and racism, diversity, mass culture, and the historical legacies of the American past.

#### HIST 030. East Asian Civilization I (4)

A broad overview of the rich histories and cultures of East Asia. We will study the timeless writings of Confucius, take a dusty journey down the Silk Road and follow Prince Genji's adventures in medieval Japan. Course focuses primarily on China and Japan, but also nomadic peoples such as Tibetans, Mongols and others in Southeast Asia. Students will discover that East Asian civilizations were at the center of world history in terms of technology, wealth, cultural sophistication, political organization and quality of life.

**HIST 031. East Asian Civilization II (4)**

Survey of East Asian Civilizations from the 19th c. to the present. Covers China and Japan as well as Korea, Singapore and Vietnam. Focuses on East Asian transformation from traditional societies to modern ones as a result of confrontation with the West. It examines their political, economic and cultural histories and traditions, providing a model of modernization different from that of the West.

**HIST 040. Colonialism in Latin America (4)**

Tracing the gruesome experiences of members of a Maya village at the hands of their colonizers, the film *Apocalipto* aptly ends at the first sighting of Spanish arrival, but not without leaving the viewer with the sense that things will never be the same again. Indeed, colonial rule would forever change the lives of Indians, Africans and Spaniards in the Americas. This course covers the history of Mesoamerica and colonial Latin America from pre-Columbian times to Independence in the 1820s. We will consider the political, economic, religious, and cultural history of the Viceroyalty of New Spain (present-day Mexico, Central America and the Caribbean) and the Viceroyalty of Peru (the Andes), with a limited discussion of Portuguese colonies. We will focus on the social relationships between the three dominant racial groups, Indigenous, African and European.

**HIST 041. The Problem With Latin America (4)**

Since independence from Spain in the early nineteenth century Latin America has been plagued with struggles to achieve political stability, social justice, and economic development. Through an analysis of social movements, this course will focus on salient issues in the history of the independent nations of Latin America from the 1820s to the present and will emphasize the development of diverse societies and cultures. We will examine issues of state building, labor movements, inter-regional conflicts, and interethnic relations. We will use a variety of sources—films, lectures, readings, and discussions—in our attempt to understand how social movements shaped and were shaped by economic and political forces. Finally, we will study how colonial legacies, neocolonial ties and globalization have affected Latin America and its people.

**HIST 050. World History I (4)**

A broad survey of ancient civilizations (i.e. Mesopotamian, Egyptian, Hebrew, Greek, Indian, Chinese, Roman), social and economic structures and patterns of trade, cultural and religious traditions and intellectual contributions. Second half covers the development of medieval and early modern civilizations to the 1500s. Particular emphasis will be placed on the decline of the Roman Empire, the role and impact of Christianity and Islam, the European Expansion and global markets, and the European Scientific Revolution.

**HIST 051. World History II (4)**

A survey of World civilization from 1500 to the present. Focuses on patterns of colonization, globalization and the impact of such forces as science and technology, consumerism, and intellectual movements on world history. Other topics include war, the impact of religious movements and the environmental impact of modernity.

**Globally-Oriented Courses****HIST 052. John Muir's World: Origins of the Conservation Movement (4)**

John Muir (1838-1914) is considered by most the “father” of the modern Conservation Movement. This course traces his life, his conservation crusades, and his global legacy. Home of the John Muir Papers, University of the Pacific's Library will be used by all students in the course for research on an aspect of John Muir's contributions to conservation. Field trips to the John Muir National Historic Site in Martinez and to Yosemite National Park are often a part of this course.

**HIST 060. 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, Premed, and Pharmacy students are encouraged to enroll, as well as non-science majors. No prerequisites or specialized knowledge required.

**HIST 061. A Global History of Food (4)**

The scope of the 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 cover history of the interaction of humans with food resources from earliest hunting and gathering societies to the present. The major theme of the course will be the process of globalization, imperialism and the growth of capitalist enterprise and the cost of indigenous cultures and traditional farming practices and how these processes were shaped by trade in food.

**HIST 062. History of Warfare (4)**

Taking a global approach, this course will examine the history of warfare from ancient times through the present. It will look at how warfare was shaped, and shaped by, social, political and technological changes. After briefly looking at warfare in ancient, traditional and medieval societies, the class will turn to the era of modern war beginning in the seventeenth century. From then on, technological and social changes transformed the conduct of war in many parts of the world. The course will end with a consideration of nuclear capability and terrorism. In class assignments, students will have an opportunity to pursue their own interests on a variety of military related themes, events, or issues.

**HIST 063. History of Science and Technology (4)**

Almost every aspect of society, from the automobile to the Internet, from racial and class inequality to gender relations, from AIDS to global warming, includes an important scientific component and has deep historical roots. This course examines the global history of science and technology from antiquity through the present. It seeks to understand how science and technology shape human lives and how society and culture, in turn, shape the development of science and technology.

**HIST 065. Women and War (4)**

This course takes an international approach to studying the history of women and war. Our objective will be to better understand how women's experience during war has changed over time and differed for women in a variety of countries. We will begin by studying the mythology of women and war, connecting ancient Greek war goddess Athena with present-day Hollywood depictions of women warriors. Lectures will then focus on the theories positioning women in war history, and will proceed with a survey of women's participation in several modern wars, comparing women's experience in the U.S. with women in other parts of the world. Finally, the course will end with an in-depth discussion of several key themes in the histories of women and war: domestic ideology, prostitution, nursing, soldiering, war work, and protest/peace politics.

**HIST 167. Gender in the History of Science (4)**

This course introduces students to the literature on gender in the history of science, technology, and medicine. The course explores five interrelated topics: (1) The historical participation of women and men in scientific work, (2) the scientific and historical construction of sex and sexuality, (3) the influence of ideologies of gender on the methodology of science, medicine, and engineering, (4) the gendering of technologies and artifacts, (5) the relation be-

tween ideas of gender, science, and politics. Based on their increased historical understanding, students reflect upon their own gendered experiences and expectations in encountering science as students, laboratory workers, patients, and consumers. This course is open to both science and non-science majors. This course is open to both science and non-science majors.

### *Pre-Modern Europe or Classics courses*

#### **HIST 100. Renaissance and Reformation (4)**

An in depth examination of the cultural, intellectual and artistic forces which shaped Europe from 1300-1600. The first half of the course focuses on Renaissance Italy, the second on the various Reformations: German, Swiss, English, Radical and Catholic.

#### **HIST 101. Tudor and Stuart England (4)**

A multi-disciplinary approach to the history of England from 1485-1688 which examines the social, economic, political and religious forces which shaped this brilliant and barbaric era. Focuses on the personalities, noble and base, which have shaped English history. Traces the development of institutions (Crown Parliament, Church) and longtime trends in society and economy, intellectual and cultural history.

#### **HIST 102. 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 possession throughout Europe, the Americas, and Asia.

#### **HIST 105. Ancient Greece (Religious and Classical Studies Dept.)(4)**

#### **HIST 106. Ancient Rome (Religious and Classical Studies Dept.) (4)**

### *20th Century Europe Courses*

#### **HIST 111. Europe in Turmoil 1900-1945 (4)**

The first fifty years of the twentieth century were years of turmoil for Europe. Two world wars left the countries in ashes and devastated the political, social and political order of Europe. A communist revolution took place in Russia that shook other places in the world. The rise of Nazism in Germany led to the Holocaust. In between these enormous crises, there were years where people hoped for a new era of peace, growth and democracy. This course will examine the origins of the conflicts, the course of the events and their legacy for our societies today.

#### **HIST 112. History of the Holocaust (4)**

The Holocaust remains a unique and ultimately incomprehensible event in human history. Nevertheless, or perhaps because of this dilemma, it teaches us many profound ideas that we should never forget. This course will examine the role of the perpetrators, the attitudes of the bystanders, and the reaction of the victims. We will look at the emergence of Nazism, the life and career of Adolf Hitler and his helpers, and the implementation and execution of mass murder. How did other countries respond to the Holocaust? How did survivors live with the memory of the horrific events? How do we remember the Holocaust today? The course will also analyze the portrayal of the Holocaust in popular film and media today.

#### **HIST 113. Europe Since 1945 (4)**

Since the end of World War II, Europe experienced a period of peace and stability unprecedented in its history. This course will examine the emergence of Europe out of the rubble, the new postwar order, the division of Europe during the Cold War, and the political, economic and social changes in modern Europe. We will look at the building and the collapse of the Berlin Wall, life behind the Iron Curtain, the break-up of European empires and the end of colonialism. European life and societies changed dramatically with the establishment of the European Union, the students' revolt in the 1960s and the

women's movement. Since the collapse of the Soviet Union, new hopes and problems have replaced Cold War fears. We will examine these changes and look at Europe at the beginning of a new millennium.

#### **HIST 114. Modern Germany (4)**

In the last one hundred years, Germany has decisively shaped the world we live in. The country's history is framed by two unifications; Bismarck's unification in 1871 and the reunification of Germany in 1989 after the forty year-long Cold War split. The time between these dates was like a terrible roller coaster. Twice Germany tried to become a world leader and dominate large areas of land and people. Both times it failed but not without first bringing war and destruction to tens of millions of people. Good times included the rapid industrialization in the last decades of the nineteenth century, the "roaring twenties" in the metropolis Berlin, the miraculous economic recovery after 1945, and the euphoric atmosphere after the fall of the Berlin Wall. How can we explain these events and developments? Who are the Germans? This course addresses not only politics, but also the social and cultural movements that shaped German history.

### *Early North America Courses*

#### **HIST 120. 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 121. Colonial America (4)**

This class will focus on the period from European and African arrival in British North America at the beginning of the 17<sup>th</sup> century to 1763. In a combination lecture and seminar format, we shall explore social, political, and environmental transformations as the new arrivals and indigenous peoples learned about each other. The lectures will provide the over-arching narrative. Readings and discussions will focus on a variety of communities as they struggled to find stability and continuity in a rapidly changing world. High immigration (slave, servant and free), rapid environmental change and social upheaval created an instable world that all had to navigate.

#### **HIST 122. Revolution and the New Nation (4)**

A study of the period in American history from 1763 to the 1790s. It emphasizes the origins of tensions between the colonists and the British government and examines the course of the Revolution, considering the war's impact on all members of American society. The course concludes with a study of the constitution and the first decade of the new nation, when competing factions argued over exactly what they had wanted the Revolution to achieve.

#### **HIST 123. Civil War Era (4)**

This course will begin with an analysis of events and factors leading up to the Civil War. It will then examine in depth the war years covering the development of technology, leadership, military medicine, and the social experience of war for men and women, free and slave. We shall conclude with a study of the immediate post-war years of Reconstruction across the nation.

#### **HIST 124. History of the American West (4)**

A study of the causes and consequences of America's westward expansion and settlement Spanish and French beginnings to modern times, with emphasis on the people, the myths, and the technologies that have shaped western development and culture.

*United States Courses***HIST 130. History of California (4)**

A survey of the Golden State from its first description as a mythical island in the sixteenth century to the state's economic and political prominence in our own times. Native American beginnings, Spanish Mission Period, Mexican California, the Gold Rush and its consequences, and Modern California from World War II to the present are emphasized. Class participants select famous "California History Makers" and present their own research with presentations on notable figures in the State's unique history from Spanish friars and explorers to politicians, inventors, scientists, Hollywood's most influential, and others in California's Hall of Fame. Especially recommended for future educators, but open to all. No prerequisite.

**HIST 132. American Immigration (4)**

Immigration and ethnicity are pressing social concerns in contemporary America. Congress debates "reform" bills while ordinary Americans protest current policy. While immigration policy issues impress us with their urgency, they are by no means new. To fully understand where we are today, we must understand the peopling of the United States. This course focuses on immigration in the 19<sup>th</sup> and 20<sup>th</sup> centuries, exploring the experiences of the diverse immigrant communities in the United States. The course explores causes of immigration; experiences within the US; effects of class, race, and gender; and issues of identity. America's changing understandings of race and ethnicity over time are also central themes in this course.

**HIST 133. Women in United States History (4)**

The course examines the history of women in the United States from the colonial era to the present. In addition to examining political reform, it offers insights into the day-to-day lives of diverse American women at various points in the female life cycle. The course is organized chronologically and thematically to promote the study of women in relation to major historical events and to explore women's roles in families, communities, the nation, and the world. It examines cultural models of American womanhood, including maternal, domestic, sexual, and social models, their development and recent changes. The course uses various primary and secondary sources to evaluate both current and historical arguments regarding the status, roles, and experiences of American women.

**HIST 134. African-American History (4)**

The course will examine the social, economic, cultural, and political history of African-Americans and the development of concepts of race and racism. We shall begin with the origins of slavery in colonial times, then on to the Civil War and Reconstruction, the Great Migration to the North and West, World War II and the civil rights era to the present day.

**HIST 135. Women in Time and Place (4)**

In the early twenty-first century news reports have covered the first mainstream woman presidential candidate, the Supreme Court's upholding of the Congressional "partial-birth" abortion ban, mothers protesting the war in Iraq and young women fighting there, and how women in the US still make only 77 cents for every dollar men make. This course uses historical analysis to understand several current "women's issues," such as reproductive rights, women's roles in wartime, political participation, sports and body image, and work. The course considers the perspectives and experiences of women from various social and cultural groups and sets US women's experience in an international context.

**HIST 136. American Environmental History (4)**

Topical survey of historical roots of environmental crises in contemporary North America beginning with western concepts of natural history. Main focus: three centuries of changing American attitudes, policies and activities that lead to the rise of the Conservation Movement by the late nineteenth century. Tensions between users and preservers, and the development of an ecological school of environmentalism since the 1940s.

**HIST 137. "His-panic" USA (4)**

When writer Oscar Hijuelos first set eyes on the word "Hispanic" he read it as "His-Panic," believing that this group of people caused alarm to Anglo society. Why do Hispanics cause so much panic? Hispanics have replaced African Americans as the largest minority group in the United States. Major news sources have written about the US government's preoccupation and concern with what "Hispanics"/Latinos do, eat, say, wear, and watch. Yet, and perhaps what is at the root of the "panic," the "largest minority" continues to be seen as "foreign." As a group, Hispanics represent all racial groups, while at the same time, they continue to identify with their country of origin rather than with a particular racial group, making it difficult to fit them into the United States's system of racial categorization.

**HIST 139. Borderlands (4)**

The relationship between Mexico and the United States has been one of conflict and codependency, constantly changing with the shifts in domestic politics and economics on each side of the border. The Mexican and U.S. communities located on or near the border frequently feel the strongest and most immediate impact of this (dis)union. The borderlands are the areas of intersection between cultures, nations, histories. The borderlands, straddling the periphery of two nations, are fundamentally different from either country. Moreover, the border and its culture have many implications that reach far beyond that region, affecting the lives of migrants, laborers, and, on a larger scale, governments and the environment. This course will take a unique approach, combining historical inquiry with analysis of contemporary issues.

*Asia Courses***HIST 140. Southeast Asia and the West (4)**

In this course, we survey the history of the "lands below the winds"—maritime and mainland southeast Asia—from their epochs of pre-modern greatness to the present. We will examine the lands of Southeast Asia as both a regional and global crossroads. Southeast Asians were connected with other civilizations through trade and religion early and consistently. Topics include the glories of Angkor and Khmer civilization, the spice trade and the world economy, and the spread of Islam. We then focus on the European and U.S. colonization of the region's states and their subsequent independence struggles, with in-depth consideration of the Philippines, the Indo-Chinese wars and the events leading to the world's most destructive genocide under the Pol Pot regime in Cambodia.

**HIST 141. Pre-Modern China to 1840 (4)**

For much of its history, China was the most powerful empire in the world. It had the grandest cities, the most formidable armies, the best technology and the biggest economy. At the dawn of the twenty first century, China is poised to retake its position as the world's superpower. Will China's rise be peaceful or violent? What lessons does history teach us about China as world hegemon? This course surveys Chinese dynastic history since its founding in 221 BC by the Qin Shihuang and ends with the last dynasty, the Qing. Topics include the dynastic cycle, the family system, noted statesmen and rebels, the treatment of women and borderlands history, including Tibet, Mongolia and the oases of Turkestan.

**HIST 142. Modern Chinese History (4)**

China's modern history is dramatic. Civil wars, foreign invasions, revolutions, high hopes, heroism, betrayal and bitterness marked what some called China's century of humiliation (ca. 1842-1950). The Chinese monarchy that collapsed in 1911 was replaced with a constitutional republic that never managed to achieve the heroic modernity imagined by its fervent patriots. The People's Republic of China sought to re-invent Chinese society from top to bottom and create a rich and powerful nation. The grimly spectacular failures to achieve this goal left many disappointed. Today, China is still run by a communist party but the newly assertive nation is now heralded by many as the next superpower. In this course, you will gain specialized knowledge of events, individuals and ideas that shaped this tumultuous period. We will focus especially on the tension between westernization and modernization.

**HIST 143. Modernization of Japan (4)**

In this course, you will gain a broad overview of the processes, events and individuals in Japan's rapid modernization. We will begin with a consideration of everyday life in traditional Japan. The political, social and economic aspects of modernization will be examined, in part through an intimate look at life for a Japanese farm family. Japan's modernization—as miraculously speedy as it was—is also linked with the rise of fascism, a brutal invasion of China and war against the United States. We will conclude our study with an in-depth look at the U.S. occupation and the economic miracles of the second half of the twentieth century. As a seminar, the course is designed to focus especially on conceptual and theoretical consideration of the facts of Japanese modern history.

**Latin America Courses****HIST 150. Women in Latin America (4)**

The history of Latin America is still, in many ways, the history of male leaders and heroes. This course analyzes gender as both a field of resistance and of the creation and internalization of social norms. We will explore the gendered roles of women and men in Latin America but will focus primarily on the lives of women. It will also examine the institutions and ideas that have expanded and limited their place in history and society. Through the use of art, literature, film, and religious forms, we will study the cultural attitudes that have affected Latin American women since pre-Columbian times to the present. Topics include: Indian women and the conquest of Latin America, the Virgin Mary, women and Revolution, and icons such as Eva Peron and Frida Kahlo.

**HIST 151. People's History of Mexico (4)**

This course surveys the history of Mexico from its origins in pre-Columbian civilizations to the present day. In the process, we examine major historical themes and developments—the society and culture of the Aztecs and Mayas, the distinctive features of the colonial empire, the eras of Independence and of Revolution, modernization and post-modernity—as experienced by or as expressions of the actions and aspirations of Mexico's people. That is to say, this course focuses on the historical experience and struggles of Mexico's diverse ethnic and social groups and foregrounds their roles in the development of a uniquely Mexican nation.

**Required Courses****HIST 070. Historical Imagination (4)**

This course explores some of the ways people have thought about, represented, and used the past across time and space. It introduces students to modern historical practices and debates through examination and discussion of texts and archives that range from scholarly monographs and documents to monuments, oral traditions, and other media. This course is required for history majors and minors and recommended at the sophomore level. It is open to others interested in the historian's craft.

**HIST 160. The Capstone (Pacific History Seminar) (4)**

The Pacific History Seminar is the capstone experience of the history program. Students take this course the fall of their senior year or, with permission, as juniors. In this course, students write a research paper based on primary documents from our own and local libraries. The course culminates with the department's capstone conference at which the students present their research orally and submit their final research paper. Interested and qualified students can later submit these research projects at campus and regional undergraduate research conferences and use them as writing samples for professional or graduate school applications.

**Special Study Courses**

These courses can satisfy the major requirement for any upper level course depending on the topic. The section number of each special study course (II – VIII) designates in which category the course can be used as a substitute. Independent study courses and internships should be arranged with professors on an individual basis. Special Topics courses will be announced in the course bulletin for each semester.

**HIST 187. Internship (Experiential Learning Opportunity) (This may not be substituted for an upper level course) (2-4)****HIST 191. Independent Study (Reading Tutorial or Research Tutorial – Experiential Learning Opportunity) (2-4)****HIST 093/193. Special Topics (Lecture Course or Research Seminar - ELO) (4)**

## Jacoby Center for Public Service and Civic Leadership

Phone: (209) 946-7444

Location: WPC 242

Website: [www.pacific.edu/cop/jacobycenter](http://www.pacific.edu/cop/jacobycenter)

Robert Bendetti, Director

### Minors Offered

Civic Leadership

Helping Professions

Public Affairs

The Harold S. Jacoby Center for Public Service and Civic Leadership encourages students to engage in civic life and leadership development through varying curricular and co-curricular options including opportunities for learning which introduce them to urban life and public issues through community service.

Jacoby Center cooperates with the Governmental Affairs Program of the McGeorge School of Law and the Washington Center in Washington, DC, to provide off-campus semester long study and experiential learning opportunities for Pacific undergraduates. Minor programs in the Helping Professions and Public Affairs are also offered through the Center.

The Civic Leadership minor is designed to prepare participants to assume positions of leadership in governmental and non-profit organizations. The curriculum addresses significant aspects of management in the public and not-for-profit sectors and invites undergraduates to study with adult students currently employed in these sectors. Special attention is given to the connection between the workplace and social science theory. Courses are taught by Pacific faculty with the assistance of community leaders. The capstone course is a field study, consisting in a research project focused on public or community service. The program can be completed in a year and is offered in eight week modules so that two courses can be easily completed in one semester. To facilitate the participation of adult students enrolled in the program through the Center for Professional and Continuing Education, courses are usually held once a week in the evening. Students must be admitted into the program as enrollment is limited. Interested students should seek applications from the Jacoby Center office.

The Helping Professions Minor exposes students to interdisciplinary knowledge, theory and practice related to the full range of health, social and education services for individuals and their families. The minor enables students to explore career interests in one of the contributing professions and the collaboration and connections between that profession and other helping professions. Jacoby Center is particularly committed to nonprofit and governmental organizations, and most health, social and education services are provided through governmental and/or non-profit agencies.

The Center also offers a minor in Public Affairs which enables students to integrate studies in public issues with disciplinary study in a variety of majors. This cross-disciplinary minor is designed to prepare students for advanced study and professional careers in fields such as government and public policy, education, social work, planning, and non-profit organization.

Students in both minor programs are encouraged to participate in the Sacramento Experience and Washington Center internship and study programs. Students make application to these unique study opportunities

through the Jacoby Center to study and intern for a full semester either in Sacramento or Washington, D.C. Through these and other programs Jacoby Center provides numerous options for involvement in policy level activities with government, non-profit, and cultural organization at all levels.

### Minor in Civic Leadership

In order to earn the minor in Civic Leadership, students must complete a minimum of 20 units and 7 courses with a Pacific minor grade point average of 2.0.

#### Minor Requirements:

JCTR 100	Leadership Theory and Practice	3
JCTR 110	Public Outreach: Public Relations and Fundraising	3
JCTR 125	Human Capital Building Capacity and Organizations	3
JCTR 135	Public Finance	3
JCTR 145	Research Methods: Analysis, Program Design and Evaluation	3
JCTR 197	Community Independent Research (Internship in a non-profit or governmental organization)	2

### Minor in Helping Professions

In order to earn the minor in helping professions, students must complete a minimum of 20 units with a Pacific minor grade point average of 2.0.

#### Minor Requirements:

JCTR 075	Introduction to the Helping Professions	2
One of the following courses:		2-4
JCTR 087A	Service Learning Practicum	
JCTR 087B	Service Learning Practicum	
At least 14 units from the following:		14
SPED 123	The Exceptional Child	
SPED 166	Building Family-Professional Partnerships	
EPSY 121X	Learner-Centered Concerns	
SLPA 051	Introduction to Speech-Language Pathology	
SLPA 127	Audiology	
ENGR 011	Technology and Society	
MTHR 011	Music as Therapy: A Survey of Clinical Applications	
MTHR 018	Basic Skills for Music Therapists and Allied Professionals	
SPTS 153	Adapted Physical Education	
SPTS 155	Motor Learning	
SOCI 061	Urban Society	
SOCI 081	Introduction to Social Services	
SOCI 125	Health and Illness	
SOCI 181	Delivery of Social Services	
PSYC 053	Behavior Change I	
PSYC 111	Abnormal Psychology	
PSYC 133	Adulthood and Aging	
PSYC 154	Child Mental Health	
PSYC 155	Couples and Family Therapy	
PSYC 156	Behavioral Medicine / Health Psychology	
RELI 145	Biomedical Ethics	

**Note:** 1) Limit of 2 courses per department will count towards these electives.

## Minor in Public Affairs

In order to earn the minor in public affairs, students must complete a minimum of 24 units and 6 courses with a Pacific minor grade point average of 2.0.

### Minor Requirements:

Two of the following introduction to field courses:	8
SOCI 061 Urban Society	
POLS 104 Urban Government	
POLS 106 California Government and Politics	
One of the following methods courses:	4
COMM 160 Communication Research Methods	
POLS 133 Political Science Research	
SOCI 171 Social Research Methods	
SPTS 179 Intro to Research	
ECON 161 Computer Application in Economics	
ECON 190 Econometrics	
Two of the following courses:	8
SPTS 141 Sport in America	
ETHN 164 Ghetto Life	
COMM 143 Intercultural Communication	
SOCI 181 Delivery of Social Sciences	
ECON 131 Public Finance	
ECON 151 Urban Economics	
ECON 193 Special Topics	
One of the following experiential/independent learning courses:	1-4
JCTR 187 Community Affairs Internship	
JCTR 191 Independent Study	
JCTR 197 Community Independent Research	

*Note: 1) 16 units must be completed at Pacific.*

## Experiential/Independent Learning

JCTR 187	Community Affairs Internship
JCTR 191	Independent Study
JCTR 197	Community Independent Research

The experiential/independent learning options (JCTR 087, 187, 191, 197) are available to any qualified student and may be repeated for credit. They need not be taken only to complete minor requirements. Jacoby Center also sponsors periodic Special Topics study options depending on current Center service or research projects which may also meet Helping Professions or Public Affairs minor requirements. Although not required for students who seek to participate, these minors provide excellent preparation for the Sacramento Experience and/or Washington Center programs. Students are encouraged to apply to these programs and may substitute the internships and seminars in these programs for elective and experiential learning requirements in the minors.

## Sacramento Experience

Students apply to this program and upon acceptance enroll in a combination of JCTR 187 and 191 depending on the internship assignment and advising by the Jacoby Center Executive Director. Students ordinarily combine study and internship activities in Sacramento with other courses on the Stockton campus.

## Washington Center

Students work with a faculty adviser in Jacoby Center to submit an application to the Washington Center in Washington, D.C. Upon acceptance to this full semester, off campus study program they enroll in

WASH 185	Washington Center Seminar
WASH 187	Washington Center Internship
JCTR 187	Community Affairs Internship

## Course Offerings

**JCTR 075. Introduction to the Helping Professions (2)**  
This course familiarizes undergraduate students with the fields providing health and education services to individuals and their families. Students will be introduced to various career options through panel presentations, discussions, and case studies focusing on prevention, assessment and treatment issues. Faculty from several departments including Adapted Physical Education, Education, Music Therapy, Speech-Language Pathology, Special Education, Counseling Psychology, Physical Therapy, Pharmacy, and Psychology will present information on their respective professions during the course of the semester. Other related fields such as Occupational Therapy and Social Work will be integrated into the course design.

**JCTR 087A, B. Service Learning Practicum (2-4)**  
A service learning community exploration experience for students who want to work with at risk youth and/or other high need groups through direct involvement. Students receive training from Pacific staff and community based organizations in methods common to the helping professions, and work on-site in schools and other community settings. The course explores how the helping professions respond to human development needs and other social issues at the community level.

**JCTR 093, 193. Special Topics (1-4)**

**JCTR 100. Leadership Theory and Practice (3)**  
This is an interdisciplinary introduction to the study of leadership and ethics, examining the relationship between leaders and followers, the circumstances which enable leadership to occur, and the forces that shape leadership methods.

**JCTR 110. Public Outreach: Public Relations and Fundraising (3)**  
This course outlines the reciprocal relationships between the public and non-profit or governmental agencies. They function within a regulatory framework which involves public trust and accountability, while having to raise funds in both the public and private sectors. This course will cover media relations, event management and grant writing.

**JCTR 125. Human Capital Building Capacity and Organizations (3)**  
This course introduces students to the theory of organizations, how organizations are structured to accomplish their objectives, and how different models of developing and managing human resources can affect results. The emphasis is on the practical application of organizational principles to administration and problem solving in the nonprofit and public organizations which make up the civic sector.

**JCTR 135. Public Finance (3)**  
This course deals with the financial management of non-profits and public agencies, including budgeting, payroll and accounting practices. The course also addresses the relationship between strategic planning and budgeting, and the development of investment strategies and policies.

**JCTR 145. Research Methods: Analysis, Program Design and Evaluation (3)**  
This course offers a framework to assist managers in designing instruments for needs assessment, organizational analysis, and outcomes assessment.



**JCTR 187A, B. Community Affairs Internship (2-4)**

Community Affairs Internship provides the opportunity for supervised observation and experience in community settings, including public agencies, non profit or voluntary organizations, or businesses. Field sites may be local or away from campus. Eligibility to enroll presupposes familiarity with issues and problems in the field in which one is to work, demonstrated by acceptable work in one or more related campus courses.

**JCTR 191. Independent Study (2-4)**

*Open to student with C average in major field with permission of instructor.*

**JCTR 197A, B. Community Independent Research (1-4)**

An opportunity for appropriately prepared students to carry out community based research which meets the university experiential learning requirement, and which contributes to a body of knowledge suitable for presentation to professional academic or community audiences. Methods used may include observation, surveys, interviews, document analysis, experimentation, or other methods common to the social or behavior sciences.

## Mathematics

Phone: (209) 946-2347

Location: Main Office in CR 106

Website: [www.pacific.edu/college/math](http://www.pacific.edu/college/math)

Sarah Merz, Chair

### Degrees Offered

Bachelor of Arts

Bachelor of Science

### Majors Offered

Mathematics (BA, BS)

Applied Mathematics (BS)

### Minors Offered

Mathematics

Applied Mathematics

Statistics

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.

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. Minors in Mathematics, Applied Mathematics and Statistics 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 who 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 that includes Trigonometry. Four years of IMP or CPM mathematics are usually equivalent to these traditional courses. Students with Advanced Placement AB credit (score of

4 or 5) or Math IB Higher Level (score of 5, 6, or 7) start college mathematics in Calculus II while students with AP BC credit (score of 4 or 5) start in Calculus III. AP credit in Statistics (score of 4 or 5) is equivalent to MATH 037. 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 College Algebra course. In order to enroll in mathematics department courses numbered 033, 035, 041, 045, 051, 053, 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 Educational 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 (Form E placement) test is for placement only and does not award credit for Math 51. Subject material for the examinations and sample questions are available at the Educational Resource Center website. For students needing additional preparation before entering introductory college mathematics courses, the Mathematics Lab of the Educational Resource Center in the Benerd School of Education offers developmental skill courses in the areas of basic mathematics, algebra and Trigonometry.

### 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 Math AB or IB Math HL credit should start in Calculus II. Majors with AP Math BC 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 041, Precalculus. Students who place lower than MATH 041 should discuss with their adviser how much extra 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.

### Bachelor of Arts Major in Mathematics

In order to earn the bachelor of arts degree with a major in mathematics, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

#### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

- IIIA. Natural Sciences
- IIIB. Mathematics and Formal Logic
- IIC. Science, Technology, and Society  
or a second Natural Science

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.*

#### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

*Note: Transfer students with sophomore standing are exempt from this requirement.*

#### III. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

*Note: A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.*

#### IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

#### V. Major Requirements

Minimum 36 units and 10 courses, including:

MATH 049	Introduction to Abstract Mathematics	4
MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4

One of the following courses: 4

- MATH 037 Introduction to Statistics and Probability
- MATH 131 Probability and Mathematical Statistics I

One of the following courses: 4

- MATH 141 Linear Algebra
- MATH 145 Applied Linear Algebra

One of the following courses: 4

- MATH 143 Abstract Algebra I
- MATH 155 Real Analysis I

Three MATH electives:

MATH	any MATH courses (excluding Math 033, 035, 041, 045, 161, and 162, minimum 3 units each )	9-12
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*Note: Electives must be approved by a mathematics advisor.*

## Bachelor of Science Major in Mathematics

In order to earn the bachelor of science degree with a major in mathematics, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

### II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### IV. Major Requirements

Minimum 46 units and 13 courses, including:

MATH 049	Introduction to Abstract Mathematics	4
MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4
MATH 141	Linear Algebra	4
MATH 143	Abstract Algebra I	4
MATH 155	Real Analysis I	4

MATH	Electives (3 courses with any number, excluding MATH 033, 035, 041, 045, 161 and 162, minimum 3 units each)	9-12
MATH	Upper Division Electives (3 courses numbered MATH 110 or higher excluding Math 161, and 162, minimum 3 units each)	9-12

## CSET Preparation (Future High School Math Teachers)

Students pursuing a California mathematics or foundational-level mathematics single-subject teaching credential may elect either the BA or BS program. In addition to earning a degree, students must show subject matter competency by passing the CSET (California Subject Exams for Teachers) in mathematics. Contact the Mathematics Credential Coordinator, Dr. Dennis Parker at dparker@pacific.edu for additional credential requirements. Below are the recommended coursework options for the BA and the BS

- BA for Single Subject Math with CSET (California Subject Exams for Teachers)

#### Core:

- MATH 051, 053, 055 : Calculus I, II, and III
- MATH 049, Introduction to Abstract Mathematics
- MATH 141, Linear Algebra
- MATH 037 or 131 (Probability and Statistics course)
- MATH 143, Abstract Algebra

#### Recommended Electives:

- MATH 164, Topics in the History of Mathematics
- MATH 166, Mathematics Concepts for Secondary Education
- MATH 168, Modern Geometries

- BS for Single Subject Math with CSET

#### Core:

- MATH 051, 053, 055: Calculus I, II, and III.
- MATH 049, Introduction to Abstract Mathematics
- MATH 141, Linear Algebra
- MATH 143, Abstract Algebra
- MATH 155, Real Analysis

#### Recommended Electives:

- MATH 072, Operations Research Models
- MATH 074, Discrete and Combinatorial Mathematics
- MATH 131, Probability and Mathematical Statistics I
- MATH 164, Topics in the History of Mathematics
- MATH 166, Mathematics Concepts for Secondary Education
- MATH 168, Modern Geometries

Students who do not major in mathematics, but wish to earn a California mathematics or foundational-level mathematics teaching credential, may consider earning a minor in mathematics to help prepare them for the CSET exams. Below are minor coursework options recommended for mathematics teacher preparation.

- MATH 051, 053: Calculus I and II
- MATH 049, Introduction to Abstract Mathematics
- MATH 037, Introduction to Probability and Statistics
- MATH 141, Linear Algebra
- MATH 166, Mathematics Concepts for Secondary Education
- MATH 168, Modern Geometries

## Pre-professional Education Courses for Single Subject Mathematics or Foundational-Level Mathematics:

Students planning to earn a degree and a teaching credential through the University of the Pacific simultaneously are required to take certain professional education courses during their undergraduate years. Contact Marilyn Draheim in the Benerd School of Education or Dennis Parker in the Mathematics Department for details about these course requirements.

## Bachelor of Science Major in Applied Mathematics

In order to earn the bachelor of science degree with a major in applied mathematics, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

### II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### IV. Major Requirements

Minimum 44 units and 13 courses, including:

MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4
MATH 145	Applied Linear Algebra	4
One of the following courses:		4

MATH 057 Applied Differential Equations I

MATH 049 Introduction to Abstract Mathematics

Four of the following courses (minimum 3 units per course) 12-16

MATH 039 Probability with Applications to Statistics

MATH 072 Operations Research Models

MATH 074 Discrete and Combinatorial Mathematics

MATH 110 Numerical Analysis

MATH 130 Topics in Applied Statistics

MATH 131 Probability and Mathematical Statistics I

MATH 132 Probability and Mathematical Statistics II

MATH 148 Cryptography

MATH 152 Vector Analysis

MATH 157 Applied Differential Equations II: PDEs

MATH 174 Graph Theory

MATH 193 Special Topics

**Note:** 1) Electives are to be chosen in consultation of a major advisor. 2) One elective may be chosen from the following experiences: independent study, undergraduate research, internship, and practicum. 3) Credit not granted for both MATH 072 and 074.

Choose either A or B 12-16

- A. Four mathematically oriented courses from one or several of the mathematical sciences (e.g. Physics, Chemistry, Engineering, Computer Science, Economics, Management Sciences or other fields), chosen from a list of approved courses available in the mathematics department. In most cases, this requirement would be fulfilled by courses required for the degree programs mentioned, with suitable electives.
- B. Three Mathematically oriented courses from one of the several mathematical sciences, as described in (A), plus one MATH elective (at least 3 units) numbered MATH 049 or higher (excluding MATH 161, 162, and 166).

### Minors

The study of mathematics is a process that develops important modes of critical thinking. Because quantitative problem solving is a desirable skill, a minor in mathematics 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.

## Minor in Mathematics

In order to earn a minor in Mathematics, students must complete a minimum of 23 units with a Pacific minor grade point average of 2.0.

### Minor Requirements:

MATH 049	Introduction to Abstract Mathematics	4
MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 141	Linear Algebra	4
One of the following courses:		4

MATH 037	Introduction to Statistics and Probability
MATH 039	Probability with Applications to Statistics
MATH 055	Calculus III
MATH 057	Applied Differential Equations I:ODEs
MATH 072	Operations Research Models
MATH 074	Discrete and Combinatorial Mathematics

One of the following courses:	3-4
MATH 110	Numerical Analysis
MATH 131	Probability and Mathematical Statistics I
MATH 132	Probability and Mathematical Statistics II
MATH 143	Abstract Algebra I
MATH 148	Cryptography
MATH 152	Vector Analysis
MATH 154	Topology
MATH 155	Real Analysis I
MATH 157	Applied Differential Equations II: PDEs
MATH 164	Topics in the History of Mathematics
MATH 166	Mathematical Concepts for Secondary Education
MATH 168	Modern Geometries
MATH 174	Graph Theory

## Minor in Statistics

In order to earn a minor in Statistics, students must complete a minimum of 25 units with a Pacific minor grade point average of 2.0

### Minor Requirements:

One of the following courses:	4	
MATH 035	Elementary Statistical Inference	
MATH 037	Introduction to Statistics and Probability	
Each of the following courses:		
MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 130	Topics in Applied Statistics	3
MATH 131	Probability and Mathematical Statistics I	4
Two additional courses relevant to statistics (at least 3 units each)	6-8	

*Note: Electives are to be chosen in consultation of a minor advisor.*

## Minor in Applied Mathematics

In order to earn a minor in applied mathematics, students must complete a minimum of 27 units with a Pacific minor grade point average of 2.0

### Minor Requirements:

One of the following courses:	4
MATH 037	Introduction to Statistics and Probability
MATH 039	Probability with Applications to Statistics
MATH 131	Probability and Mathematical Statistics I

Each of the following courses		
MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 145	Applied Linear Algebra	4
One of the following courses:	4	
MATH 074	Discrete and Combinatorial Mathematics	
MATH 174	Graph Theory	
Two Math Electives:	7-8	
MATH	Electives, see notes below	

*Note: 1) Electives are to be chosen in consultation of a minor advisor. 2) Units earned for Math 033, 035, 041, 045, 161, or 162 do not count toward the minor in applied mathematics.*

## Course Offerings

Only courses passed with a grade of "C-" or better meet prerequisite requirements for all Mathematics Department courses.

**MATH 033. 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 051 or AP credit in Calculus. *Prerequisites: two years of high school algebra and an appropriate score on either the Intermediate Algebra placement test or the Pre-Calculus placement test; or MATH 005 or 041.*

**MATH 035. 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 037 or has AP credit in Statistics. *Prerequisite: MATH 003, 005, or 041, or an appropriate score on either the Elementary Algebra placement test, the Intermediate Algebra Placement test, or the Pre-calculus placement test or permission of the instructor.*

**MATH 037. 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 035 or has AP credit in Statistics. *Prerequisite: MATH 033, 041, 045, 051, 053 or appropriate score on the calculus placement test.*

**MATH 039. 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. Credit will not be given for both Math 039 and Math 131. *Prerequisite: MATH 053.*

**MATH 041. 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 stu-

dent has AP Calculus credit. *Prerequisites: MATH 005 or an appropriate score on either the Intermediate Algebra placement test, the Pre-calculus placement test or the calculus placement test.*

**MATH 045. 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. Credit for this course will not be given if a student has credit for Math 051 or AP Calculus credit. *Prerequisites: two years of high school algebra and an appropriate score on either the Intermediate Algebra placement test, the Pre-calculus placement test, or the calculus placement test; or MATH 005 or 041.*

**MATH 049. 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 053 or permission of the instructor.*

**MATH 051. 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 Math AB credit will not receive credit for MATH 051. *Prerequisites: MATH 007 or 041 or four years of high school mathematics including Trigonometry and an appropriate score on the placement test for calculus.*

**MATH 053. Calculus II (4)**

Techniques and applications of integration. Sequences and series. Convergence of series. Taylor Polynomials. Students earning AP Math BC credit will not receive credit for MATH 053. *Prerequisite: MATH 051 or an appropriate score on the calculus placement test.*

**MATH 055. 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 053 or AP Math BC credit.*

**MATH 057. Applied Differential Equations I: ODEs (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 055 or permission of the instructor.*

**MATH 072. 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 033 or 045 or 051 or the appropriate score on the calculus placement test.*

**MATH 074. 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 033 or 045 or 051, or an appropriate score on the calculus placement test.*

**MATH 089a, 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 089A. Pass/No credit. *Prerequisites: for MATH 089A, MATH 130 or permission of the instructor; for MATH 189A, 089A and permission of the instructor.*

**MATH 095. Problem Solving Seminar (1)**

The objective of this course is to learn mathematics through problem solving. Students in mathematics courses are often given the impression that to solve a problem, one must imitate the solution to a similar problem that has already been solved. This course will attempt to develop student creativity in solving problems by considering problems not commonly encountered in other mathematics courses. Students enrolled in this course are expected to participate in the William Lowell Putnam Mathematical Competition on the first Saturday in December. Students may take this course for credit at most four times. *Prerequisite: MATH 053.*

**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 055.*

**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: MATH 035 or 037.*

**MATH 131. Probability and Mathematical Statistics I (4)**

Counting techniques; discrete and continuous random variables; distribution functions; special probability densities such as Binomial, Hypergeometric, 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. Credit will not be given for both MATH 039 and MATH 131. *Prerequisite: MATH 053.*

**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.*

**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. Students will not receive credit for both Math 141 and Math 145. *Prerequisite: MATH 049 or permission of instructor.*

**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 049 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. Students will not receive credit for both Math 141 and Math 145. *Prerequisite: MATH 053 or permission of instructor.*

**MATH 148. Cryptography (3)**

A survey of cryptography and cryptanalysis from historical cryptosystems through the modern use of cryptology in computing. Topics include public and symmetric key cryptosystems, digital signatures, modular arithmetic and other topics in number theory and algebra. Possible additional topics include error correcting codes, digital cash, and secret sharing techniques. *Prerequisites: MATH 053 or permission of the instructor.*

**MATH 152. Vector Analysis (4)**

Vector analysis and related topics for students of applied mathematics, physics and engineering. Vector fields, Gradient, divergence and curl. Parametric surfaces. Line integrals; surface integrals; integral theorems. Formulations of vector analysis in cylindrical and spherical coordinates. *Prerequisite: MATH 055.*

**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 049.*

**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 049 and 055.*

**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: PDEs (4)**

Partial differential equations. Derivation and solutions of the Wave, Heat and Potential equations in two and three dimensions. Fourier series methods, Bessel functions and Legendre polynomials. Orthogonal functions. Additional topics may include Fourier integral transform methods, the Fast Fourier Transform and Sturm-Liouville theory. Computer exercises using MATLAB. *Prerequisite: MATH 057.*

**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 003 or 005 or 035 or 041 or 051 or 053, or appropriate score on the algebra placement tests. Not open to freshman. This course does not count as an elective for a B.S. degree.*

**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 read and report on the biography of a mathematician. *Prerequisites: MATH 053 and junior standing or permission of the instructor.*

**MATH 166. Mathematical Concepts for Secondary Education (3)**

Secondary school mathematics from an advanced viewpoint and pedagogical perspective. Content is aligned with the mathematics subject matter requirements from the California Commission on Teacher Credentialing. *Prerequisite: MATH 053.*

**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 049 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 051 or 074 or COMP 047 or an appropriate score on the calculus placement test.*

**MATH 093. Special Topics (3 or 4)****MATH 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.

**MATH 193. Special Topics (3-4)****MATH 197. Undergraduate Research in Mathematics (2-4)**

## Modern Language and Literature

Phone: (209) 946-2291

Location: WPC 1<sup>st</sup> floor – Annex

Website: [www.pacific.edu/college/modern/language](http://www.pacific.edu/college/modern/language)

Jie Lu, Chair

### Degrees Offered

Bachelor of Arts

### Majors Offered

French

Language and Literature

French Studies

Spanish

Spanish Pedagogy

Language and Literature

*Cultura y civilización*

Asian Language and Studies

Japanese

Chinese

### Minors Offered

Chinese Studies

French

Japanese

Spanish

Russian Area Studies

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, Asian Language and Studies, or Spanish. 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 two national honor societies for outstanding work in a language, literature and culture: Pi Delta Phi for French and Sigma Delta Pi for Spanish. The Jan Good Award is presented to winners of an annually posted essay contest in French or Spanish. The MLL Annual Awards night celebrates achievement in all languages.

### 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 (two semesters or three quarters) or equivalent training in a language other than English for all students seeking a Bachelor of Arts (B.A.) degree. Students who transfer to University of the Pacific 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 a placement test in the languages offered in the department. A placement test may be taken only once. To fulfill the requirement by completing coursework, a grade of C- or better at Pacific or a grade of C or better at an approved college and university must be obtained in the second semester (11b) course. Courses taken to fulfill the requirement must be taken for a letter grade. 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.

While the University makes every effort to meet student interests and needs, it does not guarantee that every student will be able to fulfill this requirement by studying their first choice of language. The University also does not guarantee that students studying languages other than those offered through the Pacific Department of Modern Language and Literature will have access to the courses needed to complete the requirement. In some cases, a student taking language courses not offered by the Department of Modern Language and Literature may also need to pass an approved competency examination in addition to their course work. As with all subjects, students must get prior approval before taking course work or a competency examination outside of the University that they intend to use toward completion of their Pacific degree.

### Departmental Study Abroad Programs

Department-led summer language programs in Antigua, Guatemala and Assisi, Italy offer students the opportunity to earn COP language requirement and/or GE credits in a total immersion experience. The Guatemala program offers both lower and upper division Spanish language courses.

### Descriptions of Major Programs

The major requirements for all three majors and self-designed 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 all languages except Spanish who study abroad for one 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 majoring or minoring in Spanish who study abroad for one semester may count up to 12 units of appropriate courses from an approved program toward the major or minor. Majors studying two or more semesters abroad may count up to 16 units of appropriate course work. Students may petition the department to count additional units from abroad. These petitions will be considered on a case-by-case basis. All



majors and minors must enroll in at least one advanced course in the target language upon return to meet the major or minor requirements. Only one on-line course may be counted toward major requirements.

All majors are required to complete the department-wide capstone course in their senior year (except Spanish Pedagogy Concentration).

## Requirements for the Major

### French

The curriculum in French includes beginning multi-media 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 concentrations, 1) the Language and Literature Concentration 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 Concentration which requires five French courses beyond the intermediate level plus three approved related courses in complementary fields.

Approved equivalents of major requirements are acceptable, but at least three (3) advanced courses must be completed in the French section of the Department of Modern Language and Literature. One of these must be completed upon return from study abroad. A student may take no more than one online advanced course to complete the major.

## Bachelor of Arts Major in French Concentration in Language and Literature

In order to earn the bachelor of arts degree with a major in French and a concentration in language and literature, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### *The Individual and Society*

#### *Social and Behavioral Sciences*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### *Arts and Humanities*

- IIA. Language and Literature
- IIIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### *Natural Sciences and Mathematics*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

### II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### IV. Major Requirements

Minimum 26 upper division units (6 advanced courses plus capstone), including:

One of the following courses, or the equivalent from study abroad:	4
FREN 107 Introduction to French of Business and Economics	
FREN 110 Grammaire, Composition et Discussion	
One of the following groups, or the equivalent from study abroad:	8
a. FREN 112 Civilisation Française A	
FREN 116 Littérature Française A	
b. FREN 114 Civilisation Française B	
FREN 118 Littérature Française B	
FREN Electives (3 additional courses above FREN 025)	12
LANG 195 Capstone	2

**Note:** 1) 3 of these advanced courses must be completed at Pacific and one of these must be completed upon return from study abroad. 2) At least one semester of study abroad in a French-speaking country is strongly urged.

## Bachelor of Arts Major in French Concentration in French Studies

In order to earn the Bachelor of Brts degree with a major in French and a concentration in French studies, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

*Social and Behavioral Sciences*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

## II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

## III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

## IV. Major Requirements

Minimum 9 courses, including:

FREN	Electives (5 courses above FREN 025)	20
LANG 195	Capstone	2

**Note:** 1) FREN 051 or FREN 120 may be taken in English to count towards one of the five courses above. 2) Two of the advanced courses may be completed in a study abroad program.

Elective	3 additional related courses from other departments	12
ARTH 112	19th Century European Art	
ARTH 114	20th Century Art and Film	
HIST 111	Europe in Turmoil 1900-1945	
HIST 113	Europe Since 1945	
POLS 141	Western European Comparative Politics	
POLS 168	Comparative Foreign Policy	
ECON 121	International Trade	

**Note:** 1) Other courses may be negotiable with a French advisor. 2) At least one semester of study abroad in a French speaking country is strongly urged.

## Spanish

The curriculum in Spanish includes beginning, intermediate and advanced level classes for both native and non-native speakers of Spanish. Spanish linguistics, Hispanic literature and civilization courses are complemented by Experiential Learning opportunities. All courses are given entirely in Spanish.

The B.A. in Spanish has three concentrations: 1) The Hispanic Language and Literature Concentration; 2) The Spanish Pedagogy Concentration. (*Students seeking a teaching credential must complete the Spanish Pedagogy Concentration in addition to courses required by the School of Education.*); and 3) Cultura y Civilización.

## Bachelor of Arts Major in Spanish Concentration in Hispanic Language and Literature

In order to earn the Bachelor of Arts degree with a major in Spanish and a concentration in Hispanic language and literature, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

*Social and Behavioral Sciences*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

## II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### IV. Major Requirements

Minimum 34 units and 8 courses, including:

SPAN 101	Composición avanzada	4
SPAN 103	Introducción a la literatura hispánica	4
SPAN 133	Don Quijote	4
SPAN 135	Literatura hispanoamericana del siglo XX	4
SPAN 141	Sintaxis, semántica y morfología	4
LANG 195	Capstone Seminar	2

One of the following Hispanic Civilization courses: 4

SPAN 110	Civilización hispanoamericana	
SPAN 112	Civilización española	
SPAN	Electives (8 additional upper division units)	8

**Note:** 1) 16 of these units must be completed at Pacific.

## Bachelor of Arts Major in Spanish Concentration in Spanish Pedagogy

In order to earn the Bachelor of Arts degree with a major in Spanish and a concentration in Spanish pedagogy, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

### II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### IV. Major Requirements

Minimum 38 units and 10 courses, including:

SPAN 101	Composición avanzada	4
SPAN 103	Introducción a la literatura hispánica	4
SPAN 133	Don Quijote	4
SPAN 135	Literatura hispanoamericana del siglo XX	4
SPAN 141	Sintaxis, semántica y morfología	4
SPAN 143	Fonética y fonología	4

One of the following Hispanic Civilization courses: 4

SPAN 110	Civilización hispanoamericana
SPAN 112	Civilización española

One of the following Hispanic Literature of North America courses: 4

SPAN 122	Literatura Mexicana
SPAN 124	Escritores hispanos en los Estados Unidos

One of the following experiential learning courses: 2

LANG 087	Internship in Applied Language
LANG 089	Practicum

SPAN Elective (4 additional upper division courses) 4

**Note:** 1) Presentation of Professional Proficiency and exit examination required during semester prior to graduation.

## Bachelor of Arts Major in Spanish Concentration in Cultura y civilización

In order to earn the Bachelor of Arts degree with a major in Spanish and a concentration in *Cultura y civilización*, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

**II. Fundamental Skills**

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

**III. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

**IV. Major Requirements**

Minimum 34 units beyond the intermediate level (a maximum of 8 units may be counted from courses taught in English), as follows:

Required Courses:

SPAN 101	Composición	4
SPAN 103	Introducción a la literatura hispánica	4
SPAN 110	Civilización hispanoamericano	4
SPAN 112	Civilización española	4
SPAN 114	Cine hispano	4
One of the following courses:		4
SPAN 133	Don Quijote	
SPAN 135:	Literatura hispanoamericana	
SPAN 140	Traducción	4
ANTH 054	Anthropología cultural (taught in Spanish)	4
LANG 195	Capstone	2

Elective courses to reach 34 units required in the major:

- SPAN 027 Conversación
- SPAN 087 Internship
- SPAN 124 Escritores hispanos en Los Estados Unidos
- SPAN 128 Teatro hispánico
- HIST 040 Colonialism in Latin America
- HIST 041 The Problem with Latin America
- HIST 150 Women in Latin America
- HIST 151 History of Mexico

**Asian Language and Studies  
Bachelor of Arts  
Major in Asian Language and Studies  
Concentration in Chinese**

In order to earn the Bachelor of Arts degree with a major in Asian Language Studies and a concentration in Chinese, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

**I. General Education Requirements**

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PASC 001 and 002.

One course from each subdivision below:

*Social and Behavioral Sciences*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

**II. Fundamental Skills**

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

**III. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

**IV. Major Requirements**

Minimum 34 units, including:

CHIN 023	Chinese Through Culture / the 3rd semester	4
CHIN 025	Chinese Through Culture / the 4th semester	4
CHIN 125	Advanced Chinese I	4
CHIN 126	Advanced Chinese II	4

LANG 195	Capstone Seminar	2
SABD 000	One semester of Study Abroad in China or Taiwan *	8-12

**Note:** 1) \* Language requirement begins with the intermediate level; at least one semester (or a summer with a minimum of 8 weeks) of language requirement must be completed in China or Taiwan. 2) No more than two equivalent courses (as determined by the adviser) may be completed while studying in China/Taiwan.

Four of the following courses: 16

ASIA 120	Asian Cinemas
ASIA 124	Society, Gender & Culture in East Asia
ASIA 130	East Asian Literature
HIST 030	East Asian Civilization I
HIST 031	East Asian Civilization II
HIST 141	Pre-Modern Chinese History
HIST 142	Modern Chinese History
RELI 135	Asian Religious Tradition
RELI 152	Confucian Traditions
POLS 152	Politics of Asia

## Bachelor of Arts Major in Asian Language and Studies, Concentration in Japanese

In order to earn the Bachelor of Arts degree with a major in Asian Language Studies and a concentration in Japanese, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

### II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### III. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### IV. Major Requirements

Minimum 34 units, including:

JAPN 023	Japanese Through Culture / the 3rd semester	4
JAPN 025	Japanese Through Culture / the 4th semester	4
JAPN 125	Advanced Japanese I	4
JAPN 126	Advanced Japanese II	4
LANG 195	Capstone Seminar	2
SABD 000	One semester of Study Abroad in Japan *	8-12

**Note:** 1) \*Language requirement begins with the intermediate level; at least one semester (or a summer with a minimum of 8 weeks) of language requirement must be completed in Japan 2) No more than two equivalent courses (as determined by the adviser) may be completed while studying in Japan.

Four of the following courses: 16

ASIA 120	Asian Cinemas
ASIA 124	Society, Gender & Culture in East Asia
ASIA 130	East Asian Literature
HIST 030	East Asian Civilization I
HIST 031	East Asian Civilization II
HIST 143	Modernization of Japan
RELI 135	Asian Religious Tradition
RELI 152	Confucian Traditions
POLS 152	Politics of Asia

### Requirements for Minors Minor in Chinese Studies

In order to earn a minor in Chinese Studies, students must complete a minimum of 24 units and 6 courses with a Pacific minor grade point average of 2.0.

#### Minor Requirements:

CHIN 011A	First-Year Chinese, First Semester	4
CHIN 011B	First-Year Chinese, Second Semester	4
CHIN 023	Intermediate Chinese, Third Semester	4
CHIN 025	Intermediate Chinese, Fourth Semester	4

One of the following groups:

1) 2 advanced courses from the following:	8
ASIA 120	Asian Cinemas
ASIA 124	Society, Gender & Culture in E. Asia
ASIA 130	East Asian Literature
HIST 030	East Asian Civilization I
HIST 031	East Asian Civilization II
HIST 141	Pre-Modern Chinese to 1840

HIST 142	Modern Chinese History	
RELI 135	Asian Religious Traditions	
POLS 152	Politics of Asia	
RELI 152	Confucian Traditions	

**Note:** 1) These two courses must be taken in the Modern Language and Literature Department, or other approved department, one of which must be in the Chinese language.

2)	Approved semester or year-long program in China or Taiwan recommended	15
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### Minor in French

In order to earn a minor in French, students must complete a minimum of 24 units and 6 courses with a Pacific minor grade point average of 2.0.

#### Minor Requirements:

FREN 011A	First-Year French, First Semester	4
FREN 011B	First-Year French, Second Semester	4
FREN 023	Intermediate French, Third Semester	4
FREN 025	Intermediate French, Fourth Semester	4
FREN	Electives (2 additional upper division courses)	8

**Note:** 1) At least one of these electives must be taken at Pacific. 2) Students are encouraged to study abroad in a French-speaking country and/or participate in a summer work program or internship there.

### Minor in Japanese

In order to earn a minor in Japanese, students must complete a minimum of 24 units and 6 courses with a Pacific minor grade point average of 2.0.

#### Minor Requirements:

JAPN 011A	First-Year Japanese, First Semester	4
JAPN 011B	First-Year Japanese, Second Semester	4
JAPN 023	Intermediate Japanese, Third Semester	4
JAPN 025	Intermediate Japanese, Fourth Semester	4

Two of the following upper division courses: 8

ASIA 120	Asian Cinemas	
ASIA 124	Society, Gender & Culture in E. Asia	
ASIA 130	East Asian Literature	
HIST 030	East Asian Civilization I	
HIST 031	East Asian Civilization II	
HIST 143	Modernization of Japan	
RELI 135	Asian Religious Traditions	
POLS 152	Politics of Asia	
RELI 152	Confucian Traditions	

**Note:** 1) At least one of these electives must be taken in the Japanese Language. 2) At least 3 of the minor courses must be taken in the Department of Modern Language. 3) Japanese administers its own test for demonstrated oral proficiency on the intermediate level.

### Minor in Spanish

In order to earn a minor in Spanish, students must complete a minimum of 20 units and 6 courses with a Pacific minor grade point average of 2.0.

#### Minor Requirements:

SPAN 101	Composición avanzada	4
SPAN 103	Introducción a la literatura hispánica	4
SPAN 141	Sintaxis, semántica y morfología	4
One of the following courses:		4
SPAN 110	Civilización hispanoamericana	

SPAN 112	Civilización española	
SPAN	Electives (One course numbered SPAN 025 or higher)	4

**Note:** 1) SPAN 021 can satisfy this requirement. 2) 12 of the 20 units must be taken in the Department of Modern Language.

### Minor in Russian Area Studies

In order to earn a minor in Russian Area Studies, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

#### Minor Requirements:

Russian Language (RUSS 023, 025, or equivalents)	8
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One of the following courses: 4

RUSS 120	Contemporary Russian Film	
RUSS 073	Russian Culture and Civilization	
RUSS 191	Advanced Russian	4

One of the following courses: 4

POLS 051	International Politics	
ECON 071	Global Economic Issues	
RUSS 193	Special Topics	

Or:

An alternative course selected from those listed above, or a summer or semester of studying in Russia on a program approved by the Office of International programs or by the minor advisor. A minimum of 12 units must be completed at the University of the Pacific. Study abroad courses may substitute minor requirements with the approval of the Department of Modern Language and Literature.

**Note:** 1) A minimum of 12 units must be completed in the Department of Modern Language.

### Course Offerings

Unless otherwise specified in this listing all coursework is done in the foreign language.

Language courses 011A through 025 must be taken in sequence. A student must receive a grade of "C-" or better in any course which is a prerequisite.

#### General

#### ASIA 120. Asian Cinemas (4)

How do contemporary films from China, Hong Kong, Taiwan, Japan, Korea, Vietnam and India represent their people, re-imagine their cultural identities, and negotiate the local and global, tradition and modernity? This course is an introduction of Asian cinematic narratives. The focus will be on trying to map the overall picture of each cinema, and then examine their major films. Possible topics include cinematic history of each country; relationships to literary and cultural discourses; different film genres; major directors, and various thematic concerns. The aims of this course are to expand your knowledge of both the broad cinematic and socio-historical contexts of Asian cinemas, as well as to enhance your critical thinking. Lectures and readings in English, all films have English subtitles; no prior background is required.

#### ASIA 124. Society, Gender & Culture in East Asia (4)

The course focuses on the major social, gender and cultural issues in contemporary East Asia. The course takes a multidisciplinary approach in reading and examining theoretical/literary/filmic texts in political/economic contexts of global influences and local nationalisms. The course satisfies Asian Language and Studies Major, Chinese and Japanese minors.

**ASIA 130. East Asian Literature (4)**

This course is an introduction to East Asian literature through the reading of selected works in translation. The purpose of the course is to provide the student with an overview of modern Chinese, Korean, and Japanese literature, and the larger historical and cultural context within which it developed. There are no prerequisites: the course is open to all students who wish to expand their intellectual horizons and to enjoy lively and culturally significant reading.

**FREN 051. French Literature in English (4)**

See description under French.

**LANG 087. Internship in Applied Language (2-4)**

This course provides opportunities to use language(s) studied under supervised conditions in a professional venue, either in local schools and businesses or in study-abroad internships. Registration is subject to departmental approval and is ordinarily limited to advanced students. *Pass/No credit grading only.*

**LANG 089. Practicum (2)**

This course is designed to give the student opportunity to work with language in practical situations under supervised conditions. 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.*

**LANG 191. Independent Study (2-4)****LANG 193. Special Topics (2-4)****LANG 195. Capstone Seminar (2)**

A research-centered course on a general topic (e.g. gender, identity, politics) as expressed in societies and cultures of the world. Required of all MLL majors. *Prerequisite: Open to all MLL majors with senior standing only, or by permission of the instructor.*

**LANG 197. Undergraduate Research (2-4)**

Provides opportunity for qualified students majoring in a language in the Department of Modern Language and Literature 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.

**JAPN 170. Japanese Literature in Translation (4)**

See description under Japanese.

**JAPN 172. Japanese Culture and Civilization (4)**

See description under Japanese.

**Chinese****CHIN 011A. 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 011B. 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: CHIN 011A, or permission of the instructor.*

**CHIN 023. Intermediate Chinese, 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: CHIN 011B, or permission of the instructor.*

**CHIN 025. Intermediate Chinese, 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: CHIN 023, or permission of the instructor.*

**CHIN 125. Advanced Chinese I (4)**

Selective readings in Chinese that focus on social issues in contemporary China. Continues training in writing and conversation at the advanced level. *Prerequisites: CHIN 025 or permission of the instructor.*

**CHIN 126. Advanced Chinese II (4)**

Selective readings in Chinese of contemporary literary works in prose and drama. Continues training in writing and conversation at the advanced level. *Prerequisites: CHIN 125 or permission of the instructor.*

**CHIN 191. Independent Study (2-4)****CHIN 193. Special Topics (2-4)****French****FREN 011A. First-Year French, First Semester (4)**

Beginning training in the basic language skills of understanding, speaking, reading and writing at the first semester level. 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 011B. First-Year French, Second Semester (4)**

Training in the basic language skills of understanding, speaking, reading and writing at the second semester level. Communicative and cultural approach. Placement is subject to continuing re-evaluation. *Prerequisite: FREN 011A, or permission of the instructor.*

**FREN 023. Intermediate French, Third Semester (4)**

Culture and civilization through study of national identity and diversity, history and memory, “la francophonie,” and current issues and events in the press, cinema, and fiction. Integrated acquisition and review of grammar as a functioning language system. *Prerequisite: FREN 011B, or permission of the instructor.*

**FREN 025. Intermediate French, Fourth Semester (4)**

Continuation and expansion of cultural themes begun in FREN 023, including national identity and diversity, history and memory, “la francophonie,” and current issues and events in the press, cinema, and fiction. Integrated acquisition and review of grammar as a functioning system. *Prerequisite: FREN 023 or permission of the instructor.*

**FREN 051. French Literature in English (4)**

A study of selected themes, periods, and genres in French and Francophone literature. For specific topics, see French 124, French 122, and French 128. Readings, discussions, lectures, and exams in English. Applicable to French Studies Majors.

**FREN 107. Introduction to French of Business and Economics (4)**

French for commercial, business and academic purposes. 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: FREN 025 or permission of the instructor.*

**FREN 110. Grammaire, Composition et Discussion (4)**

Essential principles of written and oral expression in French at the advanced level. *Prerequisite: FREN 025 or permission of the instructor.*

- FREN 112. Civilisation Française A (4)**  
A survey of the culture and civilization of France from the Middle Ages through the 17th century. *Prerequisite: FREN 025 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: FREN 025 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: FREN 025 or permission of the instructor.*
- FREN 118. Littérature Française B (4)**  
An introductory study of French literature of the 19th and 20th centuries. *Prerequisite: FREN 025 or permission of the instructor.*
- FREN 120. Le Cinéma Français/French Cinema in English (4)**  
A study of the development of French cinema from its inception to the present through the analysis of themes, culture, styles, and cinematography. Directors include Lumière, Méliès, Vigo, Gance, Renoir, Carné, Godard, Truffaut, Resnais, Chabrol, Tavenier, Varda, Cantet, Kassovitz and others. In French. Offered occasionally in English with no prerequisite. (Applicable to the French Studies Track in French or English version.) *Prerequisite: FREN 025 or permission of the instructor.*
- FREN 122. La Francophonie (4)**  
Studies in the literature and film of French-speaking Africa, the Antilles, and/or Canada. Emphasis on issues of language, race, gender, power, cultural identity, and international development In French. Offered occasionally in English as FREN 051. *Prerequisite: FREN 025 or permission of the instructor.*
- FREN 124. Individu et Société (4)**  
An exploration of the construction of the self and its relation to the social in various periods in French culture through literature and film. Focus on universality and difference, the autobiographical project, social determinism, exclusion and revolt. Works by Madame de Lafayette, Laclos, Rousseau, Votaire, Diderot, Balzac, Sand, Baudelaire, Flaubert, Zola, Gide, Camus, Bâ, Modiano and others. Offered occasionally in English as French 051. *Prerequisite: French 025 or 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, Pascal, Montesquieu, Voltaire, Diderot, Rousseau, Sartre, Camus, de Beauvoir, Foucault, Wittig and others. In French. *Prerequisite: FREN 025 or permission of the instructor.*
- FREN 128. Images et Voix de Femmes (4)**  
Images and voices of women from medieval times to the present. Analysis of "la condition féminine" in the French literary and cultural context. Authors include Marie de France, Louise Labé, Mme de Lafayette, George Sand, Colette, Wittig, Némirovsky and others. In French. *Prerequisite: FREN 025 or permission of the instructor.* Offered occasionally in English as FREN 051. 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 Spécialisées (4)**  
Course topics include among others: Les Régions de France; De la Fiction au Film; La Littérature Engagée; Les Quartiers de Paris. *Prerequisite: FREN 025 or equivalent.*
- German**
- GERM 011A. 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.
- GERM 011B. 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: GERM 011A or permission of the instructor.*
- GERM 023. Intermediate German, 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: GERM 011B or permission of the instructor.*
- GERM 025. Intermediate German, 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-system. *Prerequisite: GERM 023 or permission of the instructor.*
- GERM 093. Special Topics (4)**
- GERM 106. German Culture and Society II (4)**  
A study of the major cultural, artistic and political forces of the past 150 years that have shaped the German mind of today. Figures such as Nietzsche, Freud, SchF6nberg, Thomas and Heinrich Mann, Goebbels, Heinrich BF6ll along with topics such as Expressionism, Dada, New Objectivity, the Third Reich, the postwar experience form the subject matter of the course. *Prerequisite: GERM 025 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. *Prerequisite: GERM 025 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 BFCchner, Kleist, Tieck, MF6rike, Hoffmann, Eichendorff, Grabbe, Keller, Stifter and Storm. *Prerequisite: GERM 025 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: GERM 025 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: GERM 025 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 BF6ll. *Prerequisite: GERM 025 or permission of the instructor.*
- 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: GERM 025 or permission of the instructor.*
- GERM 191. Independent Study (2-4)**  
Ordinarily limited to majors in their senior year.
- GERM 193. Special Topics (2-4)**



**Japanese****JAPN 011A. 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 011B. 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: JAPN 011A or permission of the instructor.*

**JAPN 023. Intermediate Japanese, 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: JAPN 011B or permission of the instructor.*

**JAPN 025. Intermediate Japanese, 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: JAPN 023 or permission of the instructor.*

**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 025 or 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 025 or permission of the instructor. (JAPN 125 or 126 may be taken in any order.)*

**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: JAPN 025 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 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 or 126, or 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: SPAN 025 or special permission.*

**PORT 126. Reading and Discussion on Luso-Brazilian Culture (4)**

Major or exclusive emphasis on Brazilian literature. *Prerequisite: PORT 124.*

**PORT 191. Independent Study (2-4)****Russian****RUSS 011A. 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 011B. 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: RUSS 011A or permission of the instructor.*

**RUSS 023. Intermediate Russian, 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: RUSS 011B or permission of the instructor.*

**RUSS 025. Intermediate Russian, Fourth Semester (4)**

A continuation of the cultural themes begun in RUSS 023. 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: RUSS 023 or permission of the instructor.*

**RUSS 073. 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 120. Contemporary Russian Film (4)**

RUSS 120 is a 4-unit course designed for a general audience. No knowledge of Russian is required; lectures and readings are entirely in English. All the movies to be screened have English subtitles. This course is an overview of contemporary Russian film as representation and reflection of Russian cultural values and political and economic changes for the 1960s to the present. Students will see and discuss works of major film directors in their social, political, historical, and cultural context. They will learn about new cultural trends, the relationship between culture and officialdom, as well as peculiarities of national self-perception (the Russian Idea), gender/ethnicity based interpretations, and artistic realities in Russian film.

**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 (2-4)****Spanish****SPAN 011A. 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.

- SPAN 011B. 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: SPAN 011A or permission of the instructor.*
- SPAN 021A. Spanish for Heritage Speakers, First Semester (4)**  
Beginning study of the formal use of Spanish by heritage speakers. Emphasizes skills in composition, advanced reading comprehension, standards versus vernacular usages, and cross language interference. *Prerequisite: Native speaking ability in Spanish.*
- SPAN 021B. Spanish for Heritage Speakers, Second Semester (4)**  
Emphasizes skills in composition, advanced reading comprehension, standards versus vernacular usages, and cross language interference. *Prerequisite: SPAN 021A or permission of instructor.*
- SPAN 023. Intermediate Spanish, 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: SPAN 011B or permission of the instructor.*
- SPAN 025. Intermediate Spanish, Fourth Semester (4)**  
A continuation of the cultural themes begun in SPAN 023. 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: SPAN 023 or permission of the instructor.*
- SPAN 027. Conversación (4)**  
May be repeated once for credit. An intermediate level course to develop 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. *Prerequisite: SPAN 011B or permission of the instructor.*
- SPAN 101. Composición avanzada (4)**  
Designed to prepare students for formal writing in Spanish in academic and professional contexts. Includes grammar review and vocabulary building. *Prerequisite: SPAN 025 or 021B, or permission of instructor.*
- SPAN 103. Introducción a la literatura hispánica (4)**  
A systematic survey of Hispanic literature. Addresses such topics as the function of literature, the analysis and interpretation of texts, literary periods, movements and trends. *Prerequisites: SPAN 021B or 025 or 101 or permission of the instructor.*
- SPAN 110. Civilización hispanoamericana (4)**  
A systematic survey of Hispanic-American civilization from pre-Columbian times to the modern era. Special attention is paid to the Incas, Aztecs and Mayans. May include national and regional historic, political, economic and cultural developments and their impact on Hispanic life. *Prerequisite: SPAN 021B or 025 or 101 or 103, or permission of instructor.*
- SPAN 112. Civilización española (4)**  
A systematic survey of Hispanic literature. An overview of Spanish Peninsular culture and history through literature and art. Representative works from the Middle Ages to the contemporary period are studied in the context of intellectual history and local and international historic developments. *Prerequisite: SPAN 021B or 025 or 101 or 103, or permission of instructor.*
- SPAN 114. Cine hispano/Hispanic Film (4)**  
A study of the development of Latin American or Peninsular cinema through the analysis of themes, styles, and cinematic techniques. Themes might include Latin American women film directors or the films of Pedro Almodóvar, among others. In Spanish. Films in Spanish with English subtitles. Offered occasionally in English.
- SPAN 120. Narrativa hispánica (4)**  
An overview of the novel and short story with an in-depth study of the landmark works of the most prominent authors of the Hispanic world. May be repeated with permission of instructor. *Prerequisite: SPAN 101 or 103 or 133 or 135 or permission of instructor.*
- SPAN 122. Literatura mexicana (4)**  
In-depth analysis of 20th Century Mexican literature, including narrative, poetry, drama, and essay. Themes include Mexican Revolution, Avant-Garde, Modern Novel, Latin American Boom, and Postmodernism. Concurrent study of Mexican culture through literary supplement La Jornada Semanal; art of Diego Rivera, Frida Kahlo, and their contemporaries; New Mexican Cinema; current politics; contemporary music; and food. *Prerequisite: SPAN 101 or 103 or 133 or 135 or permission of instructor.*
- SPAN 124. Escritores hispanos en los Estados Unidos (4)**  
Systematic survey of U.S. Latino literature. This course provides an overall view of Hispanic literature in the United States with emphasis on the literature of one or more of its major groups: Mexican-Americans, Cuban-Americans, or “Nuyoricans.” May be repeated with permission of instructor. *Prerequisite: SPAN 101 or 103 or 133 or 135 or permission of instructor.*
- SPAN 126. Poesía hispánica (4)**  
A study of the poetry of the Spanish-speaking world. Writers, periods and regional focus will vary from medieval Spain to contemporary Latin America. The changing emphasis of the course could range from the Middle Ages to the mysticism of Sor Juana Inés de la Cruz, *Modernismo*, *Vanguardias*, *Las generaciones del '98 y del '27* and *poesía social* with authors such as Jorge Manrique, Garcilaso, Bécquer, Darío, Machado, Lorca, Neruda, Vallejo, Paz, Parra, and Mistral among many others. *Prerequisite: SPAN 101 or 103 or 133 or 135, or permission of instructor.*
- SPAN 128. Teatro hispánico (4)**  
A study of the works of major playwrights of the Spanish-speaking world. Writers, periods and regional focus will vary. *Prerequisite: SPAN 101 or 103 or 133 or 135, or permission of instructor.*
- SPAN 133. Don Quijote (4)**  
A study of the major themes and socio-historical context of Cervantes' masterpiece with a broad consideration of the human experience from the middle ages to present day. An interdisciplinary approach that includes topics ranging from knights, religious conflicts, racism, economics and politics to classical literature, Joseph Campbell, soap operas, sitcoms, *Star Wars*, Velázquez, Magritte and Woody Allen. *Prerequisites: SPAN 101, 103 or permission of instructor. Not recommended for freshmen.*
- SPAN 135. Literatura hispanoamericana del siglo XX (4)**  
An analytical study of the novels of Gabriel García Márquez, Carlos Fuentes, and Mario Vargas Llosa, among others. The writers of the “Boom” will be an important focus in the overview of literary trends as well as the cultures of Colombia, Mexico, Peru, Argentina, Chile, and other Latin American countries. *Prerequisites: SPAN 101 and 103 or permission of instructor.*
- SPAN 140. Traducción (4)**  
Theory and practice of Spanish/English translation. Covers general theory of translation as well as theory specific to translating between Spanish and English. Practice in analyzing published translations and in translating texts from English to Spanish and vice versa. Tests include business pamphlets, political speeches, advertisements, short stories, and poems. Includes visit from poet or translator. *Prerequisite: SPAN 101 or permission of instructor.*
- SPAN 141. Sintaxis, semántica y morfología (4)**  
An overview of syntaxes, semantics and morphology within the context of Spanish linguistics. Focus on pedagogical descriptions that explain the structure of language as a complete system. Designed to facilitate the understanding and teaching of Spanish. *Prerequisite: SPAN 101 or permission of instructor. This course requires a high level of proficiency in Spanish. Not recommended for freshmen.*

**SPAN 143. Fonética y fonología (4)**

An overview of phonetics and phonology within the context of Spanish linguistics. Focus on the study of the sound system of the Spanish language, the mechanics of sound production, the manner in which the language has organized these sounds into a system of logical relationships, and the way geographical, social and ethnic variations are made manifest through that system. *Prerequisite: SPAN 141. Not recommended for freshmen.*

**SPAN 191. Independent Study (2-4)****SPAN 193. Special Topics (3 or 4)****Philosophy**

Phone: (209) 946-2281

Website: [www.pacific.edu/college/philosophy](http://www.pacific.edu/college/philosophy)

James D. Heffernan, Chair

**Degrees Offered**

Bachelor of Arts

**Majors Offered**

Philosophy

**Minors Offered**

Philosophy

The study of philosophy is at the core of a liberal arts education. The ideal of a liberal arts education is not simply to prepare students for a specific career but to prepare them for a meaningful personal life and for intelligent participation in their communities. There are issues that all human beings confront regardless of what career they choose or community they live in, such as the nature and limits of knowledge, the principles of right and wrong, the meaning of life, the truth of religious claims, and the nature of reality. Philosophers raise critical questions about these issues, and some attempt to construct comprehensive systems that explain how all human activities fit together in a unified way. Moreover, through the exposure to some of the great minds in human history and the discussion of their ideas with their professors and peers, students develop the reading, writing, and critical thinking skills that are essential to a human being. In the words of the American Philosophical Association, the study of philosophy serves:

to develop intellectual abilities important for life as a whole, beyond the knowledge and skills required for any particular profession. Properly pursued, it enhances analytical, critical and interpretive capacities that are applicable to any subject matter, and in any human context. It cultivates the capacities and appetite for self-expression and reflection, for exchange and debate of ideas, for life-long learning and for dealing with problems for which there are no easy answers. It also helps to prepare one for the tasks of citizenship. Participation in political and community affairs today is all too often insufficiently informed, manipulable and vulnerable to demagoguery. A good philosophical education enhances the capacity to participate responsibly and intelligently in public life.

Students choose the Bachelor of Arts degree in philosophy for various reasons. Most enjoy the intellectually provocative and challenging nature of philosophical thinking that opens their minds and has relevance for their personal lives. Some study philosophy in order to go to graduate school and eventually teach philosophy or to enter other professional fields, such as law. And others take philosophy as a second major since it is a good complement to virtually any other major. In all cases, the study of philosophy is personally enriching and develops skills that are transferable to a variety of occupations.

The Department of Philosophy offers different kinds of courses. Historical courses survey the major philosophers and periods in the history of philosophy. Specialized courses focus more narrowly on topics such as applied ethics, religion, the meaning of life, politics, or the thought of one philosopher. Systematic courses are advanced and deal with problems that arise in relation to all human activities, such as the activity of knowing (epistemology), the nature of reality (metaphysics), and the experience of value (metaethics). The departmental offerings are grouped as follows:

- A. Introductory Course: Introduction to Philosophy
- B. Formal Reasoning Course: Introduction to Logic
- C. Historical Courses: History of Ancient and Medieval Philosophy; History of Modern Philosophy
- D. Specialized Courses: Moral Problems; Fundamentals of Ethics; The Meaning of Life; Environmental Ethics; Philosopher in Depth; Philosophy of Science; Philosophy of Law; Philosophy of Mind; Philosophy of Religion; Political Philosophy; Biomedical Ethics, Special Topics
- E. Systematic Courses: Metaphysics; Theory of Knowledge; Good, Evil and Reason; Metaethics

### 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 he or she is especially encouraged to choose one or more courses from the following: either PHIL 011-Introduction to Philosophy, PHIL 027-Fundamentals of Ethics, PHIL 053 History of Ancient and Modern Philosophy, PHIL 037-Introduction to Logic.

### Bachelor of Arts Major in Philosophy

In order to earn the bachelor of arts degree with a major in philosophy, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

#### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*

One course from each subdivision below:

##### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

##### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

##### Natural Sciences and Mathematics

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.*

#### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

*Note: 1) Transfer students with sophomore standing are exempt from this requirement.*

#### III. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

*Note: 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.*

#### IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

#### V. Major Requirements

Minimum 33 units and 9 courses, including:

PHIL 011	Introduction to Philosophy	4
PHIL 037	Introduction to Logic	4
PHIL 053	Ancient & Medieval Philosophy	4
PHIL 055	History of modern Philosophy	4
PHIL	Electives (3 additional specialized courses excluding PHIL 180, 182, and 184)	12

Two of the following systematic courses: 8

PHIL 180	Metaphysics
PHIL 182	Theory of Knowledge
PHIL 184	Good, Evil, and Reason: Metaethics

*Note: 1) 6 of these courses must be completed at Pacific.*

#### Minor in Philosophy

In order to earn a minor in philosophy, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

##### Minor Requirements:

PHIL 011	Introduction to Philosophy	4
PHIL	Electives (4 additional courses)	16

*Note: 1) 3 of these courses must be taken at Pacific.*

#### Course Offerings

##### PHIL 011. Introduction to Philosophy (4)

An overview of issues addressed by philosophers and the problems that recur in philosophical speculation in the Western world.

##### PHIL 021. Moral Problems (4)

A moral problem is a result of rational differences of opinion about what is right or wrong. Through philosophical writings and landmark U.S. Supreme Court decisions, students will come to understand the moral and legal complexities of controversial moral problems, such as the moral standing of animals, abortion, doctor-assisted suicide, capital punishment, civil disobedience, affirmative action, sexual morality, pornography, the limits of free speech, and hunger and poverty.

**PHIL 025. The Meaning of Life (4)**

An investigation of views of the meaning of life ranging from ancient to contemporary philosophers.

**PHIL 027. Fundamentals of Ethics (4)**

An inquiry into the assumptions, arguments and implications of moral judgments and value systems.

**PHIL 035. Environmental Ethics (4)**

An investigation of various environmental problems and the ethical attitudes and principles required to address them properly.

**PHIL 037. 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 047. Philosopher in Depth (4)**

An in-depth investigation of the views of a single philosopher on epistemology, ethics, and metaphysics with special attention to how those views cohere (or fail to) into a single world view. Selected philosophers might include Plato, Aristotle, Hume, Kant, Hegel or J.S. Mill. *Course may be repeated with a different focus.*

**PHIL 053. Ancient and Medieval Philosophy (4)**

A survey of significant and historically influential philosophers from the ancient and medieval periods, with particular emphasis on the thought of Socrates, Plato, Aristotle, the Hellenistic philosophers (Epicureans, Stoics, Skeptics), Augustine, and Aquinas. Some of the topics to be investigated are: what is happiness? What is the origin and nature of justice and virtue? Why be moral? What are the aims of government and law? What is the difference between knowledge and opinion? What is the nature of things? Does a divine being exist and what is its nature? What is the relationship between religious faith and reason?

**PHIL 055. History of Modern Philosophy (4)**

A survey of some of the most significant philosophers beginning with the Reformation in the 16th century until the present day. Philosophers typically include Descartes, Locke, Hume, Kant, Mill, Marx, Nietzsche, James, Ayer, Wittgenstein, Sartre, and Popper. Some of the topics are: what are the foundations and limits of knowledge? Can humans know anything with certainty? Does God exist? What is the origin and nature of morality? What is the moral basis of government and law? What are the limits of political and social power over individuals? What gives life meaning? *A previous course in PHIL 053 is recommended but not necessary.*

**PHIL 061. Philosophy of Science (4)**

An examination of some of the main philosophical issues regarding the nature and methods of science. Topics include: science and pseudo-science, the sociology of science, theory construction and confirmation, scientific explanation, and scientific realism. Examples drawn from the natural and social sciences. *No background in science is needed, though science majors are especially welcome.*

**PHIL 093. Special Topics (4)****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 121. Philosophy of Mind (4)**

Explores some of the major issues and debates in recent philosophy of mind and cognitive science. Main interests include the mind-body problem, artificial intelligence, the problem of intentionality, the explanation of action, mental causation, and the problem of phenomenal consciousness. Additional topics may include vision, concepts, language, and animal cognition.

**PHIL 122. Philosophy of Language (4)**

Philosophy of language is a central area in contemporary analytic philosophy, playing a key role in the formulation of and solution to many philosophical problems. This course is an examination of some of the main philosophical issues concerning the syntax, semantics, and pragmatics of natural language. Topics include the semantic content of names, descriptions, indexicals, and predicates; theories of meaning and truth; knowledge of language; and speech act theory and the pragmatics of communication. Additional topics include the study of fictional names, metaphor, and the semantics of propositional attitude ascriptions.

**PHIL 124. Philosophy of Religion (4)**

Through classical and contemporary philosophical writings, students will examine arguments that support belief in God (mystical, cosmological, teleological, moral); whether morality depends on religious belief; the relationship between reason and faith; the problem of evil; the possibility of miracles and an afterlife; the nature of "secular" religions; and the relationship between science and religious belief. *A previous course in philosophy is highly recommended.*

**PHIL 135. Political Philosophy (4)**

An evaluation of bases of political power, forms of government and legal and judiciary systems.

**PHIL 145. Biomedical Ethics (4)**

This course will study the ethical principles and ideals that justify decisions in health care. It will primarily focus on the principles and ideals commonly accepted by western religious and humanistic traditions, and the various ways they are employed by these traditions in concrete cases. Topics covered will include physician-assisted suicide, termination of life-sustaining medical treatment, organ transplantation, abortion, cloning and artificial reproduction, and the allocation of medical resources. The course format will be a blend of lecture and discussion, and include numerous actual and hypothetical cases. *Not recommended for first-year students.*

**PHIL 180. Metaphysics (4)**

An in-depth examination of various metaphysical problems that cannot be answered by sense-experience and experimental methods alone, such as whether human beings are free, the nature of personal identity, the relationship between consciousness and the body, the existence of God, the possibility of an afterlife, and the meaning of life.

**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.

**PHIL 184. Good, Evil, and Reason: 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

Phone: (209) 946-2220

Location: Olson Hall, South Campus

Website: [www.pacific.edu/college/physics](http://www.pacific.edu/college/physics)

James Hetrick, Chair

### Degrees Offered

Bachelor of Arts

Bachelor of Science

### Majors Offered

Physics (BA)

Physics (BS)

Standard Track

Computational Physics Concentration

Astrophysics Concentration

Mathematical Physics Concentration

Engineering Physics (BS)

### Minors Offered

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 Physics Department helps students understand and explore these natural relationships, their meaning, interconnectedness, and their use. The study of physics includes mastering very broad fundamentals which apply to everything from atoms to galaxies, as well as specific studies in topical specializations such as computational and astrophysics. Students are also encouraged to participate in undergraduate research projects both here at Pacific and at other institutions during the summer break.

## Degrees in Physics

The degree programs in Physics prepare students to think deeply through questions, to find and connect abstract relationships to new situations, and to be academically confident and broadly knowledgeable scientists and teachers. Bachelor of Science degrees are offered in Physics and Engineering. A Bachelor of Arts degree is also offered in Physics, which is combined with the credential program for secondary school teaching. 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 classrooms of the Physics Department occupy Olson Hall. Labs are equipped with modern facilities for courses in optics solid state physics, advanced experiments, as well as for the Introductory Physics, Music, and Astronomy courses, including a 2.3 meter radio telescope for student use. The department has two computer labs with PCs, and a scientific computing (unix) lab.

## Recommended High School Preparation

Physics majors should study enough mathematics in high school so that they are prepared to take calculus in their first semester at Pacific. They should also take high school physics and chemistry. Some experience with computer programming is also very useful.

## 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.

In addition to the *Standard Track* for the Bachelor of Science in Physics described above, students may choose a focused concentration for their studies, following one of the three Concentrations below. These concentrations engage the student further in areas where our department has particular expertise and resources.

### Computational Physics Concentration

This concentration enhances the student's understanding and experience in using computers to solve physics problems and build simulations of complex phenomena, using the department's high performance computing resources. Students in this Concentration are required to take PHYS 127 and one other applied Math or Physics course, and their Senior Thesis (PHYS 199) will be a computationally intensive project.

### Astrophysics Concentration

Through coursework and projects using the department's astronomical telescopes (optical and radio) and other equipment, students in the Astrophysics Concentration enhance their understanding of the Universe beyond the Earth. Students in this Concentration are required to take PHYS 041 and PHYS 141, and their Senior Thesis (PHYS 199) will involve either an experimental or theoretical astrophysics project.

### Mathematical Physics Concentration

This Concentration is for students who are mathematically gifted or might be considering a dual major in Math. Students in the Mathematical Physics Concentration will be exposed to more advanced techniques and aspects of theoretical physics. The requirements of this Concentration are PHYS 137 and another upper division MATH elective, and the Senior Thesis (PHYS 199) will involve a theoretical investigation.

## Bachelor of Science – Engineering Physics

The Bachelor of Science in Engineering Physics is offered in cooperation with the School of Engineering. The proportions of courses taken in these two areas are roughly equal.

Today's engineer must be able to understand and apply new and changing technologies which arise from advances in fundamental science. Pacific engineering physics graduates have a firm understanding of the fundamental physics upon which modern technologies are based. He or she is able to use advanced 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 work experience component called the Cooperative Education Program. 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 a five-year program.

## Bachelor of Arts - Physics

The Bachelor of Arts degree program requires fewer advanced courses in Physics and Mathematics than are required for the three Bachelor of Science programs. Students complete six courses in Physics and four in Mathematics, which allows time for a student to develop greater breadth in other areas as is appropriate for a high school physical science teaching credential. Thus, this degree is at present limited to students in the secondary school teaching track. (Students interested in teaching credential programs with a physics or physical sciences emphasis can obtain the Teaching Credential Major sheet from the Office of Admissions.)

## 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.

## Bachelor of Arts Major in Physics

In order to earn the bachelor of arts degree with a major in physics, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### *The Individual and Society*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### *Human Heritage*

- IIA. Literature, Letters and Language
- IIB. Fundamental Human Concerns
- IIC. Practice and Perspective in the Visual and Performing Arts

#### *Natural World and Formal Systems of Thought*

- IIIA. Natural Sciences
  - IIIB. Formal Systems of Thought
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than two or three courses from a single discipline may be applied to meet the requirements of the general education program.

### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

### III. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### IV. Major Requirements

Minimum 42 units, including:

PHYS 027	Introduction to Computing for Physicists	1
PHYS 053	Principles of Physics I	5
PHYS 055	Principles of Physics II	5
PHYS 057	Modern Physics	4
PHYS 181	Classical Mechanics	4
PHYS	Electives (2 additional upper division courses)	8
MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4
MATH 057	Ordinary Differential Equations	4

## Bachelor of Science Major in Physics

In order to earn the bachelor of science degree with a major in physics, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### *The Individual and Society*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### *Human Heritage*

- IIA. Literature, Letters and Language
- IIB. Fundamental Human Concerns
- IIC. Practice and Perspective in the Visual and Performing Arts

#### *Natural World and Formal Systems of Thought*

- IIIA. Natural Sciences
  - IIIB. Formal Systems of Thought
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:1)** A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than two courses from a single discipline may be applied to meet the requirements of the general education program.

**II. Fundamental Skills**

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note: 1)** A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

**III. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

**IV. Major Requirements**

Minimum 77 units, including:

PHYS 027	Scientific Computing Tutorial	1
PHYS 053	Principles of Physics I	5
PHYS 055	Principles of Physics II	5
PHYS 057	Modern Physics	4
PHYS 101	Electricity and Magnetism	4
PHYS 102	Electrodynamics	4
PHYS 151	Advanced Physics Lab	4
PHYS 161	Thermal Physics	4
PHYS 181	Classical Mechanics	4
PHYS 183	Quantum Mechanics	4
PHYS 199	Senior Thesis	4
MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4
MATH 057	Ordinary Differential Equations	4

**Note: 1)** An upper level vector calculus or complex analysis course is recommended, such as MATH 152)

One of the following electronics courses:	5
CHEM 025	General Chemistry
CHEM 027	General Chemistry

**Note:** Students should take the Chemistry Placement Exam during orientation to determine which course is appropriate.

COMP 051	Computer Science I	4
Complete one of the following concentrations:		

**Standard Track**

PHYS	Electives (2 additional upper division courses)	8
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**Computational Physics Concentration**

PHYS 127	Computational Physics	4
One of the following:	4	
MATH 110	Numerical Analysis	
MATH 145	Applied Linear Algebra	
MATH 157	Applied Differential Equations I	

**Astrophysics Concentration**

PHYS 041	Astronomy	4
PHYS 141	Cosmology	4

**Mathematical Physics Concentration**

PHYS 137	Mathematical Physics	4
One of the following:	4	
MATH 145	Applied Linear Algebra	
MATH 157	Applied Differential Equations II	
MATH or PHYS	courses as approved by department Chair.	

**Bachelor of Science in Engineering Physics**

In order to earn the bachelor of science in engineering physics, students must adhere to the University's graduation requirements for bachelor degrees, completing a minimum of 120 units of academic work and a minimum of 32 units of Cooperative Education.

All Engineering Physics students must successfully pass the Engineering Physics Core Assessment Exam as a prerequisite for ECPE 196 – Senior Project II. The objective of the Core Assessment Exam is to ensure that all graduating Engineering Physics students have a satisfactory level of knowledge of fundamental concepts of their major.

**I. General Education Requirements**

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note: 1)** Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

*Social and Behavioral Sciences*

Two courses from the following:

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

IIB. ENGR 030

One course from the following categories:

- IIA. Language and Literature
- IIC. Visual and Performing Arts

**Note: 1)** A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) Only one course can come from each subdivision (A, B, or C). 3) No more than 8 units from a single department may be applied to meet the breadth program requirements.

**II. Degree Requirements**

Mathematics and Science (minimum of 32 units):		
MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4
MATH 057	Applied Differential Equations I	4
MATH 039	Probability with Application to Statistic	4
CHEM 025	General Chemistry	5
PHYS 053	Principles of Physics I	5
PHYS 055	Principles of Physics II	5
Engineering Science:		
ENGR 010	Dean's Seminar	1
COMP 051	Introduction to Computer Science	4
ENGR 020	Engineering Mechanics I (Statics)	3
ECPE 041	Circuits	3



ECPE 041L	Circuits Laboratory	1
ECPE 071	Digital Design	3
ECPE 071L	Digital Design Laboratory	1
ENGR 045	Materials Science	4
Engineering Core:		
ECPE 121	Systems Analysis	4
ECPE 131	Electronics	3
ECPE 131L	Electronics Laboratory	1
ENGR 120	Engineering Mechanics II (Dynamics)	3
CIVL 130	Fluid Mechanics I	3
CIVL 130L	Fluid Mechanics I Lab	1
ECPE 195	Senior Project I	2
ECPE 196	Senior Project II	2
ENGR 025	Professional Practice Seminar	1
Physics Core:		
PHYS 057	Modern Physics	4
PHYS 101	Electricity and Magnetism	4
PHYS 161	Thermal Physics	4
Technical Electives:		
Electives	5 courses from technical elective options	18
<i>Note: 1) See Program Worksheet for list of appropriate courses.</i>		
Cooperative Education:		
Minimum 32 units, including:		
ENGR 181	Professional Practice	14-18
ENGR 182	Professional Practice	14-18
ENGR 183	Professional Practice	14-18

## Minor in Physics

In order to earn the minor in physics, students must complete a minimum of 22 units and 5 courses with a Pacific minor grade point average of 2.0.

### Minor Requirements:

PHYS 053	Principles of Physics I	5
PHYS 055	Principles of Physics II	5
PHYS 057	Modern Physics	4
PHYS	Electives (2 additional upper-level courses)	8

## Course Offerings

### PHYS 017. 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. *Prerequisite: passing score on the Intermediate Algebra placement test or one of the following math courses: MATH 005, 033, 037, 039, 041, 051, or 053.*

### PHYS 023. General Physics I (5)

The physics of mechanics and motion. Rotation Fluids. Thermodynamics. The course includes laboratory work. *Prerequisite: a passing score on the pre-calculus placement test or one of the following math courses: MATH 039, 041, 045, 051, 053, or 055.*

### PHYS 025. General Physics II (5)

Acoustics and waves. Electricity and Magnetism, Quantum Mechanics and Relativity. The course includes laboratory work. *Prerequisite: PHYS 023.*

### PHYS 027. Scientific Computing Tutorial (1)

This course meets weekly and provides students with an introduction to the department's computer facilities and their use. After an introduction to unix, students learn basic programming in C++. The course then covers scientific software and libraries for data analysis and visualization. *Prerequisites: a passing score on the Intermediate Algebra placement test or one of the following math courses: MATH 005, 033, 037, 039, 041, 045, 051, 053, or 055.*

### PHYS 039. 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 involved. 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. *Prerequisite: High school level ability in algebra and geometry.*

### PHYS 041. Astronomy (4)

A broad overview of modern astronomy, with emphasis on conceptual understanding. Topics include 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. *Prerequisite: a passing score on the Intermediate Algebra placement test or one of the following math courses: MATH 005, 033, 037, 039, 041, 045, 051, 053, or 055.*

### PHYS 053. Principles of Physics I (5)

Kinematics, dynamics, oscillations, wave motion and fluids. Laboratory. *Prerequisite: MATH 051 and 053 (or concurrent enrollment) or 055 or 057. High school physics or PHYS 023 are recommended.*

### PHYS 055. Principles of Physics II (5)

Thermodynamics, electricity, magnetism, light and optics, atomic and nuclear physics, particle physics and cosmology. Laboratory. *Prerequisites: PHYS 053.*

### PHYS 057. 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 055 and MATH 055 and 057 (or concurrent enrollment).*

### 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 055, MATH 055 and 057 (or concurrent enrollment).*

### PHYS 102. Electrodynamics (4)

Maxwell's equations. Propagation of electromagnetic radiation. Transmission lines, wave guides, antennas. Applications. *Prerequisites: PHYS 057, 101 and MATH 057.*

### PHYS 105. Optics (4)

A modern introduction to optics. Topics include geometrical optics, optical instrumentation, the wave nature of light, polarization, diffraction, lasers and fiber-optics. Includes laboratory. *Prerequisite: PHYS 055 and MATH 055 and MATH 057 (or concurrent enrollment).*

### PHYS 125. Molecular Nanotechnology (4)

Molecular nanotechnology (MNT) is a rather young discipline, which came up in the nineties. Nevertheless, MNT has gained so much importance within the last years that universities at all rankings have introduced or are going to introduce MNT teaching programs. Predictions say that MNT will change our lives and society more than computer technology and electricity have done together.

The course will provide an overview of MNT. It will show that the nano regime is so different from other regimes because both classical and quantum effects can be active thus leading to unique properties of nano devices. MNT is a highly interdisciplinary science, which will be reflected in the course by making reference to physics, chemistry, biology, pharmacy, and engineering. Applications of MNT as they are already in use today and as they are planned for the future will be discussed. Also, the implications of MNT for our society will be considered. *Prerequisites: CHEM 025 or PHYS 055.*

**PHYS 127. Computational Physics (4)**

This course provides and introduction to the main computational and simulation techniques used in modern physics. Topics include numerical solution of ordinary and partial differential equations, matrix and linear algebra, Monte Carlo and random variable methods, and computer algebra. *Prerequisites: PHYS 055 and MATH 057 and COMP 051 (or permission of instructor for other programming experience).*

**PHYS 137. Mathematical Physics (4)**

Infinite series and sequences, Complex analysis, techniques of solving differential equations (ODEs and partial diff. eqs.), linear operators in Hilbert space, special functions, symmetry and group theory. *Prerequisites: PHYS 055 and MATH 057.*

**PHYS 141. Cosmology (4)**

Introduction to the physics of stars, galaxies and the universe. Topics include: observational properties of stars, stellar structure, star formation, stellar evolution, close binary stars, white dwarfs, neutron stars and black holes, observational properties of galaxies, galactic dynamics, interstellar and intergalactic medium, expansion of the universe and cosmology. *Prerequisites: PHYS 055 and MATH 057 (or concurrent enrollment).*

**PHYS 151. Advanced Physics Laboratory (4)**

Experimental studies in modern physics, especially ones which require the design, construction and use of special apparatus. Experiments in atomic, nuclear, and particle, optics, solid state physics and astrophysics are possible. *Prerequisite: PHYS 057.*

**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 055 and MATH 055.*

**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 055 and MATH 055.*

**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 055 and MATH 057.*

**PHYS 183. Quantum Mechanics (4)**

An introduction to quantum mechanics as it contrasts with classical physics. Topics include the Wave Particle Duality, Dirac Formalism, Postulates of Quantum Mechanics, Two Level Systems in Spin 1/2, The Harmonic Oscillator, Angular Momentum, The Hydrogen Atom. *Prerequisites: PHYS 057 and MATH 057.*

**PHYS 191. Independent Study (2-4)**

**PHYS 193. Special Topics (4)**

**PHYS 197. Undergraduate Research (2-4)**

**PHYS 199. Senior Thesis (4)**

## Political Science

Phone: (209) 946-2524

Location: 212 Wendell Phillips Center

Website: web.pacific.edu/x8132.xml

Brian Klunk, Chair

Cynthia Ostberg, Director of Pre-law and Legal Scholars programs

### Degrees Offered

Bachelor of Arts

### Majors Offered

Political Science

### Minors Offered

Political Science

Pre-Law

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.

### Internships

Special opportunities are provided for internships in public agencies in Stockton, Sacramento, 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.

## 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.

The Pacific Legal Scholars Program offers honors students in various majors a richly supported accelerated path leading to Pacific McGeorge Law School after three years on Pacific's Stockton campus. For a complete description of that program, please see the section on Cross-Disciplinary Majors and Programs.

## Bachelor of Arts Major in Political Science

In order to earn the bachelor of arts degree with a major in political science, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

### III. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

**IV. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

**V. Major Requirements**

Minimum 12 courses, including:

POLS 041	U.S. Government and Politics	4
POLS 051	International Politics	4
POLS 119	Government in Action: Public Policy Analysis	4
POLS 131	Approaches to Political Theory	4
POLS 133	Political Science Research	4
POLS 151	Principles of Comparative Politics	4

Minimum 2 units from one of the following orientation courses: 2

POLS 081	Career/Internship Prep (2 units)
INTL 151	Cross-Cultural Training I (2 units)

*\*Only students participating in an approved study-abroad program may take INTL 151—Cross-Cultural Training I*

Minimum 3 units from the following internship or research courses: 3-4

POLS 187a	Political Science Internship (4 units)
POLS 187c	Pre-Law Internship (4 units)
POLS 197	Undergraduate Research in Political Science (3-4 units)
JCTR 187	Internship (3-4 units)
JCTR 197A,B	Community Independent Research (3-4 units)
WASH 187	Washington Semester Internship (4 units)

POLS Electives 3 additional courses at the 100-level or from: 12

PHIL 106	Philosophy of Law
PHIL 135	Political Philosophy
INTL 174	Global Environmental Policy

POLS 189 Capstone Seminar 4

**Minor in Political Science**

In order to earn a minor in political science, students must complete a minimum of 21 units and 6 courses with a Pacific minor grade point average of 2.0.

**Minor Requirements:**

POLS 011	Introduction to Political Science	4
POLS 041	U.S. Government and Politics	4
POLS 051	International Politics	4
POLS	Electives 3 additional courses at the 100-level or from:	12
PHIL 106	Philosophy of Law	
PHIL 135	Political Philosophy	
INTL 174	Global Environmental Policy	

*Note: 1) At least ten of these units must be taken at Pacific.*

**Minor in Pre-Law**

In order to earn a minor in pre-law, students must complete a minimum of 24 units and 6 courses with a Pacific minor grade point average of 2.0.

**Minor Requirements:**

One of the following public law courses:	4
POLS 122	Constitutional Law
POLS 124	Constitutional Law: Civil Liberties

POLS 126	Criminal Law	
One of the following law courses:	4	
BUSI 053	The Legal and Ethical Environment of Business	
INTL 167	Introduction to International Law	
SPTS 165	Sports Law	
BUSI 127	Legal Aspects of Real Estate	
BUSI 157	Commercial Law	
BUSI 159	Employment Law	
BUSI 167	International Business Law	
MMGT 153	Entertainment Law	
One of the following communication courses:	4	
COMM 027	Public Speaking	
COMM 114	Argumentation and Advocacy	
ENGL 025	English 25	
One of the following philosophy courses:	4	
PHIL 021	Moral Problems	
PHIL 027	Fundamentals of Ethics	
PHIL 037	Introduction to Logic	
PHIL 106	Philosophy of Law	
One of the following business administration / statistics courses:	4	
BUSI 031	Principles of Financial Accounting	
ECON 190	Econometrics	
ECON 161	Computer Applications in Economics	
MATH 035	Elementary Statistical Inference	
MATH 037	Introduction to Statistics and Probability	
POLS 133	Political Science Research	
INTL 101	International Research Methods	
SOCI 171	Social Research Methods	
One of the following social sciences courses:	4	
ECON 053	Introductory Microeconomics	
ECON 055	Introductory Macroeconomics	
POLS 041	U.S. Government and Politics	
POLS 119	Government in Action: Public Policy Analysis	
POLS 120	The Judicial Process	
POLS 162	International Organization	
BUSI 157	Commercial Law	
PSYC 031	Introduction to Psychology	
PSYC 111	Abnormal Psychology	
SOCI 131	Deviant Behavior	
SOCI 133	Criminology	
SOCI 139	Corrections	

*Note: 1) 12 of these units must be taken at Pacific. 2) All courses must be graded "C-" or higher. 3) Only two courses may be transferred from community colleges. 4) Courses transferred from community colleges cannot fulfill the public law requirement. 5) No more than 3 courses from a single academic department can be counted in the pre-law minor.*

**Course Offerings**

**Lower-Division**

**POLS 011. 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 041. U.S. Government and Politics (4)**

An analysis of the constitutional structure of the federal government and its functioning, including the political processes involved. This course satisfies the state requirement on the U.S. Constitution.

**POLS 051. 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 060. Legal Study Seminar (1)**

An introduction to the legal profession, court structure, and practical skills needed for law school. This course also examines current problems in different fields of law through panel discussions by law faculty. *Prerequisite: Pacific Legal Scholar Student, or permission of the instructor.*

**POLS 062. Legal Practice Seminar (1)**

An examination of different legal career trajectories, legal scholarship, and career exploration. This course also draws connections between academic training and legal practice through panel discussions by legal practitioners, and courthouse visits. *Prerequisite: Pacific Legal Scholar Student, or permission of the instructor*

**POLS 081. Internship Orientation (2)**

Orientation to and preparation for the workplace expectations commonly encountered by students in political science internships. The course also provides information about careers commonly pursued by political science majors and how to prepare for them. *Prerequisites: POLS 041 and sophomore standing.*

**Upper-Division Courses****POLS 104. Urban Government (4)**

The structure and operation of urban units of government with emphasis on inter-governmental and inter-group relations in the United States. Problems of finance, racial, ethnic and class conflict, the 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. Political Parties and Interest Groups (4)**

Analysis of the role of political parties and interest groups in the American political system. Examines the origins, development, and current state of parties and interest groups, as well as the ways that they organize and influence the policy-making process.

**POLS 119. Government in Action: Public Policy Analysis (4)**

Analysis and evaluation of how government makes and implements policy at various levels, including state and local. *Prerequisite: POLS 041.*

**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.

**POLS 130. Ancient to Medieval Political Theory (4)**

Analysis of ancient and medieval political thinkers. This course examines the formation of social and political thought from approximately fifth century Greece through twelfth century Europe. The course addresses tensions between democracy and empire, ideas of democracy, freedom, the responsibilities of political power, the place of ambition, the role of justice, and the meaning of the good life.

**POLS 131. Approaches to Political Theory (4)**

Examination of the most important approaches to political theory and normative political theorizing used by political scientists and the application of these approaches to significant works of political theory. *Prerequisites: POLS 041 and 051.*

**POLS 132. Modern to Contemporary Political Theory (4)**

Analysis of modern and contemporary political thinkers. This course examines the formation of social and political thought from the sixteenth century through the twenty-first centuries. The course materials address the development of the nation state, individual rights and freedom, religious liberty and toleration, popular sovereignty, popular consent, social equality, and intellectual, social, and historical progress.

**POLS 133. Political Science Research (4)**

Development of skills needed for conducting and understanding research in political science, including research design, critical statistical techniques and computer applications. *Prerequisites: POLS 041, POLS 051 or instructor permission.*

**POLS 134. American Political Thought (4)**

Principles and problems of political theory within the American setting as they emerge from the founding period to the present. The course explores both the mainstream tradition and branches of counter traditions of political ideas in America, focusing on the themes of authority, community, equality, liberty.

**POLS 136. Jurisprudence (4)**

Analysis of the nature and functions of law, law as an instrument of social control, and the relationship between law, morality, and justice. This course examines current problems in law as it intersects with politics and society. Readings are drawn from legal and political philosophy, social science, and judicial opinions.

**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.

- 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 151. Principles of Comparative Politics (4)**  
Examination of the most important analytical approaches used by political scientists in the comparative analysis of political systems and application of those approaches to selected examples. *Prerequisites: POLS 041, 051 or permission of instructor.*
- 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 051 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 051 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 055 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 051 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 041.*
- 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 175. Legal Writing and Research Seminar (1)**  
Students are exposed to legal writing and advanced research skills, the content of first year law courses, and resources and facilities at Pacific McGeorge. *Prerequisite: POLS 060/POLS 062, Pacific Legal Scholar Student with Junior or Senior standing and an overall GPA of 3.0, or permission of the instructor. This course must be taken in the summer after the Junior year (regardless of whether a student is in the 3+3 or 4+3 program).*
- POLS 187A, B. Political Science Internship (4)**  
Supervised experience in an approved government or political setting to be contracted on an individual basis. POLS 187b can be either an experience in a second government or political setting or a second experience in the same setting focused at a more advanced level than POLS 187a. The course may be repeated for credit, but will apply toward major requirements only once. *Prerequisites: Junior standing and overall GPA of 2.0, POLS 041 and department permission.*
- POLS 187C. Pre-Law Internship (4)**  
Supervised experience in an approved legal or judicial setting to be contracted on an individual basis. *Prerequisites: Junior standing and overall GPA of 2.0, POLS 041 and department permission.*
- 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)**
- POLS 197. Undergraduate Research in Political Science (2-4)**  
Students will acquire skills in the design and implementation of political science research while serving as a research assistant to a faculty member or conducting an independent research project under the supervision of a faculty member. *Prerequisite: Junior or senior standing as a political science major and permission from the department.*

## Psychology

Phone: (209) 946-2133

Location: Psychology/Communications Building

Website: [www.pacific.edu/college/psychology](http://www.pacific.edu/college/psychology)

Roseann Hannon, Chair

### Degrees Offered

Bachelor of Arts

Master of Arts (see Graduate Catalog for information)

### Majors Offered

Psychology

### Minors Offered

Psychology

Child Psychology

Lifespan Development

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 parenting, children learning moral concepts, troubled adolescents, anxious adults, and people who have chronic health problems, 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, science, sports, and the arts.

### Career Preparation

The department offers 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 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.

### Bachelor of Arts Major in Psychology

In order to earn the bachelor of arts degree with a major in psychology, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

#### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program. 3) In selecting courses to meet GE requirements, try to choose from the Biology, Literature, Mathematics and Philosophy offerings.*

#### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

*Note: 1) Transfer students with sophomore standing are exempt from this requirement.*

**III. Fundamental Skills**

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

*Note: 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.*

**IV. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

**V. Major Requirements**

Minimum 45 units and 11 letter-graded courses, including:

PSYC 031	Introduction to Psychology	4
PSYC 053	Behavior Change I	4
PSYC 105	Experimental Psychology	5
PSYC 125	History and Systems of Psychology	4
One of the following courses (PSYC 103 preferred):		4
PSYC 103	Statistical Inference in Behavior Sciences	
MATH 035	Elementary Statistical Inference	
MATH 037	Introduction to Statistics and Probability	
Three of the following courses:		12
PSYC 107	Psychology of Learning	
PSYC 109	Physiological Psychology	
PSYC 115	Cognitive Psychology	
PSYC 129	Developmental Psychology	
PSYC 169	Social Psychology	
PSYC	Electives (3 additional 100-level courses)	12

*Note: 1) Courses counting toward the major are selected according to the interests of the student in consultation with an adviser in the department. 2) Psychology majors are also strongly encouraged to take one course in PSYC 197 – Independent Research, PSYC 087/189 – Internship or PSYC 089/189 – Practicum. 3) All courses must be graded “C-” or better to count towards the major.*

**Minor in Psychology**

In order to earn a minor in psychology, students must complete a minimum of 24 units and 6 courses with a Pacific minor grade point average of 2.0.

**Minor Requirements:**

PSYC 031	Introduction to Psychology	4
PSYC 053	Behavior Change I	4
PSYC 103	Statistical Inference in Behavioral Sciences	4
PSYC	Electives (3 additional 100-level courses excluding PSYC 185A, 185B, 187, 189)	12

*Note: 1) These electives must be taken at Pacific. 2) All courses must be graded “C-” or better to count towards the minor.*

**Minor in Child Psychology**

In order to earn a minor in child psychology, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

**Minor Requirements:**

PSYC 029	Child Development	4
PSYC 053	Behavior Change I	4

PSYC 131	Adolescence and Young Adulthood	4
Two of the following courses:		8
PSYC 154	Child Mental Health	
PSYC 155	Couples and Family Therapy	
SPED 123	The Exceptional Child	
PSYC 087D	Human Development and Family Intervention Internship	
PSYC 187D	Human Development and Family Intervention Internship	

*Note: 1) If selected, PSYC 087d and 187d must be taken for a total of 4 units. 2) All courses must be graded “C-” or better to count towards the minor.*

**Minor in Lifespan Development**

In order to earn a minor in lifespan development, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

**Minor Requirements:**

PSYC 029	Child Development	4
PSYC 131	Adolescence and Young Adulthood	4
PSYC 133	Adulthood and Aging	4
Two of the following courses:		8
ANTH 053	Cultural Anthropology	
PSYC 031	Introduction to Psychology	
PSYC 066	Human Sexuality	
PSYC 087D	Human Development and Family Intervention Internship	
PSYC 187D	Human Development and Family Intervention Internship	
SOCI 127	Family and Marriage	

*Note: 1) If selected, PSYC 087d and 187d must be taken for a total of 4 units. 2) All courses must be graded “C-” or better to count towards the minor.*

**Academic Structure of Options Within the Major**

**Increased Understanding of Your Own and Others’ Behavior**

In addition to the eight 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 subfields 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 107-Psychology of Learning, PSYC 156-Behavioral Medicine, and PSYC 158-Behavioral Assessment. 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 031	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 175	Leadership and Change

Students should also take PSYC 089-Internship or PSYC 087-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 may select from the following sequence of courses in addition to the major requirements: PSYC 089D Research Assistantship Practicum, MATH 130-Topics in Applied Statistics and PSYC 183-Research Design. It is strongly recommended that major courses include a representation of the basic subfields of psychology as well as additional PSYC 197-Independent Research and PSYC 087-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 department's Psychology Clinic.

## Course Offerings

### PSYC 029. 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. *Recommended for sophomores. Does not count toward major.*

### PSYC 031. 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 053. Behavior Change I (4)

An introduction to behavioral principles, to the psychology major (including career options and different fields of psychology), and to the process of learning to write scientific papers. 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. Students also spend three hours per week in practicum setting. Supervision of undergraduate students will be provided by the instructor and graduate students. *Prerequisite: Psychology Major, Psychology Minor, Child Psychology Minor, Helping Professions Minor, or instructor permission; recommended for freshmen.*

### PSYC 066. 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. *Open to freshmen. Does not count toward major.*

### PSYC 087, 187. Internship (1-4, 1-4)

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 087A, 187A. Business and Industrial Internship (1-4, 1-4)

Supervised experience in performance management and training in business and industrial settings.

### PSYC 087B, 187B. Developmental Disabilities Internship (1-4, 1-4)

Supervised experience in agencies providing services to the developmentally disabled.

### PSYC 087C, 187C. Educational/Training Internship (1-4, 1-4)

Supervised experience in educational and training institutions and agencies.

### PSYC 087D, 187D. Human Development and Family Intervention Internship (1-4, 1-4)

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 087E, 187E. Mental Disabilities Internship (1-4, 1-4)

Supervised experience in agencies providing services to the mentally disabled.

### PSYC 087F, 187F. Autism Internship (1-4, 1-4)

Supervised experience working with autistic children. *Prerequisite: PSYC 053.*

### PSYC 089, 189. Practicum (1-4, 1-4)

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 089d, 189d. Research Assistantship Practicum (1-4, 1-4)

Students will acquire skills in the design and implementation of psychological research while serving as assistants to faculty conducting research projects.

### PSYC 089e, 189e. Teaching of Psychology Practicum (1-4, 1-4)

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 003 or appropriate score on the Mathematics Placement Test. PSYC 103 (or MATH 035 or MATH 037) required for psychology majors.

**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 053 and PSYC 103, MATH 035, or MATH 037. *Required for psychology majors; recommended in sophomore year; not open to freshmen.*

**PSYC 107/207. Psychology of Learning (4)**

The scientific investigation of learning and behavior. Both experimental and related theoretical developments are considered, as well as applications of the basic principles of learning to issues of social significance. *Prerequisite:* PSYC 105 or permission of the instructor.

**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. *Prerequisite:* sophomore standing or above.

**PSYC 111. Abnormal Psychology (4)**

Study of the causes, classification and treatment of abnormal behavior. The class will be of interest to any student who is curious about people and what they do, especially the unusual things that people do. The class addresses the distinction between being different and having a mental disorder, what we can change and what we can not change, psychological testing, the DSM classification system, the role of genetic factors in abnormal behavior as well as the current status of empirically validated psychosocial and pharmacological treatments for mental disorders. The class is highly recommended for any student who aspires to go into clinical psychology, marriage family counseling, child psychology, forensic psychology, social work, or clinical psychopharmacology.

**PSYC 115. Cognitive Psychology (4)**

Introduction to the field of cognitive psychology, focusing on the mental processes that underlie thinking, remembering/forgetting, perception, attention, knowledge, language, and problem solving. Current research on cognition, as well as applications of research findings, will be emphasized in lecture and in laboratory activities. *Prerequisite:* PSYC 105 or permission of the instructor.

**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. *Required for psychology majors.*

**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. Field observation of children and/or adolescents is required. *Prerequisite:* PSYC 105 or permission of the instructor.

**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 140. Psychology of Gender (4)**

This course introduces students to psychological research on the experiences, behaviors, and abilities of men and women. A comparative approach is used to examine historical, contemporary, and cultural differences. Topics include gender differences and similarities in mental abilities, social behavior, mental health issues, and experiences of men and women in the workplace. *Prerequisite:* sophomore standing or above.

**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:* Sophomore standing or above.

**PSYC 155/255. Couples 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. *Prerequisite:* Sophomore standing or above.

**PSYC 156/256. Behavioral Medicine/Health Psychology (4)**

A survey class on the overlapping fields of behavioral medicine and healthy psychology, two of the fastest growing fields in contemporary psychology. Focuses on a biopsychosocial model of illness, how this model compares to a more traditional biomedical model of illness, and the applications of a biopsychosocial model to the treatment and prevention of chronic illnesses such as coronary heart disease, cancer, arthritis, AIDS/HIV, and stroke. Other topics include health promotion, chronic pain, the disease prone personality, medical compliance, and the doctor-patient relationship. Of interest to any student who aspires to become a health care professional in health psychology, clinical psychology, medicine, pharmacy, physical therapy, or nursing. Upper division standing recommended. *Prerequisite:* PSYC 053.

**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 053.*

**PSYC 166. Psychology of Personality (4)**

Survey of contemporary personality theories and research. Focuses on the study of individual difference and how these differences are explained and measured using different personality assessment devices. Recommended for students aspiring to graduate study in clinical psychology, school psychology, marriage and family counseling, child development, or social work. Also of interest to those who want to learn more about themselves and the diversity of the species. *Upper division standing recommended.*

**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: PSYC 105 or permission of the instructor.*

**PSYC 183/283. Research Design (4)**

Design and analysis of research using single subjects and groups. *Prerequisites: PSYC 105, and permission of the instructor.*

**PSYC 191. Independent Study (1-4)****PSYC 193. Special Topics (1-4)****PSYC 195. Seminar (4)****PSYC 197. Independent Research (1-4)****Course Offerings****Graduate**

See Graduate Catalog for course descriptions

PSYC 220.	Clinical Neuropsychology	(4)
PSYC 251.	Behavioral Treatments/Applications	(4)
PSYC 253.	Supervising & Teaching Behavior Change	(2)
PSYC 285E.	Behavior Analysis Internship I	(1)
PSYC 285F.	Behavior Analysis Internship II	(1)
PSYC 291.	Independent Graduate Study	(2-4)
PSYC 293.	Special Topics	(1-4)
PSYC 295.	Graduate Seminar in Psychology	(4)
PSYC 297.	Independent Graduate Research	(2 or 4)
PSYC 299.	Thesis	(2 or 4)

**Religious & Classical Studies**

Phone: (209) 946-2161

Location: WPC Annex

Website: [www.pacific.edu/college/religion](http://www.pacific.edu/college/religion)

George Randels, Chair

Martha Bowsky, Director of Liberal Studies

**Degrees Offered**

Bachelor of Arts

**Majors Offered**

Religious Studies

Liberal Studies Major

**Minors Offered**

Religious Studies

Classical Studies

The Department of Religious & Classical Studies offers students the opportunity to study belief systems, texts, and languages in both modern and ancient contexts. Some courses focus on the role of religion in human history, experience, thought, and action, while others focus on the cultures of Ancient Greece and Rome, and their lasting effects on the modern world. 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 need an understanding of religion, and of the origins of Western civilization. A typical course in the Department includes students from various backgrounds and academic disciplines, thereby affording significant opportunity for inter-disciplinary discussion.

**Career Opportunities**

A major in Religious Studies provides groundwork for students to be citizen-leaders in various careers. These possible career paths 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 or Classical Studies can also provide groundwork for these careers while supplementing a student's major field of study.

**Bachelor of Arts  
Major in Religious Studies**

In order to earn the bachelor of arts degree with a major in religious studies, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

**I. General Education Requirements**

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*

One course from each subdivision below:

*Social and Behavioral Sciences*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.*

**II. College of the Pacific BA Requirement**

One year of college instruction or equivalent training in a language other than English.

*Note: 1) Transfer students with sophomore standing are exempt from this requirement.*

**III. Fundamental Skills**

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

*Note: 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.*

**IV. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

**V. Major Requirements**

Minimum 40 units, including:

- One of the following courses: 4
  - RELI 023 Hebrew Bible
  - RELI 025 New Testament and Christian Origins
- Three required courses:
  - RELI 034 Introduction to Religion 4
  - CLAS 051 Classical Mythology 4
  - RELI 196 Religious Studies Seminar 4
- Electives:
  - 5 additional departmental courses 20
  - 1 "collateral" course from an outside department 4

*Note: 1) See department for a current list of approved collateral courses.*

*Note: 2) Electives to be chosen in consultation with an adviser.*

**Minor in Religious Studies**

In order to earn a minor in religious studies, students must complete a minimum of 20 units with a Pacific minor grade point average of 2.0.

**Minor Requirements:**

- One of the following courses: 4
  - RELI 023 Hebrew Bible
  - RELI 025 New Testament and Christian Origins
- Two required courses:
  - RELI 034 Introduction to Religion 4
  - RELI 134 World Religions 4
- Electives:
  - RELI 2 additional courses 8

*Note: 1) 16 of these units must be completed at Pacific.*

**Minor in Classical Studies**

In order to earn a minor in classical studies, students must complete a minimum of 20 units with a Pacific minor grade point average of 2.0.

**Minor Requirements:**

- One of the following language courses: 4
  - GREK 011a First-Year Ancient Greek, First Semester
  - GREK 011b First-Year Ancient Greek, Second Semester
  - GREK 023 Intermediate Greek, Third Semester
  - GREK 025 Intermediate Greek, Fourth Semester
  - GREK 127 Advanced Greek
  - LATN 011a First-Year Latin, First Semester
  - LATN 011b First-Year Latin, Second Semester
  - LATN 023 Intermediate Latin, Third Semester
  - LATN 025 Intermediate Latin, Fourth Semester
  - LATN 127 Advanced Latin
- One of the following classical mythology courses: 4
  - CLAS 051 Classical Mythology
  - CLAS 115 Topics in Mythology and Religion
- Three of the following courses: 12
  - CLAS 100 History of Ancient Greece or,
  - CLAS 102 History of Ancient Rome
  - CLAS 110 Literature in Translation or,
  - CLAS 112 Latin Literature in Translation
  - CLAS 120 Sexuality in Greek Society or,
  - CLAS 122 Sexuality in Roman Society
  - CLAS 130 Greek Art and Architecture or,
  - CLAS 132 Roman Art and Architecture
  - CLAS 191 Independent Study
  - GREK 191 Independent Study
  - LATN 191 Independent Study
  - CLAS 193 Special Topics
  - GREK/LATN 1 course in Greek or Latin 4

**Bachelor of Arts  
Major in Liberal Studies**

In order to earn the bachelor of arts degree with a major in liberal studies, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

**I. General Education Requirements**

- Minimum 42 units and 12 courses, including:
  - PACS 001 Pacific Seminar 1: What is a Good Society? 4
  - PACS 002 Pacific Seminar 2: Topical Seminar 4

PACS 003 Pacific Seminar 3: The Ethics of Family, Work, and Citizenship

3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

*Social and Behavioral Sciences*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

- IIA. Language and Literature
- IIIB. Worldviews and Ethics
- IIIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

- IIIA. Natural Sciences
- IIIB. Mathematics and Formal Logic
- IIIC. Science, Technology, and Society  
or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program. 3) Not all the courses that satisfy the subdivisions above will also satisfy the General Education requirements for the Liberal Studies major. Choose courses to satisfy the General Education requirements in consultation with an advisor.

## II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

## III. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

## IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department which offers the course(s) in that discipline (including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

## V. Major Requirements

Minimum 82 units and 23 courses, including:

### Area I: Language Arts

Minimum 18 units and 5 courses, including:

- A course in composition or PACS 001
- A course in literary analysis
- A course in language and language acquisition
- A course in communication
- A language arts elective

### Area II: Mathematics/Science

Minimum 16 units and 4 courses, including:

- A course in college mathematics
- A course in life science
- A course in physical science
- A mathematics/science elective

### Area III: Humanities/Social Studies

Minimum 23 units and 7 courses, including:

- A course in the development of civilization
- A course in American history and institutions
- A course in global/intercultural studies or PACS 002
- A course in multicultural/ethnic/gender studies
- A humanities elective or course in intercultural /international studies
- A course in individual/interpersonal behavior
- A humanities/social science elective

### Area IV: Performing Arts

Minimum 11 units and 3 courses, including:

- A course in visual arts
- A course in music
- A course in performing arts

### Area V: Pacific Seminar

Minimum 3 units and 1 course, including:

- PACS 003 or another ethics course

### Area VI: Concentration

Minimum 11 units and 3 courses

**Note:** 1) Choose a concentration listed at the beginning of this section in consultation with an advisor.

## Course Offerings

### Religious Studies

#### RELI 023. Hebrew Bible (4)

The Hebrew Bible is a central book of western culture, serving as a foundation for Judaism and Christianity. This course surveys the biblical literature, familiarizes students with critical methods for the study of the Bible, situates the Bible within the literature and culture of the ancient Near East, and discusses the religion of ancient Israel. Issues of history and archaeology will also be addressed.

#### RELI 025. New Testament and Christian Origins (4)

This course offers a socio-historical and literary introduction to the writings of the earliest Christians. It will emphasize the importance of the historical context of these writings and will investigate the ways these texts fit into Mediterranean cultures. Topics include: the Jewish origins of the "Jesus movement;" the formation of early Christian communities and their varying patterns of belief and practice; the development of oral and written traditions about Jesus, especially in the gospels and letters of Paul; and various images of Jesus and their significance. Students will learn how to read ancient texts closely, gain an understanding of the various methods of scholarly biblical interpretation, and learn how to evaluate these interpretations critically.

**RELI 027. Portraits of Jesus (4)**

In this course, we will examine some of the different “Jesuses” that have emerged from the “Quest for Jesus” through the ages, including historical studies, art, and literature. Was Jesus an itinerant, charismatic teacher? A healer and miracle-worker? A social revolutionary? Or is he an ahistorical figure on whom we have projected our own needs and desires for two millennia?

**RELI 030. Western Religious Traditions (4)**

This course will survey Western religious traditions broadly conceived. The Abrahamic traditions (Judaism, Islam, and Christianity) will comprise the core of the course. Other content will vary by instructor and/or semester but may include Mesopotamian, Egyptian, or Greek religion, Zoroastrianism, European Paganism, Native American religion, or New Religious Movements.

**RELI 034. 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 035. 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 043. 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 044. 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 070. 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 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 102. History of Ancient Egypt and the Near East (4)**

This course covers the history and cultures of the pre-Greek ancient world, namely, Egypt and the Near East from the third millennium BCE (3300 BCE) to the beginning of the Hellenistic period (333 BCE). After surveying the geography of the area under study, we will examine primary and secondary sources to understand the political currents and social practices of Egypt, Sumer, Babylonia, and Assyria. Special emphasis will be given to the origins, development, and social uses of writing / literacy.

**RELI 120. Wisdom in Biblical Literature (4)**

This course will introduce the student to the biblical books of Proverbs, Job, and Qohelet (Ecclesiastes). These books share the common thread of teaching people how to live skillfully and have incited controversy for millennia. We will read these books in English, examine and discuss the major themes, literary structures, cultural contexts, and issues in interpretation that surround these books, and reflect upon their significance for several communities of readers in various periods of history. In order to situate these Israelite books within their ancient cultural contexts, we will have opportunity to read and discuss wisdom texts from the neighboring cultures of Egypt and Mesopotamia. And, in order to appreciate the position of these books within wisdom tradition, we will also look at some wisdom writings from Israel not included in the biblical canon.

**RELI 124. Ancient Judaism (4)**

We will survey ancient Judaism from roughly 539 BCE until the Islamic era (c. 600 CE), emphasizing the ideological importance of the destruction of the second temple in 70 CE. Readings and discussion in primary texts (e.g. Enoch, the Dead Sea Scrolls, Maccabees, the Talmud, Mishnah, and various midrashim) will complement our historical investigation.

**RELI 126. Ancient Israel in Its Historical Context (4)**

This course will focus on the historical and cultural context in which ancient Israel arose and flourished—from the early Iron Age (c. 1200 BCE) to the beginning of the Hellenistic period (323 BCE). In the first part of the course, after surveying the geography and political history of the ancient Near East from 2000–320 BCE, we will critically examine the historical rise and existence of Israel in its larger geo-political context. Special consideration will be given to understanding the relationship of archaeological, politico-historical, and biblical evidence. In the second part of the course we will turn our attention to “everyday life” in ancient Israel, that is, to various social and material elements of ancient Israelite culture (e.g., family structure, buildings, vocational activities, art and music, literacy, etc.) as reconstructed from archaeological and biblical evidence. We will apply what we learn to various biblical topics and/or texts.

**RELI 128. Social Topics in Early Christianity (4)**

A study of one or more social issues prominent during the early stages of Christianity. Topics will vary according to the interests of faculty and students.

**RELI 130. The Christian Tradition (4)**

An historical and theological analysis of Christian thought and practice. Content will vary depending upon instructor. It may, for example, focus on Christian origins in Greek and Hebrew culture, the Reformation Era, or 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.

**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. Business Ethics (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, and 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.

**RELI 152. Confucian Traditions (4)**

This course will examine moral, political, philosophical and religious aspects of various Confucian traditions beginning from Confucius and Mencius to Han and Song dynasties Confucianism to modern Du Weiming's school. No prerequisite is necessary, however, this course is not recommended to freshmen.

**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 various 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 196. Religious Studies Seminar (4)**

Capstone seminar for majors. Focus of the study will vary from year to year according to interests of faculty and students (e.g. Religion and Nature, Christian Church Fathers, or Buddhism & Christianity).

**Classics-in-English****CLAS 051. Classical Mythology (4)**

An introductory survey of the Greek and Roman myths of major importance in Western literature, art and music. May focus upon Greek mythology against the background of Roman, or Roman mythology against the background of Greek.

**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.

**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.

**CLAS 110. Greek Literature in Translation (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.

**CLAS 112. Latin Literature in Translation (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.

**CLAS 115. Topics in Mythology and Religion (4)**

In depth study of particular aspects of Greek and Roman mythology and religion. Students are expected to write about and discuss various topics, relevant to the ways that mythology and religion informed ancient life and/or has continued to influence modern culture. *Prerequisite: CLAS 051 or permission of the instructor.*

**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.

**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.

**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.

**CLAS 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.

**CLAS 197. Senior Research Project (4)**

The culminating experience for Classics majors. Students will select a topic of personal interest and, with the supervision of faculty experienced in that area of study, will learn about traditional and current research methods and produce an original work. This will demonstrate the student's ability to formulate a relevant question, conduct necessary research, synthesize information, think critically and communicate these results in a manner appropriate to a graduate. Prerequisite: permission of the department, dependent on the student's ability to complete the requirements for graduation.

**Greek****GREK 011A. 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 011B. 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. *Prerequisite: GREK 011A or permission of the instructor.*

**GREK 023. 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: GREK 011B, equivalent or permission.*

**GREK 025. 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: GREK 023, equivalent or permission.*

**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 025 or equivalent.*

**Hebrew****HBRW 011A. First-Year Classical Hebrew, First Semester (4)**

This course will introduce students to basic vocabulary and an outline of the grammar of Classical Hebrew with an emphasis on learning to read basic Biblical Hebrew prose and some traditional liturgical texts. In addition, the course will briefly examine the early history of the alphabet and the development of the Hebrew language within the broader family of Semitic. Finally, because the class is philological and not conversational in nature (i.e., Classical Hebrew is not a living language), the student will learn basic elements of historical linguistics.

**HBRW 011B. First-Year Classical Hebrew, Second Semester (4)**

This course will continue HBRW 11a, focusing on acquiring more vocabulary and grammar and on reading Biblical Hebrew prose and poetical texts. Translating larger portions of the biblical text will be a major priority during this semester. Finally, because the class is philological and not conversational in nature (i.e., Classical Hebrew is not a living language), the student will continue to learn elements of historical linguistics. *Prerequisite: HBRW 011A*

**Latin****LATN 011A. 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 011B. First-Year Latin, Second Semester (4)**

Continuation of training in the basic reading and writing skills; appropriate readings from Latin authors. Offered every spring. *Prerequisite: LATN 011A.*

**LATN 023. Intermediate Latin, Third Semester (4)**

Selected readings from prose authors. Attention to grammar as needed; simple composition exercises. *Prerequisite: LATN 011b, equivalent or permission.*

**LATN 025. 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: LATN 023, equivalent or permission.*

**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 025 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.*

**Additional Courses****RELI 087. Internship (2-4)****GREK 093. Special Topics (4)****LATN 093. Special Topics (4)****CLAS 191. Independent Study (2-4)****GREK 191. Independent Study (2-4)****HBRW 191. Independent Study (2-4)****LATN 191. Independent Study (2-4)****RELI 191. Independent Study (2-4)****CLAS 193. Special Topics (4)****RELI 193. Special Topics (4)**



## Sociology

Phone: (209) 946-2101

Location: Wendell Phillips Center

Website: [www.pacific.edu/college/sociology](http://www.pacific.edu/college/sociology)

G. Lewis, (Chair)

### Degrees Offered

Bachelor of Arts

### Majors Offered

Sociology

### Minors Offered

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 concentrations 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.

### Bachelor of Arts Major in Sociology

In order to earn the bachelor of arts degree with a major in sociology, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

#### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

IA. Individual and Interpersonal Behavior

IB. U.S. Studies

IC. Global Studies

#### Arts and Humanities

IIA. Language and Literature

IIIB. Worldviews and Ethics

IIIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

IIIA. Natural Sciences

IIIB. Mathematics and Formal Logic

IIIC. Science, Technology, and Society

or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

#### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

#### III. Fundamental Skills

Demonstrate competence in:

Reading

Writing

Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

#### IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

#### V. Major Requirements

Minimum 42 units and 10 courses, including:

SOCI 071	Foundations of Sociology	4
SOCI 079	Social Psychology	4
SOCI 171	Social Research Methods	4
SOCI 172	Social Inequality	4
SOCI 177	Theories of Society and Culture	4
SOCI 179	Capstone Seminar	4

**Note:** 1) SOCI 071 and 079 are strongly recommended prior to SOCI 171 and 172. 2) SOCI 179 is strongly recommended as the final course in the core sequence and should be taken in spring semester of the senior year.

One of the following statistics courses:	4	
POLS 133	Political Science Research	
MATH 035	Elementary Statistical Inference	
MATH 037	Introduction to Statistics and Probability	
SOCI	Electives (3 additional courses, two of which are numbered 100 or above excluding SOCI 051, 187a, 187b, 197a, and 197b)	12

**Note:** 1) Majors may elect to develop their own concentration of elective courses in consultation with their faculty advisor. 2) Work toward the major will normally include no more than 8 units transferred from another institution and no more than two introductory level non-required courses. 3) Students majoring in sociology are strongly advised to take one or more courses, which build skills in writing, oral communication and computer use.

One of the following experiential learning courses:	4
SOCI 187A Fieldwork	
SOCI 187B Fieldwork	
SOCI 197A Independent Research	
SOCI 197B Independent Research	
JCTR 187 Community Affairs Internship	
COOP 092 Co-op Internship	
COOP 192 Co-op Internship	

## Minor in Sociology

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.

In order to earn a minor in sociology, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

### Minor Requirements:

SOCI 071 Foundations of Sociology	4
SOCI 171 Social Research Methods	4
SOCI Elective (1 additional course numbered below 100 excluding SOCI 051)	4
SOCI Electives (2 additional courses numbered 100 or above excluding SOCI 187A, 187B, 197A, and 197B)	8

**Note:** 1) Electives should be chosen in consultation with the adviser.

## Course Offerings

### Lower Division Courses

#### **SOCI 021. Culture and Society (4)**

An examination of the various forms of culture and their linkages to our society. The course looks at what culture is and what it means to people—how it links them together and drives them apart. Topics examined include how culture is “created,” and by whom; what restraints are placed upon cultural creation by individuals and society; how culture is manufactured and “sold” to large audiences; subcultures and the creation of cultural identity; the diffusion of culture both within societies and between them; the process of globalization and effects of American culture overseas. Special emphasis on the impacts of social stratification, class, gender and race.

#### **SOCI 031. Deviant Behavior (4)**

This course critically examines various sociological approaches to the study of deviant behavior. Special attention is paid to the problem of defining deviance in a useful manner for sociological study—and not just as officially illegal behavior. Most forms of deviance, ranging from major infractions of societal norms (such as rape or child abuse) to less extreme, but still significant deviant acts (such as marijuana smoking or illegal file sharing) will be discussed. In addition the political and economic elite will be examined with respect to their ability to define deviance, their use of punishment as social control, and the ways they are able to “hide” crime to their own advantage. American data will be supplemented by cross-cultural and comparative materials.

#### **SOCI 051. 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 061. Urban Society (4)**

A sociological introduction to the study of American cities and urban lifestyles, which explores patterns of racial, ethnic, immigration and social class diversity, sources of inequality, and economic and social problems that influence the quality of modern urban life. Application of sociological knowledge to improve social institutions and multicultural relations, develop communities and achieve positive social change.

#### **SOCI 081. 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.

### Upper Division Courses

#### **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 or permission of the instructor.

#### **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 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:* A course in sociology 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. *Prerequisite:* A course in sociology or permission of the instructor.

#### **SOCI 125. Health and Illness (4)**

This course is designed to introduce students to the sociology of medicine and the delivery of health care, with an emphasis on the interaction of patients, health care professionals, and social institutions. Topics of examination include health care settings, provider-patient relationships, ethical issues in health care, and trends in medicine and policies. Additionally, the course will explore how race, class, and gender affect people's health and illness; how health policies shape the medical system, and how definitions, attitudes, and beliefs affect health and illness. *Prerequisite:* A course in sociology or permission of the instructor.

**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. *Prerequisite: A course in sociology or permission of the instructor.*

**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 139. 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. *Prerequisite: A course in sociology or permission of the instructor.*

**SOCI 141. Prejudice and Racism (4)**

This course will examine, explore and analyze prejudice and racism from an historical and multi-cultural perspective. Students will be provided with opportunities to acquire a substantive knowledge base from required readings, video showing, class discussions and individual (invited guests) testimonies. Students will be encouraged to examine their own attitudes and values. *Prerequisite: A course in sociology or permission of the instructor.*

**SOCI 165. Social Organizations (4)**

An exploration of the social structure of communities and the influence of organizations and social institutions on individuals and groups which focuses primarily on the dynamics of community level organizations. Analyses of social service, nonprofit, voluntary, public, and similar kinds of civic sector organizations and agencies, and the social issues to which they respond. Examination of basic principles of organization including program development, team building, leadership and related topics as strategies for responding to human needs, solving social problem and achieving social change. *Prerequisite: A course in sociology or permission of the instructor.*

**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: a course in sociology or permission of the instructor.*

**Core Courses**

These courses must be taken to fulfill major requirements in sociology.

**SOCI 071. 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.*

**SOCI 079. Social Psychology (4)**

The study of the relationships between the individual and his/her social environment, including the nature of social roles, socialization and human development, group formation, intergroup relations including the causes and consequences of prejudice, and the influence of groups and social institutions on human identity and behavior. *Prerequisite: SOCI 071 (or concurrent enrollment) or permission of the instructor.*

**SOCI 171. Social Research Methods (4)**

The review and application of the various methods most used in social science research to design research projects and gather and analyze data. Examination of the ethical issues involved in the use of such methods. Consideration of the interrelationships between the development of social theory and methodologies of data collection including experiments, observation, interviews, surveys and content analysis. Use of statistical software in sampling and data analysis. *Prerequisite: SOCI 071 or permission of the instructor.*

**SOCI 172. Social Inequality (4)**

This course will examine the historical causes, current structure, and consequences of social inequality. The emphasis will be on contemporary social, economic and political issues in the United States, but there will be some comparisons with other societies. We will focus on both individual group experiences of inequality due to age, class, gender and race, the effects of social inequality on society in general, and possible ways to reduce the level of social inequality in the United States. *Prerequisite: SOCI 071 or permission of the instructor. SOCI 171 strongly recommended.*

**SOCI 177. Theories of Society and Culture (4)**

Examination of sociological theory at both the macro- and micro-sociological levels. Students completing this course will learn how sociologists define and use theory in the development of sociological knowledge. They will learn and be able to compare and contrast several basic theoretical orientations. Through practical exercises they will develop the ability to select and to appropriately apply multiple theoretical concepts and perspectives to a variety of social issues facing individuals, groups, our society and the world. *Prerequisites: SOCI 071 and 172 strongly recommended.*

**SOCI 179. Capstone Seminar (4)**

A seminar that allows senior students to put into practice skills and ideas they have developed throughout their major course of study. Students will examine the history of the field, including the promise, successes, and failures of sociology. Students will present ideas and data to their peers, participate in the assessment of the major program, and consider the major as it relates to their personal and professional goals. *Prerequisite: Open to majors with senior standing only, or by permission of the instructor.*

**Special Areas****SOCI 187A, B. Fieldwork (2 or 4, 2 or 4)**

Provides the opportunity for supervised observation and experience in community settings, including public agencies, non-profit or voluntary organizations, or businesses. Fieldwork sites may be local or away from campus. Eligibility to enroll presupposes familiarity with issues and problems in the field in which one is to work, usually demonstrated by acceptable work in one or more related campus courses. 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. SOCI 187 is an advance learning opportunity designed for students with sociological preparation who want to learn more about sociological topics through direct experience, observation, reflection and analysis. The course may be repeated for credit, but will apply toward major requirements only once. SOCI 187 is a letter-graded course. *Prerequisites: SOCI 071 and SOCI 171, 2.0 GPA in major or permission of the instructor.*

**SOCI 191. Independent Study (2 - 4)**

Permission of individual instructor.

**SOCI 193. Special Topics (upper level) (4)****SOCI 197A, B. Independent Research (2 or 4)**

Provides the opportunity for qualified students to complete a supervised original social research project using one or more research methodologies common to the discipline of sociology. Students are encouraged to focus on a sociologically relevant community based topic and to prepare results for professional presentation. Projects undertaken for 4 units of credit may meet the departmental experiential learning requirement. *Prerequisite: SOCI 171.*

## Sport Sciences

Phone: (209) 946-2209

Location: Main Gym

Website: [www.pacific.edu/college/sportssciences](http://www.pacific.edu/college/sportssciences)

Christopher Snell, Chair

### Degrees Offered

Bachelor of Arts

Bachelor of Science

Master of Arts (see Graduate Catalog for information)

### Majors Offered

Sport Sciences (BA)

Sport Pedagogy

Sports Medicine

Sport Management

Athletic Training (BS)

### Minors Offered

Sport Sciences

### Mission

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 Sport Sciences

The Department of Sport Sciences offers programs of study leading to the Bachelor of Arts, Bachelor of Science, and Master of Arts degrees. The purpose of a Sport Sciences degree 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 students with a common base of knowledge and understanding about the philosophical, sociological, psychological and scientific concepts within the discipline. In addition to the core, Sport Sciences majors must successfully complete one of the following Concentrations: sport pedagogy, sports medicine, or sport management. Students seeking a physical education teaching credential may also earn units in adapted physical education. Athletic Training majors must successfully complete the required coursework for the Commission on Accreditation of Athletic Training Education (CAATE) accredited program. Additional programs, which enjoy broad University participation, include a wide range of physical activity classes, informal recreational opportunities, intramural 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, an Athletic Training laboratory, two gymnasias, eight tennis courts, the Olympic-size Kjeldsen Pool and numerous playing fields.

## 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, bowling, running for health, volleyball, badminton, tennis, golf, basketball, weight training, kick box, 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 ACTY 001-049 – Activities, ACTY 050-099 - Intercollegiate Sports and THEA 005 in the Theatre Arts Department toward graduation. Up to 8 units of activity and intercollegiate sports classes may count toward the COP breadth requirement. A one-unit activities class (ACTY 001-049) can be repeated only once; no two-unit activities class may be repeated for credit.

All activity and intercollegiate sports classes are evaluated on the pass/no credit basis.

### Bachelor of Arts Major in Sport Sciences Concentration in Sport Pedagogy

The Sport Pedagogy Concentration provides an opportunity to study 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 credentials, coaching certification, or advanced study. Degree requirements for this concentration also include the demonstration of a variety of motor skill proficiencies.

In order to earn the bachelor of arts degree with a major in sport sciences with a concentration in sport pedagogy, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

#### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar I: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*

One course from each subdivision below:

#### Social and Behavioral Sciences

IA. Individual and Interpersonal Behavior

IB. U.S. Studies

IC. Global Studies

#### Arts and Humanities

IIA. Language and Literature

IIIB. Worldviews and Ethics

IIIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

IIIA. Natural Sciences

IIIB. Mathematics and Formal Logic

IIIC. Science, Technology, and Society

or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

**II. College of the Pacific BA Requirement**

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

**III. Fundamental Skills**

Demonstrate competence in:

Reading

Writing

Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

**IV. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

**V. Major Requirements:**

Minimum 50 units, including:

SPTS 100	Introduction to Research	3
SPTS 121	Team Sports	3
SPTS 123	Individual Sports	3
SPTS 127	Philosophy of Sport	3
SPTS 131	Assessment and Evaluation	4
SPTS 133	Kinesiology	4
SPTS 139	Exercise Psychology	4
SPTS 141	Sport in America	4
SPTS 147	Exercise Physiology	4
SPTS 151	Elementary Physical Education	3
SPTS 153	Adapted Physical Education	4
SPTS 155	Motor Learning	3
SPTS 159	Sport Pedagogy	3
SPTS 161	Biomechanics of Human Movement	4
SPTS 189E	Practicum: Sport Pedagogy	2

**Motor Skill Proficiencies**

Sport Sciences majors completing the Sport Pedagogy Concentration 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.

**Career Options for Sport Pedagogy**

Completion of the Sport Pedagogy Concentration and subsequent single-subject teaching credential requirement permits students to pursue careers in a variety of education settings. This is true of the regular credential program in physical education as well as the more specialized coaching concentration. The coaching concentration is not only recommended for sport pedagogy students 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.

## Bachelor of Arts Major in Sport Sciences Concentration in Sports Medicine

The Sports Medicine concentration is scientifically based and human oriented. It prepares students for careers and/or further graduate study in health and fitness related areas such as medicine, physical therapy, occupational therapy, nutrition and exercise/work physiology. A primary goal of this concentration is to provide a scholarly environment in classes and laboratories that supports and encourages the application of theoretical concepts. Students will study and apply principles relevant to the rehabilitation and enhancement of human performance.

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.

In order to earn the bachelor of arts degree with a major in sport sciences with a concentration in sports medicine, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

**I. General Education Requirements**

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar I: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

*Social and Behavioral Sciences*

IA. Individual and Interpersonal Behavior

IB. U.S. Studies

IC. Global Studies

*Arts and Humanities*

IIA. Language and Literature

IIB. Worldviews and Ethics

IIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

IIIA. Natural Sciences

IIIB. Mathematics and Formal Logic

IIIC. Science, Technology, and Society

or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

## II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

## III. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

## IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

## V. Major Requirements:

Minimum 65 units, including:

SPTS 100	Introduction to Research	3
SPTS 127	Philosophy of Sport	3
SPTS 131	Assessment and Evaluation	4
SPTS 133	Kinesiology	4
SPTS 147	Exercise Physiology	4
SPTS 157	Clinician in Sport Medicine	4
BIOL 051	Principles of Biology	4
BIOL 061	Principles of Biology	4
BIOL 071	Human Anatomy	4
BIOL 081	Human Physiology	4
CHEM 025	General Chemistry	5
PHYS 023	General Physics I	5
SPTS	Electives (3 additional courses excluding SPTS 023, 025)	9-12
One of the following courses:		4
SPTS 139	Exercise Psychology	
SPTS 141	Sport in America	

## Career Options for Sports Medicine

Employment opportunities following completion of the sports medicine concentration include fitness directorship, cardiac disease prevention-rehabilitation, work toward advanced degrees in allied health sciences such as nursing, physical therapy, occupational therapy and medicine or sports medicine. Sports Medicine is in part a self-contained program as curricular support for Pacific's Physical Therapy Graduate program.

## Pre-Physical Therapy (Optional)

Students in the Sports Medicine concentration who are interested in pursuing graduate studies in Physical Therapy are advised to complete the following courses:

BIOL 145	Microbiology
CHEM 027	General Chemistry
COMP 025	Computers and Information Processing
PHYS 025	General Physics
PSYC 111	Abnormal Psychology
PSYC	Psychology Elective
MATH 037	Probability and Statistics
Pacific 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 adviser for any additional courses and also complete the following:

COMM 027	Public Speaking
ENGL	Two writing courses or PACS 001 & 002
MATH 037	Probability and Statistics
PSYC 031	Intro to Psychology
PSYC 111	Abnormal Psychology
Two Social Science courses	
A Studio Art course (Ceramics or Drawing)	

## Bachelor of Arts Major in Sport Sciences Concentration in Sport Management

The Sport Management Concentration 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.

In order to earn the bachelor of arts degree with a major in sport sciences with a concentration in sport management, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar I: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

IIA. Language and Literature

IIB. Worldviews and Ethics

IIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

IIIA. Natural Sciences

IIIB. Mathematics and Formal Logic

IIIC. Science, Technology, and Society

or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

**II. College of the Pacific BA Requirement**

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

**III. Fundamental Skills**

Demonstrate competence in:

Reading

Writing

Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

**IV. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

**V. Major Requirements:**

Minimum 65 units, including:

SPTS 100	Introduction to Research	3
SPTS 127	Philosophy of Sport	3
SPTS 147	Exercise Physiology	4
SPTS 165	Sports Law	4
SPTS 167	Introduction to Sport Management	4
SPTS 169	Managing Sport Enterprises	4
SPTS 171	Sport Economics and Finance	4
SPTS 174	Sport Marketing and Promotions	4
SPTS 175	Sport Event Management	4
SPTS 187a	Internship: Sport Management	4
SPTS 187b	Internship: Sport Management	4
BUSI 031	Principles of Financial Accounting	4
BUSI 107	Marketing Management	4
COMP 025	Computers and Information Processing	4
ECON 053	Introductory Microeconomics	4
One of the following courses:		3-4
SPTS 139	Exercise Psychology	
SPTS 141	Sport in America	
One of the following courses:		3
COMM 027	Public Speaking	
COMM 043	Introduction to Interpersonal Communication	

**Career Options for Sport Management**

Employment opportunities following completion of the sport management concentration include, but are not limited to, event marketing, sales, management, hospitality, sponsorship, community relations, athlete representation, and public relations. These specialized areas can be found in amateur and professional sport, corporations that market through sport, sport tourism, community recreation, resorts, health and fitness centers, collegiate sport, casinos, stadiums, and arenas.

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.

**Bachelor of Science  
Major in Athletic Training**

The Bachelor of Science in Athletic Training is designed to prepare students in the application of scientific techniques to prevent, recognize, manage, and rehabilitate sports injuries. The program is specifically designed to provide the theoretical and practical learning experience requisite to certification by the Board of Certification (BOC). Students who select the Athletic Training Major must complete a series of courses within the department, adjunct courses from the natural sciences, and four consecutive semesters of clinical education.

During the clinical education portion of the program, athletic training students must accumulate a minimum of 800 hours (200 hours/semester) of experience under the direct supervision of a Certified Athletic Trainer (ATC) or other allied health care professional. Students must also demonstrate proficiency in entry-level athletic training skills in the presence of an Approved Clinical Instructor (ACI). Students are required to meet prerequisite criteria and submit application materials before beginning the clinical education program. A limited number of students will be admitted into the program each fall semester. Please visit the program's website for more specific information about admission criteria, technical standards, and application materials. The program's website is <http://web.pacific.edu/x12442.xml>

In order to earn the bachelor of science degree with a major in athletic training, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

**I. General Education Requirements**

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar I: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

**Social and Behavioral Sciences**

IA. Individual and Interpersonal Behavior

IB. U.S. Studies

IC. Global Studies

*Arts and Humanities*

IIA. Language and Literature

IIB. Worldviews and Ethics

IIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

IIIA. Natural Sciences

IIIB. Mathematics and Formal Logic

IIIC. Science, Technology, and Society  
or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

**II. Fundamental Skills**

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

**III. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

**IV. Major Requirements:**

Minimum 68 units, including:

SPTS 089b	Practicum: Athletic Training I	2
SPTS 089k	Practicum: Athletic Training II	2
SPTS 100	Introduction to Research	3
SPTS 127	Philosophy of Sport	3
SPTS 133	Kinesiology	4
SPTS 139	Exercise Psychology	4
SPTS 143	Care and Prevention of Athletic Injuries	4
SPTS 145	Therapeutic Modalities	4
SPTS 146	Health, Disease, and Pharmacology	4
SPTS 147	Exercise Physiology	4
SPTS 149	Clinical Evaluation and Diagnosis I	3
SPTS 150	Clinical Evaluation and Diagnosis II	3
SPTS 163	Therapeutic Exercise	4
SPTS 173	Health Care Mgmt & Prof. Dev.	4
SPTS 189B	Practicum: Athletic Training III	2
SPTS 189K	Practicum: Athletic Training IV	2
BIOL 061	Principles of Biology	4
BIOL 071	Human Anatomy	4
BIOL 081	Human Physiology	4
One of the following courses:		4
SPTS 045	Science of Nutrition	
SPTS 135	Sports Nutrition	

**Career Options for Athletic Training**

Employment opportunities following completion of the Athletic Training Major and passing the BOC Examination include athletic training at the secondary school and collegiate levels, professional athletic training, athletic training in clinical or industrial settings, athletic training in

hospitals and clinics, and work toward advanced degrees in areas related to Athletic Training and Sports Medicine.

**Minor in Sport Sciences**

In order to earn a minor in sport sciences, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

**Minor Requirements:**

SPTS 127	Philosophy of Sport	3
SPTS 147	Exercise Physiology	4
One of the following courses:		4
SPTS 139	Exercise Psychology	
SPTS 141	Sport in America	
SPTS	Electives (9 additional units excluding ACTY 002-099, SPTS 025 and 028)	9

**Note:** 1) Student should work closely with their adviser in selecting electives. 2) These elective units would be selected on the basis of the specific area of Sport Sciences (e.g., Exercise Psychology, Athletic Training, Sport Management, Coaching, Sport Pedagogy, Sports Medicine) in which the student is interested.

**Course Offerings**

**ACTY 002-049. General Activity Classes (1-2)**  
Open to entire University student body. Only 8 units may apply towards graduation requirements *Pass/No credit grading only. Activity fee required.*

**ACTY 050-099. 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. Only 8 units may apply towards graduation requirements. Open to all University student-athletes. *Pass/No credit grading only.*

**SPTS 023. 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 025. 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 041. Heart, Exercise and Nutrition (4)**  
This course is an introduction to the acute and chronic effects of exercise on the cardiovascular and musculo-skeletal systems. An individually prescribed exercise program based upon class discussion and laboratory assessment of aerobic capacity, blood lipids, and nutritional habits is offered. CPR certification is offered. *Lab fee required.*

**SPTS 043. 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 045. 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 for this course if they take either BIOL 045 or SPTS 135. *Lab fee required.*

**SPTS 087. Fieldwork (2-4)**

Laboratory work in school and community agencies. Open to non-majors by permission of the instructor. *Pass/No credit only.*

**SPTS 089/189. Practicum (2)**

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 eight units maximum of 089/189a, 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 089A/189A. Practicum: Adapted Physical Education (2, 2)****SPTS 089B/189B. Practicum: Athletic Training I, III (2, 2)****SPTS 089C/189C. Practicum: Biomechanics (2, 2)****SPTS 089D/189D. Practicum: Exercise Physiology (2, 2)****SPTS 089H/189H. Practicum: Sports Law (2, 2)****SPTS 089J/189J. Practicum: Kinesiology (2, 2)****SPTS 089K/189K. Practicum: Athletic Training II, IV (2, 2)****SPTS 089B. Practicum: Athletic Training I (2)**

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: admission to the athletic training clinical education program, or permission of the instructor.*

**SPTS 089K. Practicum: Athletic Training II (2)**

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 089B.*

**SPTS 100. Introduction to Research (3)**

This course introduces students to the various methods of research used in Sport Sciences. Issues to be addressed include selecting research topics, developing reviews of literature, methodology, and analysis of data. Open to Sport Sciences majors with sophomore standing or higher only.

**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 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.

**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. *Lab fee required.*

**SPTS 133. Kinesiology (4)**

A functional study of musculoskeletal anatomy and its relationship to human movement, posture, exercise prescription, and rehabilitation. *Prerequisite: BIOL 011 or 051 or 061 or permission of the instructor. Lab fee required.*

**SPTS 135. Sports Nutrition (4)**

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 manner in which psychological factors influence sport performance and the manner in which sport participation can influence the human psyche. Theories concerning the relationship between human cognition, behavior and sport performance will be covered. Particular emphasis will be given to the practical application of these theories.

**SPTS 139. Exercise Psychology (4)**

This course employs the theories and methods of psychology to examine the related fields of competitive sports, fitness, exercise, and rehabilitation from injury. Major questions addressed in the course will include: How do psychological factors influence participation in physical activity and performance of the individual? How does participation in physical activity or incapacity due to an injury affect the psychological make-up of the individual? These questions are explored from educational, coaching, research, and clinical perspectives.

**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. Care and Prevention of Athletic Injuries (4)**

This course provides an overview of the field of athletic training, its organization, and the responsibilities of a certified athletic trainer (ATC) as part of the sports medicine team. Instruction will emphasize prevention, recognition, and immediate care of injuries and illnesses associated with physical activity. This course is recommended for freshman. *Lab fee required.*

**SPTS 145. Therapeutic Modalities (4)**

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: BIOL 081 recommended. Lab fee required.*

**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 I (4)**

In this course you will examine the acute physiological responses and chronic adaptations that result from physical exertion. These concepts will be explored in order to understand the integrative influences that exercise can have on health, nutrition, disease processes, aging, and psychological and mental function. The laboratory experience will provide demonstration of basic physiological responses and how responses to exercise are assessed. *Prerequisite: BIOL 011 or 041 or 051 or 061. Lab fee required.*

**SPTS 149. Clinical Evaluation and Diagnosis I (3)**

This course presents an in-depth study of musculoskeletal assessment of the lower extremity, thoracic and lumbar spine for the purpose of identifying (a) common acquired or congenital risk factors that would predispose an individual to injury and/or (b) musculoskeletal injury common to athletics or physical activity. Students will receive instruction in obtaining a medical history, performing a visual observation, palpating bones and soft tissues, and performing appropriate special tests for injuries and conditions of the foot, ankle, lower leg, knee, thigh, hip, pelvis, lumbar and thoracic spine. This course is directed toward students pursuing athletic training and/or physical therapy professions. *Prerequisite: SPTS 133 or BIOL 071 or equivalent. Lab fee required.*

**SPTS 150. Clinical Evaluation and Diagnosis II (3)**

This course presents an in-depth study of musculoskeletal assessment of the upper extremity, cervical spine, head and face for the purpose of identifying (a) common acquired or congenital risk factors that would predispose an individual to injury and/or (b) musculoskeletal injury common to athletics or physical activity. Students will receive instruction in obtaining a medical history, performing a visual observation, palpating bones and soft tissues, and performing appropriate special tests for injuries and conditions of the shoulder, upper arm, elbow, forearm, wrist, hand, fingers, thumb, cervical spine, head, and face. This course is directed toward students pursuing athletic training and/or physical therapy professions. *Prerequisite: SPTS 133 or BIOL 071 or equivalent. Students may take this course independent of SPTS 149. 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 and activity needs of children and adults with disabilities. Components of course focus on physiological profiles of individuals with disabilities, federal and state legislative mandates, assessment, 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)**

This course integrates theory and practice and requires students to develop a research topic, consistent with an explicitly and narrowly defined area of interest. *Permission of 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 Concentration 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 011 or 051 or 061 or permission of the instructor. Lab fee required.*

**SPTS 163. Therapeutic Exercise (4)**

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 133 or permission of instructor. Lab fee required.*

**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)**

This course is for beginning sport management students and students interested in sport business. Students study general academic, managerial, and business concepts related to sport and explore the variety of sport and fitness-related businesses and organizations within the public and private sectors. Potential career opportunities are considered.

**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 respective areas of sport economics, finance, and labor relations. Both theoretical and practical aspects will be explored. Students will examine sport as a multi-billion dollar industry and will analyze the role of sport within the larger socio-economic structure within the United States and internationally. *Prerequisites: ECON 053 and BUSI 031 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. Health Care Management and Professional Development (4)**

An in-depth study of the management of health care organizations related to finances, facilities, equipment, organizations structures, medical/insurance records, risk management, human relations, and personnel. Practical and conceptual skills will be taught to help students focus on more efficient health care delivery. Also covered is development of leadership skills, future trends in health care management, guidelines for designing effective work groups and managing conflict.

**SPTS 174. Sport Marketing and Promotions (4)**

An in-depth study of the specific challenges associated with the field of sport and life-style marketing. Mainstream marketing theory and principles will be applied to develop an understanding of sport marketing research, sport consumer behavior, sponsorship, promotions, information management, public relations, and the segmentation process. *Prerequisite: SPTS 169.*

**SPTS 175. Sport Event Management (4)**

A comprehensive investigation into the organizational framework and principles needed to design, implement, and manage all types of sport events. The planning, design, and maintenance of sport and recreational facilities will also be explored. Logistics, risk management, human resource management, and marketing of events and facilities will be given special attention. *Prerequisites: BUSI 107 and SPTS 169.*

**SPTS 177. Exercise Physiology II (4)**

This course seeks to fulfill two main objectives: 1) To establish a foundational understanding of clinical exercise testing used to examine cardiac, metabolic and respiratory pathology. 2) To provide a more in-depth examination of several basic exercise physiology concepts introduced in Exercise Physiology I. These include lactate kinetics, oxygen dynamics, pulmonary function and cardiovascular function during exercise and in response to training. *Prerequisite: SPTS 147. Lab fee required.*

**SPTS 187. Internship in Sports Medicine (4)**

An opportunity for qualifying students to work in an area of Sports Medicine that interests them. *Prerequisites: SPTS 157; GPA 2.0; No grade in major below C-; and approval of course supervisor.*

**SPTS 187A, B. Internship: Sport Management (4, 4)**

The internship in Sport Management at the University of the Pacific is a management and leadership experience for upper division majors who have successfully completed a majority of their theory classes. *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 089 for subcategories and enrollment limitations.

**SPTS 189B. Practicum: Athletic Training III (2)**

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 089K.*

**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 (2)**

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)****Course Offerings****Graduate**

See Graduate Catalog for course descriptions.

SPTS 233.	Advanced Kinesiology	(4)
SPTS 235.	Grad. Nutrition/Exercise Metabolism	(4)
SPTS 237.	Advanced Sport Psychology	(4)
SPTS 239.	Advanced Applied Sport Psychology	(4)
SPTS 241.	Advanced Sociology of Sport	(4)
SPTS 247.	Advanced Exercise Physiology	(4)
SPTS 248.	Applied & Clinical Physiology	(4)
SPTS 253.	Advanced Adapted Physical Education	(4)
SPTS 255.	Advanced Motor Learning	(4)
SPTS 257.	Advanced Clinician in Sports Medicine	(4)
SPTS 259.	Professional Prep. In Sport Sciences	(4)
SPTS 261.	Advanced Biomechanics of Sport	(4)
SPTS 265.	Advanced Sports Law	(4)

SPTS 269.	Advanced Management of Sport Enterprises	(4)
SPTS 272.	Advanced Case Analysis in Sport and Fitness Management	(4)
SPTS 274.	Advanced Sport Marketing and Promotions	(4)
SPTS 275.	Advanced Sport Management	(4)
SPTS 279.	Research Methods in Sport Sciences	(4)
SPTS 287.	Advanced Internship in Sports Medicine	(4)
SPTS 287A, B.	Advanced Internship: Sport Management	(4, 4)
SPTS 289A.	Advanced Practicum: Sport Management	(4)
SPTS 289B.	Advanced Practicum: Coaching	(2-4)
SPTS 291.	Independent Study	(2-4)
SPTS 293.	Special Topics	(3, 4)
SPTS 297.	Independent Research	(1-4)
SPTS 299.	Thesis	(4)

## Theatre Arts

Phone: (209) 946-2116

Location: DeMarcus Brown Theatre

Website: [www.pacific.edu/college/theatrearts](http://www.pacific.edu/college/theatrearts)

Cathie McClellan, Chair

## Degrees Offered

Bachelor of Arts

## Majors Offered

Theatre Arts

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.

## Liberal Studies Major

Liberal Studies majors may elect a 20-unit concentration in Theatre Arts specially designed by the students, and approved by Theatre Faculty, to meet a particular need. Liberal Studies majors or students interested in a minor in Theatre Arts should contact the chair of the department for further details.

## University Productions

In line with our academic mission, the department maintains a schedule of theatrical productions, including plays of varying historical periods and dramatic styles and musicals as a co-curricular aspect of our program. All students, staff and faculty of the University and members of the Stockton Community may audition for departmental productions. Performances are given on the proscenium stage of the Long Theatre or the intimate black-box DeMarcus Brown Studio Theatre (in the Drama Building). 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 005, 087, 089, 187 and 189).

## Bachelor of Arts Major in Theatre Arts

In order to earn the bachelor of arts degree with a major in theatre arts, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	3
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

**II. College of the Pacific BA Requirement**

One year of college instruction or equivalent training in a language other than English.

**Note:** 1) Transfer students with sophomore standing are exempt from this requirement.

**III. Fundamental Skills**

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

**IV. Breadth Requirement**

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education, transfer courses, CPCE/EXTN units, internships, etc.)

**V. Major Requirements**

Minimum 49 units, including:

THEA 031	Stage Makeup Fundamentals	2
THEA 033	Theatrical Design Fundamentals	4
THEA 035A	Stage Management Theory	1
THEA 035B	Stage Management Practice	2
THEA 071	Beginning Acting	3
THEA 075	Expressive Movement	3
THEA 105	Career Workshop	2
THEA 109	Theatre Arts Capstone	2
THEA 111	Script Analysis	3
THEA 113	Theatre Heritage I	4
THEA 115	Theatre Heritage II	4

One of the following courses: 2

- THEA 037A Costume Construction and Technology
- THEA 037B Light and Sound Technology
- THEA 037C Scenery

Six units from the following courses: 6

- THEA 005 A-H Theatre: On Stage
- THEA 005 I-P Theatre: Backstage
- THEA 089 A-D Practicum: Performance
- THEA 089 E-H Practicum: Production
- THEA 189 A-D Practicum: Performance
- THEA 189 E-H Practicum: Performance

THEA Electives (11 additional units) 11

**Minor in Theatre Arts**

In order to earn a minor in theatre arts with a focus in acting, design/technology, directing/playwriting/stage management or dance, students must complete a minimum of 25-28 units with a Pacific minor grade point average of 2.0.

**Core Courses:**

Minimum 13 units, including:

THEA 005	Backstage	2
THEA 111	Script Analysis	3
THEA 113	Theatre Heritage I	4
THEA 115	Theatre Heritage II	4

Acting Track – Total 25-26 units

Minimum 12 units, including:

THEA 031	Stage Make-up Fundamentals	2
THEA 071	Beginning Acting	3
THEA 171	Intermediate Acting	3

Additional electives from: 4-5

- THEA 005 Onstage
- THEA 075 Expressive Movement
- THEA 077 Voice for the Actor
- THEA 089 Practicum: Performance

Design/Technology Track – Total 26-28 units

Minimum 12 units, including:

THEA 033	Thea. Design Fundamentals	4
THEA 071	Beginning Acting or THEA 005 Onstage	2-3

Two additional electives from: 4

- THEA 031 Stage Make-up Fundamentals
- THEA 037A Costume Construction & Tech
- THEA 037B Lights and Sound Tech
- THEA 037C Scenic Construction & Tech

Additional electives from: 3-4

- THEA 005 Backstage
- THEA 089 Practicum: Production

Directing/Playwriting/Stage Management Track - 26-27 units

Minimum 12 units, including:

THEA 035A	Stage Management Theory	1
THEA 035B	Stage Management Practice	2
THEA 071	Beginning Acting	3

One additional elective from: 2-4

- THEA 112 Playwriting
- THEA 172 Directing
- THEA 037A Costume Construction & Tech
- THEA 037B Lights and Sound Tech
- THEA 037C Scenic Construction & Tech

Additional electives from: 4

- THEA 005 Backstage
- THEA 005 Onstage
- THEA 089 Practicum: Performance
- THEA 089 Practicum: Production

Dance Track - Total 25-27 units

Minimum 12 units, including:

THEA 031	Stage Make-up	2
THEA 051A	Ballet (1 unit class, repeat for 3 units)	3
THEA 051B	Jazz (1 unit class, repeat for 2 units)	2
THEA 051C	Modern Dance (1 unit class, repeat for 2 units)	2
THEA 051D	Tap (1 unit class, repeat for 2 units)	2

One of the following: 2-3

THEA 071 Beginning Acting

THEA 005 Onstage

**Course Offerings**

All course Prerequisites must be completed with a C- or higher. Several courses require a B or higher. See course descriptions.

**THEA 005 A,B,C,D,E,F,G,H. Theatre: On Stage (2)**

Open to all students, this course provides 2 units of credit for full participation as a cast member in a Theatre Department production, which is judged by the faculty to be of suitable scope or difficulty. *Pass/No Credit only. May be repeated for each sub-section. Permission of instructor required.*

**THEA 005 I,J,K,L,M,N,O,P. Theatre: Back Stage (1)**

Open to all students, this course provides 1 unit of credit for participation on a technical crew for a Theatre Department production. *Pass/No Credit only. May be repeated for each sub-section. Permission of instructor required.*

**THEA 011. 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 031. Stage Makeup Fundamentals (2)**

Essentials of makeup for stage, including basics of makeup application, color theory, etc. Class projects include two-dimensional and three-dimensional techniques, cross-gender and stylized makeup designs. Students learn to apply makeup on themselves and, through service hours to Theatre Department productions, on others.

**THEA 033. Theatrical Design Fundamentals (4)**

In this lecture and demonstration course, students learn the theory and application of the fundamental principles of theatre design, covering costumes, lights, and scenery. Topics included color theory, sketching, drafting, rendering, script analysis, model-building, research, and historical analysis. Assignments also include hands-on work in the Scene Shop and Costume Shop.

**THEA 035A. Stage Management Theory (1)**

An introductory course in the theories, techniques and practices of stage-managing a production from its initial stages to the conclusion of the run. *Prerequisite: THEA 033 or permission of the instructor.*

**THEA 035B. Stage Management Practice (2)**

This is a course that will emphasize the application of the theory, techniques, and best practices of stage management. Students will be assigned to a stage management team in charge of stage management duties for a departmental (or possibly other) production. *Prerequisite: THEA 035A or permission of the instructor.*

**THEA 037A. Costume Construction and Technology (2)**

This class covers all aspects of costume construction, including pattern making, pattern alterations, fitting adjustments, hand and machine sewing, and other related methods and materials for costume construction. Class work includes participation in current Theatre Department productions. This course is intended for majors and minors, but is suitable for interested general students. *Prerequisite: THEA 033 or permission of the instructor.*

**THEA 037B. Light and Sound Technology (2)**

Students will be trained in the application of the principles of stagecraft to the creation of lighting and sound environments for live theatre. Class work includes participation in current Theatre Department productions. This course is intended for majors and minors, but is suitable for interested general students. *Prerequisite: THEA 033 or permission of the instructor.*

**THEA 037C. Scenery (2)**

Students will be trained in the application of the principles of stagecraft as applied to the creation of scenic environments for the live theatre. Class work includes participation in current Theatre Department productions. This course is intended for majors and minors, but is suitable for interested general students. *Prerequisite: THEA 033 or permission of the instructor.*

**THEA 051A. Ballet (1, repeatable to 4)**

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 051B. Jazz (1, repeatable to 4)**

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 051C. Modern Dance (1, repeatable to 4)**

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 051D. Tap (1, repeatable to 4)**

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 071. 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, based on the theories of Konstantin Stanislavsky.

**THEA 075. Expressive Movement (3)**

This course introduces the student to several theoretical approaches to the implication 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 077. Voice or the Actor (2)**

Utilizing Kristin Linklater's book *Freeing the Natural Voice*, students will develop a kinesthetic understanding of the use of their voice, with the goal to free the voice to its most expressive and expansive state. Totally experiential, the class consists primarily of in-class exercises, with observation skills developed through journal writing.

**THEA 087. Theatre Internship (2)**

Work experience off-campus, under supervision of non-Pacific managers/supervisors, in any theatrical field: film/television/ stage; acting, administration, management, design, or construction; for a specific production, a specified time length, or a summer season. *Pass/No Credit only.*

**THEA 089 A,B,C,D. Practicum: Performance (2)**

Students who are assigned a performance task which is judged by the faculty to be of suitable scope or difficulty will be enrolled in this course. Assignments may include a role or multiple roles, dance, combat, choreography assistance, etc. *Pass/No Credit only. Prerequisites: THEA 005 A, B, C, D, E, F, G, H and permission of the instructor.*

**THEA 089 E,F,G,H. Practicum: Production (2)**

Students who are assigned a production task which is judged by the faculty to be of suitable scope or difficulty will be enrolled in this course. Students will have some background in production and will assume positions with staff-like responsibilities. *Prerequisites: THEA 005 I, J, K, L, M, N, O, or P and permission of the instructor.*

**THEA 100 A,B,C,D. Theatre Tour (2)**

Attendance of theatre in a major center of theatre activity in the U.S. or abroad, on site seminars, lectures, and tours will be included. Written journals and plan reviews are required.

**THEA 105. Career Workshop (2)**

In this 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. Class members will also prepare resumes, headshots, and portfolios as part of the course work. *Prerequisites: THEA 033, 035, 071, senior standing, and/or permission of the instructor.*

**THEA 109. Theatre Arts Capstone (2)**

A student-developed and Faculty coordinated learning experience, which may involve performance or portfolio development and display, design or directing. All majors will create a specific project which will demonstrate a synthesis of the training received and an originality of perspective. Project proposals are reviewed and approved by a faculty committee. *Prerequisites: senior standing, or permission of the instructor.*

**THEA 111. 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.

**THEA 112. 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, and permission of instructor.*

**THEA 113. 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 theater, 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.

**THEA 115. Theatre Heritage II (4)**

This course studies theatre history and dramatic literature from the Neoclassic to the modern era. Students study the development of the physical theater, 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. *Prerequisites: THEA 113 or equivalent course and/or permission of instructor.*

**THEA 130. Puppetry and Mask-Making (2)**

The study of construction and maintenance of puppets and masks, and their creative use in theatrical production. This course is also potentially relevant in education, therapy, and recreation. Students will develop creative presentations in particular aspects of the art and craft of puppetry and masks.

**THEA 170. Storytelling and Creative Drama (3)**

Principles and practice in selecting, preparing and telling stories for children to stimulate exploration and discovery through creative dramatic experiences.

**THEA 171. 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. *Prerequisites: a "B" or better in THEA 071 and permission of the instructor.*

**THEA 172. Directing (4)**

A study of the theories, principles, and practice of directing for the stage through directing projects for classroom presentation. *Prerequisites: THEA 033, 071, 111, junior standing and permission of the instructor.*

**THEA 173A. 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 Edvardian playwrights will be explored. *Prerequisites: a "B" or better in THEA 171 and permission of the instructor.*

**THEA 173B. Advanced Acting: Actor's Repertoire (3)**

The actor will create a portfolio of work consisting of classical and contemporary monologues and/or songs. Performance ready material will help facilitate the actor's transition from academic theatre to professional theatre. *Prerequisites: a "B" or better in THEA 171 and permission of the instructor.*

**THEA 187. Theatre Internship (2)**

Work experience off-campus, under supervision of non-Pacific managers/supervisors, in any theatrical field: film/television/stage; acting, administration, management, design or construction; for a specific production, a specified time length, or a summer season. *Pass/No Credit only. Prerequisite: junior or senior standing.*

**THEA 189 A,B,C,D. Practicum: Performance (2)**

Students who are assigned a performance task which is judged by the faculty 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. *Pass/No Credit only. Prerequisites: permission of the instructor and junior or senior standing.*

**THEA 189 E,F,G,H. Practicum: Production (2)**

Students who are assigned production support/technical crew roles judged by the faculty to be of suitable scope or difficulty will be enrolled in this class. Assignments may include: director, assistant director, production stage manager, designer (costumes, lights, sets, sound, etc.). *Pass/No Credit only. Prerequisites: permission of the instructor and junior or senior standing.*

**THEA 191. Independent Study (2-4)****THEA 193. Special Topics (2-4)**

## Visual Arts

Phone: (209) 946-2241  
 Location: Jeannette Powell Art Center, South Campus  
 Website: www.pacific.edu/cop/art  
 S. Brett DeBoer, Chair

### Degrees Offered

Bachelor of Arts  
 Bachelor of Fine Arts

### Majors Offered

Art (BA)  
 Studio Art (BFA)  
 Graphic Design (BFA)

### Minors Offered

Art History  
 Studio Art  
 Graphic Design

### Degrees in Studio Art and Graphic Design

The study of art involves learning about the cultural and historical significance of the visual arts and the development of visual literacy. This involves a personal engagement in the creative process and acquiring a more profound understanding of human expression. The department provides an undergraduate curriculum that is appropriate for students that plan careers in the field of studio art or graphic design and is responsive to liberal arts students seeking to expand their knowledge and understanding of the visual arts. The department offers two accredited degree programs. These programs lead to a Bachelor of Arts degree in Art or a Bachelor of Fine Arts degree in Graphic Design or Studio Art. A self-designed major in Art History is available (e.g. Visual Studies, Arts Administration, Art Therapy). Admission into the BA or BFA degree programs requires filing a declaration of major form and consulting with a department adviser in the chosen discipline.

### Bachelor of Arts Major in Art

In order to earn the bachelor of arts degree with a major in art, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

#### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*

One course from each subdivision below:

#### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.*

#### II. College of the Pacific BA Requirement

One year of college instruction or equivalent training in a language other than English.

*Note: 1) Transfer students with sophomore standing are exempt from this requirement.*

#### III. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

*Note: 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.*

#### IV. Breadth Requirement

Complete 64 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

#### V. Major Requirements

Minimum 58 units, including:

ARTH 007	Survey of World Art to 1400	4
ARTH 009	Survey of World Art after 1400	4
ARTH 116	Contemporary World Art 1945 to Present	4
ARTS 005	Drawing	3
ARTS 007	Principles of Two-Dimensional Design	3
ARTS 009	Principles of Three-Dimensional Design	3
ARTS 023	Painting I	3
One of the following :		3
ARTS 035	Ceramics	
ARTS 037	Sculpture	
ARTS 045	Digital Photography	3
ARTS 059	Printmaking I	3
ARTS 047	Digital Media Survey	3
ARTS 181	Junior Studio Seminar	3
ARTS 185	Senior Studio Seminar	4



Choose 2 of the following concentrations:

*A) Drawing:*

ARTS 021 Life Drawing I 3

One of the following courses: 3

ARTS 121 Life Drawing II

ARTS 127 Illustration

*B) Painting:*

ARTS 123 Painting II 3

One of the following courses 3

ARTS 125 Painting III

ARTS 057 Watercolor Painting

ARTS 127 Illustration

*C) Photography:*

ARTS 141 Photography II 3

ARTS 143 Photography III 3

*D) Printmaking:*

ARTS 151 Printmaking II 3

ARTS 153 Printmaking III 3

*E) Three Dimensional Media:*

ARTS 133 Three-Dimensional Studio I 3

One of the following courses (not selected above): 3

ARTS 035 Ceramics

ARTS 037 Sculpture

*F) Visual Arts Teaching Credential:*

ARTS 021 Life Drawing I 3

ARTS 131 Visual Arts in Education 3

One of the following courses (not selected above): 3

ARTS 035 Ceramics

ARTS 037 Sculpture

One of the following courses: 3

ARTS 057 Watercolor Painting

ARTS 123 Painting II

One of the following courses: 3

ARTS 141 Photography II

ARTS 151 Printmaking II

## Bachelor of Fine Arts Major in Studio Art

In order to earn the bachelor of fine arts degree with a major in studio art, students must complete a minimum of 136 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001 Pacific Seminar 1: What is a Good Society? 4

PACS 002 Pacific Seminar 2: Topical Seminar 4

PACS 003 Pacific Seminar 3: The Ethics of Family, Work, and Citizenship 3

*Note:* 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

One course from each subdivision below:

#### Social and Behavioral Sciences

IA. Individual and Interpersonal Behavior

IB. U.S. Studies

IC. Global Studies

#### Arts and Humanities

IIA. Language and Literature

IIIB. Worldviews and Ethics

IIIC. Visual and Performing Arts

#### Natural Sciences and Mathematics

IIIA. Natural Sciences

IIIB. Mathematics and Formal Logic

IIIC. Science, Technology, and Society

or a second Natural Science

*Note:* 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

### II. Fundamental Skills

Demonstrate competence in:

Reading

Writing

Quantitative analysis

*Note:* 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

### III. Breadth Requirement

For the BFA students must complete a minimum of 53 units outside the primary discipline of the first major, regardless of the department that offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

### IV. Major Requirements

Minimum 83 units, including:

ARTH 007 Survey of World Art to 1400 4

ARTH 009 Survey of World Art after 1400 4

ARTH 116 Contemporary World Art 1945 to Present 4

ARTS 005 Drawing 3

ARTS 007 Principles of Two-Dimensional Design and Color 3

ARTS 009 Principles of Three-Dimensional Design 3

ARTS 021 Life Drawing I 3

ARTS 023 Painting I 3

ARTS 035 Ceramics 3

ARTS 037 Sculpture 3

ARTS 045 Digital Photography 3

ARTS 047 Digital Media Survey 3

ARTS 059 Printmaking I 3

ARTS 161 Web Design for Artists 3

ARTS 181 Studio Art Seminar I 3

ARTS 183 Studio Art Seminar II 3

ARTS 185 Studio Art Seminar III 4

Choose 2 of the following concentrations:

*A) Photography:*

ARTS 141 Photography II 3

ARTS 143 Photography III 3

ARTS 197 Undergraduate Research	2-4
Plus one of the following courses:	2-4
ARTS 095 Computer Graphic Design I: Time-Based Media	
ARTS 089 Practicum	
ARTS 189 Practicum	
<i>B) Printmaking:</i>	
ARTS 151 Printmaking II	3
ARTS 153 Printmaking III	3
Plus one of the following courses:	2-4
ARTS 197 Undergraduate Research	
ARTS 089 Practicum	
ARTS 189 Practicum	
<i>C) Drawing:</i>	
ARTS 121 Life Drawing II	3
ARTS 127 Illustration	3
One of the following courses:	2-4
ARTS 197 Undergraduate Research	
ARTS 089 Practicum	
ARTS 189 Practicum	
<i>D) Painting:</i>	
ARTS 123 Painting II	3
ARTS 125 Painting III	3
Plus one of the following courses:	3
ARTS 057 Watercolor Painting	
ARTS 127 Illustration	
ARTS 197 Undergraduate Research	
<i>E) Three Dimensional Media:</i>	
ARTS 133 Three Dimensional Studio I	3
ARTS 135 Three Dimensional Studio II	3
ARTS 191 Independent Study	2-4
Plus one of the following courses:	2-4
ARTS 197 Undergraduate Research	
ARTS 087/089 Internship/Practicum	
ARTS 187/189 Internship/Practicum	
<i>F) Visual Arts Teaching Credential:</i>	
ARTS 021 Life Drawing I	3
ARTS 131 Visual Arts in Education	3
Plus one of the following courses (not selected above):	3
ARTS 035 Ceramics	
ARTS 037 Sculpture	
Plus one of the following courses:	3
ARTS 057 Watercolor Painting	
ARTS 123 Painting II	
Plus one of the following courses:	3
ARTS 141 Photography II	
ARTS 151 Printmaking II	
<i>V. Advanced Practice</i>	
Four of the following courses:	12-13
ARTS 075 Graphic Design I	
ARTS 087 Internship	
ARTS 187 Internship	
ARTS 089 Practicum	
ARTS 189 Practicum	

ARTS 091 Computer Graphic Design I: Print Media
ARTS 095 Computer Graphic Design I: Time-Based Media
ARTH 101 Graphic Design History
ARTS 123 Painting II
ARTS 125 Painting III
ARTS 127 Illustration
ARTS 131 Visual Arts in Education
ARTS 133 Three Dimensional Studio I
ARTS 135 Three Dimensional Studio II
ARTS 141 Photography II
ARTS 143 Photography III
ARTS 151 Printmaking II
ARTS 153 Printmaking III
ARTS 191 Independent Study
ARTS 193 Special Topics
ARTS 197 Undergraduate Research
ARTH 112 19th -Century European Art
ARTH 114 20th Century Art and Film
ARTH 118 Art in the United States: 1865-1945
ARTH 124 Sex, Gender and the Arts
THEA 033 Theatrical Design Fundamentals
THEA 037A Costume Construction and Technology
THEA 037B Light and Sound Technology
THEA 037C Scenery

**Bachelor of Fine Arts  
Major in Graphic Design**

In order to earn the bachelor of fine arts degree with a major in graphic design, students must complete a minimum of 136 units with a Pacific cumulative and major/program grade point average of 2.0.

*I. General Education Requirements*

Minimum 42 units and 12 courses, including:

PACS 001 Pacific Seminar 1: What is a Good Society?	4
PACS 002 Pacific Seminar 2: Topical Seminar	4
PACS 003 Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*

One course from each subdivision below:

*Social and Behavioral Sciences*

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

*Arts and Humanities*

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

*Natural Sciences and Mathematics*

- IIIA. Natural Sciences
  - IIIB. Mathematics and Formal Logic
  - IIIC. Science, Technology, and Society
- or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

## II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

## III. Breadth Requirement

For the BFA students must complete a minimum of 53 units outside the primary discipline of the first major, regardless of the department who offers the course(s) in that discipline (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

## IV. Major Requirements

Minimum 83 units, including:

ARTS 005	Drawing	3
ARTS 007	Principles of Two-Dimensional Design and Color	3
ARTS 009	Principles of Three-Dimensional Design	3
ARTS 021	Life Drawing	3
ARTS 045	Digital Photography	3
ARTS 075	Graphic Design I	3
ARTS 077	Graphic Design II	3
ARTS 079	Typography	3
ARTS 091	Computer Graphic Design: Print Media	3
ARTS 095	Computer Graphic Design: Time-Based Media	3
ARTS 103	Graphic Production	3
ARTS 161	Web Design for Artists	3
ARTS 171	Graphic Design III	3
ARTS 173	Graphic Design Seminar	3
ARTS 175	Senior Graphic Design Seminar	4
Plus one of the following courses:		3
ARTS 023	Painting I	
ARTS 057	Watercolor Painting	
Plus one of the following courses:		3
ARTS 047	Digital Media Survey	
ARTS 141	Photography II	
One of the following courses:		3
ARTS 059	Printmaking I	
ARTS 127	Illustration	
One of the following courses:		3
ARTS 121	Life Drawing II	
ARTS 151	Printmaking II	
ARTH 009	Survey of World Art after 1400	4
ARTH 101	Graphic Design History	4
ARTH 114	20th Century European Art	4
One of the following courses:		4
ARTH 116	Contemporary World Art	
ARTH 124	Sex, Gender and the Arts	

## V. Advanced Practice

Minimum 9 units from the following courses:

ARTS 075	Graphic Design I	9
ARTS 087	Internship	
ARTS 187	Internship	
ARTS 089	Practicum	
ARTS 189	Practicum	
ARTS 123	Painting II	
ARTS 125	Painting III	
ARTS 127	Illustration	
ARTS 141	Photography II	
ARTS 143	Photography III	
ARTS 151	Printmaking II	
ARTS 153	Printmaking III	
ARTS 191	Independent Study	
ARTS 193	Special Topics	
ARTS 197	Undergraduate Research	
ARTH 112	19th -Century European Art	
ARTH 118	Art in the United States: 1865-1945	
ARTH 124	Sex, Gender and the Arts	

## Minor in Art History

In order to earn a minor in art history, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

### Minor Requirements:

ARTH 007	Survey of World Art to 1400	4
ARTH 009	Survey of World Art after 1400	4
ARTH 114	20th Century European Art	4
ARTH 116	Contemporary World Art	4
One of the following courses:		4
ARTH 120	Chinese Art History	
ARTH 122	Japanese Art History	

**Note:** A minimum of 10 units from the Minor course of study must be completed at Pacific.

## Minor in Graphic Design

In order to earn a minor in graphic design, students must complete a minimum of 21-22 units and 7 courses with a Pacific minor grade point average of 2.0.

### Minor Requirements:

ARTS 007	Principles of Two-Dimensional Design and Color	3
ARTS 075	Graphic Design I	3
ARTS 077	Graphic Design II	3
ARTS 079	Typography	3
One of the following courses:		3
ARTS 091	Computer Graphic Design: Print Media	
ARTS 095	Computer Graphic Design: Time-Based Media	
One of the following courses:		3-4
ARTH 101	Graphic Design History	
ARTS 103	Graphic Production	
One additional elective from:		3
ARTS 045	Digital Photography	

- ARTS 141 Photography II  
 ARTS 161 Web Design for Artists  
 ARTS 173 Graphic Design Seminar

*Note:* 1) The Foundations level courses ARTS 007 and ARTS 075 should be completed by the end of the first year. 2) ARTS 161 and ARTS 173 are considered capstone courses and are to be taken during the last year of study. 3) A minimum of 12 units from the Minor course of study must be completed at Pacific.

## Minor in Studio Arts

In order to earn a minor in studio arts, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

### Minor Requirements:

Minimum 11 units in foundational courses, including:

ARTH 009 Survey of World Art after 1400 4

One of the following courses: 4

ARTS 003 Visual Arts Exploration

ARTH 116 Contemporary World Art

One of the following courses: 3

ARTS 007 Principles of Two-Dimensional Design and Color

ARTS 009 Principles of Three-Dimensional Design

ARTS Electives 9

*Note:* 1) These nine units may be in one area such as ceramics, drawing, painting, photography, printmaking, or sculpture. They may also be earned in courses from two or more of these areas. 2) Students are encouraged to consult a Studio Art Faculty Advisor to plan your Minor as not all courses are offered every semester. 3) A minimum of 12 units from the Minor course of study must be completed at Pacific.

## Course Offerings

\* Some courses require a studio materials fee.

### Art History

**ARTH 007. Survey of World Art to 1400 (4)**

A foundational level art history course that surveys the major periods of world art from the Stone Age to onset of the Renaissance in the West during the 14<sup>th</sup> century. This is a lecture-based course using visual images to examine the characteristics and styles of each period.

**ARTH 009. Survey of World Art after 1400 (4)**

A continuation of ARTH 007, examining world art from 1400 to the present. Areas to be covered include Renaissance, Baroque, Neoclassicism, Impressionism, Abstract Expressionism, Pop Art and Conceptual Art.

**ARTH 108. Renaissance Art and Architecture (4)**

The examination of the art (painting, sculpture and architecture) of the 16<sup>th</sup> 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 their artistic, historical and cultural contexts.

**ARTH 110. 17<sup>th</sup> Century Art: Age of Rembrandt (4)**

This course examines the masters of 17<sup>th</sup> century art. Major themes include the development of naturalism, a new interest in space, time and light, and relationship to artistic tradition.

**ARTH 112. 19<sup>th</sup> 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. Painting, sculpture, photography, and architecture will be considered. Art historical methods including formalism, psychoanalysis, Marxism, and gender theory will be explored.

**ARTH 114. 20<sup>th</sup> Century Art and Film (4)**

Major styles of the 20<sup>th</sup> century including Fauvism, Cubism, Expressionism, Surrealism, etc., and their appearance in the visual arts, theater design, and film will be explored. We will 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 World Art 1945 to Present (4)**

This course will explore major artists, styles and movements in world art from 1945 to the present. Gestural abstraction, Pop, Photo Realism, 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. Art in the United States: 1865 – 1945 (4)**

This course will explore major painters, sculptors and architects and filmmakers in the U.S. from 1865–1945. Topics such as depictions of race and immigration, the impact of technology upon visual perception, art and politics and the impact of gender upon art will be discussed. Expatriate art, the Ash Can School, the Stieglitz Group, The New Deal art projects and other significant styles and trends will also be examined.

**ARTH 120. Chinese Art History (4)**

An introductory survey of the arts of China, from the Stone Age to the present. Works of art are analyzed stylistically and their meanings examined within original political and social contexts. China's enduring artistic tradition will be emphasized.

**ARTH 122. Japanese Art History (4)**

An introductory survey to the arts of Japan, from prehistoric to the present. Works of art are analyzed for their style, meanings, and original political and social contexts. How artists worked within Japanese artistic tradition and how they absorbed influences from abroad will be emphasized.

**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 130. Greek Art and Architecture (4)**

This course offers 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 modern 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.E to the 4<sup>th</sup> century C.E. 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 087, 187. Internship (2-4)**

Off-campus, non-classroom experiences/projects related to art history.

**ARTH 089, 189. Practicum (2-4)**

Off-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.

**ARTH 197. Undergraduate Research (3 - 4)**  
Undergraduate research in Art History/Visual Studies is conducted in consultation with a faculty advisor. It is designated to focus upon selected topics and advanced research in the field. Students undertaking this course must participate in the Pacific Undergraduate Research Conference (PURC) held each spring. *Prerequisites: permission from Department Chair or supervising faculty.*

### Studio Art

**ARTS 003. Visual Arts Exploration (4)**  
A hands-on course is designed as an experiential studio/discussion course with emphasis upon acquiring practical skills and appreciation for the theoretical aspects of the creative process. This course explores two-dimensional and three-dimensional art forms such as drawing, painting, printmaking sculpture and ceramics.

**ARTS 005. Drawing (3)**  
A foundational level, hands-on course in drawing with an emphasis upon skill building and the visual and conceptual possibilities of art through drawing. A variety of projects and materials will be used investigate the medium's history, traditional approaches and expressive possibilities.

**ARTS 007. Principles of 2-D Design and Color (3)**  
A foundational level, hands-on course introducing the theoretical application of the elements and principles of 2-D design and the practical applications of color theory. Exercises in visual thinking and the use of traditional principles of composition and two-dimensional media are emphasized through sequential, skill building projects.

**ARTS 009. Principles of 3-D Design (3)**  
A foundational level, hands-on course introducing the theory and principles of 3-D Design found in organic and man-made objects. Developing creative design solutions will be emphasized through observations of nature architecture, visual art, industrial design and sequential, skill building projects.

**ARTS 021. Life Drawing I (3)**  
The primary emphasis is placed on the development of visual and perceptual skills relative to drawing the human body. Exercises in the anatomical, structural, formal and expressive factors of figure drawing are covered in this course. *Prerequisites: ARTS 005.*

**ARTS 023. Painting I (3)**  
A foundational level, hands-on course introducing the concepts, methods and materials of oil painting. Practical exercises in skill development, conceptual directions in art and personal imagery will be emphasized. *Prerequisites: ARTS 005, ARTS 007.*

**ARTS 035. Ceramics (3)**  
An introductory, hands-on course in ceramic materials, processes and their creative potential. Students will explore a variety of problems using the potter's wheel and hand-building techniques to discover the potential of clay.

**ARTS 037. Sculpture (3)**  
An introductory, hands-on course exploring the concepts and creative potential of sculpture. Through a sequence of applied assignments, a variety of media (clay, wood, plaster, metal, etc.) will be explored students will learn to use materials and tools to create sculpture.

**ARTS 045. Digital Photography (3)**  
An introductory course to historical and technical development and contemporary aesthetics of digitally-based photography. Through a series of practical and conceptual assignments students will routinely work with digital cameras, scanners, selected software and printers to develop acquire basic mastery of the medium.

**ARTS 047. Digital Media Survey (3)**  
An introductory level course designed to introduce computer-based applications and methods used by artists, designers and photographers. In lecture/discussion the historical, theoretical and aesthetic aspects of the medium are explored and incorporated into practical assignments.

**ARTS 057. Watercolor Painting (3)**  
Through demonstrations, readings, discussions and studio work this course introduces a variety of materials, techniques, traditions and contemporary uses of watercolor painting. A sequence of practical assignments incorporate aesthetic and conceptual development to build skill with the media and personal expression. *Prerequisite: ARTS 005.*

**ARTS 059. Printmaking I (3)**  
An introductory survey, hands-on course designed to examine and the historical and aesthetic development of the processes, materials and techniques of printmaking. A sequence of applied assignments incorporate the aesthetic and conceptual development to achieve basic mastery of the printmaking processes. *Prerequisites: ARTS 005, 007.*

**ARTS 121. Life Drawing II (3)**  
This course builds upon the experiences and skills achieved in Figure Drawing I. The course emphasizes personal expression and advanced drawing from the nude figure. *Prerequisite: ARTS 021.*

**ARTS 123. Painting II (3)**  
A studio course designed to build upon the experience and skills achieved in beginning drawing and painting. Instruction will focus upon problem solving using traditional and contemporary solutions and media. The development of personal style and expression is emphasized. *Prerequisites: ARTS 005, ARTS 023.*

**ARTS 125. Painting III (3)**  
Open to the advanced painting student. This course emphasizes conceptual development, setting and achieving personal goals. Emphasis is placed upon portfolio development and exhibition. *Prerequisites: ARTS 123.*

**ARTS 127. Illustration (3)**  
A course designed to examine the historical and applied application of visual art for publication and mass media. A series of practical assignments investigate a variety of sub-themes routinely practiced by illustrators: advertising, editorial, scientific and book illustration. *Prerequisite: ARTS 021, 023.*

**ARTS 133. 3-D Studio I (3)**  
This course emphasizes intermediate skill building and conceptual development for three-dimensional art forms. Building upon foundational skills of ceramics and sculpture, Students explore contemporary trends, methods and materials applicable to 3-D studio practice. *Prerequisite: ARTS 035 or ARTS 037.*

**ARTS 135. 3-D Studio II (3)**  
Open to the advanced studio art major, this course emphasizes advanced conceptual, project and portfolio development for the 3-D artist. Studio management is an integral component of this course. *Prerequisite: ARTS 133.*

**ARTS 141. Photography II (3)**  
An intermediate course of project-based assignments designed to introduce the routines of professional photography. Building upon foundational skills, a sequence of practical assignments will provide experience with concepts and methodologies of contemporary studio and location photography designed for publication. *Prerequisite: ARTS 045.*

**ARTS 143. Photography III (3)**  
Open to advanced students, this course emphasizes conceptual and portfolio development for publication and preparation for internships and/or exhibition. The course will emphasize a thematic project from pre-selected topics in photography. *Prerequisite: ARTS 141.*

**ARTS 151. Printmaking II (3)**  
An intermediate level course designed to emphasize mastery of a single process introduced in ARTS 059. Students are required conduct historical, technical and aesthetic research to provide background and rigor to their investigation and completed work. *Prerequisite: ARTS 059.*

**ARTS 153. Printmaking III (3)**  
This course is designed to provide foundational work for students considering graduate studies in printmaking and related processes. Emphasis will be placed upon working closely with faculty and studio management and portfolio development. *Prerequisites: ARTS 059 and 151.*

**ARTS 161. Web Design (3)**  
An intermediate level course for studio art and graphic design majors emphasizing the development of web sites for commercial applications and artists' portfolios. Emphasis is placed upon effective approaches to organization and design of web sites for self-promotion, employment and e-commerce. *Prerequisites: ARTS 045 and 141.*

**ARTS 181. Studio Art Seminar I (3)**  
Level one of three studio art seminars preparing artists for graduate studies and a professional art career. The course involves advanced theoretical reading/discussions, writing, critiques and field trips. *Prerequisite: Completion or concurrent enrollment in Program Level Two coursework.*

**ARTS 183. Studio Art Seminar II (3)**  
Level two of three courses preparing Studio Art BFA candidates for graduate study and/or entry level to a professional art career. This requires involves reading/discussions, fieldtrips and practical assignments that emphasize professional identify, self-promotion, legal and business practices for artists. *Prerequisite: ARTS 181 or permission of Instructor.*

**ARTS 185. Studio Art Seminar III (4)**  
Level three of three studio seminar course for the BA and BFA candidates in the Studio Arts. Intensive studio work in a chosen concentration, including research, critiques and field trips define the activities undertaken during this course. Emphasis will be placed upon preparing a senior thesis, and a senior exhibition. *Prerequisites: ARTS 181 and 183.*

**ARTS 087, 187. Internship (2-4)**  
Off-campus, non-classroom experience applying the studio arts in a professional context.

**ARTS 089, 189. Practicum (2-4)**  
On-campus, non-classroom experiences/projects related to discipline-specific studio arts.

**ARTS 191. Independent Study (2-4)**  
Enrolled by permission of the faculty only. Unless indicated, independent study courses may be counted only as electives. IS Contracts must be completed by student and faculty and approved by the department Chair.

**ARTS 193. Special Topics (3-4)**

**ARTS 197. Undergraduate Research (3-4)**  
Undergraduate research in studio art is conducted in consultation with a faculty advisor. It is designated to focus upon selected topics in the studio arts-related inquiries and advanced research in the field. Students undertaking this course must participate in the Pacific Undergraduate Research Conference (PURC) held each spring. *Permission from Department Chair or supervising faculty*

### Graphic Design

**ARTS 075. Graphic Design I (3)**  
A beginning course introducing broad and exposure to theories and range of the graphic design field. *Prerequisites: ARTS 005 and 007.*

**ARTS 077. Graphic Design II (3)**  
An intermediate level course that expands the skills and knowledge acquired in Graphic Design I. The course emphasizes practical assignments that examine applied problem solving and professional solutions for graphic designers. *Prerequisite: ARTS 075.*

**ARTS 079. Typography (3)**  
This course is an introductory level course that examines the history, principles and application of typography in graphic design. The course involves a sequence of applied assignments exploring typography as a creative, illustrative tool. *Prerequisite: ARTS 007.*

**ARTS 091. Computer Graphic Design I: Print Media (3)**  
This course explores graphic design for publication. Assignments examine and develop creative solutions for graphic design and methods of publishing in print utilizing software applications in graphic design and contemporary publishing. *Prerequisite: Taken concurrently: ARTS 075 or Instructor's permission.*

**ARTS 095. Computer Graphic Design II: Time Based Media (3)**  
This course examines and develop projects using computer-generated imagery and time-based software applications. Applications include, but are not limited to digital video editing, interactive multi-media and the World Wide Web.

**ARTH 101. History of Graphic Design (4)**  
A survey of the development of Graphic Communication introduced by analysis of major works of Graphic Design. Seen within various contexts such as technology, religion, geography, and cultural mores, this course presents significant events in visual communication from 1450 to the present.

**ARTS 103. Graphic Production (3)**  
This course examines methods of production of printing, including typesetting and photographic technologies related to the graphic designer. *Prerequisites: ARTS 075, 091 and 095.*

**ARTS 171. Graphic Design III (3)**  
This is an advanced level course with intensive involvement in project development. Emphasis is placed upon research and selecting design processes, client communication and professional presentation of work. *Prerequisite: ARTS 077.*

**ARTS 173. Graphic Design Seminar (3)**  
Open only to BFA majors in graphic design with junior standing. This is an advanced level course in project and portfolio development. *Prerequisite: ARTS 171 or instructor's permission.*

**ARTS 175. Senior Graphic Design Seminar (4)**  
Open only to BFA majors in graphic design with senior standing This capstone course emphasizes research in the field of graphic design, and presentation of a senior presentation and exhibition. *Prerequisite: ARTS 173 or Instructor's permission.*

**ARTS 191. Independent Study (2-4)**  
Enrolled by permission of the faculty only. Unless indicated, independent study courses may be counted only as electives. IS Contracts must be completed by student and faculty and approved by the department Chair. *Prerequisites: Completion of foundations and upper division course work unless approved by Department Chair.*

**ARTS 087, 187. Internship (2-4)**  
Off-campus, non-classroom experience that allows exposes a student to studio arts in a professional context. Emphasis is placed upon the development of attitudes and routines that lead significant portfolio development to support future employment or graduate opportunities. *Prerequisites: Completion of foundations and upper division coursework*

**ARTS 089, 189. Practicum (2-4)**

On-campus, non-classroom experiences/projects related to graphic design. *Prerequisites: Completion of foundations and upper division course work unless approved by Department Chair.*

**ARTS 193. Special Topics (3-4)**

The Department of Visual Arts reserves the right to copy, document or hold student work in its archives for future program accreditation reviews. Student property left on the premises after the semester's end will be subject to disposal.

**ARTS 197. Undergraduate Research (3-4)**

Undergraduate research in graphic design is conducted in consultation with a faculty advisor. It is designated to focus upon selected topics in the field of graphic design-related inquiries and advanced research in the field. Students undertaking this course must participate in the Pacific Undergraduate Research Conference (PURC) held each spring. *Permission from Department Chair or supervising 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.

### Environmental Science Major (BS)

Lydia Fox, Chair

The Bachelor of Science in Environmental Science is offered through the Department of Earth & Environmental Science with the cooperation of several departments in the College and prepares students with the practical skills and knowledge required to critically evaluate environmental problems and issues and provide applied solutions.

See Earth & Environmental Science department for degree requirements.

### Environmental Studies Major (BA)

Lydia Fox, Director

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 early 21<sup>st</sup> century. It may be especially useful to students who are already pursuing a major in one of the contributing fields, but it may also appeal to students who simply wish to consider the environment and its problems from a variety of perspectives.

See Earth & Environmental Science department for degree requirements.

### Chemistry - Biology Major (BS)

Gregg Jongeward, Director

Patrick Jones, Director

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.

See biology or chemistry department for degree requirements.

### Ethnic Studies Minor

Xiaojing Zhou, Director

Ethnic Studies is an interdisciplinary program. It provides students with multiple models of critical theories and methodologies for examining the intersections of race, ethnicity, gender, culture, and class in the historical formations of the United States, with an emphasis on the experiences and perspectives of historically disenfranchised populations such as African Americans, Asian Americans, Latinos, and Native Americans.

Incorporating courses offered in various schools and departments, its curriculum broadens students' major fields of study, prepares students for interdisciplinary studies at the graduate level, and enhances students' employment opportunities in law, education, business, medicine, government, communication, and social services, among other professions.

See ethnic studies program for minor requirements.

### Gender Studies Minor

Gesine Gerhard, Director

The Gender Studies Program at Pacific is a thriving interdisciplinary consortium of faculty and students committed to both a curricular and cultural environment supportive of the study of gender. We are interested in how gender intersects with definitions of nationality, race, ethnicity, and class, and how gender identities are constantly redefined over time. By exploring the relationship between gender identity and cultural meaning, we prepare students to think comparatively, structurally and critically about their experiences and impact on the world. The dialogue we foster among the liberal arts, natural sciences and the professions enriches the intellectual life of Pacific's students and faculty, as well as our surrounding community.

See gender studies program for minor requirements.

### Liberal Studies Major (BA)

Martha Bowsky, Director

The Department of Religious and Classical Studies offers the Liberal Studies major, which is designed for students seeking a diversified major program within College of the Pacific. It includes a breadth requirement, core major requirements, and a disciplinary or interdisciplinary concentration.

See religious and classical studies department for degree requirements.

### Chemistry Major with a Concentration in Medicinal Chemistry (BS)

Jianhua Ren, Director

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.

See chemistry department for degree requirements.

### Pre-Law Program

Cynthia Ostberg, Director

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 test, and which also strengthens students' skills in areas they will need in law school.

See political science department for minor requirements.

### Pacific Legal Scholars Program

Cynthia Ostberg, Director

Website: [Web.pacific.edu/x13999.xml](http://Web.pacific.edu/x13999.xml)

The Pacific Legal Scholars Program offers students interested in pursuing a career in law the opportunity to earn a bachelor's degree and a JD degree in an abbreviated period of time. The program offers both a 3+3 and 4+3 track, each with specific admissions requirements. Qualified students complete all major and general education course requirements, 3 seminar classes for law school preparation, and a number of off-campus law-related activities. Common majors for students in the program include Political Science, Business, International Relations, English, Communications, Psychology, History, Sociology, Economics, and History.

See the program director for degree and program requirements in Political Science.

### Self-Designed Major (BA )

Eddie Sparks, Senior Associate Dean

A unique opportunity for students who have special academic or career objectives not directly met by existing majors is the "self-designed" major. Students may pursue either an interdisciplinary program or a discipline specific program of study as part of the self-designed major. In this program a student will work with several faculty members to construct a major organized around a particular theme or interdisciplinary course of study or around a specific discipline offered in the College which does not have a regular major program. All self-designed majors must be approved by the Senior Associate Dean of the College.

See the College Academic Affairs Office (WPC 111) for degree requirements.

### Thematic Minor

Eddie Sparks, Senior Associate Dean

Students interested in designing their own minor program around a specific area of interest or field of study offered in the College may do so by declaring a Thematic Minor. 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. The Thematic Minor must contain at least 20 units, normally five courses. No course may count for both the student's major and the Thematic Minor, and no more than one course may be completed outside the University. Some advanced courses must be included.

See the College Academic Affairs Office (WPC 111) for degree requirements.

### 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, passage of a state examination (CSET examinations); a course or successful test on the Constitution of the United States; and specified professional preparation courses offered by the School of Education. The California Basic Educational Skills Test (CBEST) and California Subject Examinations for Teachers (CSET) must be passed before a candidate may student teach or intern. 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 University of the Pacific GPA, and cumulative GPA.

A student in the college seeking a credential may complete any major program. However, the College offers specified baccalaureate degree programs which fulfill the degree requirements and help with CSET preparation.

Students can pursue single subject credentialing for Art; English; Mathematics; Sciences (see Biology); Spanish; Physical Education (see Sport Sciences); Social Sciences (see History) and Music Education. CSET examinations in these fields will be required, unless students matriculated to Pacific prior to state timelines for eligibility to complete specific subject matter programs based on 1994-95 standards. Some programs are in the process of obtaining approval from CCTC for subject matter programs based on 2003-04 standards.

The department major programs recommended for the Single Subject areas are described in the departmental sections of this catalog. Students may also check with the Academic Affairs Office of The College (WPC 111) to learn more about subject matter test preparation for a credential.

Information about curriculum courses in the School of Education required for teacher preparation as well as state requirements are available in room 102, Department of Curriculum and Instruction, and Room 108, Credentials office, in the School of Education building. See also the section in the catalogue for the Benerd School of Education Department of Curriculum and Instruction.

### Social Sciences Major (BA)

Caroline Cox, Advisor

The Social Sciences major is open to any student and appeals to students with a broad range of interests. It provides especially good preparation for those interested in becoming social studies teachers for grades 7-12. The major provides comprehensive preparation in several social science fields. Students do not need to declare a social science major in order to prepare for the credential test in the social sciences. But this major is designed to cover the fields in which students are expected to demonstrate mastery on the state-approved test for a single subject credential in the social sciences. See the history department for degree requirements.

### Programs in the Health Professions\*

G. Jongeward (Biology), Chair

C. Vierra (Biology), Assistant 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 programs 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 programs 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: D. Maxwell (Biology), C. Vierra (Biology), A. Franz (Chemistry)

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), M. McCallum (Chemistry), D. Maxwell (Biology), L. Wrischnik (Biology), E. Thomas (Biology), G. Lin-Cereghino (Biology), C. Vierra (Biology), K. Land (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; four semesters of biology; one year of general physics; and one year of English, including one course in composition. Note: One year in English requirement can be met by Pacific Seminar I and II.

## 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 G. Jongeward, Department of Biological Sciences. Correspondence regarding the Pre-Medical Program should be directed to D. Maxwell, Department of Biological Sciences. Correspondence regarding the other programs in the Pre-Health Professions should be directed to D. Maxwell, Department of Biological Sciences.

## College of the Pacific Faculty

### Biological Sciences

**Gregg D. Jongeward**, 1996, Associate Professor and Chair, B.S., University of Minnesota, 1986; Ph.D., California Institute of Technology, 1993.

**Craig A. Vierra**, 1995, Professor and Assistant Chair, B.S., University of California, Davis, 1990; Ph.D., University of California, Riverside, 1994.

**Mark S. Brunell**, 2002, Associate Professor, B.A., California State University, Fullerton, 1988; M.A., 1991; Ph.D., University of California Riverside, 1997.

**Janet Koprivnikar**, 2007, Assistant Professor, B.S., University of Toronto, 1998; M.S., 2001; Ph.D., 2006.

**Kirkwood M. Land**, 2004, Assistant Professor, B.S., University of California, Davis, 1992; M.A., University of California, Riverside, 1995; Ph.D., University of California, Los Angeles, 2001.

**Geoffrey Lin-Cereghino**, 2000, Associate Professor, B.S., University of California, Davis, 1989; Ph.D., University of California, San Diego, 1995.

**Joan Lin-Cereghino**, 2000, Associate Professor, A.B., Princeton University, 1987; Ph.D., University of California, San Diego, 1992.

**Leah Larkin**, 2008, Assistant Professor, B.A. Swarthmore College, Pennsylvania, 1991; Ph.D., University of Texas, 2002.

**Stacy Luthy**, 2007, Assistant Professor, B.S., Louisiana State University, 1997; Ph.D. University of Miami, 2004.

**W. Desmond Maxwell**, 1999, Associate Professor, B.Sc., The Queen's University of Belfast, 1986; Ph.D., 1991.

**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.

**Srinivas Venkatram**, 2006, Assistant Professor, B.S., Madurai Kamaraj University, 1992; M.S., Madurai Kamaraj University 1994; Ph.D., University of Kentucky, 1999.

**Lisa A. Wrischnik**, 2002, Associate Professor, B.A., University of California, Berkeley, 1986; Ph.D., University of California, San Francisco, 1995. Member, Phi Beta Kappa.

### Chemistry

**Larry O. Spreer**, 1970, Professor and Assistant Chair, B.S., University of Kansas, 1965; Ph.D., University of Colorado, 1969.

**Dieter Cremer**, 2005, Research Professor, B.S., University of Cologne, 1969; Ph.D., University of Cologne, 1972.

**Andreas Franz**, 2002, Associate Professor, B.S., Universitaet-Gesamthochschule Siegen, 1994; M.S., University of the Pacific, 1997; Ph.D., University of the Pacific, 2000.

**Patrick R. Jones**, 1974, Professor, B.A., University of Texas, 1966; B.S., 1966; Ph.D., Stanford University, 1971. Member, Phi Beta Kappa.

**Elfi Kraka**, 2005, Professor, B.S., University of Cologne, 1981; Ph.D., University of Cologne, 1984.

**C. Michael McCallum**, 1994, Associate Professor, B.S., Michigan State University, 1988; Ph.D., University of California, Berkeley, 1993.

**Jianhua Ren**, 2002, Associate Professor, B.S., Beijing Normal University, 1986; M.S., Auburn University, 1994; Ph.D., Purdue University, 1999.

**Silvio Rodriguez**, 1978, Professor, M.S., University of California, Santa Barbara, 1970; Ph.D., 1978.

**Vyacheslav V. Samoshin**, 1999, Professor, M.S., Lomonosov Moscow State University, USSR, 1974; Ph.D., M.S.U. 1982; D.Sci., M.S.U. 1991.

**Bálint Sztáray**, 2008, Associate Professor, M.S., Eötvös Loránd University, 1997; Ph.D., Eötvös Loránd University, 2001.

**Jerry Tsai**, 2008, Associate Professor, B.S., University of California, Los Angeles, 1991; Ph.D., Stanford University, 1998.

**Liang Xue**, 2007, Assistant Professor, B.S., Fudan University, Shanghai, China, 1996; Ph.D., Clemson University, 2004.

## Communication

**Qingwen Dong**, 1996, Professor and Chair, B.A., Beijing Second Foreign Language Institute, 1983; M.A., University of Missouri-Columbia, 1990; Ph.D., Washington State University, 1995.

**Marlin Bates**, 2005, Assistant Professor, B.A., University of the Pacific, 1996; M.A., University of the Pacific, 1999; Ph.D., Pennsylvania State University, 2005.

**Teresa G. Bergman**, 2006, Associate Professor, B.A., University of California, Berkeley, 1978; M.A., San Francisco State University, 1991; Ph.D. University of California, Davis, 2001.

**Kenneth D. Day**, 1987, Professor, B.S., Indiana University, 1970; M.A., 1975; M.S., 1976; Ph.D., 1980.

**Carol Ann Hackley**, 1985, Professor, B.A., California State University, Sacramento, 1961; M.A., The Ohio State University, 1984; Ph.D., 1985.

**Randall J. Koper**, 1985, Professor, B.A., Michigan State University, 1974; M.A., 1984; Ph.D. 1985.

**R. Alan Ray**, 1987, Assistant Professor, B.S., Memphis State University, 1977; M.A., 1980; Ph.D., University of Missouri, 1986.

**Jon F. Schamber**, 1980, Professor, B.A., University of the Pacific, 1974; M.A., 1975; Ph.D., University of Oregon, 1982.

**Paul Turpin**, 2007, Assistant Professor, B.A., University of California, Berkeley, 1994; M.A., University of Southern California, 1997; Ph.D., 2005.

## Earth & Environmental Sciences

**Lydia K. Fox**, 1990, Associate Professor and Chair, BSE, Princeton University, 1981; Ph.D., University of California, Santa Barbara, 1989.

**Kurtis Burmeister**, 2005, Assistant Professor, B.A., University of California at Santa Barbara, 1996; M.A., 2000; Ph.D., University of Illinois, 2005.

**Eugene Pearson**, 1971, Professor, B.A., Pomona College, 1967; Ph.D., University of Wyoming, 1972.

**Laura Rademacher**, 2005, Assistant Professor, B.S., University of Wisconsin, Madison; Ph.D., University of California, Santa Barbara, 2002.

## Economics

**Peter J. Meyer**, 1985, Associate Professor and Chair, A.B., Harvard University, 1972; Ph.D., University of California, Berkeley, 1979.

**Michelle M. Amaral**, 2007, Assistant Professor, B.S., University of the Pacific, 1998; M.A., University of Virginia, 2001; Ph.D. University of California, Davis, 2007.

**Benjamin N. Dennis**, 1996, Associate 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.

**William E. Herrin**, 1985, Professor, B.S., Wilkes College, 1980; M.A., State University of New York, Binghamton, 1982; Ph.D., 1985.

**David E. Keefe**, 1978, Associate Professor, B.S., Cornell University, 1965; Ph.D., University of California, Berkeley, 1980.

**Sharmila K. King**, 2001, Associate Professor, B.A., University of York, England, 1992; M.A., San Francisco State University, 1996; Ph.D., University of California, Davis, 2001.

**J. Farley Ordovensky Staniec**, 1993, Associate Professor, B.S., University of Delaware, 1986; M.A., Duke University, 1988; Ph.D., 1992.

## English

**Camille Norton**, 1994, Professor and Chair, B.A., University of Massachusetts, 1983; M.A., Harvard University, 1987; Ph.D., 1992.

**Andreea D. Boboc**, 2006, Assistant Professor, B.A., Ludwig-Maximilians University, 1997; M.A., 1998; Ph.D., University of Michigan, Ann Arbor, 2006.

**Diane M. Borden**, 1971, Professor and Film Studies Program Director, B.A., Lone Mountain College, 1964; M.A., San Francisco State University, 1966; Ph.D., University of California, Santa Cruz, 1971.

**Cynthia Dobbs**, 1998, Associate Professor and Assistant Dean B.A., Pomona College, 1987; Ph.D., University of California, Berkeley, 1998. Member, Phi Beta Kappa.

**Courtney Lehmann**, 1998, Professor, B.A., University of North Carolina at Chapel Hill, 1991; M.A., Indiana University, 1994; Ph.D., 1998. Member, Phi Beta Kappa.

**John Lessard**, 2006, Assistant Professor, B.A., Rice University, 1997; M.A., University of Pennsylvania 1999; Ph.D., 2006.

**Amy Elizabeth Smith**, 1999, Associate Professor, B.A., West Virginia University, 1986; M.A., The Pennsylvania State University, 1991; Ph.D., 1998.

**Eric A. Sonstroem**, 2001, Associate Professor, B.A., Westeyan University, 1988; M.A., Indiana University, 1990; Ph.D., 1999.

**Xiaojing Zhou**, 2002, Associate Professor, B.A., College of Foreign Languages and Literature, Shandong University, China, 1974; M.A., University of Regina, Saskatchewan, Canada, 1989; Ph.D., Memorial University of Newfoundland, St. John's, Canada, 1995.

## History

**Caroline Cox**, 1998, Associate Professor and Chair B.A., University of California, Berkeley, 1990; M.A., 1993; Ph.D., 1997. Member, Phi Beta Kappa.

**Kenneth Albala**, 1994, Professor, B.A., George Washington University, 1986; M.A., Yale University, 1987; M. Phil., Columbia University, 1990; Ph.D., 1993. Member, Phi Beta Kappa.

**Gesine Gerhard**, 1999, Associate Professor, B.A., Free University of Berlin, 1991; M.A., Technical University of Berlin, 1994; Ph.D., University of Iowa, 1999.

**Jennifer Helgren**, 2006, Visiting Assistant Professor, B.A. University of California, Los Angeles, 1994; M.A. Claremont Graduate University, 1999; Ph.D. 2005. Member, Phi Beta Kappa.

**Tomomi Kinukawa**, 2006, Assistant Professor, B.A., University of Tokyo, 1989; M.A., University of Wisconsin-Madison, 1993; Ph.D., 2001.

**Marisela J. Ramos**, 2007, Assistant Professor, B.A., Brown University, 1999; M.A., University of Connecticut, 2001; M.A., Brown University, 2002, Ph.D., Brown University, 2008.

**Greg Rohlf**, 2001, Assistant Professor, B.A. Luther College, 1988; M.A., University of Michigan, 1993; Ph.D., University of Iowa, 1999.

**Edith Sparks**, 1999, Associate Professor and Senior Associate Dean, B.A., University of California, Berkeley, 1991; M.A., University of California, Los Angeles, 1996; Ph.D., 1999. Member, Phi Beta Kappa.

**William Swagerty**, 2001, Professor, B.A., The Colorado College, 1973; Ph.D., University of California at Santa Barbara, 1981. Member, Phi Beta Kappa.

## Mathematics

**Sarah Merz**, 1995, Associate Professor, B.A., Whitman College, 1991; M.S., University of Colorado at Denver, 1994; Ph.D., 1995. Member, Phi Beta Kappa.

**Aleksei I. Beltukov**, 2004, Assistant Professor, B.S., Mendeleev University, 1994; M.S., Mendeleev University, 1996; M.S., Tufts University, 1996; Ph.D., 2004.

**Mouchumi Bhattacharyya**, 2000, Associate Professor, B.S., Cotton College, 1988; M.S., Delhi University, 1990; M.Phil., 1992; Ph.D., University of Wisconsin, Milwaukee, 1999.

**Jialing Dai**, 2006, Assistant Professor, B.S., Southwestern Normal University (China), 1985; MS, Jilin University of Technology (China), 1987; MS, University of Arizona, 1998; Ph.D., University of Arizona, 2000.

**Christopher Goff**, 2002, Associate Professor, B.S., B.A., University of Texas, Austin, 1993; M.A., University of California, Santa Cruz, 1995; Ph.D., 1999. Member, Phi Beta Kappa.

**Larry Langley**, 2001, Associate Professor, B.S., U.C. Santa Cruz, 1988; A.M. Dartmouth College, 1990; Ph.D., Dartmouth College, 1993.

**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.

## Modern Language and Literature

**Jie Lu**, 1996, Professor of Chinese and Chair, 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.

**Martín Camps**, 2005, Assistant Professor, B.A., Instituto de Comunicacion y Filosofia, Mexico City, 1997; M.F.A., University of Texas, El Paso, 1999; Ph.D., University of California, Riverside, 2003.

**Zeljko Cipris**, 2000, Professor, M.A., Columbia University, 1987; M.Phil., 1987; Ph.D., 1994.

**Arturo Giraldez**, 1990, Professor, B.A., Universidad Complutense de Madrid, 1976; M.A., 1979; Ph.D., University of California, Santa Barbara, 1990; Ph.D., Amsterdam University, 1999.

**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.

**Katherine Golsan**, 1994, Professor, B.A., Colgate University, 1976; M.A., University of North Carolina, 1980; Ph.D. University of Michigan, 1988. Member, Phi Beta Kappa.

**Jeeyoung Peck**, 2008, Assistant Professor, B.A., Hankuk University of Foreign Studies, Korea (valedictorian) 2000; M.A., Hankuk University of Foreign Studies, Korea 2002; Ph.D., Stanford University, 2008.

**Kathy A. Richman**, 2007, Assistant Professor, B.A., Cornell University, 1980; A.M., Harvard University, 1992; Ph.D., 2002.

**Traci Roberts-Camps**, 2005, Assistant Professor, B.A., Willamette University, 1999; M.A., University of California, Riverside, 2001; Ph.D., 2004.

## Philosophy

**James D. Heffernan**, 1972, Professor and Chair, B.A., Fordham University, 1964; M.A., 1967; Ph.D., University of Notre Dame, 1976.

**Lou J. Matz**, 1999, Associate Professor and Associate Dean and Director of General Education, B.A., University of the Redlands, 1984; M.A., University of California, San Diego, 1987; Ph.D., 1992. Member, Phi Beta Kappa.

**Ty Raterman**, 2006, Assistant Professor, B.A., Northwestern University, 1999; M.A., University of North Carolina at Chapel Hill, 2001; Ph.D., 2006.

**Ray Rennard**, 2005, Assistant Professor, B.A., University of Pittsburgh, 1992; Ph.D., Johns Hopkins University, 2003.

**Eleanor E. Witttrup**, 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, Professor and Chair, B.S., Case Western Reserve University, 1982; Ph.D., University of Minnesota, 1990.

**Joseph F. Alward**, 1979, Assistant Professor, B.A., California State University, Sacramento, 1968; M.A., University of California, Davis, 1973; Ph.D., 1976.

**Daniel Birmingham**, 2005, Associate Professor, B.A., Trinity College, Dublin, 1982; Ph.D., 1985.

**Kieran Holland**, 2006, Assistant Professor, B.Sc., University College Cork, 1994; M.Sc., 1995; Ph.D., Massachusetts Institute of Technology, 1999.

**Keisuke J. Juge**, 2007, Assistant Professor, B.Sc., University of Toronto, 1993; M.S., University of California, San Diego, 1995; Ph.D., 1998.

## 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.

**Jeffrey Becker**, 2006, Assistant Professor, B.A., University of California, Santa Cruz, 1991; M.A., Rutgers University, 1996; Ph.D., 2004. Member, Phi Beta Kappa.

**Robert Benedetti**, 1989, Professor, B.A., Amherst College, 1964; M.A., University of Pennsylvania, 1967; Ph.D., 1975. Member, Phi Beta Kappa.

**Michael T. Hatch**, 1985, Professor, B.A., Utah State University, 1970; M.A., Johns Hopkins University, 1973; Ph.D., University of California, Berkeley, 1983.

**Cynthia Ostberg**, 1994, Professor, B.A., University of California, Berkeley, 1985; M.A., Northern Illinois University, 1991; Ph.D., 1995.

**Susan Sample**, 1999, Associate Professor, B.A., University of Missouri, 1991; Ph.D., Vanderbilt University, 1996. Member, Phi Beta Kappa.

**Keith W. Smith**, 2008, Assistant Professor, B.A., Pepperdine University, 1997, M.P.M., University of Maryland, 1999; M.A. University of California, Berkeley, 2000; Ph.D., 2005.

**Dari Sylvester**, 2005, Assistant Professor, B.A., Trinity College, 1998; M.A., State University of New York, Stony Brook, 2002; Ph.D., 2006. Member, Phi Beta Kappa.

## Psychology

**Roseann Hannon**, 1970, Professor and Chair, 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.

**Scott Jensen**, 2006, Assistant Professor, B.S., Brigham Young University, 1998; M.S., Colorado State University, Fort Collins, 2003; Ph.D., 2004.

**Carolynn S. Kohn**, 2004, Assistant Professor, B.A., University of California at Santa Barbara, 1991; M.A., Hahnemann University, 1996; Ph.D., MCP-Hahnemann University, 2000.

**Matthew P. Normand**, 2007, Assistant Professor, B.A., Western New England College, 1997; M.A., Western Michigan University, 1999; M.S., Florida State University, 2002; Ph.D., 2003.

**Stacy Rilea**, 2006, Assistant Professor, B.S., Fayetteville State University, 1996; M.A., The University of Alabama, 1999; Ph.D., 2002.

**Deborah Schooler**, 2007, Assistant Professor, B.A., Brown University, 1999; Ph.D., University of Michigan, 2004.

## Religious and Classical Studies

**George D. Randels, Jr.**, 1996, Associate Professor and Chair, B.A., University of Iowa, 1984; M.A.R., Yale University, 1987; Ph.D., University of Virginia, 1994. Member, Phi Beta Kappa.

**Martha W. Bowsky**, 1984, Professor, B.A., University of North Carolina, 1972; M.A., 1974; Ph.D., University of Michigan, 1983. Member, Phi Beta Kappa.

**Lynn Kraynak**, 1987, Associate Professor, B.A., University of California, Berkeley, 1973; M.A., 1976; Ph.D., 1984.

**Alan Lenzi**, 2006, Assistant Professor, B.A., Central Bible College, 1993; M.A.R., Westminster Theological Seminary, 1997; M.A., Brandeis University, 2002; Ph.D., 2006.

**Caroline T. Schroeder**, 2007, Assistant Professor, A.B., Brown University, 1993; M.A., Duke University, 1998; Ph.D., 2002. Member, Phi Beta Kappa.

**Tanya Storch**, 2000, Associate Professor, B.A., M.A., University of St. Petersburg, 1988; Ph.D., University of Pennsylvania, 1995.

## Sociology

**Alison H. Alkon**, 2008, Assistant Professor, B.A., Emory University, 1999; M.A., U.C. Davis, 2003; Ph.D., University of California, Davis, 2008.

**George H. Lewis**, 1970, Professor and Chair, B.A., Bowdoin College, 1965; M.A., University of Oregon, 1968; Ph.D., 1970.

**Marcia Hernandez**, 2005, Assistant Professor, B.A., University of California, Santa Barbara, 1994; Ph.D., State University of New York, Albany, 2007.

**Ethel G. Nicdao**, 2007, Assistant Professor, B.A., University of California, Davis, 1994; M.A., California State University, Hayward, 2001; Ph.D., University of New Mexico, 2006.

## Sport Sciences

**Christopher Snell**, 1990, Professor and Chair, B.A., Bedford College, England, 1987; M.S., University of Oregon, 1990; Ph.D., 1993.

**Margaret E. (Peg) Ciccolella**, 1985, Professor, B.A., University of Colorado, 1970; M.S., Brigham Young University, 1972; Ed.D., 1978; J.D., Humphreys College of Law, 1993.

**Jodi Baker**, 2006, Clinical Assistant Professor and Program Director, Athletic Training Education Program, B.S. Whitworth University, 1997 M.S. San Diego State University, 2002

**Virgil Darrin Kitchen**, 2005, Assistant Professor, B.A., California State University, Chico, 1996; M.A., 1997; Ed.D., University of the Pacific, 2006.

**Linda Koehler**, 1989, Associate Professor, B.A., Purdue University, 1971; M.S., University of New Mexico, 1975; Ph.D., University of Illinois, 1982.

**Peter J. Schroeder**, 2007, Assistant Professor, B.S., Truman State University, 1996; M.A. University of the Pacific, 1998; Ed.D. University of Missouri, 2003.

**J. Mark VanNess**, 1999, Associate Professor, B.S., Wheaton College, 1990; M.S., California State University, Sacramento, 1993; Ph.D., Florida State University, 1997.

## Theatre Arts

**Gary Armagnac**, 2001, Associate Professor and Chair (Producer, Artistic Director), B.A., Speech and Theatre, Iona College, 1974; M.F.A., Acting and Directing, California State University, Long Beach, 1993.

**Randall A. Enlow**, 2003, Associate Professor, B.A., University of Akron, 1987, M.F.A., Case Western Reserve University, 1993.

**Macelle Mahala**, 2007, Assistant Professor, B.A., Macalester College, 2001; M.A., University of Minnesota, 2004; Ph.D., 2007.

**Cathie McClellan**, 2002, Associate Professor, B.A., Brigham Young University, 1975; M.F.A., University of Arizona, 1989.

**Lisa Tromovitch**, 2005, Assistant Professor, B.A., Dartmouth College, 1983; M.F.A., Southern Methodist University. Member, Phi Beta Kappa.

## Visual Arts

**Daniel Kasser**, 1984, Professor and Chair, B.A., Humboldt State University, 1980; M.F.A., University of New Mexico, 1991.

**Trent Burkett**, 2002, Associate Professor, B.A., California State University, Sacramento 1993; M.F.A. University of Minnesota, Twin Cities, MN, 2000.

**Brett DeBoer**, 1999, Associate Professor, B.F.A., University of Northern Colorado, 1977; M.S., Parsons School of Design, 1985; M.F.A., Rochester Institute of Technology, 1989.

**Barbara Flaherty**, 1988, Associate Professor, B.A., Hamline University, 1962; M.A., University of California, Davis, 1966.

**Lucinda Kasser**, 1995, Associate Professor, B.A., Humboldt State University, 1979; M.A., California State University, Sacramento, 1989.

**Jennifer Little**, 2005, Assistant Professor, B.F.A., Washington University, 2001; M.F.A., University of Texas, Austin, 2005.

**Merrill Schleier**, 1982, Professor, B.A., The City College of New York, 1973; M.A., University of California, Berkeley, 1976; Ph.D., 1983. Member, Phi Beta Kappa.

# conservatory of music

Phone: (209) 946-2415  
 Location: Faye Spanos Concert Hall  
 Website: [www.pacific.edu/conservatory](http://www.pacific.edu/conservatory)  
 Giulio Maria Ongaro, Dean

## Degrees Offered

Bachelor of Arts  
 Bachelor of Music  
 Master of Music (see Graduate Catalog for information)  
 Master of Arts (see Graduate Catalog for information)

## Majors Offered

Music Composition (BM)  
 Music Education (BM, MM)  
     Instrumental  
     Choral  
 Music History (BM)  
 Music Management (BM)  
 Music Therapy (BM, MA)  
 Performance (BM)  
     Woodwinds, Brass, and Percussion  
     Voice  
     Strings  
     Piano  
 Jazz Studies (BA)  
 Music (BA)  
     General  
     Music Management

## Minors Offered

Music  
 Music History  
 Music Theory

*A professional school educating and training musicians for the highest levels of artistic performance, creative endeavor, and intellectual inquiry.*

## Mission

The mission of the Conservatory of Music is to provide superior educational opportunities in music so students can prepare for successful professional careers and to become artistic leaders of the future, to be a significant musical resource for the University and the community by presenting high quality and diverse forms of the musical arts, and to have a significant impact on the future of music by doing research, creating new music, and being of service to the music profession.

## Vision

The Conservatory of Music will be the finest music school possible, one which sustains and communicates traditional musical and educational values through its curricular programs. Simultaneously, the Conservatory will explore, develop, and employ new and innovative means of communicating those values, and will create and present new music in both traditional and developing forms.

## Bachelor of Music

Six areas of professional study are available in the Bachelor of Music degree.

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 a variety of careers including composing, sound design and sound for film, music technology development, 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 Education prepares musicians for careers as music teachers at all levels in public and private schools.

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. Music History majors may continue to the graduate level in preparation to join and teach in the discipline of musicology. Music history degrees can also be combined with degrees in other fields to enhance career prospects in music librarianship, conducting, performance, or music journalism.

Music Management prepares qualified students for a wide array of career options in recording production and promotion, music products

management, music publishing, arts management and administration, business and legal relationships in the entertainment media and a host of other interests in the music industry.

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.

Performance Studies provide students a foundation for pursuing careers as instrumentalists in symphony orchestras, bands, singers in opera and musical theatre, solo recitalists, accompanists, conductors, private and college teachers and church musicians.

## 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 Education leading to a graduate degree and teaching credential in music. Complete information on these degrees is available in the Graduate School Catalog and from the Conservatory of Music.

## The Brubeck Institute

The Brubeck Institute is named for the legendary musician and University of the Pacific alumnus, Dave Brubeck, and is a component of the Conservatory of Music. The mission of the Institute is to build on Dave Brubeck's legacy – quintessentially American in origin, international in scope, and unique in its breadth. Its philosophy of musical styles is inclusive, reflecting the exploratory spirit and social values of the Institute's namesake, involving jazz, contemporary classical music, and

interdisciplinary education in subject areas such as ethnic studies, philosophy, and sociology. At the heart of it all is a haven of the humanities, civil rights, and social justice, values to which Dave Brubeck has dedicated his life.

The Brubeck Institute Fellowship Program is a one-year to two-year performance program for exceptional jazz performers, ages 18-19, who comprise the Brubeck Institute Ensemble.

Enrollment is limited to 5 to 7 students, admitted by audition and interview.

Internationally known jazz artists and clinicians serve as the faculty for the Institute. The program is designed to provide intensive instruction in jazz performance with numerous performance opportunities in Northern California and beyond. For more information, contact the Institute at 209.946.3970 or visit <http://www.pacific.edu/brubeck>.

The University is also home to the Brubeck Collection, one of the largest jazz collections in the world. Held in the Holt-Atherton Special Collections Department of the University of the Pacific Library, it contains hundreds of compositions, manuscripts, recordings, photos, writings, and memorabilia. This collection is available for study by students and scholars.

### ***Pacific Music Camp / Brubeck Institute Jazz Camp***

Pacific Music Camp and the Brubeck Institute Jazz Camp are summer programs of musical study and performance for junior and senior high school musicians. Daily activities include concert band, orchestra, chorus and piano along with master classes, electives and chamber ensembles. Students have the opportunity to work with top music educators, professional musicians and Conservatory faculty. One-week sessions are offered in the summer for junior high school band and orchestra and senior high school band, orchestra, chorus, jazz and piano. Each week concludes with public performances in the Faye Spanos Concert Hall. For more information, contact Pacific Music Camp, Conservatory of Music, University of the Pacific, 3601 Pacific Ave, Stockton, CA 95211. 209.946.2416. [www.pacific.edu/musiccamp](http://www.pacific.edu/musiccamp)

### **Accreditation**

The Conservatory is accredited by the National Association of Schools of Music and the music therapy programs are approved by 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.

Pacific's Conservatory of Music and Eberhardt School of Business are designated as Affiliates of the International Music Products Association, otherwise known as NAMM. As a NAMM-Affiliated institution, Pacific students are eligible for a range of benefits including admission to the twice-a-year NAMM Convention, and annual NAMM student scholarships. Pacific is the first school to be designated as a NAMBI Affiliate in the state of California.

### **Facilities and Equipment**

The Conservatory of Music occupies a complex of five buildings. The landmark Conservatory Building, renovated in 1987, houses the 946-seat Faye Spanos Concert Hall, the 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, the Music Technology Lab, student commons and study areas. Owen Hall houses additional classrooms, teaching laboratories, chamber ensemble rehearsal studios, the Conservatory's Digital Recording Studio, which is based around a Pro Tools HD2 system with a C-24 control surface, 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 a Pro Tools HD2 system, the facility includes extensive software for sound design, detailed audio editing capabilities, fully digital automated mixing, and hardware to support the composition of music for film.

The Conservatory Music Technology Lab serves as both a teaching facility and a general purpose computer lab for Conservatory students and faculty. 19 iMacs are equipped with a large variety of professional software including current versions of Sibelius, Logic Studio, Final Cut Studio, Pro Tools LE, Dreamweaver, Photoshop, and commonly used word processing/presentation software.

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, DVD's 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***

1. All baccalaureate degrees require a minimum of 124 units.
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 according to 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 full-time residency according to major field specifications. In addition, instrumentalists are required to participate in a major choral ensemble for two semesters with the exception of the BA in Music Management degree.
5. All undergraduate music majors must enroll in Solo Class and remain enrolled according to major field specifications.
6. The Conservatory Academic Regulations Committee must approve any waiver, challenge, substitute or other deviation regarding any curricular requirements of 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. (Core music theory courses are defined as MCOM 009-017 inclusive. Core music history courses are defined as MHIS 011-013 inclusive.) Independent studies in the music history and music theory core curriculum are not permitted.

7. 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.

### Academic Structure

The Conservatory of Music is a professional school within 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. Composition applicants must submit two 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.

### 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/No Credit (P/NC) is used only in MEDU 113, MGMT 010 and 187, and MTHR 187, 245, and 299. Pass/Fail is used only in MPER 050.
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 002, MHIS 005, 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. At the beginning of each term, the instructor will distribute a syllabus explaining attendance and grading policies and containing any other information pertinent to the class.

### *Bachelor of Science in Business Administration with a Concentration 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.

## Conservatory General Education Requirements

All Conservatory students complete a General Education program as specified in the General Education section of this catalog. This requirement includes a minimum 30 units and 9 courses, including:

### I. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

*Note: 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.*

### II. Core Requirements

PACS 001	Pacific Seminar 1: What is a good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from categories I and II not chosen below\*\*, in place of taking PACS 001 and 002. PACS 003 is required for transfer students.*

### III. Breadth Requirements

Conservatory students also complete a breadth program as specified in the General Education section of this catalog. \*\*Only one course can come from each subdivision (A, B, and C).

#### I. Social and Behavioral Sciences

Two courses from the following:

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### II. Arts and Humanities

Two courses from the following:

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

#### III. Natural Sciences and Mathematics

- IIIA. Natural Sciences
- IIIB. Mathematics and Formal Logic

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.*

## 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.. Major fields are performance (Brass, Percussion, Piano, Strings, Voice, Woodwinds), music composition, music education, music history, music management and music therapy.

## Bachelor of Music Major in Performance

### Woodwind, Brass, Percussion

In order to earn the bachelor of music degree with a major in performance (woodwinds, brass, or percussion), students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

### I. Major Requirements:

MCOM 009	Introduction to Music Technology	1
MCOM 010	Music Theory and Aural Perception I	4
MCOM 011	Music Theory and Aural Perception II	4
MCOM 012	Music Theory III: Chromaticism	2
MCOM 013	Aural Perception III	1
MCOM 014	Introduction to Orchestration	2
MCOM 015	Music Theory IV: Twentieth Century	2
MCOM 016	Aural Perception IV	1
MCOM 017	Form and Processes in Music	2
MHIS 011	Survey of Music History I	3
MHIS 012	Survey of Music History II	3
MHIS 013	Survey of Music History III	3
MPER 151	Principles of Conducting	2

Four units of one or a combination of the following courses: 4

MAPP 001D Applied Music: Piano

MAPP 005M Applied Music: Piano

MPER 070-073 Major Ensemble 8

MPER 060 Chamber Ensemble 8

*Note: MPER 060 is to be taken every semester.*

MPER 082-084 2 semesters of Major Choral Ensemble 2

MPER 153 Instrumental Conducting 2

MHIS 140 Symphonic Literature 3

MHIS 142 Chamber Music Literature 3

MCOM 113 Advanced Analysis 3

One of the following courses: 3

MCOM 108 Counterpoint

MCOM 109 Advanced Orchestration

MCOM 113 Advanced Analysis

One of the following courses: 3

MHIS 150 Medieval Music

MHIS 151 Music in the Renaissance

MHIS 152 Music in the Baroque

MHIS 153 Classical Studies

MHIS 154 Romantic Studies

MAPP 012 Applied Music 8

*Note: 1) MAPP 012 is to be repeated to have a total of 8 units from this one course.*

MAPP 112 Advanced Applied Music for Performance Majors 16

*Note: 1) MAPP 112 is to be repeated to have a total of 16 units from this one course.*

MPER 050 Solo Class 0

*Note: 1) MPER 050 is to be taken every semester.*

Half recital during the Junior year.

Full recital during the Senior year.



## Bachelor of Music Major in Performance

### Voice

In order to earn the bachelor of music degree with a major in performance (voice), students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

#### I. Major Requirements:

MCOM 009	Introduction to Music Technology	1
MCOM 010	Music Theory and Aural Perception I	4
MCOM 011	Music Theory and Aural Perception II	4
MCOM 012	Music Theory III: Chromaticism	2
MCOM 013	Aural Perception III	1
MCOM 014	Introduction to Orchestration	2
MCOM 015	Music Theory IV: Twentieth Century	2
MCOM 016	Aural Perception IV	1
MCOM 017	Form and Processes in Music	2
MHIS 011	Survey of Music History I	3
MHIS 012	Survey of Music History II	3
MHIS 013	Survey of Music History III	3
MPER 151	Principles of Conducting	2
MPER 020	Introduction to Lyric Diction	2
MPER 021	Introduction to Lyric Diction	2
MPER 120	Lyric Diction, Advanced	2
MPER 121	Lyric Diction, Advanced	2
MPER 141	Pedagogy of Voice	2
MPER 151	Principles of Conducting	2
MPER 152	Choral Conducting	2

A minimum of four to eight units of one or a combination of the following courses: 4-8

- MAPP 001D Applied Music: Piano
- MAPP 005M Applied Music: Piano

Piano studies for Voice Performance majors are continued unless the piano skills examination is passed.

MPER 080	Opera Production	2
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*Note:* Can be counted only as major ensemble credit during the junior and senior year, but allow for more

6 units from the following courses determined in consultation with an advisor: 6

- MPER 082 The Oriana Choir (Women's Chorus)
- MPER 083 University Chorus
- MPER 084 Pacific Singers

Elective	MHIS or MCOM elective (100 level)	3
MHIS 144	Vocal Literature	3
MPER 069	Opera Theatre Workshop	2
MPER 169	Advanced Opera Workshop	1

*Note:* 1) 3 units of THEA can substitute for MPER 069 and MPER 169

GERM	011A and 011B	8
FREN	011A and 011B	8
MAPP 012	Applied Music	8

*Note:* 1) MAPP 012 is to be repeated to have a total of 8 units from this one course.

MAPP 112	Advanced Applied Music for Performance Majors	12
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*Note:* 1) MAPP 112 is to be repeated to have a total of 12 units from this one course.

MPER 050	Solo Class	0
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*Note:* 1) MPER 050 is to be taken every semester.

Half recital during the Junior year.

Full recital during the Senior year.

Senior examinations in Vocal Terms and Pedagogy

## Bachelor of Music Major in Performance

### Cello, Double Bass, Viola, Violin

In order to earn the bachelor of music degree with a major in performance (strings), students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

#### I. Major Requirements:

MCOM 009	Introduction to Music Technology	1
MCOM 010	Music Theory and Aural Perception I	4
MCOM 011	Music Theory and Aural Perception II	4
MCOM 012	Music Theory III: Chromaticism	2
MCOM 013	Aural Perception III	1
MCOM 014	Introduction to Orchestration	2
MCOM 015	Music Theory IV: Twentieth Century	2
MCOM 016	Aural Perception IV	1
MCOM 017	Form and Processes in Music	2
MHIS 011	Survey of Music History I	3
MHIS 012	Survey of Music History II	3
MHIS 013	Survey of Music History III	3
MPER 151	Principles of Conducting	2
Four units of one or a combination of the following courses:		4
MAPP 001D Applied Music: Piano		
MAPP 005M Applied Music: Piano		
MPER 060	Chamber Ensemble	8

*Note:* 1) MPER 060 is to be repeated until 8 units in this one course is complete.

MPER 070	University Symphony Orchestra	8
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*Note:* 1) MPER 070 is to be repeated until 8 units in this one course is complete.

MPER 082-084	2 semesters of Major Choral Ensemble	2
MPER 153	Instrumental Conducting	2
MCOM 108	Counterpoint	3
MCOM 113	Advanced Analysis	3
MHIS 140	Symphonic Literature	3
MHIS 142	Chamber Music Literature	3

One of the following period courses: 3

- MHIS 150 Medieval Music
- MHIS 151 Music in the Renaissance
- MHIS 152 Music in the Baroque
- MHIS 153 Classical Studies
- MHIS 154 Romantic Studies

MAPP 012	Applied Music	8
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*Note:* 1) MAPP 012 is to be repeated to have a total of 8 units from this one course.

MAPP 112	Advanced Applied Music for Performance Majors	16
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*Note:* 1) MAPP 112 is to be repeated to have a total of 16 units from this one course.

MPER 050	Solo Class	0
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*Note:* 1) MPER 050 is to be taken every semester.

Half recital during the Junior year.

Full recital during the Senior year.

## Bachelor of Music Major in Performance

### Piano

In order to earn the bachelor of music degree with a major in performance (piano), students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

### Major Requirements:

MCOM 009	Introduction to Music Technology	1
MCOM 010	Music Theory and Aural Perception I	4
MCOM 011	Music Theory and Aural Perception II	4
MCOM 012	Music Theory III: Chromaticism	2
MCOM 013	Aural Perception III	1
MCOM 014	Introduction to Orchestration	2
MCOM 015	Music Theory IV: Twentieth Century	2
MCOM 016	Aural Perception IV	1
MCOM 017	Form and Processes in Music	2
MHIS 011	Survey of Music History I	3
MHIS 012	Survey of Music History II	3
MHIS 013	Survey of Music History III	3
MPER 151	Principles of Conducting	2
MPER 060	Chamber Ensemble	4
MPER 130	Accompanying	4
MPER 140	Pedagogy of Piano	2
One of the following courses:		2
MPER 152	Choral Conducting	
MPER 153	Instrumental Conducting	
MHIS 142	Chamber Music Literature	3
MHIS 143a	Keyboard Literature	3
MHIS 143b	Keyboard Literature	3
Electives	6 additional units in MCOM or MHIS courses (100 level)	6
Eight units from the following courses:		8
MPER 070	University Symphony Orchestra	
MPER 072	Symphonic Wind Ensemble	
MPER 073	Concert Band	
MPER 080	Opera Production	
MPER 082	The Oriana Choir (Women's Chorus)	
MPER 083	University Chorus	
MPER 084	Pacific Singers	
MAPP 012N	Applied Music	8

*Note:* 1) MAPP 012N is to be repeated to have a total of 8 units from this one course.

MAPP 112N	Advanced Applied Music for Performance Majors	16
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*Note:* 1) MAPP 112N is to be repeated to have a total of 16 units from this one course.

MPER 050	Solo Class	0
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*Note:* 1) MPER 050 is to be taken every semester.

Half recital during the Junior year.

Full recital during the Senior year.

## 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 (four 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.

Music Education majors must present a half recital, usually in their senior year. 2) Music Education majors with voice as a principal instrument are required to complete a senior examination during the final year. 3) 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. 4) 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. 5) Students who take Video Microrehearsal Techniques as part of student teaching may substitute electives for the student teaching in the fourth year. 6) Major Ensembles must relate to the student's proposed teaching area as specified by advisers. 7) Residency requirements in Solo Class, Major Ensemble and Lab Ensemble may be waived when in conflict with student teaching.

## Bachelor of Music Major in Music Education Concentration Instrumental

In order to earn the bachelor of music degree with a major in music education concentration instrumental, students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

### I. Major Requirements:

MCOM 009	Introduction to Music Technology	1
MCOM 010	Music Theory and Aural Perception I	4
MCOM 011	Music Theory and Aural Perception II	4
MCOM 012	Music Theory III: Chromaticism	2
MCOM 013	Aural Perception III	1
MCOM 014	Introduction to Orchestration	2
MCOM 015	Music Theory IV: Twentieth Century	2
MCOM 016	Aural Perception IV	1
MCOM 017	Form and Processes in Music	2
MHIS 011	Survey of Music History I	3
MHIS 012	Survey of Music History II	3
MHIS 013	Survey of Music History III	3
MPER 151	Principles of Conducting	2
MCOM	Elective (1 jazz course)	2-3
MAPP 001A	Guitar Class	1

*Note:* 1) Proficiency in guitar must be met.

Four to eight units from the following courses: 4-8  
 MAPP 001D Applied Music: Piano  
 MAPP 005M Applied Music: Piano

*Note:* 1) Proficiency in piano must be met. 2) If the student is a pianist, substitute voice lessons for piano.

MAPP 011 Applied Music 8-10

*Note:* 1) MAPP 011 is to be repeated to have a total of 8 units from this one course.

MAPP 111 Advanced Applied Music for Music Education Majors 6-8

*Note:* 1) A minimum of 6 units of MAPP 111 is required; MAPP 111 is to be repeated to have a total of 6 to 8 units; 16 units total of the combination of MAPP 11/111 are required.

MPER 050 Solo Class 0

*Note:* 1) MPER 050 is to be taken every semester.

Six units from the following courses: 6

MEDU 101 Woodwind Instruments I

MEDU 102 Woodwind Instruments II

MEDU 103 Brass Instruments I

MEDU 105 Percussion Instruments

MEDU 107 String Instruments I

MEDU 108 String Instruments II

One of the following courses: 2

MEDU 110 Band Development

MEDU 112 Orchestra Development

MEDU 113 Laboratory Ensemble 2

*Note:* 1) MEDU 113 must be taken for four semesters, two units total.

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 006 Music of the World's Peoples 3

Eight units from the following courses: 8

MPER 070 University Symphony Orchestra

MPER 072 Symphonic Wind Ensemble

MPER 073 Concert Band

MPER 153 Instrumental Conducting 2

MPER 082-084 2 semesters of Major Choral Ensemble 2

Half recital is required.

Piano Exam

EDUC 156 Content Area Literacy Development in Secondary Schools 3

EDUC 140 Transformational Teaching and Learning 4

*The following are required for the credential, not for the degree:*

EDUC 163 Teaching English Learners 3

EDUC 170 Professional Practice 2-12

SPED 125x Teaching Exceptional Learners 2

EDUC 171 Professional Practice Seminar 2

MCOM Elective (1 jazz course) 2

*Note:* 1) MPER 050, MAPP 111, Major Ensemble, and MEDU 113 may be waived during the last year if they conflict with student teaching.

## Bachelor of Music Major in Music Education Concentration Choral

In order to earn the bachelor of music degree with a major in music education concentration choral, students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

### I. Major Requirements:

MCOM 009 Introduction to Music Technology 1

MCOM 010 Music Theory and Aural Perception I 4

MCOM 011 Music Theory and Aural Perception II 4

MCOM 012 Music Theory III: Chromaticism 2

MCOM 013 Aural Perception III 1

MCOM 014 Introduction to Orchestration 2

MCOM 015 Music Theory IV: Twentieth Century 2

MCOM 016 Aural Perception IV 1

MCOM 017 Form and Processes in Music 2

MHIS 011 Survey of Music History I 3

MHIS 012 Survey of Music History II 3

MHIS 013 Survey of Music History III 3

MPER 151 Principles of Conducting 2

Four units of one or a combination of the following courses: 4

MAPP 001 Applied Music: Piano

MAPP 005 Applied Music: Piano

*Note:* 1) Proficiency in piano must be met. 2) If the student is a pianist, substitute voice lessons for piano.

Five of the following courses: 5

MEDU 101 Woodwind Instruments I

MEDU 102 Woodwind Instruments II

MEDU 103 Brass Instruments I

MEDU 105 Percussion Instruments

MEDU 107 String Instruments I

MEDU 108 String Instruments II

MEDU 111 Choral Development 2

MEDU 113 Laboratory Ensemble 2

MEDU 114 Music in Elementary Schools 2

MEDU 115 Music Experiences, K-6 2

MEDU 116 Music in Secondary Schools 2

MEDU 117 Music Experiences, 7-12 2

MHIS 006 Music of the World's People 3

MPER 020 Introduction to Lyric Diction 2

MPER 021 Introduction to Lyric Diction 2

Eight units from the following courses: 8

MPER 080 Opera Production

MPER 082 The Oriana Choir (Women's Chorus)

MPER 083 University Chorus

MPER 084 Pacific Singers

MPER 152 Choral Conducting 2

MCOM Elective (1 jazz course) 2-3

MAPP 011 Applied Music 8-10

*Note:* 1) MAPP 011 is to be repeated to have a total of 8 units from this one course.

MAPP 111 Advanced Applied Music for Music Education Majors 6-8

*Note:* 1) A minimum of 6 units of MAPP 111 is required; MAPP 111 is to be repeated to have a total of 6 to 8 units; 16 units total of the combination of MAPP 11/111 are required.

MPER 050	Solo Class	0
<i>Note: 1) MPER 050 is to be taken every semester.</i>		
EDUC 156	Content Area Literacy Development in Secondary Schools	3
EDUC 140	Transformational Teaching and Learning	4
Half a Recital		
Piano Exam		

**The following are required for the credential, not for the degree:**

EDUC 163	Teaching English Learners	3
EDUC 170	Professional Practice	2-12
SPED 125x	Teaching Exceptional Learners	2
EDUC 171	Professional Practice Seminar	2
MCOM	Elective (1 jazz course)	2

*Note: 1) MPER 050, MAPP 111, Major Ensemble, and MEDU 113 may be waived during the last year if they conflict with student teaching.*

**Music Therapy**

The Music Therapy program is approved by the American Music Therapy Association (AMTA). The Bachelor of Music degree is earned at the completion of four years of coursework plus 6 months of clinical internship (MTHR 187). One is eligible for the Board Certification Examination upon the completion of the six-month internship at an approved clinical facility. Students must be enrolled for at least one unit of MTHR 187 during the semesters covering the start and completion dates of the internship. Final grade for all sections of MTHR 187 will be given only upon receipt of the final internship evaluation.

In order to complete the Music Therapy degree, students must obtain a grade of B- or better in Music Therapy courses and demonstrate interpersonal 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 011 or MTHR 018 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 011-141) 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 functional proficiencies on piano, guitar, and voice before enrolling in the senior level capstone course MTHR 141, 142, and 150 section 02. Voice competencies are assessed in the mandatory MAPP 001E voice class and during fieldwork. All students, regardless of major instrument, must complete the voice class, pass all parts of the piano functional examination, and both beginning and advanced level functional guitar examinations. These examinations are given within the functional courses, but may also be passed at the examination time offered at the end of each semester.

**Bachelor of Music  
Major in Music Therapy**

In order to earn the bachelor of music degree with a major in music therapy, students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

**I. Major Requirements:**

MCOM 009	Introduction to Music Technology	1
MCOM 010	Music Theory and Aural Perception I	4
MCOM 011	Music Theory and Aural Perception II	4
MCOM 012	Music Theory III: Chromaticism	2

MCOM 013	Aural Perception III	1
MCOM 014	Introduction to Orchestration	2
MCOM 015	Music Theory IV: Twentieth Century	2
MCOM 016	Aural Perception IV	1
MCOM 017	Form and Processes in Music	2
MHIS 011	Survey of Music History I	3
MHIS 012	Survey of Music History II	3
MHIS 013	Survey of Music History III	3
MPER 151	Principles of Conducting	2
MPER 080-084	2 semesters of Major Choral Ensemble	2

Piano, Guitar, and Vocal Proficiencies:

MAPP 001D and/or 005N	Applied Piano	4-8
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*Note: 1) Registration required every semester unless waived by department chair and/or passing proficiency examination.*

MAPP 001A	Beg. Guitar Class	2
MAPP 001B	Advanced Guitar Class	2
MAPP 001E	Voice Class for MTHR and MEDU Majors	1
MTHR 011	Music as Therapy: A Survey of Clinical Applications	3
MTHR 018	Basic Skills for Music Therapists and Applied Professionals	3
MTHR 020	Observation and Assessment in Music Therapy	2
MTHR 135	Music with Children in Inclusive Settings: Therapeutic and Educational Applications	3
MTHR 140	Psychology of Music	3
MTHR 141	Music Therapy in Mental Health and Social Services	3
MTHR 142	Music Therapy in Medicine and Health Care	3

*Note: 1) Students must obtain a grade of B- or better in all Music Therapy courses. 2) Students must receive a grade of B- in MTHR 011 or MTHR 018 before enrolling in upper-division courses.*

MTHR 150	Fieldwork in Music Therapy	4
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*Note: 1) Repeated for four semesters.*

MTHR 187	Internship in Music Therapy	2
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*Note: 1) Repeated for two semesters.*

MEDU 105	Percussion Instruments	1
MHIS 006	Music of the World's People	3

Behavioral Health / Natural Science courses

Minimum 20 units, including:

BIOL 011	Anatomy and Physiology	4
SPED 123	Exceptional Child	3
PSYC 111	Abnormal Psychology	4
Electives	9 units of Behavioral/Health/Natural Science courses	9

*Note: 1) See elective list for appropriate courses.*

Eight units from the following courses: 8

MPER 070	University Symphony Orchestra	
MPER 072	Symphonic Wind Ensemble	
MPER 073	Concert Band	
MPER 080	Opera Production	
MPER 082	The Oriana Choir (Women's Chorus)	
MPER 083	University Chorus	
MPER 084	Pacific Singers	
MAPP 010	Applied Music	8

*Note: 1) MAPP 010 is to be repeated to have a total of 8 units from this one course.*

MPER 050	Solo Class	0
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*Note: 1) MPER 050 is to be taken every semester.*

## Bachelor of Music Major in Music Composition

In order to earn the bachelor of music degree with a major in music composition, students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

### I. Major Requirements:

MCOM 009	Introduction to Music Technology	1
MCOM 010	Music Theory and Aural Perception I	4
MCOM 011	Music Theory and Aural Perception II	4
MCOM 012	Music Theory III: Chromaticism	2
MCOM 013	Aural Perception III	1
MCOM 014	Introduction to Orchestration	2
MCOM 015	Music Theory IV: Twentieth Century	2
MCOM 016	Aural Perception IV	1
MCOM 017	Form and Processes in Music	2
MHIS 011	Survey of Music History I	3
MHIS 012	Survey of Music History II	3
MHIS 013	Survey of Music History III	3
MPER 151	Principles of Conducting	2

Four units of one or a combination of the following courses: 4

MAPP 001D Applied Music: Piano

MAPP 005M Applied Music: Piano

*Note: 1) Not required for piano students.*

MPER 080 - 084 2 semesters of Major Choral Ensemble 2

*Note: Not required for voice students*

MCOM 019	Music and Computer Technology	3
MCOM 024	Composition: Lower Division	8
MCOM 026	New Resources in Pitch	1
MCOM 027	New Resources in Rhythm	1
MCOM 124	Composition: Upper Division	8
MCOM 108	Counterpoint	3
MCOM 109	Advanced Orchestration	3
MCOM 111	Advanced Computer Music	3
MCOM 113	Advanced Analysis	3
MCOM 126	New Performance Techniques	1
MCOM 127	Music, Sound, and Film	1
MCOM 128	New Approaches to Form	1
MCOM 129	Non-Western Composing Techniques	1

Eight units from the following courses: 8

MPER 070 University Symphony Orchestra

MPER 072 Symphonic Wind Ensemble

MPER 073 Concert Band

MPER 080 Opera Production

MPER 082 The Oriana Choir (Women's Chorus)

MPER 083 University Chorus

MPER 084 Pacific Singers

One of the following courses: 4

ARTH 114 20<sup>th</sup> Century Art and Film

ARTH 116 Contemporary World Art

ARTH 118 Art in the United States: 1865-1945

PHYS 039 Physics of Music 4

MAPP 010 Applied Music 8

*Note: 1) MAPP 010 is to be repeated to have a total of 8 units from this one course.*

MPER 050 Solo Class 0

*Note: 1) MPER 050 is to be taken every semester.*

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.

## Bachelor of Music Major in Music History

In order to earn the bachelor of music degree with a major in music history, students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

### I. Major Requirements:

MCOM 009	Introduction to Music Technology	1
MCOM 010	Music Theory and Aural Perception I	4
MCOM 011	Music Theory and Aural Perception II	4
MCOM 012	Music Theory III: Chromaticism	2
MCOM 013	Aural Perception III	1
MCOM 014	Introduction to Orchestration	2
MCOM 015	Music Theory IV: Twentieth Century	2
MCOM 016	Aural Perception IV	1
MCOM 017	Form and Processes in Music	2
MHIS 011	Survey of Music History I	3
MHIS 012	Survey of Music History II	3
MHIS 013	Survey of Music History III	3
MPER 151	Principles of Conducting	2

Four of one or a combination of the following courses: 4

MAPP 001D Applied Music: Piano

MAPP 005M Applied Music: Piano

Eight units from the following courses: 8

MPER 070 University Symphony Orchestra

MPER 072 Symphonic Wind Ensemble

MPER 073 Concert Band

MPER 080 Opera Production

MPER 082 The Oriana Choir (Women's Chorus)

MPER 083 University Chorus

MPER 084 Pacific Singers

MHIS 6 additional courses determined in consultation with an advisor (100 level) 18

*Note: 1) See program worksheet for appropriate courses.*

MCOM 108 Counterpoint 3

MCOM 113 Advanced Analysis 3

One of the following courses: 2

MPER 152 Choral Conducting

MPER 153 Instrumental Conducting

GERM 4 semesters required 16

FREN 2 semesters required 8

MAPP 010 Applied Music 8

*Note: 1) MAPP 010 is to be repeated to have a total of 8 units from this one course.*

MPER 050 Solo Class 0

*Note: 1) MPER 050 is to be taken every semester.*

A Senior paper/project is required.

## Bachelor of Music Major in Music Management

In order to earn the bachelor of music degree with a major in music management, students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

### I. Major Requirements:

MCOM 009	Introduction to Music Technology	1
MCOM 010	Music Theory and Aural Perception I	4
MCOM 011	Music Theory and Aural Perception II	4
MCOM 012	Music Theory III: Chromaticism	2
MCOM 013	Aural Perception III	1
MCOM 014	Introduction to Orchestration	2
MCOM 015	Music Theory IV: Twentieth Century	2
MCOM 016	Aural Perception IV	1
MCOM 017	Form and Processes in Music	2
MHIS 011	Survey of Music History I	3
MHIS 012	Survey of Music History II	3
MHIS 013	Survey of Music History III	3
MPER 151	Principles of Conducting	2
One of the following courses:		4
MAPP 001D Applied Music: Piano		
MAPP 005M Applied Music: Piano		
MMGT 010	Freshman Seminar – Music Management	1
MMGT 011	Music and Entertainment in Society	4
MMGT 096	Sound Recording Fundamentals	3
MMGT 111	Music Industry Analysis	4
MMGT 153	Entertainment Law	4
MMGT 187	Internship	2-4
<i>Note: 1) Student must qualify for an internship in order to enroll. 2) A Business elective may be taken in place of this internship.</i>		
MMGT 196	Senior Seminar	2
MMGT 199	Exit Examination	0
ECON 053	Introductory Microeconomics	4
BUSI 031	Principles of Financial Accounting	4
BUSI 053	Legal and Ethical Environment of Business	4
BUSI 107	Marketing Management	4
BUSI 109	Management and Organizational Behavior	4
MATH 035	Elementary Statistical Inference	4
Eight units from the following courses:		8
MPER 070 University Symphony Orchestra		
MPER 072 Symphonic Wind Ensemble		
MPER 073 Concert Band		
MPER 080 Opera Production		
MPER 082 The Oriana Choir (Women's Chorus)		
MPER 083 University Chorus		
MPER 084 Pacific Singers		
MAPP 010	Applied Music	8
<i>Note: 1) MAPP 010 is to be repeated to have a total of 8 units from this one course.</i>		
MPER 050	Solo Class	0

*Note: 1) MAPP 010 is to be repeated to have a total of 8 units from this one course. 2) Students are strongly encouraged to pursue an internship in the music business. Those who do not are required to take business or music management elective totaling 4 units.*

## Bachelor of Arts

All candidates for the Bachelor of Arts degree with a major in music must complete a minimum of 46 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 adviser in the Conservatory of Music must approve all course lists for registration. The core music courses in the Bachelor of Arts degree are as follows:

### Bachelor of Arts Major 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.

In order to earn the bachelor of arts degree with a major in music, students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

### I. Major Requirements:

MCOM 009	Introduction to Music Technology	1
MCOM 010	Music Theory and Aural Perception I	4
MCOM 011	Music Theory and Aural Perception II	4
MCOM 012	Music Theory III: Chromaticism	2
MCOM 013	Aural Perception III	1
MCOM 014	Introduction to Orchestration	2
MCOM 015	Music Theory IV: Twentieth Century	2
MCOM 016	Aural Perception IV	1
MCOM 017	Form and Processes in Music	2
MHIS 011	Survey of Music History I	3
MHIS 012	Survey of Music History II	3
MHIS 013	Survey of Music History III	3
Elective	1 add'l MCOM or MHIS course (100 level)	3
Eight units from the following courses:		8
MPER 070 University Symphony Orchestra		
MPER 072 Symphonic Wind Ensemble		
MPER 073 Concert Band		
MPER 080 Opera Production		
MPER 082 The Oriana Choir (Women's Chorus)		
MPER 083 University Chorus		
MPER 084 Pacific Singers		

*Note: 1) A Major Ensemble is required every semester for a total of 8 units.*

### II. Breadth Courses:

Complete 64 units outside the Conservatory of Music (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

MAPP 010	Applied Music	8
<i>Note: 1) MAPP 010 is to be repeated to have a total of 8 units from this one course.</i>		
MPER 050	Solo Class	0

*Note: 1) MAPP 010 is to be repeated to have a total of 8 units from this one course. 2) MPER 050 is to be taken every semester.*

## Bachelor of Arts Major in Jazz Studies

The Bachelor of Arts with a major in Jazz Studies provides students a foundation in both traditional and innovative approaches to development as a jazz artist or composer. Courses in jazz history, theory, improvisation, and composition are combined with solo performance, small ensemble and large ensemble experiences. The curriculum culminates in a four-semester sequence of research based seminars investigating the performance techniques and historical development of jazz. In consultation with the program director, students will select additional coursework from a broad range of disciplines in the arts and sciences.

In order to earn the bachelor of arts degree with a major in jazz studies, students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

### I. Major Requirements:

MCOM 009	Introduction to Music Technology	1
MCOM 010	Music Theory and Aural Perception I	4
MCOM 011	Music Theory and Aural Perception II	4
MCOM 030	Jazz Theory and Aural Training	3
MCOM 040	Jazz Improvisation I	2
MCOM 041	Jazz Improvisation II	2
MCOM 050	Jazz Style and Analysis	3
MCOM 120	Advanced Improvisation	2
MCOM 121	Jazz Arranging and Composition	3
MEDU 130	Jazz Pedagogy	2
MHIS 008	History of Jazz	3
MHIS 011	Survey of Music History I	3
MHIS 012	Survey of Music History II	3
MHIS 013	Survey of Music History III	3
MHIS 120	Jazz Seminar and Perspectives I	3
MHIS 121	Jazz Seminar and Perspectives II	3
MHIS 122	Jazz Seminar and Perspectives III	3
MHIS 123	Jazz Seminar and Perspectives IV	3
MPER 030	Jazz Piano I	1
MPER 031	Jazz Piano II	1
One of the following courses:		8
MPER 066	Jazz Ensemble	
MPER 067	Jazz Combo	

*Note: 1) Whichever course is chosen is to be taken every semester.*

MPER 080-084	2 semesters of Major Choral Ensemble	2
MAPP 010	Applied Music	8

*Note: 1) MAPP 010 is to be repeated to have a total of 8 units from this one course.*

MPER 050	Solo Class	0
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*Note: 1) MPER 050 is to be taken every semester.*

## Bachelor of Arts Major in Music, Concentration in Music Management

The Bachelor of Arts with a major in Music - Concentration in Music Management offers students the option of pursuing a degree that will prepare them for a range of contemporary music careers in the areas of record company operations, music products management, arts administration, and recording technology. Students pursuing the B.A. in Music with a concentration in Music Management also gain additional

knowledge by choosing a number of elective courses to complement their music studies.

In order to earn the bachelor of arts degree with a major in music and a concentration in music management, students must complete a minimum of 124 units with a Pacific cumulative and program grade point average of 2.0.

### I. Major Requirements:

MCOM 009	Introduction to Music Technology	1
MCOM 010	Music Theory and Aural Perception I	4
MCOM 011	Music Theory and Aural Perception II	4
Seven units from the following courses:		7
MCOM 014	Introduction to Orchestration	
MCOM 019	Music and Computer Technology	
MCOM 012, 013, 014, 019, 040, 041, 050		
MCOM 030	Jazz Theory and Aural Training	
Nine units from the following music history, or repertoire courses:		9
MHIS 006	Music of the World's Peoples	
MHIS 008	History of Jazz	
MHIS 011	Survey of Music History I	
MHIS 012	Survey of Music History II	
MHIS 013	Survey of Music History III	
<i>Note: 1) MHIS 005 does not count toward this requirement.</i>		
MMGT 010	Freshman Seminar – Music Management	1
MMGT 011	Music, Entertainment in U.S. Society	4
MMGT 096	Sound Recording Fundamentals	3
MMGT 111	Music Industry Analysis	4
MMGT 153	Entertainment Law	4
MMGT 187	Music Industry Internship	4
MMGT 196	Senior Seminar	2
MMGT 199	Exit Examination	0
Six elective units from the following courses:		6
MMGT 081	Running an Independent Label	
MMGT 097	Performing Arts Administration	
MMGT 140	Music Products Management	
MMGT 141	Music Products	
MMGT 160	Recording Studio Production	
MMGT 191	Independent Study	
MMGT 193	Special Topics	
MMGT 197	Undergraduate Research	

*Note: 1) Other MMGT courses in the student's interest can be substituted with approval.*

Eight units from the following courses:		8
MPER 070	University Symphony Orchestra	
MPER 072	Symphonic Wind Ensemble	
MPER 073	Concert Band	
MPER 080	Opera Production	
MPER 082	The Oriana Choir (Women's Chorus)	
MPER 083	University Chorus	
MPER 084	Pacific Singers	

MAPP 010	Applied Music	6
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*Note: 1) MAPP 010 is to be repeated to have a total of 6 units from this one course.*

MPER 050	Solo Class	0
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*Note: 1) MPER 050 is to be taken four times.*

BUSI 031	Principles of Financial Accounting	4
BUSI 053	The Legal and Ethical Environment of Business	4
BUSI 107	Marketing Management	4
BUSI 109	Management and Organizational Behavior	4
ENGL 109	Writing in the Workplace	4
ECON 053	Introductory Microeconomics	4
MATH 035	Elementary Statistical Inference	4
	Elective units in Art or Culture Studies	4
<i>Note: Studies in the areas of Art History, Studio Art, Theater Arts, Film Studies, and cultural studies in Sociology as approved by adviser.</i>		
	Elective units in non-Western Culture	3
<i>Note: Studies of non-western cultures in Religious Studies, Philosophy, World Music, or Art History as approved by adviser.</i>		
	Elective Music Studies	4
	Free Electives	5
<i>Note: Electives in Music Studies and and free electives can be determined in consultation with the Music Management Program Director</i>		

### 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 perform 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 300, Conservatory Building.

### Minor in Music

In order to earn a minor in music, students must complete a minimum of 21 units and 10 courses with a Pacific minor grade point average of 2.0.

#### Minor Requirements:

MCOM 010	Music Theory and Aural Perception I	4
MHIS 005	Music Appreciation	4
	One of the following courses:	3-4
MCOM 011	Music Theory and Aural Perception II	
MHIS 011	Survey of Music History I	
MHIS 012	Survey of Music History II	
MHIS 013	Survey of Music History III	
MAPP 010	Applied Music	2
<i>Note: 1) Minimum two semesters of private instruction.</i>		
MPER 050	Solo Class	0
<i>Note: 1) Minimum of two semesters of enrollment in MPER 050.</i>		
Ensemble	2 semesters of participation in any ensemble	2
Electives	5-7 units of additional courses excluding MCOM 002	5-7

*Note: 1) A qualified student may pass out of MCOM 010/011, then elect to take MCOM 012/013 or one semester of MHIS 011, 012, or 013.*

### Music History Minor for Music Majors

The Music History minor for music majors is designed for students who wish to pursue additional coursework in the field of music history. It is open to students pursuing any music major. Composition, Performance, and Music Education majors can explore more research-oriented courses through the music history minor. The requirements include four upper-division music history courses, two semesters of a foreign language, and a semester of individualized research.

### Minor in Music History

In order to earn a minor in music history, students must complete a minimum of 22 units and 7 courses with a Pacific minor grade point average of 2.0.

#### Minor Requirements:

Twelve units from the following courses:		12
MHIS 150	Medieval Music	
MHIS 151	Music in the Renaissance	
MHIS 152	Music in the Baroque	
MHIS 153	Classical Studies	
MHIS 154	Romantic Studies	
<i>Note: 1) Special Topics courses with the consent of the adviser may be substituted.</i>		
LANG	2 semesters of any foreign language	8
<i>Note: 1) Language courses are to be chosen in consultation with the music history adviser. 2) Both semesters must be in the same language.</i>		
MHIS 197	Research in Music History	2

### Music Theory Minor for Music Majors

The minor in music theory is available only to music majors. The intent is to offer 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.

### Minor in Music Theory

In order to earn a minor in music theory, students must complete a minimum of 22 units and 7 courses with a Pacific minor grade point average of 2.0.

#### Minor Requirements:

<i>Note: 1) Only music majors are eligible for the minor in music theory.</i>		
MCOM 019	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
PHYS 039	Physics of Music	4
One of the following upper division music history courses:		3
MHIS 150	Medieval Music	
MHIS 151	Music in the Renaissance	
MHIS 152	Music in the Baroque	
MHIS 153	Classical Studies	
MHIS 154	Romantic Studies	

*Note: 1) All the courses above must be taken at Pacific.*



## Course Offerings

### Music Composition Department

#### **MCOM 002. Fundamental Structures (3)**

Music fundamentals, music reading and harmonization of simple melodies. All theoretical skills will be applied at the piano keyboard.

#### **MCOM 009. Introduction to Music Technology (1)**

A basic introduction to the use of computer technology for musicians. The course is divided into modules covering music notation; MIDI, digital audio workstation, and synthesizer/sampler plugins; multi-track recording and editing; and web design and construction. Discussions will cover aspects of copyright, content ownership, and online resources for publishing and music distribution.

#### **MCOM 010. 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 011. 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 010.*

#### **MCOM 012. 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. *Taken previously or concurrently: MCOM 013 and 014. Prerequisite: MCOM 011.*

#### **MCOM 013. Aural Perception III (1)**

The training of musicianship skills related to the chromatic harmony studied in MCOM 012. Includes the development of expertise through the dictation of 3 part exercises, harmonic progressions, and extended rhythmic lines. *Taken previously or concurrently: MCOM 012 and 014. Prerequisite: MCOM 011.*

#### **MCOM 014. 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. *Taken previously or concurrently: MCOM 012 and 013. Prerequisite: MCOM 011.*

#### **MCOM 015. 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 indeterminacy of John Cage, modality and spectral music, minimalism, and computer music. *Taken previously or concurrently: MCOM 016 and 017. Prerequisites: MCOM 012, 013 and 014.*

#### **MCOM 016. 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. *Taken previously or concurrently: MCOM 015 and 017. Prerequisite: MCOM 012 013 and 014.*

#### **MCOM 017. 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. *Taken previously or concurrently: MCOM 015 and 016. Prerequisites: MCOM 012, 013 and 014.*

#### **MCOM 019. Music and Computer Technology (3)**

This course provides a basic introduction to the use of computers for the creation and production of music. During this study students will develop a working knowledge of the MIDI studio as well as fundamental information on analog synthesis and music hardware and software. Software used in this course includes: Logic Audio Gold with EXS24 and Peak. As a project oriented study students will be required to schedule individual time each week to work in the studio. The course is taught in Studio 12 in the Conservatory of Music. *Prerequisite: MCOM 002.*

#### **MCOM 024. Composition (2)**

Composition involves the writing of original works under the guidance of faculty composers. *Prerequisite: non-music majors require permission of the instructor.*

#### **MCOM 025. 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, Sound and Film, New Formal Structures, Non-Western Compositional Resources, and Experimental Music and Improvisation. *Corequisite: MCOM 024.*

#### **MCOM 026. New Resources in Pitch (1)**

The study of late 20th/early 21st Century pitch organization techniques: Polymodality, Synthetic scales, Clusters, Mathematical manipulations, Spectral techniques. *Prerequisite: MCOM 012.*

#### **MCOM 027. New Resources in Rhythm (1)**

The study of late 20th/early 21st Century rhythmic techniques: Rhythmic characters, Time Signature, Multi-layers, Polyrythm, Metric Modulation, Complex ratio. *Prerequisite MCOM 011.*

#### **MCOM 030. Jazz Theory and Aural Training (3)**

Technical aspects of jazz improvisation including harmonic substitutions, chord/scale relationships, analysis of harmonic progressions and solos, forms, and ear training. Class examples and exercises will be written for piano. Emphasis will be placed on students studying the materials at the piano and their individual instruments. *Prerequisite: MCOM 010 and 011 or permission of the instructor.*

#### **MCOM 040. Jazz Improvisation I (2)**

Study of the essential elements utilized in jazz performance. Students participate on their individual instruments in the playing of patterns, scales, and compositions that aid in the development of improvisational skills. Course includes both written and performance exams. *Prerequisites: MCOM 010 and 011, or equivalent or permission of the instructor.*

#### **MCOM 041. Jazz Improvisation II (2)**

Study of the essential elements utilized in jazz performance. Students participate on their individual instruments in the application of advanced patterns and scales. Additional components involve jazz improvisation instruction for contemporary compositions, ballad performance, and free form vehicles. Course includes both written and performance exams. *Prerequisites: MCOM 010, 011, and 040, or equivalent or permission of the instructor.*

#### **MCOM 050. Jazz Style and Analysis (3)**

This course will explore jazz style through the analysis of historically significant transcribed solos of jazz masters. The course will focus on the development of harmonic and melodic vocabulary, and will involve student transcriptions. *Prerequisites: MCOM 010, 011, and 040, or equivalent, or permission of the instructor.*

- MCOM 108. Counterpoint (3)**  
Study of Palestrina's and Lassus' contrapuntal techniques accomplished through written exercises and analysis. *Prerequisites: MCOM 010-017.*
- 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 010-017.*
- 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 010-019.*
- MCOM 112. Composition - Computer Music (2)**  
Private composition study in computer music within the Conservatory Computer Studio for Music Composition.
- MCOM 113. Advanced Analysis (3)**  
Advanced topics in music analysis including extensive study of Schenkerian analysis. *Prerequisites: MCOM 010-017.*
- MCOM 120. Advanced Improvisation (2)**  
Advanced techniques and practices of jazz improvisation. Includes tune analysis and develops a more definitive concept of chord/scale relationships. Examination of contemporary performance practices including the use of synthetic scales and free improvisation. *Prerequisites: MCOM 010, 011, 040, 041, or equivalent or permission of the instructor.*
- MCOM 121. Jazz Arranging and Composition (3)**  
This course will focus on familiarizing students with jazz composition and arranging techniques for the small jazz ensemble. Two and three part writing techniques associated with the jazz tradition will be the focus. *Prerequisites: MCOM 041, MPER 031, or equivalent or permission of the instructor.*
- 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. *Taken previously or concurrently: 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, Sound and Film, New Formal Structures, Non-Western Compositional Resources, and Experimental Music and Improvisation. *Taken previously or concurrently: MCOM 124.*
- MCOM 126. New Performance Techniques (1)**  
This class will focus on the study of extended acoustical techniques for voice, keyboard, string, woodwinds, brass, and percussion instruments. Specific techniques and appropriate notation will be discussed and compositions utilizing these techniques will be studied. *Prerequisite: MCOM 015.*
- MCOM 127. Music, Sound, and Film (1)**  
In any visual experience from real-life to commercial cinema to sound/image installation, sound plays a significant role in defining the expressive and relational content of the experience. This course explores the use of sound/music in film and experimental art with an emphasis on understanding the complex role sound plays in our experience. Through readings, film viewing, discussion, and analysis, we delve into the thinking of current sound designers, sound artists, and composers. *Prerequisite: MCOM 019.*
- MCOM 128. New Approaches to Form (1)**  
In the 20th Century, composers have found it necessary to explore new formal structures that allow them to unify their compositions at all levels. These approaches vary greatly from technical to conceptual. This course will pursue the study of formal approaches to compositional organization with an emphasis on the unique problems each one confronts musically. *Prerequisite: MCOM 017.*
- MCOM 129. Non-Western Composing Techniques (1)**  
Expansion of melodic, rhythmic, harmonic, and timbral composition techniques through the study of music from The Republic of Central Africa, Japan, India and Bali. *Prerequisite: MCOM 015.*
- MCOM 191. Independent Study (1-2)**
- MCOM 193. Special Topics (1-3)**
- Music Education Department*
- MEDU 100. Music for Children (3)**  
Music fundamentals resources, concepts and activities for the pre-adolescent child. Open to non-music majors only. Required for multiple subjects credential candidates.
- MEDU 101. Woodwind Instruments I (1)**  
Study of flute and clarinet.
- MEDU 102. Woodwind Instruments II (1)**  
Study of oboe, bassoon and saxophone.
- MEDU 103. Brass Instruments I (1)**  
Principles for teaching and playing brass instruments.
- MEDU 104. Brass Instruments II (1)**  
Advanced principles of brass instrument teaching.
- MEDU 105. Percussion Instruments (1)**  
Pedagogical principles related to playing percussion instruments.
- MEDU 107. String Instruments I (1)**  
Introductory study of string playing and teaching techniques.
- MEDU 108. String Instruments II (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. *Graded Pass/No Credit.*
- 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. *Corequisite: MEDU 115.*
- MEDU 115. Music Experiences, K-6 (2)**  
Music specialist approach to materials and techniques for developing music experiences for elementary school children. *Corequisite: 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. *Corequisite: MEDU 117. 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. *Corequisite: 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.*

**MEDU 130. Jazz Pedagogy (2)**  
 The study of jazz education materials and performance techniques designed for the student who may teach jazz ensembles or design curriculum. *Prerequisites: MCOM 010, 011, 040, 041.*

**MEDU 191. Independent Study (1-2)**

**MEDU 193. Special Topics (1-2)**

### *Music History Department*

**MHIS 005. 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.

**MHIS 006. 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.

**MHIS 008. History of Jazz (3)**  
 Comprehensive study of jazz styles and performers through intelligent listening and historical research. Realizing jazz as an art form created by African-Americans, this course investigates issues concerning race, ethnicity, and social justice. Course content involves connections to slavery, Civil and World Wars, segregation, and the musical response of African-Americans. Course will include writing a live performance critique, album reviews, artist papers, and a research paper. No previous study of music is required.

**MHIS 011. Survey of Music History I (3)**  
 Survey of Western music history: composers, styles, genres, and institutions from antiquity to 1600.

**MHIS 012. Survey of Music History II (3)**  
 Survey of Western music history: composers, styles, genres, and institutions from 1600 to 1800.

**MHIS 013. Survey of Music History III (3)**  
 Survey of Western music history: composers, styles, genres, and institutions from 1800 to the present.

**MHIS 120. Jazz Seminar and Perspectives I (4)**  
 Jazz Seminar & Perspectives I comprises two major components involving Undergraduate Research and Performance Perspectives.

- Research Component: Jazz and the Harlem Renaissance
- Performance Perspectives Component: Form and Variations of the Blues

Subject matter involves jazz performance issues, stylistic comparisons of artists, works of major composers, and jazz historical perspectives. Students will be involved with in-class performances, research papers, and music transcriptions. Research topic involves the various cultural, economic, historical, and social aspects of jazz and its relevance to the Harlem Renaissance. Assembly of a portfolio serves as a key component of this course. *Prerequisites: MCOM 030, 040, 041, 050, MHIS 008, MPER 030, 031.*

**MHIS 121. Jazz Seminar and Perspectives II (4)**  
 Jazz Seminar & Perspectives II comprises two major components involving Undergraduate Research and Performance Perspectives.

- Research Component: Jazz and the world stage – Although born in America, is jazz more respected abroad?
- Performance Perspectives Component: Form and Variations on the Rhythm Changes Vehicle

Subject matter involves jazz performance issues, stylistic comparisons of artists, works of major composers, and jazz historical perspectives. Students will be involved with in-class performances, research papers, and music transcriptions. Research topic involves the various cultural, economic, historical, and social aspects of jazz and its relevance to the exodus of jazz musicians into European countries. Assembly of a portfolio serves as a key component of this course. *Prerequisites: MHIS 008, 120, MCOM 030, 040, 041, MPER 030, 031.*

**MHIS 122. Jazz Seminar and Perspectives III (4)**

Jazz Seminar & Perspectives III comprises two major components involving Undergraduate Research and Performance Perspectives.

- Research Component: Afro-Cuban Jazz Tradition
- Performance Perspectives Component: Jazz Interpretations of Broadway Show Tunes

Subject matter involves jazz performance issues, stylistic comparisons of artists, works of major composers, and jazz historical perspectives. Students will be involved with in-class performances, research papers, and music transcriptions. Research topic involves the various cultural, economic, historical, and social aspects of jazz and its relevance to Afro-Cuban music and its blending with jazz styles. Assembly of a portfolio serves as a key component of this course. *Prerequisites: MHIS 008, 120, 121, MCOM 030, 040, 041, MPER 030, 031.*

**MHIS 123. Jazz Seminar and Perspectives IV (4)**

Jazz Seminar & Perspectives IV comprises two major components involving Undergraduate Research and Performance Perspectives.

- Research Component: Women in Jazz
- Performance Perspectives Component: Expression of the Ballad Style

Subject matter involves jazz performance issues, stylistic comparisons of artists, works of major composers, and jazz historical perspectives. Students will be involved with in-class performances, research papers, and music transcriptions. Research topic involves the various cultural, economic, historical, and social aspects of jazz and its relevance to female artists and their contributions within a male dominated field. Assembly of a portfolio serves as a key component of this course. *Prerequisites: MHIS 008, 120, 121, 122, MCOM 030, 040, 041, MPER 030, 031.*

**MHIS 140. Symphonic Literature (3)**  
 History of the symphony from Baroque antecedents to contemporary examples. *Prerequisites: MCOM 010-017, MHIS 011, 012, 013 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.. Relationship of opera to world history. *Prerequisites: MCOM 010-017, MHIS 011, 012, 013 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 010-07, MHIS 011, 012, 013 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 010-017, MHIS 011, 012, 013 or permission of the instructor.*

**MHIS 143b. Keyboard Literature II (3)**  
Keyboard music from 1825 to present. *Prerequisites: MCOM 010-017, MHIS 011, 012, 013 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 in addition to recital programming. *Prerequisites: MCOM 010-017, MHIS 011, 012, 013, or permission of the instructor.*

**MHIS 150. Medieval Music (3)**  
Topics in music history to c. 1450. *Prerequisites: MCOM 015-017, MHIS 011, 012, 013, 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 010-017, MHIS 011, 012, 013, or permission of the instructor.*

**MHIS 152. Music in the Baroque (3)**  
Topics in music history from c. 1580 to c. 1750. *Prerequisites: MCOM 010-017, MHIS 011, 012, 013, or permission of the instructor.*

**MHIS 153. Studies of Classical Period (3)**  
Study of music from c. 1750-1810 with stress on evolution of style and historical factors which relate to this evolution. *Prerequisites: MCOM 010-017, MHIS 011, 012, 013, or permission of the instructor.*

**MHIS 154. Studies of Romantic Period (3)**  
Study of music of the 19th century and its relationship to other art forms and historical developments. *Prerequisites: MCOM 010-017, MHIS 011, 012, 013, or permission of the instructor.*

**MHIS 191. Independent Study (3)**

**MHIS 193. Special Topics (3)**

**MHIS 197. Research in Music History (1-4)**  
*Prerequisite: Permission of the instructor. Senior Standing.*

### Music Management Department

**MMGT 010. Freshman Seminar – Music Management (1)**  
A general introduction to making a successful transition to college. Areas covered include understanding department and University procedures and regulations, developing a four-year academic plan, professional orientation and career planning, writing and research, styles of learning, computer skills assessment, and beginning a student portfolio. Required of all freshman in Music Management.

**MMGT 011. Music, Entertainment in U.S. Society (4)**  
Introductory course covering the business, financial, and legal parameters of the music industry. Special emphasis is given to understanding recording contracts, artist management, royalty earnings, copyright issues and motion picture music.

**MMGT 081. Running an Independent Record Label (3)**  
A hands-on course providing students with the opportunity to operate a start-up record label through one album cycle. Students are responsible for all aspects of company operations, fund raising, marketing, management, budget control and artist relations. A commercial record is created and marketed in the immediate campus region by the students.

**MMGT 096. Sound Recording Fundamentals (3)**  
An introduction to basic audio techniques applicable to recording sound. A combination of lecture, lab sessions and independent studio projects will provide a basic understanding of how audio is captured, stored and manipulated in the recording industry.

**MMGT 097. Performing Arts Administration (3)**  
A practical approach to management and business issues affecting arts organizations, including program planning, budget development, fund-raising, community relationships and concert promotion and production.

**MMGT 111. Music Industry Analysis (4)**  
Using reading, research, and discussion, students investigate the evolution of the American popular music industry during the last century. Social, cultural, business and technological changes are considered. Emphasis is placed on critical thinking, forming and defending opinions, and clearly presenting written and oral arguments supporting student-developed theses relating to a variety of eras and themes. Coursework includes a substantial research project on a topic of the student's own choosing. *Prerequisite: MMGT 011.*

**MMGT 140. Music Products Management (3)**  
This course introduces students to the inner workings of the operations, sales and financial aspects of the music products industry. Course work includes case studies, lab sessions at a music retailer, development of a retail store start-up plan and site visits to leading regional music products firms.

**MMGT 141. Music Products Practicum (1-4)**  
This course provides students with a laboratory learning experience in the music products industry. Typically, students will perform their practicum in this area during their sophomore or junior year. Coursework includes time on site at employer as well as required meetings with faculty adviser and preparing journals and other written assignments. *Prerequisite: MMGT 140 or permission of instructor.*

**MMGT 153. Entertainment Law (4)**  
All aspects of legal relationships and rights problems in films, television, music and records. Normally taken during the student's final semester on campus. *Prerequisites: MMGT 011 and BUSI 053.*

**MMGT 160. Recording Studio Production (2)**  
This course provides students with an opportunity to work independently and as part of a group to learn about acoustical sound recording and digital audio production techniques. Classes will develop sound recording and aural acuity relevant to the production of high quality music productions. *Prerequisites: MMGT 096 (or equivalent).*

**MMGT 187. Music Industry Internship (2-4)**  
An opportunity for qualifying students to work in an area of the music industry that interests them. Coordinated with the Pacific Career Resource Center. *Prerequisite: Successful completion of two courses in Music Management, approval of faculty adviser. Graded Pass/No Credit.*

**MMGT 191. Independent Study (1-2)**

**MMGT 193. Special Topics (1-4)**

**MMGT 196. Senior Seminar in Music Management (2)**  
MMGT 196 is a launch pad for seniors about to enter the music industry. Students will assess current career trends, meet with leading practitioners, perform research in their specific field of interest and fine-tune their professional portfolio. Professional skill development in interviewing and organizational behavior is included along with field trips to visit regional music industry firms. *Prerequisite: Senior standing in MMGT of School of Business Arts & Entertainment emphasis.*

**MMGT 197. Undergraduate Research (1-4)**

**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.

**MMGT 199. Exit Examination (0)**

This course is an exit examination that provides assessment at the completion of all relevant coursework in Music Management. Students demonstrate mastery of skills required of professional music business practitioners. Test measures performance in the areas of critical thinking, music industry analysis, current affairs in the industry and oral expression. A passing grade is required for all graduates in Music Management.

**Music Performance Department: Applied****MAPP 001. Applied Music, Class Lessons (1)**

Enrollment in applied music classes requires an applied music fee per unit.

**MAPP 005. 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 010. 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 011. Applied Music for Music Education Majors (1-2)**

For music education majors in their principal applied media. Enrollment in applied music requires an applied music fee per unit.

**MAPP 012. Applied Music for Performance Majors (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 193. Special Topics (1-4)****Music Performance Department: Ensembles**

Ensembles are open to all students by audition and/or permission of the instructor.

**MPER 060. Chamber Ensemble (1-2)**

Enrollment by permission of the instructor.

**MPER 066. Jazz Ensemble (1)**

Study and performance of music designed for the large jazz ensemble. Open to all students by audition.

**MPER 067. 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. Open to all students by audition.

**MPER 069. Opera Theatre 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 070. University Symphony Orchestra (1)**

Open to all students by audition. Major ensemble.

**MPER 072. Symphonic Wind Ensemble (1)**

Open to all students by audition. Major ensemble.

**MPER 073. Concert Band (1)**

Open to all students. Major ensemble.

**MPER 080. Opera Production (1)**

Major ensemble. By audition only.

**MPER 082. The Oriana Choir (Women's Chorus) (1)**

Open to all students by audition. Major ensemble. Average of two concerts per semester.

**MPER 083. University Chorus (1)**

Open to all students by audition. Major ensemble. Average of two concerts per semester.

**MPER 084. Pacific Singers (1)**

Audition required for enrollment. Average of three concerts per semester. Major ensemble.

**Music Performance Department: Supportive Courses****MPER 020, 021. 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. *MPER 020 is prerequisite to 021.*

**MPER 030. Jazz Piano I (1)**

Jazz piano instruction geared toward the non-pianist. This course will provide a foundation of skills that will be built upon in the second semester. Students will acquire the ability to perform standard jazz compositions with minimal right-hand improvisation and sight-read chord changes.

**MPER 031. Jazz Piano II (2)**

Jazz piano instruction geared toward the non-pianist. This course provides more advanced study of jazz progressions and skills acquired from the first semester. Students will acquire the ability to perform standard jazz compositions utilizing rootless and quartal voicings, contemporary harmonies, and sight-read advanced chord changes. *Prerequisite: MPER 030.*

**MPER 050. Solo Class (0)**

Weekly performance recital for all music majors. *Graded Pass/Fail.*

**MPER 120, 121. Lyric Diction (2, 2)**

Theory and practice of singing Italian, German, English and French. Translation and declamation of texts. *Prerequisite for MPER 120: MPER 021. Prerequisite for MPER 121: MPER 120.*

**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, resonance 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)**  
Basic techniques of the baton, score reading and interpretation. *Prerequisite: MCOM 011-014.*

**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 through practical rehearsal application. The first term is dedicated to repertoire and audition technique (Craig), while the second term focuses on scene study (Meisner, Felsenstein).

**MPER 191. Independent Study (1-2)**

**MPER 193. Special Topics (1-4)**

### *Music Therapy Department*

**MTHR 011. Music as Therapy: A Survey of Clinical Applications (3)**  
This course introduces the uses of music as a creative arts therapy, including an overview of the history, theory, and clinical practice of music therapy across a broad range of settings. Classroom experiences, readings, films, and field observations introduce the student to various uses of music in the treatment of children and adults; a foundation for the sequence of music therapy courses which together support development of required AMTA competencies for the professional music therapist. This course also offers an introduction to music therapy for interested persons in other health and pre-professional programs. OPEN TO NON-MAJORS.

**MTHR 018. Basic Skills for Music Therapists and Allied Professionals (3)**  
This course supports the development of applied/basic music skills necessary for implementing therapeutic music interventions with children and adults. Students will increase performance competencies in the areas of singing and accompanying, and will explore improvising/composing/arranging with instruments such as autoharp, omnichord, Orff and other rhythmic/ethnic instruments. Includes development of song repertoire commonly used across various therapeutic settings. OPEN TO NON-MAJORS. *Prerequisites: MCOM 002.*

**MTHR 020. Observation and Assessment in Music Therapy (2)**  
This course focuses on developing observation skills and assessment competencies. Students practice implementation of standardized and therapist-constructed assessments to appropriately measure and monitor progress and evaluate effectiveness of music therapy interventions for children and adults. Includes fieldwork assignments in observation, data collection, and assessment. *Prerequisites: MTHR 011 and 018.*

**MTHR 135. Music with Children in Inclusive Settings: Therapeutic and Educational Applications (3)**  
This course presents specific music therapy techniques and skills for the development of programs for children's successful integration within home/school/community environments. Students will identify and create therapeutic music strategies to effect changes in children's academic, social, motor, and leisure skills development. This course also acquaints students with relevant music therapy/education research and current legislation

regarding children within inclusive settings. OPEN TO NON-MAJORS. *Prerequisites: SPED 123 and either MTHR 018 or MCOM 002; or with instructor permission.*

**MTHR 140. Psychology of Music (3)**  
This course introduces psychological foundations of music, including the study of acoustics, perception of sound, and physical and psychosocial responses to music. Students survey current research in music/music therapy and develop skills in applied research methodology. *Prerequisite: MCOM 002 or permission of the instructor. OPEN TO NON-MAJORS.*

**MTHR 141. Music Therapy in Mental Health and Social Services (3)**  
This course contains theory, research, and clinical skills related to music therapy for adults, children, and adolescents in various mental health and social service treatment settings. It also includes an introduction to current DSM IV criteria for mental disorders commonly encountered by music therapists, and an overview of major theories of psychotherapy as they relate to music therapy. Introduction to music therapy techniques for group treatment, including music improvisation, songwriting, and basic relaxation methods are taught. For music therapy majors only. Must be taken concurrently with Fieldwork in Music Therapy. *Prerequisites: MTHR 011, 018, 135, & 140, PSYC 111 and completion of Voice, Guitar, and Piano competencies.*

**MTHR 142. Music Therapy in Medicine and Health Care (3)**  
This course provides an overview of music therapy with children, adults, and older adults in medical settings. Students survey theories, methods, and empirically supported treatments in settings such as acute care, physical rehabilitation, gerontology, palliative care, preventative medicine, and health maintenance. It also includes study of physical and psychosocial processes natural to aging and end of life, and assists students in developing skills in improvised music for relaxation and palliative care. For music therapy majors only. *Prerequisites: MTHR 141, BIOL 011 and completion of Voice, Guitar, and Piano competencies.*

**MTHR 143. Supervisory Techniques (1-2)**  
Techniques in the supervision of music therapy fieldwork. Course open to music therapy majors by permission of the instructor only. *Prerequisites: MTHR 020, 140 and 150.*

**MTHR 150. Fieldwork in Music Therapy (1-2)**  
Fieldwork provides students with structured clinical experiences in music therapy under the supervision of a music therapist in varying community settings. This course is repeated for credit and taken concurrently each semester students are enrolled in MTHR 135, 140, 141, and 142. *Prerequisites: MTHR 011, 018; open only to music therapy majors. A minimum of 4 units of Fieldwork (MTHR 150) is required for completion of the music therapy degree program.*

**MTHR 187. Internship in Music Therapy (1)**  
This course consists of clinical training experience at an internship site approved by the AMTA. Successful completion of required hours and competencies allows students to sit for the Music Therapy Board Certification Examination. *Prerequisites: Successful completion of all coursework and functional music skills.*

**MTHR 191. Independent Study (1-2)**

**MTHR 193. Special Topics (1-2)**

## Course Offerings

### Graduate

See Graduate Catalog for course descriptions

MCOM 208.	Counterpoint	(3)
MCOM 209.	Advanced Orchestration	(3)
MCOM 211.	Advanced Computer Music	(3)
MCOM 212.	Composition – Computer Music	(2)
MCOM 213.	Advanced Analysis	(3)
MCOM 291.	Independent Study	(1-4)
MCOM 293.	Special Topics	(1-2)
MCOM 299.	Thesis	(3)
MEDU 200.	Video Microrehearsal for Music Teaching Candidates	(3)
MEDU 201.	Video Microrehearsal for Experienced Music Teachers	(1-4)
MEDU 202.	Fieldwork in Music Education	(3)
MEDU 210.	Seminar in Music Education	(2)
MEDU 220.	Instrumental Organization, Conducting and Literature	(3)
MEDU 221.	Choral Organization, Conducting and Literature	(3)
MEDU 222.	Advanced Problems in Elementary Music Teaching	(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)
MEDU 310.	Seminar in Music Education	(2)
MEDU 311.	Philosophy of Music Education	(3)
MEDU 312.	Graduate Research in Music Education	(1-3)
MEDU 313.	Graduate Research in Music Education	(1-3)
MEDU 322.	Issues in Elementary Music Teaching	(3)
MEDU 391.	Independent Graduate Study	(1-3)
MEDU 393.	Special Topics	(1-2)
MUSC 202.	Introduction to Research in Music	(3)
MUSC 203.	Contemporary Issues in Music Education and Music Therapy	(3)
MHIS 250.	Medieval Music	(3)
MHIS 251.	Music in the Renaissance	(3)
MHIS 252.	Music in the Baroque	(3)
MHIS 253.	Studies of Classical Period	(3)
MHIS 254.	Studies of Romantic Period	(3)
MHIS 291.	Independent Study	(1-3)
MHIS 293.	Special Topics	(3)
MAPP 210.	Graduate Applied Music for Non-performance Majors	(1-2)
MAPP 291.	Graduate Independent Study	(1-4)
MPER 269.	Advanced Opera Theatre Workshop	(1)
MPER 280.	Advanced Opera Production Major ensemble.	(1)
MPER 291.	Graduate Independent Study	(1-4)
MTHR 230.	Bonny Method of Guided Imagery & Music Level I Training	(3)
MTHR 231.	Individual Music Therapy: Advanced Theory and Techniques	(3)
MTHR 232.	Group Music Therapy: Advanced Theory and Techniques	(3)
MTHR 240.	Psychology of Music	(3)
MTHR 245.	Clinical Clerkship in Music Therapy	(1-4)
MTHR 251.	Music Therapy Supervision I: Intro to Theory and Applications	(1)
MTHR 252.	Music Therapy Supervision II: Applied Experience	(1)

MTHR 260.	Advanced clinical Practice in Music Therapy	(1)
MTHR 265.	Supervised Experience in Music Therapy Human Research	(1)
MTHR 275.	Music Therapy college Teaching: Curriculum & Competencies	(3)
MTHR 291.	Independent Study	(1-4)
MTHR 293.	Special Topics	(1-4)
MTHR 299.	Thesis	(1-4)

## Conservatory of Music Faculty

**Giulio Maria Ongaro**, Dean, 2009, B.M., University of Iowa, 1978; M.A., University of North Carolina, 1981; Ph.D., University of North Carolina, 1986.

**Jennie Blomster**, Lecturer in Horn, B. M. University of Denver; M.A. CSU Fresno. Studied with Thomas Hiebert, Richard Seraphinoff, David Krehbiel, David Kappy, John Keene, and David Kaslow. Member of the Pacific Arts Woodwind Quintet, Winds of the San Joaquin, and Fresno Brass Quintet. Principal horn Gold Country Chamber Orchestra, Merced Symphony Orchestra, Moment Musical Chamber Ensemble. Frequently plays with Fresno Philharmonic Orchestra, Stockton Symphony Orchestra, Stockton Opera.

**Ruth V. Brittin**, 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. Editor, Update: Applications of Research in Music Education, 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.

**K. Allen Brown**,\* Visiting Lecturer 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, Kodaly Musical Training Institute (Hungary), 1980.

**David Chase**, Assistant Dean, Instructor in Music Management, 2001, B.M., Trumpet Performance, University of the Pacific, 1994, M.A. 2001.

**Robert Coburn**, Professor of Music Composition and Theory. Director, Conservatory Computer Studio for Music Composition; Artistic Director, SoundImageSound; Chair, Department of Music Studies; 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: San Francisco New Music Ensemble; Royal Conservatory of Music (Stockholm, Sweden); Victoria International Festival (Victoria, B.C., Canada); Electronic Music Plus Festival; Roulette Festival of New Music (N.Y.); International Saxophone Festival Palmela (Portugal). Permanent Sound Environment Installations: 39 Bells (Philadelphia), 1996; Bell Circles II (Oregon Convention Center, Oregon Public Art Program), 1991. Selected compositions: TranquilTurmoil

Dreaming (2003) for computer and video; In Stillness (2005) for violin, computer, and video; Fragile Horizon (2007) for viola, speaking voice, computer and video.

**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.

**John Cozza**, Visiting Lecturer, Applied Piano and Accompanying, 2004. B.M., M.M., University of Southern California, diploma in piano performance and in chamber music from the Hochschule fur Musik in Vienna, Austria, D.M. in solo performance, chamber music and accompanying from Northwestern University. Studied with Daniel Pollack in Los Angeles, David Kaiserman in Chicago, and Hans Graf and George Ebert in Vienna. Member of Pi Kappa Lambda, Phi Mu Alpha, American Liszt Society, and the Franz Schmidt Society in Austria.

**Jeffrey Crawford**, Lecturer in Music Theory and Technology, 2001. Audio production consultant who directs, records, masters, and produces custom music CDs; analyzes, enhances, and restores audio; composes and produces music for theater, film and video; creates multimedia projects; photographs and produces cover-art, layout inserts and labels for projects; and engineers and produces programs for radio broadcast. Former Engineer and Producer for Fingers Audio Productions and Engineer for Tonos Electraacoustic Music Studio.

**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.

**Daniel Ebbers**, Assistant Professor of Voice, 2004. B.M. University of Wisconsin-Stevens Point, M.M. University of Southern California, artist training at Universita per Stranieri, Italy, Utah Festival Opera Young Artist Program, Glimmerglass Opera Young American Artists Program, Britten-Pears School for Advanced Musical Studies, resident artist, Los Angeles Music Center Opera.

**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).

**James Haffner**, Associate Professor of Opera, 1999. B.A. degree in theatre from Baldwin-Wallace College, an Artists' Diploma in opera stage directing and a Master of Fine Arts in directing from the University of Cincinnati College-Conservatory of Music. Member of the Lincoln Center Theatre Directors' Lab National Opera Association, and Opera America. He has taught at the and Die Technische Universitat, Berlin; stateside, he has served on the faculties of the University of Kentucky, Miami University of Ohio, Webster University and Cal State Fullerton.

**Eric Hammer**, 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**, Associate Professor of Music Management; Program Director, Music Management Program. 2001. B.A. University of California Berkeley, 1973; Certificate in Marketing, University of California Berkeley, 1993. Principal and founder of Keith Hatschek & Associates, consultant to the recording technology and entertainment industries. Author, "How to Get a Job in the Music and Recording Industry" (2007) Berklee Press, "The Golden Moment: Recording Secrets of the Pros" (2005) Backbeat Books, regular contributor to various print and online music industry journals. Voting member National Academy of Recording Arts and Sciences, Associate Member-Audio Engineering Society, Faculty adviser-NAMM-Affiliated Music Business Institutions member, Music and Entertainment Industry Educators Association (MEIEA).

**David Henderson**, Lecturer in Saxophone, 2007. B.M. University of Michigan; M.M. The Juilliard School. Awarded first prize in saxophone from the Conservatoire de Bordeaux, where he studied on a Fulbright-ITT grant. Student of William Fread, Larry Teal, Donald Sinta, Joe Allard and Jean-Marie Londeix. Performs with the San Francisco Symphony, Opera and Ballet orchestras; member of the San Francisco Saxophone Quartet.

**Feilin Hsiao**, Assistant Professor of Music Therapy, 2006; Ph.D., University of Iowa, 2006; M.A., New York University, 1994; Certified Music Therapist, 1994; B.A., Chinese Cultural University (Taipei, Taiwan), 1986; Board Certified Music Therapist, 2001; Teaching Credential in Music Education (1996) and Special Education (1999). Lecturer at National Taipei University of Education, Taipei Municipal University of Education, and Shih Chien University; Past-president of the Music Therapy Association of Taiwan; Recipient of the T. Anne Cleary International Dissertation Research Fellowship.

**William Douglas Hunt**, Lecturer in Tuba/Euphonium, Brass Instruments, 1989, B.M., University of the Pacific, 1966; M.A., 1991. Studied with Arnold Jacobs and William Bell. Applied music instructor, San Joaquin Delta College. Former tubist with U.S. Naval Academy Band and the Annapolis Symphony. Principal tubist with the Stockton Symphony since 1987, and currently performs in various Northern California ensembles.

**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 Philharmonic. Performed with Music Now, President of the Board of the Chamber Music Society of Sacramento. Principal Flute of the Bear Valley Music Festival, recordings with the VUTAE, Albion, and Klavier labels.

**Nicolasa Kuster**, Assistant Professor of Bassoon, 2008. B.M. and B.A. Oberlin College and Conservatory, 1993. Former Principal Bassoonist of the Wichita Symphony Orchestra and bassoonist with the Lieurance Woodwind Quintet. Positions in the Tulsa Philharmonic Orchestra, the Rhode Island Philharmonic, the Virginia Symphony, and the Civic Orchestra of Chicago, and has performed as a soloist in the U.S., Panama, Italy, and Kazakhstan. Guest artist at the Anchorage Music Festival, Ameropa Chamber Music Festival and Solo Course in Prague, Czech Republic; recordings on the Chandos label with the Spoleto Festival Orchestra.

**Patrick Langham**, Associate Professor and Director of Jazz Studies, 2003. Holds both the Bachelor of Music with a concentration in jazz studies and the Master of Music with a concentration in jazz studies from the University of Tennessee in Knoxville. He has taught at the University of South Carolina – Spartanburg and Tusculum College in Knoxville. As a saxophonist and director Professor Langham has performed with distinguished jazz artists and on numerous jazz festivals throughout the southern United States. He has developed and taught courses in jazz history, theory, improvisation, and performance, and has created and operated a highly successful jazz camp at USC Spartanburg.



**Brook Moes**, Lecturer in Music Education, 2005. B.M. University of the Pacific; M.M. University of Maryland; M.B.A. Herriot-Watt University in Scotland. Student of James Stern, Ronda Cole, Arnold Steinhardt, John Dalley, and William Preucil; pedagogy studies with Ronda Cole and John Kendall, chamber music studies with the Guarneri Quartet. Recitals in Scandinavia, Romania, and the U. S.

**Sonia Leong**, Lecturer in Piano, 2001, B.M., University of British Columbia, 1992; M.M., Peabody Conservatory of Music, 1994; Concert Recital Diploma, Guildhall School of Music, 1995; D.Mus., University of Montreal, 1998. Member of New Pacific Trio. Concerto performances with Filarmonica de Stat Dinu Lipatti (Romania) and Banff Festival Chamber Orchestra (Canada). Performances in Canada, the US, England, Romania, Switzerland, and Hong Kong. Former faculty member of the University of Puget Sound.

**Ann Miller**, Assistant Professor of Violin, 2008. B.M. summa cum laude, Rice University, 2003; M.M. The Juilliard School, 2005. Student of Ronald Copes and Kathleen Winkler. Chamber appearances in Ukraine, Mongolia, and throughout the U.S. Member of the New Pacific Trio.

**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 Sacramento Philharmonic, Stockton Symphony, California Symphony, San Francisco Contemporary Music Players, Sierra Chamber Society and Sonus Imaginorem. Member, Pacific Arts Woodwind Quintet.

**Leonard Ott**, Lecturer in Trumpet, 1998, B.A. in Music, California State University, Hayward, 1987. Member of Oakland East Bay Symphony, Modesto Symphony Orchestra, and Carmel Bach Festival Orchestra. Also freelances regularly with Santa Rosa Symphony, Napa Symphony, Stockton Symphony, Sacramento Symphony, and many other Bay Area groups.

**Stephen Perdicaris**, Lecturer in Trombone, Director, Pacific Music Camp, Director, Brubeck Institute Jazz Camp, Operations Manager, Conservatory of Music, 1993, B.M., University of North Texas, 1981, Associate with Honors, Royal College of Music, London, 1990. Numerous recordings with Sir Simon Rattle and the City of Birmingham Symphony (England) on EMI. Currently a member of the Sacramento Philharmonic. Clinician, Selmer Corporation.

**Margaret Perry**, Lecturer in Class Piano and Piano Pedagogy, 2004. B.M., M.M. Brigham Young University, D.M.A. University of Arizona. Ensemble Artist Pianist with the Utah Symphony and Opera. Member, Music Teachers National Association, College Music Society, and Phi Kappa Phi.

**Burr Cochran Phillips**, Assistant Professor of Voice, 2007. B.M. University of North Texas 1982; M. M. Texas Christian University, Fort Worth TX, 1994; Performances with opera companies include Dallas Opera, Santa Fe Opera, Houston Grand Opera, Chautauqua Opera, Tulsa Opera, Fort Worth Opera and San Antonio Opera Theater. Orchestral performances include Dallas Symphony, Fort Worth Chamber Orchestra, Tulsa Philharmonic, Chautauqua Symphony, Amarillo Symphony, Phoenix Symphony, Honolulu Symphony, Ars Nova Orchestra of Buffalo, Carmel Bach Festival, Oklahoma Philharmonic, San Antonio Symphony and Corpus Christi Symphony. Previous faculty positions include The University of Texas at Arlington, Arlington TX, Southern Methodist University, Dallas TX and Northern Arizona University, Flagstaff AZ. Member of The National Association of Teachers of Singing and Phi Mu Alpha Sinfonia.

**François Rose**, Associate Professor of Composition and Theory, 1997, B.M., McGill University, 1986; M.M., 1991; Certificate from the Institut de Recherche et de Coordination Acoustique et Musique (IRCAM), 1991; Ph.D., University of California San Diego, 1997. Award winner in the 5th Edvard Grieg International Competition for Composers in Norway, 2001; in the 3rd International Composers' Competition "Kazimieri Serocki" in Poland, 1990; and in the SDE/PRO Canada Composers' Competition in 1986, 1987 and 1988. Selected Commissions and Performances: San Francisco NME (San Francisco, Windsor) 2006; Sax quartet Quasar (Montréal) 2005; Trio Strata (Interlochen) 2004. Selected presentations: "Computerized Orchestration Tool: LabOrch" (Paris, Warsaw, Krakow, San Sebastian, Santa Cruz) 2007.

**Patricia Shands**,\* 1995, Professor of Clarinet, Director of Chamber Music. 1995. D.M.A. Rice University, 2001, M.M., University of Southern California, 1985, B.M. Peabody Conservatory of Music, 1981. Student of David Shifrin, Mitchel Lurie, and David Peck. Prizewinner in the International Concert Artist Guild competition. Featured at music festivals of Spoleto, Chautauqua, Round Top, Tucson Winter Chamber Music Festival and frequent live performances nationally on NPR "Performance Today". Recordings featured on "Art of the States" are broadcast internationally. Solo and chamber music recordings on Centaur, Onossa, Albany and Plum labels. Current member of the Ariel Ensemble, Stockton Symphony, Sacramento Philharmonic, and the Pacific Arts Woodwind Quintet.

**Igor Veligan**, Lecturer of Violin/Viola and Chamber Music, 2006. M. A. Odessa State Conservatory. Student of Zoja Istomina and Galina Gritzenko, chamber music studies with Oleg Shkarpitnuy and Natalya Buzanova; master classes with Zakhar Bron, Liana Isakadze, and Igor Frolov. Performances with the L'Estro Armonico String Quartet, the Arlekin String Quartet, Argenta Trio, Chamber Music Society of Sacramento; concertmaster of the San Francisco Choral Society Orchestra, principal viola of the Reno Philharmonic Orchestra, principal violist of the Lake Tahoe Summer Festival, member of the Monterey Symphony.

**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 Philharmonic "Dinu Lipatti" (Romania).

**Sarah Clemmens Waltz**, Assistant Professor of Music History; Program Director of Music History and the B.A. in Music; Ph.D. in Music History, M.Phil., Yale University, 2007; B.M. in Music History with High Honors, Oberlin Conservatory, 2000; B.A. in Physics, Oberlin College, 2000. Recent works: Ph.D. diss., *The Highland Muse in Romantic German Music*, 2007; "In Defense of Moonlight," *Beethoven Forum* (Spring 2007). Presentations at national and international conferences. Member: American Musicological Society, American Beethoven Society, North American British Music Studies Association.

**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. Eberhardt Teacher-Scholar Award, Faculty Research-Lecturer Award, Distinguished Faculty Award.

**Lynelle Frankforter Wiens**, Professor of Voice, 1978, B.M., University of Nebraska, 1975 (Phi Beta Kappa); M.M. with Distinction, Indiana University, 1978; Mus. D. with High Distinction, Indiana University, 1988. Student of Eileen Farrell, Margaret Harshaw, Lynn Wickham. MTNA National Winner, 1971; Van Lawrence Fellow (awarded by National NATS and the Voice Foundation), 1993. Served as a faculty member at the Symposium on the Care of the Professional Voice (Philadelphia) and the Pacific Voice Conference (San Francisco.)

**Therese West**, Assistant Professor of Music Therapy and Music Education, 2002. Program Director of Music Therapy. B.A., University of California, 1976; Music Therapy Equivalency, Willamette University, 1984; M.M., Music Therapy, University of Miami, (FL), 1999; Ph.D. Interdepartmental Studies; Music Therapy and Health Psychology, University of Miami, (FL), 2003; Board-Certified in Music Therapy, 1989; Fellow and Past President, Association for Music and Imagery (AMI).. Conducts supervision and training in the Bonny Method of Guided Imagery and Music (GIM), on training staff of Therapeutic Arts Training Institute, San Francisco. Editorial Board of Music Therapy Perspectives.

**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.

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Location: Weber Hall

Website: [www.business.pacific.edu](http://www.business.pacific.edu)

Richard E. Flaherty, Dean

Ray Sylvester, Associate Dean of Undergraduate Programs

Cynthia Firey Eakin, Associate Dean for Graduate Programs

## Undergraduate Degree Programs Offered

Bachelor of Science in Business Administration

Accounting

Arts & Entertainment Management

Business Law

Economics

Entrepreneurship

Finance

General Business

International Business

Management Information Systems

Marketing

Management and Human Resources

Real Estate

## Minors Offered

Management

Business Administration

Management Information Systems

## Graduate Degree Programs Offered

(see Graduate Catalog for information)

Master in Business Administration (MBA)

JD/MBA

PharmD/MBA

Peace Corps MBA

*A professional school offering graduate and undergraduate programs providing the educational breadth and depth for tomorrow's leaders of business, government, and not-for-profit organizations.*

## 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 25 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 student government 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 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.

## Accreditation

The School is accredited by AACSB International - The Association to Advance Collegiate Schools of Business.

## General Academic Regulations for BS in Business Administration

### Graduation Requirements

1. Fulfill the ESB minimum residency requirement of at least 32 units taken in the School.
2. There is a limit on extension course credits for courses offered through the Center for Professional and Continuing Education. The total ceiling on such units is six, with a limit of 3 in any one semester.
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. A student must receive a grade of "C" or better in any core course which is a prerequisite before taking a related concentration course.

**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 freshman level Deans' Seminar and junior level Career Development 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

disqualification. Disqualification decisions will usually 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.

3. Any student who is on probation for three consecutive semesters is subject to disqualification.

Further clarification of these (or other) policies may be obtained from the ESB Student Affairs Office.

**Transfer Students**

Transfer courses must have a credit value of at least three semester units if they are to be applied to general education 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.

**Degree Program Requirements Bachelor of Science in Business Administration**

In order to earn the bachelor of science in business administration degree, students must complete a minimum of 128 units with a Pacific cumulative and school/program grade point average of 2.0.

**I. General Education Requirements (for students starting as Freshmen):**

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific 2 Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: Pacific Seminars cannot be taken for Pass/No Credit.*

One course from each subdivision below:

*Social and Behavioral Sciences*

- IA. Individual and Interpersonal Behavior (ECON 053)
- IB. U.S. Studies (ECON 055)
- IC. Global Studies (Transfers only)

*Arts and Humanities*

- IIA. Language and Literature (ENGL 025 or COMM 027)
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

*Note: Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from IC and IIC*

*Natural Sciences and Mathematics*

- IIIA. Natural Sciences
- IIIB. Mathematics and Formal Logic (MATH 045 or 051)
- IIIC. Science, Technology, and Society or a second Natural Science (Transfers only)

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single department or other school or college may be applied to meet the requirements of the general education program.*

**II. Fundamental Skills**

Demonstrate competence in:  
 Reading  
 Writing  
 Quantitative analysis

*Note: 1) A detailed description how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.*

**III. Pre-professional Skills Requirements**

Advanced Writing:		
ENGL 025 or another approved writing course*		4
Public Speaking:		
COMM 027 Public Speaking*		3
Mathematics:		
MATH 045 Intro to Finite Mathematics and Calculus*		4
MATH 037 Probability and Statistics*		4
Computer Literacy:		
COMP 025 Computers and Information Processing*		4
Economics:		
ECON 053 Microeconomics*		4
ECON 055 Macroeconomics*		4

*Note: 1) \*These courses are also part of the Pacific General Education Program, and can be counted toward the University General Education requirements.*

**IV. Major Core Courses**

BUSI 010	Deans' Seminar (Entering freshmen only)	1
BUSI 031	Financial Accounting	4
BUSI 033	Managerial Accounting	4
BUSI 053	Legal and Ethical Environment of Business	4
BUSI 100	Management Information Systems	4
BUSI 104	Operations Management	4
BUSI 105	Financial Management	4
BUSI 107	Marketing Management	4

BUSI 109	Management & Organizational Behavior	4
BUSI 110	Career Development	1
BUSI 181	Strategic Management and Policy	4

### V. Concentrations

Complete one of the following concentrations:

**Note:** 1) A student is required to take at least four concentration courses, one of which must be an international concentration course. 2) A number of concentrations require more than four courses.

#### Core Area Concentrations

##### Accounting

BUSI 113A	Intermediate Accounting I	4
BUSI 113B	Intermediate Accounting II	4
BUSI 113C	Advanced Accounting	4
BUSI 115	Tax Accounting	4
BUSI 117	Cost Accounting	4
BUSI 119	Auditing	4

One additional course from the following: 4

BUSI 163	International Financial Management
BUSI 177	International Trade Law
BUSI 178	International Commercial Law

##### Economics

ECON 101	Intermediate Microeconomic Analysis	4
ECON 190	Econometrics	4
ECON	Electives (2 additional courses above 100)	8

One additional course from the following: 4

ECON 121	International Trade
ECON 123	International Finance
ECON 125	Economic Development
ECON 118	Globalization History: Economic, Environmental, and Demographic Interactions

##### Finance

BUSI 121	Financial Markets	4
BUSI 123	Investment Analyses	4
BUSI 163	International Financial Management	4
One additional course from the following:		4
BUSI 122	Student Investment Fund	
BUSI 124	Entrepreneurial Finance	
BUSI 125	Intermediate Financial Management	
BUSI 126	Topics in Finance	
BUSI 128	Real Estate Valuation and Investment	
BUSI 129	Real Estate Finance	

##### International Business

BUSI 163	International Financial Management	4
BUSI 165	International Marketing	4
One of the following:		4
BUSI 177	International Trade Law	
BUSI 178	International Commercial Law	
One additional course from the following:		4
BUSI 168	Global Strategic Management	
BUSI 169	Comparative Management	

**Note:** 1) Each student concentrating in international business is strongly advised to study and/or internship abroad for a semester or summer and engage in the study of a foreign language.

##### Marketing

BUSI 141	Marketing Research	4
BUSI 165	International Marketing	4
Two additional courses from the following:		8
BUSI 143	Product Innovation	
BUSI 145	Retailing and Channels	
BUSI 147	Consumer Behavior	
BUSI 149	Strategic Marketing	

##### Management Information Systems

BUSI 136	Business Programming	4
BUSI 137	Database Management Systems	4
BUSI 138	Networking and Telecommunications Management	4
BUSI 139	Electronic Commerce Project	4
One additional international course from the following:		4
BUSI 163	International Financial Management	
BUSI 165	International Marketing	
BUSI 177	International Trade Law	
BUSI 178	International Commercial Law	
BUSI 169	Comparative Management	

**Note:** 1) 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	4
BUSI 170	Human Resources Management	4
Two additional courses from the following:		8
BUSI 134	Conflict Management	
BUSI 159	Employment Law	
BUSI 174	Work Group Dynamics	
BUSI 175	Leadership and Change	

##### General Business

BUSI	Electives (3 courses from any ESB concentrations)	12
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**Note:** Excluding BUSI 183

One additional course from the following:		4
BUSI 163	International Financial Management	
BUSI 165	International Marketing	
BUSI 177	International Commercial Law	
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 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 Associate Dean's Office.

**Entrepreneurship**

BUSI 172	Entrepreneurship	4
Two additional courses from the following:		8
BUSI 124	Entrepreneurial Finance	
BUSI 143	Product Innovation	
BUSI 176	Managing Small Business	
One additional international course from the following:		4
BUSI 163	International Financial Management	
BUSI 165	International Marketing	
BUSI 177	International Trade Law	
BUSI 178	International Commercial Law	
BUSI 169	Comparative Management	

**Real Estate**

BUSI 127	Legal Aspects of Real Estate	4
BUSI 128	Real Estate Valuation and Investment	4
BUSI 129	Real Estate Finance	4
One additional international course from the following:		4
BUSI 163	International Financial Management	
BUSI 165	International Marketing	
BUSI 177	International Trade Law	
BUSI 178	International Commercial Law	
BUSI 169	Comparative Management	

**Business Law**

BUSI 157	Commercial Law	4
One of the following:		4
BUSI 177	International Trade Law	
BUSI 178	International Commercial Law	
Two additional courses from the following:		8
BUSI 115	Tax Accounting	
BUSI 127	Legal Aspects of Real Estate	
BUSI 159	Employment Law	

**Arts and Entertainment Management**

BUSI	Electives (3 courses from any ESB concentrations)	12
One of the following courses:		4
BUSI 163	International Financial Management	
BUSI 165	International Marketing	
BUSI 177	International Trade Law	
BUSI 178	International Commercial Law	
BUSI 169	Comparative Management	
In addition the following four Music Management courses:		16
MHIS 005*	Music Appreciation	
MMGT 011	Music, Entertainment in U.S. Society	
MMGT 153	Entertainment Law	
MMGT 111	Music Industry Analysis	

*Note: 1) \*Can count toward general education requirements.*

**Minor in Management**

Minor intended to provide an exposure to general management principles and some functional area technical skills for students majoring in disciplines outside of the Eberhardt School of Business. The minor is not intended as a substitute for the broad in-depth coverage found in the business degree.

In order to earn a minor in management, students must complete a minimum of 20 units with a Pacific minor grade point average of 2.0.

**Minor Requirements:**

BUSI 031	Financial Accounting	4
BUSI 109	Management and Organizational Behavior	4
BUSI	Electives (3 courses offered by the School of Business, excluding the Deans' Seminar, the Career Development Seminar, and most special topics or independent studies)	12

**Minor in Business Administration**

The minor in business administration covers a wide range of the basic principles used in business administration and is intended for non-business majors. The minor is not a substitute for the broad in-depth coverage found in the business degree.

In order to earn a minor in business administration, students must complete a minimum of 24 units with a Pacific minor grade point average of 2.0.

**Minor Requirements:**

BUSI 031	Financial Accounting	4
Four of the following five courses		16
BUSI 033	Principles of Managerial Accounting	
BUSI 053	Business Law	
BUSI 105	Financial Management	
BUSI 107	Marketing Management	
BUSI 109	Management and Organizational Behavior	
BUSI	Electives (1 courses offered by the School of Business, excluding the Deans' Seminar, the Career Development Seminar, and most special topics or independent studies)	4

**Minor in Business Information Systems**

The minor in business information systems provides a basic knowledge in business information systems and is intended for non-business majors. The minor is not a substitute for the broad in-depth coverage found in the business degree.

In order to earn a minor in business information systems, students must complete a minimum of 28 units with a Pacific minor grade point average of 2.0.

**Minor Requirements:**

Seven of the following eight courses		28
COMP 025	Computers and Information Processing	
BUSI 100	Management Information Systems	
BUSI 136	Business Programming	
COMP 051	Computer Science I	
BUSI 137	Database Management Systems	
BUSI 138	Networking and Telecommunications Management	
BUSI 139	Electronic Commerce Project	
BUSI 140	Business Systems Analysis	

*Note: 1) All courses taken for a letter grade at the Eberhardt School of Business. 2) Students minoring must fulfill all prerequisites and junior class standing requirements for ESB courses. 3) Students must 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-business majors.*

## Course Descriptions

### *BS in Business Administration Courses*

A student must receive a grade of “C” or better in any core course which is a prerequisite before taking a related concentration course.

**BUSI 010. 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. (P/NC only)

**BUSI 031. 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 033. Principles of Managerial Accounting (4)**

Use and analysis of accounting information for management decision-making in planning, production, evaluation and control decisions. *Prerequisite: BUSI 031.*

**BUSI 053. 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 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 025 or 051.*

**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 031, 033; ECON 053, 055; MATH 037, 045; 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 profit-ability and liquidity. *Prerequisites: BUSI 031; ECON 053, 055; MATH 037, 045; 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 053; 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 110. Career Development Seminar (1)**

This course is designed to enable business students to clearly define their career objectives and available opportunities. Through the course business students will understand the connection between internships and full-time careers, be trained in the methods of conducting a successful job search and in preparing for on-going career development. Topics will include career assessment, resumes and related correspondence, interviewing, career planning, and job search resources. The course will also discuss opportunities available in graduate studies. *Prerequisite: junior standing.*

**BUSI 111. Accounting Information Systems (4)**

Emphasis is on the use of accounting software and the interaction of accountants with information systems. Also covers assessment of internal and computer controls in order to identify key risks within accounting cycles. Reviews the latest computer architectures used in ERP. *Prerequisites: BUSI 033 and BUSI 100; 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 031; 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 with a “C” or better; 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 with a “C” or better; junior standing.*

**BUSI 115. Tax Accounting (4)**

The study of federal tax laws and doctrines that significantly affect businesses, property transactions, and individuals. Tax planning techniques and tax research skills are emphasized. *Prerequisites: BUSI 031 and 033; 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 031 and 033; MATH 037; 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 with a “C” or better; 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 122. Student Investment Fund (SIF) (4)**  
Operated entirely by students, allowing them to gain hands-on, real world experience in managing an investment fund with substantial market value. Students perform sector analyses as well as financial analyses of a wide array of securities, and as a group have to determine the fund's sector allocation and stock/bond/cash allocation. SIF, while maintaining a well-diversified profile, strives to outperform the market (S&P 500) *Prerequisites: BUSI 105 and permission of the instructor; 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 and 121 with a "C" or better; junior standing.*
- BUSI 124. Entrepreneurial Finance (4)**  
Entrepreneurial Finance 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 and 121 with a "C" or better; 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 053; 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. *Prerequisite: junior standing.*
- 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: BUSI 136 with a "C" or better; 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: BUSI 100; 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: BUSI 100; 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: BUSI 136 with a "C" or better; 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 and MATH 037 with a "C" or better; 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 and 107; junior standing.*



- BUSI 153. Labor-Management Relations (4)**  
A study of labor movements and their impact on organizations and the economy. *Prerequisites: ECON 053 and 055; junior standing.*
- BUSI 157. Commercial Law (4)**  
Basic principles of commercial and trade law; business organizations including agency partnerships and corporations; contracts and the Uniform Commercial Code, real and personal property; securities regulation, secured transactions; bankruptcy; professional liability and negotiable instruments. *Prerequisites: BUSI 053 with a "C" or better; 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 053 with a "C" or better; 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 with a "C" or better; 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 with a "C" or better; junior standing.*
- BUSI 169. Comparative Management (4)**  
Develops cross-cultural awareness through understanding of social, political, economic, and historical influences on managerial practice. Methods used include lectures, readings, videos, role-plays, and reports (written and oral). *Prerequisites: BUSI 109 with a "C" or better; 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 with a "C" or better (may be taken concurrently); 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 031, 033, 107 with a "C" or better; junior standing.*
- BUSI 174. Work Group Dynamics (4)**  
The purpose of the course is to provide students with an understanding of group dynamics that will enable them to develop skills in both participating in and leading groups in the workplace. Because the focus is on groups, the course will take a "learning by doing" approach and will involve numerous group activities designed to reinforce the material. *Prerequisites: BUSI 109 with a "C" or better; 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 with a "C" or better, 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 031 and 109 with a "C" or better; junior standing.*
- BUSI 177. International Trade Law (4)**  
International Trade Law will provide students with the opportunity to study legal aspects associated with international trade agreements. The primary emphases of the course will be on the global trading system as represented by the General Agreement on Tariffs and Trade and the World Trade Organization and regional trading systems such as the European Union and the North American Free Trade Agreement. The course will also examine agreements ancillary to these trading regimes as well as relevant national laws. 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 that may assist in resolving these problems. *Prerequisites: BUSI 053 with a "C" or better; junior standing.*
- BUSI 178. International Commercial Law (4)**  
International Commercial Law will provide students with the opportunity to study the law governing international contracts. The course will examine ethical considerations in international contracting, commercial dispute resolution, and import and export transactions. Several different types of contract will be examined, including those relating to the sale of goods, services, transportation, insurance and intellectual property rights. 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 that may assist in resolving these problems. *Prerequisites: BUSI 053 with a "C" or better; junior standing.*
- BUSI 181. Strategic Management and Policy (4)**  
An integrated analysis of the major functional areas of an enterprise, viewed primarily from the upper levels of management. The strategic management process provides the framework for formulating and implementing objectives, policies and programs, through which a company gains sustainable competencies and competitive advantage in then marketplace. Students will participate in computer simulations, case analyses, and experiential exercises in order to develop skills in executive teamwork, solving strategic problems and presenting and defending recommendations. *Prerequisites: BUSI 031, 033, 053, 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 the ESB Career Services Office or the office of the Associate Dean located in Weber Hall.

**BUSI 186. Firm, Markets, and Environment: Theory and Application (3)**

This course is designed to provide in-depth exposure to both the theory of the firm and a set of quantitative techniques that managers need to utilize in order to facilitate decision making and problem solving. The topics covered include demand theory and estimation, forecasting with econometric and time-series techniques, production and cost theory, theory of markets, capital budgeting, fiscal and monetary policy, and the global economic and financial environment. *Prerequisites: senior standing; ECON 053, 055 and permission of the MBA Program Director.*

**BUSI 188. Data and Decisions (3)**

This course introduces the fundamental concepts and techniques for analyzing risk and formulating sound decisions in uncertain environments. The course examines statistical methods for interpreting and analyzing data including sampling concepts, regression analysis, and hypothesis testing. Applications include investor management, portfolio analysis, quality control and inventory management. This course emphasizes analytical techniques that are broadly applicable to business problems. *Prerequisites: senior standing; MATH 037 and 045 and permission of the MBA Program Director.*

**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.

**Course Offerings****Graduate**

See Graduate Catalog for course descriptions

BUSI 210.	Business and Public Policy	(3)
BUSI 211.	Applied Business Principles	(20)
BUSI 212.	MBA Career Development Seminar	(1)
BUSI 213.	Corporate Social Responsibility	(2)
BUSI 214.	Negotiation	(2)
BUSI 220.	Corporate Finance	(3)
BUSI 221.	Entrepreneurial Finance	(3)
BUSI 222.	Student Investment Fund	(3)
BUSI 223.	Investment and Portfolio Analysis	(3)
BUSI 230.	Enterprise Systems Analysis	(3)
BUSI 231.	Database Management	(3)
BUSI 236.	Business Programming	(3)
BUSI 238.	Computer Networking and Telecommunications Management	(3)
BUSI 239.	MIS Project	(3)
BUSI 241.	Marketing Research	(3)
BUSI 245.	Consumer Relationship Management	(3)
BUSI 247.	Customer Behavior	(3)
BUSI 249.	Global Strategic Marketing	(3)
BUSI 263.	International Finance	(3)
BUSI 267.	International Business Law	(3)

BUSI 268.	Global Business Competition	(3)
BUSI 269.	Comparative Management	(3)
BUSI 270.	Human Resource Management	(3)
BUSI 272.	Entrepreneurship	(3)
BUSI 274.	Managing Quality and Productivity	(3)
BUSI 275.	Technology and Innovation	(3)
BUSI 276.	Entrepreneurial Management	(3)
BUSI 279.	Leadership and Change	(3)
BUSI 281.	Strategic Management	(3)
BUSI 282.	Entrepreneurial Rapid Growth Strategy	(3)
BUSI 291.	Independent Study	(1-3)
BUSI 293.	Special Topics	(1-4)

**Eberhardt School of Business Faculty**

**Richard E. Flaherty**, 2008, Dean, B.S., The University of Kansas, 1966; M.S., The University of Kansas, 1968; Ph.D., The University of Kansas, 1971.

**Luann Bangsund**, 2006, Assistant Professor, B.A., University of Redlands, 1974; M.A., University of Redlands, 1978; M.B.A., University of California Los Angeles, 1981; Ph.D., Claremont Graduate University, 2006.

**Thomas E. Brierton**, 1989, Associate Professor, B.B.A., University of Wisconsin, 1978; J.D., Northern Illinois University, College of Law, 1983.

**Michael L. Canniff**, 2003, Lecturer, B.A., University of Minnesota, 1985; M.S., Syracuse University, 1990.

**Cynthia Eakin**, 1996, Associate Dean for Graduate Programs, 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.

**Peter E. Hilsenrath**, 2009, Professor, B.A., University of California, Santa Cruz, 1978; Ph.D., University of Texas, Austin.

**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.

**Sacha M. Joseph**, 2006, Assistant Professor, B.A., University of the West Indies (Jamaica), 1998; M.S., Florida State University, 2004; Ph.D., Florida State University, 2006.

**John R. Knight**, 1995, Professor, B.A., Tulane University, 1969; M.B.A., Louisiana State University, 1978; Ph.D., 1990.

**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, Associate 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, Associate Professor, B.S., Tulane University, 1993; Ph.D., Louisiana State, 1998.

**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.

**Chris Sablynski**, 2009, Associate Professor, B.S., University of Florida, 1986; M.S., San Francisco State University, 1996; Ph.D., University of Washington, 2002.

**Ray Sylvester**, 1972, Associate Dean, Professor, B.A. Gettysburg College, 1962; M.B.A., University of Michigan, 1963; Ph.D., 1972.

**Dara M. Szliowicz**, 2006, Assistant Professor, B.A., Columbia University, 1988; M.A., University of California, Berkeley, 1990; Ph.D., University of Illinois, 1998.

**Eric W. Typo**, 1998, Associate 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.

**R. Daniel Wadhvani**, 2006, Assistant Professor, B.A., Yale University, 1991; Ph.D., University of Pennsylvania, 2003.

**Cynthia K. Wagner Weick**, 1990, 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

Phone: 209.946.2556

Location: Gladys L. Benerd School of Education

Website: [www.pacific.edu/education](http://www.pacific.edu/education)

Lynn G. Beck, Dean

## Contents

Diversified Major (Liberal Studies)

Pedagogy Major

Multiple Subject Credentials

Single Subject Credentials

Special Education/Education Specialist  
Credentials

*Single Subject Credentials are offered in conjunction with other University academic units.*

*A professional school of University of the Pacific offering programs for Bachelor of Arts, Master's, Educational Specialist, Doctor of Education, and Doctor of Philosophy degrees.*

## Mission

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 in service 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 was the first university in California whose professional education programs were 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. Although teacher education is considered to be an all-University responsibility, all professional education degree and credential programs at University of the Pacific are offered and coordinated through the Gladys L. Benerd School of Education. Continuing accreditation has been con-

ferred through the year 2011 on all eligible programs in the Benerd School of Education.

## Programs in the School of Education

At the undergraduate level, programs are offered to prepare classroom teachers and special educators. At the graduate level, programs are offered to prepare instructional specialists, school psychologists, supervisors, principals, superintendents, central office personnel, and leaders in higher education, non-profit, and other organizations. Undergraduate and graduate programs through the doctorate for teachers and other educational personnel are offered by the Department of Curriculum and Instruction. Graduate programs through the doctorate for educational administrators are offered by the Department of Educational Administration and Leadership. Graduate programs through the doctorate for school psychologists are offered by the Department of Educational and School Psychology. Detailed requirements for a Master of Education (M.Ed.), Master of Arts in Education (M.A.), Educational Specialist (Ed.S.), Doctor of Education (Ed.D.), and Doctor of Philosophy (Ph.D.) can be found in the Graduate School Catalog.

## Student Organizations

Student organizations in the School of Education include the School of Education Student Association (SESA); a student chapter of the Association for Supervision and Curriculum Development; a student chapter of the Council for Exceptional Children (CEC); the Math, Science, and Critical Thinking Club and the Music Education Student Association (MESA).

Membership in these student organizations is open to all undergraduate students who are en-

rolled 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 School of Education has a state-of-the-art Macintosh Computer Laboratory, and the University Library contains other comprehensive resources for students in education in its collections of books, professional periodicals, pamphlets, microfilms, and other reference materials.

The Testing Office in the School of Education is an officially designated national testing center for the subject test of the Graduate Record Examination. In addition, the Office maintains a collection of restricted psychological assessments for use by faculty and approved advanced students in the school psychology program.

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 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. The School insists 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, and their willingness to commit to excellence in teacher preparation, any freshman or higher level student may enroll in the sequence of prerequisite courses prior to the professional course sequence and directed teaching.

### Completion of More Than One Credential

It is possible to earn more than one teaching credential while enrolled as a student at the University of the Pacific. For information about specific requirements and to plan an appropriate study that supports the earning of more than one credential, please see an advisor in the Department of Curriculum and Instruction.

### Bilingual Program—SB2042 Multiple Subject Credential with BCLAD

For those students desiring to teach in Spanish/English bilingual, elementary 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. 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 BCLAD adviser.

### 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. Such teachers may enter Pacific for the purposes of clearing a credential or satisfying selected requirements. A credential file should be opened, with the credential secretary being given copies of credential documents. Admission to Pacific's Graduate School is also necessary. The School of Education will recommend for the appropriate 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 to qualify for a teaching credential may write to the School of Education or phone (209) 946-2287 or 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 contact the Graduate School for information and application and 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. The GRE General Examination scores are required for application for an advanced degree at Pacific.

### Programs in English as a Second Language: Pedagogy Major for International Students

The School of Education offers an undergraduate program for International students who wish to become teachers of ESL (English as a Second Language) or EFL (English as a Foreign Language). At the undergraduate level, international students may choose the Pedagogy Major with a specialization in either Language and Culture or Second Language Pedagogy. (See description under Degrees in the School of Education for specific courses required for the Pedagogy Major.)

### Programs to Earn Multiple Subject Credential

The courses and experiential learning opportunities for students seeking a multiple subject credential is included as a part of the Bachelor of Arts with Liberal Studies with credential program discussed below under "Undergraduate Degrees." As noted, students also have the option of earning a credential through post-baccalaureate programs of study (credential only or M.Ed.) These are discussed in the Graduate Catalog. Information about all programs is available in the Curriculum and Instruction office.

## Programs to Earn Credentials to Teach Special Education

The courses and experiential learning opportunities for students seeking to become special education teachers (Educational

Specialist-mild/moderate or moderate/severe Levels I and II) are discussed below under "Undergraduate Degrees." As noted, students also have the option of earning a credential through post-baccalaureate programs of study (credential only or M.Ed.) These are discussed in the Graduate Catalog. Information about all programs is available in the Curriculum and Instruction office.

## Programs To Earn Single Subject Credential

Students seeking to earn a single subject credential in one of the following areas: English, Art, Social Sciences, Sciences, Mathematics, Spanish, Music, and Physical Education should consult with a faculty adviser in the appropriate academic department. They should also consult with a School of Education adviser for appropriate education courses.

The Department of Curriculum and Instruction offers a Preliminary Single Subject Credential Program consisting of the following:

### I. Prerequisite courses:

EDUC 140	Transformational Teaching and Learning	4 units
EDUC 141	Transformational Teaching and Learning Practicum	2 units
EDUC 130	Technology Enhanced Learning Environments	2 units
EDUC 150	Teaching and Assessment	3 units
EDUC 163	Teaching English Learners	3 units

### II. Professional Teacher Education

#### Courses for the Single Subject Credential

CURR 175/EDUC 165	Reading/Language Arts Development (Single Subject)	3 units
CURR 179x	Teaching in the Content Areas (Single Subject)	4 units

The Single Subject Program in Music Education provides methods courses in place of EDUC 150, Teaching and Assessment, and CURR 179x, Teaching in the Content Areas. The Physical Education program allows SPTS 159, Sports Pedagogy, to replace EDUC 150.

### III. Directed Teaching: 12 units

EDUC 170	Professional Practice	2-10 units
EDUC 172	Professional Practice Seminar	2-10 units
Completion of the following course:		
SPED 125x	Teaching Exceptional Learners	2 units

In addition to meeting degree requirements and completion the program outlines above, a student seeking a Single Subject Preliminary Requirement, must also:

- Pass the California Subject Exam For Teachers (CSET) for the specific subject matter field (see adviser for information regarding the required exams and the timeline for completion of this exam.)
- Pass all program requirements including maintaining a 2.5 GPA, credential candidacy, meeting standards on all embedded signature assignments (implemented in the electronic portfolio on TaskStream)
- Demonstrate his/her competence in relationship to thirteen Teaching Performance Expectations and through the completion of all requirements in the Performance Assessment for California Teachers (PACT), the Teaching Performance Assessment
- Demonstrate his/her competence in professional practice (student teaching/internship) as assessed by University Supervisor and their cooperating teacher(s) in their student teaching and/or internship placement(s)
- Complete an application for the SB 2042 Single Subject Preliminary Credential at the Office of the Credential Analyst
- Completion of CBEST prior to Student Teaching or Internship
- Completion of the United States Constitution requirement

Under SB 2042 legislation, the holder of a Single Subject Preliminary Credential must complete requirements for a Clear Credential through a CTC-approved Induction Program provided by a school district or some California colleges or universities.

*Advising materials for the Single Subject are available in the Department of Curriculum and Instruction, Room 102, School of Education Building. Students are required to meet with a department adviser for registration*

The credentials or licenses for teaching in California schools offered by the University include the Multiple Subject Credential, the Single Subject Credential, and the Educational Specialist Credentials, Mild/Moderate Disabilities or Moderate/Severe Disabilities, Level One and Level Two.

The Single Subject Credential authorizes its holder to teach that subject at any level between kindergarten and grade 12, though it is used typically in grades 7-12. The Multiple Subject Credential authorizes its holder to teach in any classroom in which the students remain with the teacher. The Multiple Subject Credential is required for teaching grades K through 6. Some districts require a Single Subject Credential for teaching one subject field in middle school or junior high school. The Multiple Subject Credential may be used for teaching upper grades in which students remain with the teacher in a self-contained classroom and for adult education.

Students who have earned a baccalaureate degree and who meet admissions criteria have the option of pursuing their teaching credentials through a post-baccalaureate credential, M.Ed., or internship programs. Details regarding these options are available in the Department of Curriculum and Instruction. Details regarding the M.Ed. program are also available in the Graduate Catalog.

Students seeking to earn a credential must complete an approved program of study and take and pass certain required tests. Specific information about the requirements for each program is available in the Department of Curriculum and Instruction.

## Undergraduate Degrees

### Degree Offered

Bachelor of Arts in Liberal Studies

### Majors Offered

Diversified

Pedagogy

*A Diversified Major, leads to a preliminary credential for elementary teaching in California. A Pedagogy Major is designed for undergraduate students from other countries who wish to teach in their home countries.*

### Bachelor of Arts in Liberal Studies Major Diversified Liberal Studies

In order to earn the Bachelor of arts in liberal studies degree with a major in diversified, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0. (Please note – a 2.5 GPA is required in all courses leading to a teaching credential.)

The program of study includes the following:

#### I. Language, Literature, Communication

CURR 123	Introduction to Syntax and Semantics	3
PACS 001	Pacific Seminar 1	4
PACS 002	Pacific 2 Topical Seminar	4
COMM 143	Intercultural Communication	4
ENGL 025	(Literature Analysis)	4
EDUC 100	Introduction to Language	3
EDUC 120	First and Second Language Acquisition	3

#### II. History (World, United States, California)

HIST 050	World History or HIST 010, Western Civilization	4
HIST 020	United States History I	4
HIST 021	United States History II	4
HIST 130	History of California	4

#### III. Mathematics (Two Courses)

MATH 161	Elementary Concepts of Math I	4
	One of the following:	4
	MATH 035 Elementary Statistical Inference	
	MATH 037 Probability and Statistics	

**Note:** 1) MATH 037 for students with advanced mathematics abilities

#### IV. Sciences

PHYS 017	Concepts of Physics	4
BIOL 041	Introduction to Biology	4
GEOS 057	Earth Systems Science	4

#### V. Visual and Performing Arts

THEA 011	Introduction to Theatre	3
MEDU 100	Music for Children	3
EDUC 142	Visual Arts in Education	4

#### VI. Physical Education and Child Development

SPTS 151	Elementary Physical Education	3
PSYC 029	Child Development	4

#### VII. Senior Capstone Courses

PACS 003	Pacific Seminar 3	3
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#### VIII. Concentration “Depth of Study” Courses

Three to four courses in one of the following concentrations:	12
Language and Linguistics	
History and Social Sciences	
Mathematics	
Sciences	
Visual and Performing Arts	
Physical Education	
Human Development, with emphasis in Special Education	
BCLAD in Spanish	
Evening Program Concentration for EdPro2 students	(12 or more units)

**Note:** 1) These concentrations are described in advisement materials found in the Curriculum and Instruction Department, Room 102. 2) Students must complete successfully Pacific Seminar 3. 3) Courses in the major and in credentialing must be taken for a letter grade. 4) No more than eight units of extension coursework from Pacific may count towards the degree. 5) Limitations on Activity courses coursework also apply.

**Note:** Evening Degree (EdPro2) students are subject to complete a specialized concentration

#### IX. Prerequisite Teacher Education Courses (Required for the Degree in the Traditional Degree Program)

EDUC 140	Transformational Teaching and Learning	4
EDUC 141	Transformational Teaching and Learning Practicum	2
EDUC 130	Technology Enhanced Learning	2
EDUC 150	Teaching and Assessment	3
EDUC 163	Teaching English Learners	3

#### X. Professional Teacher Preparation Courses – Multiple Subject (Required for a Preliminary Multiple Subject Credential)

EDUC 151	Teaching Science (MS)	2 units
EDUC 152	Teaching Mathematics (MS)	2 units
EDUC 160	Positive Learning Environments	2 units
EDUC 161	Literacy Development (MS)	4 units
EDUC 162	Literacy Assessment (MS)	2 units

#### XI. Directed Teaching: 12 units

EDUC 170	Professional Practice	2-10 units
EDUC 172	Professional Practice Seminar	2-10 units
	Completion of the Following Course:	
SPED 125x	Teaching Exceptional Learners	2 units

In addition to meeting the above degree requirements, a student seeking a Multiple Subject Preliminary Requirement, must also:

Pass the Reading Instruction Competency Assessment (RICA) prior to applying for the credential

Pass the California Subject Exam For Teachers (CSET-MS) prior to Student Teaching or Internship

Pass all program requirements including maintaining a **2.5** GPA, credential candidacy, meeting standards on all embedded signature assignments (implementation in the electronic portfolio on TaskStream)

Demonstrate his/her competence in relationship to thirteen Teaching Performance Expectations through the completion of all requirements in the Performance Assessment for California Teachers (PACT)

Demonstrate his/her competence in professional practice (student teaching/ internship) as assessed by University Supervisor and their cooperating teacher(s) in their student teaching and/or internship placement(s),

Complete an application for the SB 2042 Multiple Subject Preliminary Credential at the Office of the Credential Analyst.

Completion of CBEST

Completion of the United States Constitution requirement.

Under SB 2042 legislation, the holder of a Multiple Subject Preliminary Credential must complete requirements for a Multiple Subject Clear Credential through a CTC-approved Induction Program provided by a school district or some California colleges or universities.

Advising materials for the Diversified Major are available in the Department of Curriculum and Instruction, Room 102, School of Education Building. Students are required to meet with a department adviser for registration each semester as they progress through the degree program.

### 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 Pacific Seminars 1, 2 and 3 and two courses in each of the three main categories in general education. If a Pacific Seminar 1 or 2 course is waived, or not passed, 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 – A minimum of 24 units is required. The student's adviser will assist him/her in determining appropriate courses.
4. Electives (3 units minimum) chosen from a list of courses available in the Department of Curriculum and Instruction.
5. Concentration Area: Students complete a Concentration Area in one of the following options: (24 units)
  - a. Second Language Pedagogy (for international 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 international 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 international 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 Education Pedagogy (for international students preparing to teach in a specialized learning field): teaching the physically and psychologically handicapped.
6. Elective courses to meet degree requirements of 124 units.
7. 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.

### Undergraduate Preparation for a Bachelor of Arts in Liberal Studies and a Level One Education Specialist Credential

Students in the Bachelor of Arts in Liberal Studies program in the Benerd School of Education may pursue an Education Specialist Credential, Mild/Moderate or Moderate/Severe Disabilities, Level One and the Diversified-Liberal Studies Major. Students complete:

the Diversified-Liberal Studies Major described previously,

prerequisite courses in Teacher Education Program described above,

the following courses in the Education Specialist Level One program:

#### *I. Courses in the Diversified-Liberal Studies Major's Concentration in Human Development:*

SPED 123	The Exceptional Child	3 units
SPED 166	Building Family-Professional Partnerships	3 units
PSYC 131	Adolescent and Young Adulthood	4 units
JCTR 075	Introduction to the Helping Professions	2 units

#### *II. Professional Methods Courses:*

SPED 124	Assessment of Special Education Students	3 units
SPED 128M or S	Advanced Programming, M or S Mild/Moderate or Moderate/Severe	3 units
SPED 142M or S	Curriculum and Instruction/SPED Mild/Moderate Or Curriculum and Instruction/SPED Moderate/Severe	3 units
SPED 195E	Positive Behavioral Support in the Classroom	3 units
EDUC 161	Literacy Development	4 units

#### *III. Directed Teaching*

SPED 198M or S	Directed Teaching: M or S Mild/Moderate Or Moderate/Severe	10 units
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In addition to meeting the above degree requirements, a student seeking an Educational Specialist Level I credential must also:

Pass the Reading Instruction Competency Assessment (RICA) (see adviser for the timeline for completion of this exam.)

Pass other mandated exams: CBEST and CSET (see adviser for details and the timeline.)

Completion of the United States Constitution requirement

Pass all program requirements including maintaining a **2.5** GPA, credential candidacy, meeting standards on all embedded signature assignments (implementation in the electronic portfolio on TaskStream)

Demonstrate his/her competence in relationship to Education Specialist competencies and completion of all requirements in the Performance Assessment for California Teachers (PACT), when implemented for the Education Specialist credential(s)

Demonstrate his/her competence in professional practice (student teaching/ internship) as assessed by University Supervisor and their cooperating teacher(s) in their student teaching and/or internship placement(s)

Complete an application for the Education Specialist Level I Credential at the Office of the Credential Analyst.

The holder of a Educational Specialist Level I Credential must complete requirements for a Level II Credential through a CTC-approved Level II Program provided by California colleges or universities or district programs.



Advising materials for the Educational Specialist Credential programs are available in the Department of Curriculum and Instruction, Room 102, School of Education Building. Students are required to meet with a department adviser for registration each semester.

***Courses in the Diversified-Liberal Studies Major's Concentration in Human Development:***

SPED 123	The Exceptional Child	3
SPED 166	Building Family-Professional Partnerships	3
PSYC 131	Adolescent and Young Adulthood	4
JCTR 075	Introduction to the Helping Professions	2

***Teacher Education Prerequisite Courses:***

EDUC 140	Transformational Teaching and Learning	4
EDUC 141	Transformational Teaching and Learning Practicum	2
EDUC 130	Technology Enhanced Learning	2
EDUC 150	Teaching and Assessment	3
EDUC 163	Teaching English Learners	3

***Professional Methods Courses:***

Students must complete Advancement to Teacher Education (Credential Candidacy) steps as described in the Multiple Subject description in this Catalog to enroll in the following courses:

SPED 124	Assessment of Special Education Students	3
SPED 128M or S	Advanced Programming, M or S Mild/Moderate or Moderate/Severe	3
SPED 142M or S	Curriculum and Instruction/SPED Mild/Moderate Or Curriculum and Instruction/SPED Moderate/Severe	3
SPED 195E	Positive Behavioral Support in the Classroom	3
EDUC161	Literacy Development	4

Subject matter competence (CSET) may be met with successful completion of the Diversified major or a Single Subject subject matter program or the state-approved examination(s) for the Multiple or Single Subject-subject matter content areas. State requirements for subject matter competence are subject to change. Federal and state requirements may designate subject matter examinations for level of teaching placement.

***Approval for Special Education Directed Teaching:***

Prior to admission to Directed Teaching, students must attend a meeting that the Coordinator of Special Education and the Director of Field Experiences hold to inform students about application procedures for student teaching or internship placements (STAR review). GPA requirements and minimum grade requirements in teacher preparation courses are reviewed and must be completed. The CBEST examination must be passed and subject matter requirements for the credential must be completed. Students will not be allowed to register for Directed Teaching if the CBEST and subject matter requirements, either the CCTC approved program for the Diversified-Liberal Studies Major with 100% completion of designated courses and with a GPA of 2.5 or higher or successful passage of the CSET examination(s) for the Multiple Subject credential, are not met. A subject matter program or passage of examinations for a Single Subject content area is allowed for the Education Specialist Credential. Students must also complete the United States Constitution requirement (See the Multiple Subject section in the Catalog.) Most school districts may require passage of the CSET-Multiple Subjects examination for employment. Single Subject examinations may also be required for employment.

***Directed Teaching***

**SPED 198M or S Directed Teaching: M or S Mild/Moderate or Moderate/Severe**

**10**

Internship is an option for Directed Teaching for the Education Specialist Credentials. A student must have a bachelor's degree and meet all program requirements for an Internship. See the Internship section in the Catalog for requirements for Internship.

Students must complete competencies for the Education Specialist Program, pass the RICA examination, complete a professional portfolio and program and state assessments, and satisfy all program requirements for a recommendation for the Level One Credential.

**Course Offerings**

**Department of Curriculum and Instruction**

*All course Prerequisites must be completed with a C- or higher.*

**EDUC 010. 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.

**EDUC 011. 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.

**EDUC 100. 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.

**EDUC 120. First and Second Language Acquisition**

**(3)**

Using first language acquisition for comparison, this course introduces first and second language development. It covers theoretical perspectives in first and second language acquisition and explores the relationship between theories and practice in language learning and teaching. This course addresses pedagogical implications of various theories of second language acquisition and discusses socio-cultural factors that influence second language learning. *Prerequisites: EDUC 100, EDUC 110.*

**EDUC 130. Technology Enhanced Learning Environments**

**(2)**

A course focused on basic skills and software for creating multimedia projects, completing assignments in all education courses, and meeting the state's technology standards for teachers. All assignments in this course relate to building the structure and first section of a candidate's teacher education electronic portfolio. Thereafter, candidates add sections to the portfolio during other courses and activities in their programs of study, including evidence that they have met the state's technology standards. Upon graduation, the portfolios are archived in the BSE, and candidates will be able to create a DVD of their entire portfolio or of parts they wish to use. This course is a prerequisite to Admission to Teacher Education.

**EDUC 140. Transformational Teaching and Learning (4)**

This is an introductory course that explores the complex relationships within and among local, state, and national levels of public instruction. The course introduces historical, legal, and social issues that affect diverse educational settings. Topics include key movements and legal cases of prominence in American education; demographic information about learners and schools in California; home, family and school partnerships; and professional stages in teaching careers (e.g., subject matter preparation, teacher education, initial licensure, induction programs, and professional development). The course also includes an introduction to “reflective practice”; an overview of stages in human development; prominent learning and motivation theories; the characteristics of learners with exceptional needs; and individual differences among learners, including English language learners. This course is taken by students interested in Multiple Subject, Single Subject and/or Educational Specialist credentials. It is a prerequisite to Admission to Teacher Education, but it is open to all students at the University. Fieldwork requires fingerprint review and clearance at local districts and TB clearance. There are fees for these services.

**EDUC 142. Visual Arts in Education (4)**

This course is designed to assist students in developing an understanding of the visual arts and how they interface with children’s development through age 18. The course acquaints students with Visual Arts curriculum in the K-12 classroom. A philosophical emphasis will be placed upon the interface of visual arts with children’s development. The course explores such concepts and processes as aesthetic perception, creative expression, visual arts heritage and aesthetic valuing, and media and materials, suitable for children through age 18. *Sophomore or higher standing is required.*

**EDUC 150. Teaching and Assessment (3)**

This course supports reflective teaching and learner-centered principles and practices in K-12 schools. The course focuses on state-adopted curriculum standards and frameworks in seven content fields, approaches to classroom management, selection of curriculum materials at the state and evaluation. The course includes principles of specially designed academic instruction for English language learners and ways of fostering equity in the curriculum. Technology is used to enhance curriculum design and student interaction with content knowledge. Twenty hours of fieldwork is required. *Prerequisites: EDUC 140 and fingerprint and TB test clearances.*

**EDUC 151. Teaching Science (Multiple Subject) (2)**

Methods and curriculum for teaching science in self-contained classrooms. Topics include state-adopted content standards and curriculum frameworks; essential life, physical, and earth science themes, concepts, and skills; instructional planning and diverse and appropriate teaching strategies for meeting the needs of diverse learners, including mainstreamed and culturally, linguistically, economically, and ethnically diverse learners; principles and practices of evaluation of students’ learning. Ten hours of fieldwork is required. *Prerequisite: Admission to Teacher Education and fingerprint and TB test clearance. Taken prior to Directed Teaching.*

**EDUC 152. Teaching Mathematics (Multiple Subject) (2)**

Methods and curriculum for teaching mathematics in self-contained classrooms. Topics include state-adopted content standards and curriculum frameworks; essential mathematics themes, concepts, and skills; instructional planning and diverse and appropriate teaching strategies for meeting the needs of diverse learners, including mainstreamed and culturally, linguistically, economically, and ethnically diverse learners; principles and practices of evaluation of students’ learning. Ten hours of fieldwork is required. *Prerequisite: Admission to Teacher Education.*

**EDUC 157. 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.

**EDUC 161. Literacy Development (Multiple Subject) (4)**

This course introduces methods and curriculum for teaching reading and language arts with integration of humanities and social science for students from kindergarten to eighth grade classrooms. The course focuses on theory-based effective instruction of reading, writing, listening and speaking across the curriculum. Students learn to analyze and evaluate effective literacy skills and strategies in teaching reading, writing, listening and speaking to K-8 students, and to apply and practice these skills and strategies in various instructional settings in various content areas. Emphasis is placed on the integration of reading and language arts throughout the curriculum. Twenty-four hours of fieldwork is required. *Prerequisite: Admission to Teacher Education program with fingerprint and TB test clearance. Taken prior to Directed Teaching (Professional Practice).*

**EDUC 162. Literacy Assessment (Multiple Subject) (2)**

This course investigates uses of ongoing instructional diagnostic strategies in reading and language arts that guide teaching and assessment; early intervention techniques appropriate for a classroom setting; and guided practice of these techniques. Fieldwork is required and shared with CURR 135x. *Prerequisite: Admission to Teacher Education and fingerprint and TB test clearance. Concurrent or prerequisite enrollment in EDUC 161 is required. Taken prior to Directed Teaching.*

**EDUC 163. Teaching English Learners (3)**

An overview of various organizational methods (e.g., submersion, ESL pull-out, transitional, maintenance, enrichment and two-way bilingual, immersion) to meet the needs of English learners. The philosophy, rationale, and goals of these methods are explored and debated. Multiple strategies and approaches to assist learners with content-based instruction and with developing competency and fluency in English are presented. Observations of and practice in such strategies are built into field experiences, including directed teaching, affording teacher candidates multiple opportunities to see, practice, and reflect on ways to meet the needs of English learners. Ten hours of fieldwork is required. *Prerequisites: EDUC 100, EDUC 110, EDUC 120, or permission of Department of Curriculum and Instruction. Fingerprint and TB test clearances.*

**EDUC 164. Introduction to Bilingual Education (3)**

This course provides an overview of bilingual education and is designed to meet the needs of both undergraduate and graduate students who are interested in understanding the role of bilingual, bicultural education in schools. Students explore the related implications of second language acquisition research, sociopolitical theory, and historical as well as contemporary experiences in the contexts of program design, instructional practice, and school/community relations toward a conceptualization of bilingual education as a source of pedagogical enrichment strategies for all learners in all settings. *Prerequisites: EDUC 100, EDUC 110, EDUC 120, and EDUC 163.*

**EDUC 170. Professional Practice (2-10)**

Full-day Student Teaching in public schools. Candidates for a Multiple Subject Preliminary teaching credential are placed in local public schools for intensive application of their knowledge, skills, and dispositions for professional practice in California schools. Student Teaching is full-day teaching for a semester, and undergraduates may be approved for Student Teaching. *Prerequisites: Completion of EDUC 130, EDUC 140, EDUC 141, EDUC 150, EDUC 151, EDUC 152, EDUC 161, EDUC 162, EDUC 163 with grades of “C” or higher; minimum GPA of 2.5; Admission to Teacher Education/Credential Candidacy; CBEST passed: subject matter completed (CSET examination or approved subject matter/waiver program) and*

approved; approval of a Certificate of Clearance; TB test clearance; program assessments prior to Directed Teaching completed; completion of Directed Teaching approval process and clearance by the Director of Field Experiences. The United States Constitution requirement must be completed to apply for a teaching credential. No other coursework permitted other than CURR 195x and SPED 125x and weekend and vacation workshops, except that a candidate must petition for permission to take an additional course in advance with the Curriculum and Instruction Department's Director of Field Experiences. Taken concurrently with: EDUC 172 and SPED 125x.

**EDUC 172. Professional Practice Seminar (2)**

Reflection upon and integration of the Directed Teaching experience in large and small group settings for the SB 2042 Credential. Topics include multicultural education, child abuse, school law, interpreting standardized test scores, professional associations and negotiations, discipline plans, lesson planning and conferencing skills. *Prerequisite, may be taken concurrently: EDUC 170/270 and satisfaction of all prerequisites.*

**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 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 134x or CURR 161 or permission of the instructor.*

**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 180. Workshop Learning: Issues Group Leadership (1)**

**CURR 179. Teaching in the Content Areas (4)**

Preparation of Single Subject credential candidates to develop professional, reflective practices and abilities for teaching in single subject classrooms, especially in secondary schools. Emphasis will be placed on acquiring and practicing the knowledge, skills, and ethical values associated with managing contemporary, culturally diverse secondary classroom environments and with learning about specific subject matter content and pedagogy and a variety of instructional and assessment strategies to benefit all learners. The needs of all secondary school students, including English learners, and characteristics of the school environment will be emphasized for fostering effective teaching and learning. Fieldwork is required in addition to class meetings.

*Prerequisites: Completion of prerequisite courses or concurrent enrollment and approval for Credential Candidacy.*

**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 Fieldwork**

**192B. Secondary Education Fieldwork**

**192D. Early Childhood Education**

**192E. Reading**

**192F. Bilingual Education**

**192G. Cross-cultural Education**

**192H. Special Project**

**CURR 193. Special Topics (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 80% of the diversified major. Senior status or second semester junior status required.*

**EDUC 172. Seminar: Directed Teaching (2)**

Reflection upon and integration of the Directed Teaching experience in large and small group settings for the SB 2042 Credential. Topics include multicultural education, child abuse, school law, interpreting standardized test scores, professional associations and negotiations, discipline plans, lesson planning and conferencing skills. *Prerequisite, may be taken concurrently: EDUC 170/270 and satisfaction of all prerequisites.*

**CURR 197. Research in Education (1-3)**

Primarily field investigation. *Prerequisite: Consent of the department chair.*

## Course Offerings

### Graduate

See Graduate Catalog for course descriptions

CURR 209.	Curriculum Theory	(3)
CURR 212.	Instructional Strategies and Classroom Processes	(3)
CURR 214.	Supervision of Instruction	(3)
CURR 221.	Research in Second Language Acquisition	(3)
CURR 225.	Psychology of Reading	(3)
CURR 252.	Teaching the Creative, Talented and Gifted Child	(3)
		(2-10)
CURR 261.	Microcomputers in Education	(3)
CURR 262.	Advanced Methods in Bilingual Education	(3)
CURR 265.	Microcomputers and Curriculum Design	(3)
CURR 277.	Practicum	(2-4)
CURR 277.	Practicum (Montessori)	(2-4)
CURR 280.	Modern Trends in Early Childhood Education	(3)
CURR 282.	Advanced Curriculum and Theory in Early Childhood Education	(3)
CURR 291.	Independent Graduate Study	(1-3)
CURR 292.	Advanced Fieldwork	(1-6)
292A.	Elementary Education	
292B.	Secondary Education	

292D.	Early Childhood Education	
292F.	Reading	
292H.	Special Projects	
292I.	Advanced Fieldwork in Bilingual Education	
CURR 293.	Special Topics	(2-4)
CURR 295A.	Seminar: Middle School Curriculum	(3)
CURR 295B.	Seminar: Secondary Curriculum	(3)
CURR 295E.	Seminar: Teaching Reading and Writing	(3)
CURR 295G.	Seminar: Elementary Curriculum	(3)
CURR 295H.	Seminar in Language Teaching	(3)
CURR 297.	Graduate Research in Education	(1-3)
CURR 299.	Master's Thesis	(2 or 4)
CURR 302.	Issues in Teacher Education	(3)
CURR 304.	Program Evaluation	(3)
CURR 306.	Curriculum Materials Development	(3)
CURR 308.	Issues in Curriculum and Instruction	(3)
CURR 318.	Research in the Classroom Context	(3)
CURR 320.	Advanced Curriculum Studies	(3)
CURR 352.	Applied Inquiry I	(3)
CURR 354.	Applied Inquiry II	(6)
CURR 356.	Applied Inquiry III	(3)
CURR 358.	Applied Inquiry IV	(3)
CURR 391.	Independent Graduate Study	(1-3)
CURR 392.	Curriculum Practicum	(2-4)
CURR 393.	Special Topics	(2-4)
CURR 395B.	Qualitative Research Design and Methods	(3)
CURR 397.	Graduate Research in Education	(1-3)
CURR 397A.	QSA Proposal Development	(1)
CURR 397B.	Qualifying Scholarly Activities Projects	(1)
CURR 397C.	Dissertation Proposal Development	(1)
CURR 399.	Doctoral Dissertation	(1-15)
EDUC 256.	Content Area Lit Dev/Sec Schools	(3)
EDUC 257.	ESL Theory and Practice	(3)
EDUC 264.	Introduction to Bilingual Education	(3)
EDUC 270.	Professional Practice	(2-10)
EDUC 271.	Professional Practice Music	(2-10)

### 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 124. 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 and Admission to Teacher Education/Credential Candidacy or permission of Special Education Coordinator or Department Chair of Curriculum and Instruction.*

**SPED 125X. Teaching Exceptional Learners (2)**  
This methods-based course is for candidates who will be teaching students with disabilities in the general education classroom, and it includes techniques and strategies for individualizing specific student needs. The course content reviews special education law and the inclusive schools movement. Taken concurrently with Directed Teaching. *Prerequisite: Admission to Teacher Education (Credential Candidacy), fingerprint and TB test clearance, and co-enrollment in CURR 158/258 or CURR 178/278.*

**SPED 128M. 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 and Admission to Teacher Education/Credential Candidacy or permission of Special Education Coordinator or Department Chair of Curriculum and Instruction.*

**SPED 128S. 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 and Admission to Teacher Education/Credential Candidacy or permission of Special Education Coordinator or Department Chair of Curriculum and Instruction.*

**SPED 142M. 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, SPED 166 and Admission to Teacher Education/Credential Candidacy or permission of Special Education Coordinator or Department Chair of Curriculum and Instruction.*

**SPED 142S. 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 and Admission to Teacher Education/Credential Candidacy or permission of Special Education Coordinator or Department Chair of Curriculum and Instruction.*

**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 191. Independent Study (1-3)**  
*Consent of the department chair.*

**SPED 193. Special Projects (1-3)**

**SPED 195E. 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 and Admission to Teacher Education/Credential Candidacy or permission of Special Education Coordinator or Department Chair of Curriculum and Instruction.*

**SPED 198M. Directed Teaching: Mild/Moderate (10)**

This student teaching 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 Directed Teaching and permission of the Director of Special Education or designate.*

**SPED 198S. Directed Teaching: Moderate/Severe (10)**

This student teaching 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 Directed Teaching and permission of the Director of Special Education or designate.*

**Course Offerings****Graduate**

See Graduate Catalog for course descriptions

SPED 224. Assessment of Special Education Students	(3)
SPED 228M. Advanced Programming for Students with Mild/Moderate Disabilities	(3)
SPED 228S. Advanced Programming for Students with Moderate/Severe Disabilities	(3)
SPED 242M. Curriculum and Instruction for Students with Mild/Moderate Disabilities	(3)
SPED 242S. Curriculum and Instruction for Students with Moderate/Severe Disabilities	(3)
SPED 250. Introduction to Induction Plan	(2)
SPED 252. Portfolio Assessment	(2)
SPED 291. Independent Graduate Study	(1-3)
SPED 293. Special Project	(1-3)
SPED 295A. Seminar: Crucial Issues in Special Education	(3)
SPED 295E. Positive Behavioral Support in the Classroom	(3)
SPED 297. Graduate Research	(1-3)
SPED 298M. Directed Teaching: Mild/Moderate	(6-10)
SPED 298S. Directed Teaching: Moderate/Severe	(6-10)
SPED 298IM. Internship: Mild/Moderate	(5)
SPED 298IS. Internship: Moderate/Severe	(5)
SPED 299. Master's Thesis	(4)
SPED 391. Independent Graduate Study - Special Education	(1-3)
SPED 393. Special Project	(1-3)
SPED 395a. Seminar: Crucial Issues in Special Education	(3)

**Department of Educational Administration and Leadership**

**EADM 130. Seminar: Cultural Basis of Conflict in Education (3)**  
Analysis of cultural diversity in American classrooms. Not open to doctoral students.

**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.*

**Course Offerings****Graduate**

See Graduate Catalog for course descriptions

EADM 204. Pluralism in American Education	(3)
EADM 206/306. Comparative Education	(3)
EADM 207/307. Sociology of Education	(3)
EADM 210. Seminar in American Educational Thought	(3)
EADM 220. Seminar: Social Class Effects in Education	(3)
EADM 230. Seminar: Cultural Basis of Conflict in Education	(3)
EADM 231. Seminar: Educational Anthropology	(3)
EADM 232. Gender Issues: Cross-cultural Perspectives	(3)
EADM 233. Seminar: Multicultural Education	(3)
EADM 234. Seminar: Asian Cultures	(3)
EADM 240. Introduction to Student Affairs	(3)
EADM 241. Student Development Theory	(3)
EADM 242. College Student Environment	(3)
EADM 243. Legal Issues in Higher Education Student Affairs	(3)
EADM 244. Strategies Promoting Student Development	(3)
EADM 245. Counseling Theories in College Student Affairs	(3)
EADM 246. Counseling Special Populations	(3)
EADM 276. Seminar: Educational Planning, Delivery, and Assessment	(3)
EADM 277. Diversity and Constituency in Educational Administration	(3)
EADM 278. Educational Organizations and Diverse Constituencies	(3)
EADM 280. School Law and Legal Processes	(3)
EADM 283. School Finance and Business Administration	(3)
EADM 286. Administration of Human Resources	(3)
EADM 289. Educational Leadership	(3)
EADM 290. Seminar: Computers in Educational Administration	(3)
EADM 291. Independent Graduate Study	(1-3)
EADM 292A. Student Affairs Field Experiences	(1-3)
EADM 292. Field Experience in Administration and Supervision	(1-4)
EADM 293. Special Topics	(1-3)
EADM 350B. Seminar: Social Scientific Thinking	(3)
EADM 352. Applied Inquiry I	(3)
EADM 354. Applied Inquiry II	(6)
EADM 356. Applied Inquiry III	(3)
EADM 358. Applied Inquiry IV	(3)
EADM 360. Seminar: Trends, Issues, and the Dynamics of Change	(3)
EADM 361. Seminar: Ethics, Law, and Finance	(3)
EADM 362. Seminar: Administration of Instructional Programs	(3)

EADM 363.	Seminar: Personnel Issues	(3)	EPSY 291.	Independent Graduate Study	(1-3)
EADM 364.	Seminar: Educational Policy-Making and Politics	(3)	EPSY 293.	Special Project	(1-3)
EADM 365.	Seminar: Administration of Higher Education	(3)	EPSY 294B.	School Psychology Fieldwork	(1-4)
EADM 366.	Seminar: Communications and Public Relations in Education	(3)	EPSY 297.	Graduate Research	(1-3)
EADM 367.	Seminar: Cultural Diversity and Educational Administration	(3)	EPSY 299.	Master's Thesis	(4)
EADM 368.	Seminar: Administering Complex Educational Organizations	(3)	EPSY 300.	Seminar: Introduction to School Psychology	(1)
EADM 369.	Seminar: District Office Administration	(3)	EPSY 301.	Data-Based Decision Making I	(2)
EADM 370.	Professional Induction Planning	(2)	EPSY 302.	Data-Based Decision Making II	(2)
EADM 371.	Professional Assessment	(2)	EPSY 306.	Psychotherapeutic Interventions in the Schools	(3)
EADM 372.	Program Evaluation and Grant Writing	(3)	EPSY 307.	Group Counseling	(3)
EADM 373.	Economics of Education	(3)	EPSY 308.	History, Systems, and Indirect Interventions for the School Psychologist	(3)
EADM 381.	Law in Higher Education	(3)	EPSY 309.	Consultation Methods	(3)
EADM 382.	Leadership in Higher Education	(3)	EPSY 310.	Crisis Intervention	(3)
EADM 383.	Administering Curriculum, Pedagogy and Assessment in Higher Education	(3)	EPSY 311.	California Law and Professional Ethics	(1)
EADM 391.	Graduate Independent Study	(1-3)	EPSY 312.	Child Psychopathology & Wellness Promotion	(3)
EADM 392.	Internship and Advanced Field Experience in Administration	(1-4)	EPSY 315.	Individual Assessment	(3)
EADM 393.	Special Topics	(1-3)	EPSY 316.	Behavior and Personality Assessment in the Schools	(3)
EADM 397A.	Seminar: Qualifying Scholarly Activities	(1)	EPSY 317.	Neuropsychology in the Schools	(3)
EADM 397B.	Seminar: Doctoral Research in Educational Administration	(3)	EPSY 320A.	Seminar: Advanced Human Development - I	(3)
EADM 399.	Doctoral Dissertation	(1-15)	EPSY 320B.	Seminar: Advanced Human Development – II	(3)
			EPSY 321.	Seminar: Advanced Human Development III	(3)
			EPSY 324.	Seminar: Advanced Consultation and Supervision	(3)
			EPSY 391.	Graduate Independent Study	(1-3)
			EPSY 393.	Special Topics	(1-3)
			EPSY 395C.	Quantitative Research Design and Methods	(3)
			EPSY 395E.	Advanced Statistical Methods	(3)
			EPSY 395J.	Seminar: Promoting Cultural Competence Across Systems	(3)
			EPSY 395M.	Measurement and Theory and Practice	(3)
			EPSY 397.	Graduate Research	(1-3)
			EPSY 398.	School Psychology Internship	(1-4)
			EPSY 399.	Doctoral Dissertation	(1-15)

### Department of Educational and School Psychology

#### EPSY 121X. Learner-Centered Concerns (3)

A general overview of stages in human development from birth to young adulthood, prominent learning and motivation theories, learner-centered principles of teaching and assessment, the characteristics of learners with exceptional needs, and individual differences among learners including English language learners. Taken by students interested in Multiple Subject, Single Subject and/or Educational Specialist credentials. This course is a prerequisite to Admission to Teacher Education, but it is open to all students at the University. Twenty hours of fieldwork in K-12 public schools is required, which also requires fingerprint review and clearance at local districts and TB test clearance. There are fees for these services.

#### EPSY 191. Independent Study (1-3)

*Prerequisite: Consent of the department chair.*

#### EPSY 201. Techniques of Research (3)

Study of the various research methodologies including qualitative, descriptive, causal-comparative, survey, correlational and experimental. Emphasis on learning to read and comprehend research published in professional journals. This includes understanding how basic descriptive and inferential statistics are applied to address quantitative research questions.

## Course Offerings

### Graduate

See Graduate Catalog for course descriptions

EPSY 214.	Intermediate Statistics	(3)
EPSY 220.	Nature and Conditions of Learning	(3)
EPSY 285.	Alcohol and Drug Dependency Counseling	(1)
EPSY 286.	Child Abuse Counseling Issues	(1)
EPSY 287.	Human Sexuality and Sexual Counseling	(1)
EPSY 288.	Behavioral Intervention Strategies	(3)

## Educational Resource Center

#### MATH 001. Pre-algebra and Lab (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. Neither the course credit or course grade applies towards graduation. *Prerequisite: An appropriate test score or permission of the instructor.*

#### MATH 003. Elementary Algebra and Lab (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. Neither the course credit or course grade applies towards graduation. *Prerequisites: A passing grade (equivalent to C- or better) in Math 001, an appropriate test score\* or permission of the instructor.*

**MATH 005. Intermediate College Algebra and Lab (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. Pass/No credit (P/NC) grading option is not allowed for this course. A grade of C- or better is required to satisfy the University's Basic Skills requirement in quantitative analysis/math. Students who complete MATH 005 and 007 may enroll in Calculus (MATH 051). *Prerequisites: A passing grade (equivalent to C- or better) in MATH 003, an appropriate test score or permission of the instructor.*

**MATH 007. Trigonometry and Lab (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. Pass/No credit (P/NC) grading option is not allowed for this course. (Students who complete MATH 005 and 007 with a C- or better may enroll in MATH 051- Calculus). *Prerequisites: A grade of C- or better in MATH 005, an appropriate test score or permission of the instructor.*

**ESL 009. 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 010. 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 013. 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 015. 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 017. 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. Pass/No credit (P/NC) grading option is not allowed for this course. *Prerequisite: An appropriate test score or permission of the instructor.*

**WRIT 019. Basic Writing (3)**

Concentrate on the practical applications of writing theory to develop confidence and competence in written composition skills. Neither the course credit or course grade applies towards graduation. *Prerequisites: A grade of C- or better in WRIT 017, an appropriate test score or permission of the instructor.*

**WRIT 021. 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. Pass/No credit (P/NC) grading option is not allowed for this course. A grade of C- or better is required to satisfy the University's Basic Skills requirement in writing. *Prerequisites: A passing grade (equivalent to C- or better) in WRIT 019, an appropriate test score or permission of the instructor.*

**ESL 023. Advanced ESL: Speaking and Pronunciation (2)**

The pronunciation, rhythm, stress and intonation of American English will be studied and practiced, as well as skills needed for academic discussion. Students will receive help in improving pronunciation of sounds.

**ESL 025. 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 031. Reading for College (2)**

Examination of the nature of the reading process and of techniques used by successful readers through the development of vocabulary, comprehension, concentration, memory and fluency skills. Pass/No credit (P/NC) grading option is not allowed for this course. A grade of C- or better is required to satisfy the University's Basic Skills requirement in reading. *Prerequisite: An appropriate test score or permission of the instructor.*

**READ 051. 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 061. 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 091. Individually Prescribed Study (1-3)**

Development of specific thinking, organization and communication skills as determined through individual assessment and prescription.

**READ 093. Special Projects (1-3)**

*Prerequisite: Consent of the instructor.*

## Gladys L. Benerd School of Education Faculty

**Lynn G. Beck**, 2005, Dean and Professor of Education, B.A., Belhaven College, 1974; M.A., University of Mississippi, 1976; Ph.D., Vanderbilt University, 1991.

**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.

**Norena Norton Badway**, 2003, Associate Professor of Education, B.A., University of Missouri, 1969; M.A., University of the Pacific, 1986; Ph.D., University of California, Berkeley, 1998.

**Dennis Brennan**, 1980, Assistant Dean and 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.

**Kellie Cain**, 2002, Assistant Director of Field Experiences, Assistant Professor, B.A., University of California, Davis, 1987; M.A., University of the Pacific, 1999; Ed.D., 2005.

**Marilyn E. Draheim**, 1986, Assistant Dean and 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.

**Michael Ellum**, 2004, Associate Professor of Education, B.A., Appalachian State University, 1975; M.A., 1975; Ed.D., University of Alabama, Tuscaloosa, 1983.

**Scott Evans**, 1990, Instructor of Education, B.A., California State University, Sonoma, 1976; M.A., University of California, Davis, 1980.

**Ann L. Go**, 2005, Assistant Professor of Education, B.A., California State University, Sacramento, 1989; M.A., 1993; Ph.D., University of California, Davis, 2003.

**Rachelle Hackett**, 1994, Associate Professor of Education, B.A., California State University, Fresno, 1982; M.S., Stanford University, 1986; Ph.D., 1994.

**Delores E. McNair**, 2006, Assistant Professor, B.A., Holy Names College, 1988; MPA, University of Southern California, 1988; Ed.D., Oregon State University, 2002.

**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.

**Robert Oprandy**, 2002, Professor of Education, B.A., Rutgers University, 1969; M.A., Teachers College, Columbia University, 1977; M.Ed., 1979; Ed.D., 1988.

**Andrew Pitcher**, 2003, Instructor of Education, B.S., University of the Pacific, 2000; M.A., University of California, Davis, 2002.

**Gregory R. Potter**, 2002, Assistant Professor of Education, A.B., University of California, Davis, 1992; M.S., 1996; Ph.D., 2000.

**Jonathan Sandoval**, 2006, Professor, A.B., University of California, Santa Barbara, 1964; M.A., University of California, Berkeley, 1966; Ph.D., 1969.

**Claudia W. Schwartz**, 1987, Director of Field Experiences, Instructor of Education, B.A., University of the Pacific, 1974; M.A., 1981.

**Amy Scott**, 2007, Assistant Professor, B.A., University of California, Berkeley, 2000; M.A., Arizona State University, Tempe, 2002; Ph.D., 2006.

**Antonio Serna**, 2006, Clinical Assistant Professor, B.A., California State University, Fresno, 1974; M.A., Stanford University, 1978; Ed.D. University of the Pacific, 1990.

**Heidi J. Stevenson**, 2004, Assistant Professor of Education, B.A., University of California, Davis, 1995; M.A., Chapman University, 2001; Ed.D., University of California, Santa Barbara, 2004.

**Linda Webster**, 1996, Associate Professor of Education, B.A., California State University, Fresno, 1981; M.A., University of California, Berkeley, 1984; Ph.D., 1988.



# school of engineering and computer science

Phone: (209) 946-2151  
 Location: Baun Hall  
 Website: [www.pacific.edu/eng](http://www.pacific.edu/eng)  
 Ravi Jain, Dean

## Degrees offered

Bachelor of Science in Bioengineering  
 Bachelor of Science in Civil Engineering  
 Bachelor of Science in Computer Engineering  
 Bachelor of Science in Electrical Engineering  
 Bachelor of Science in Engineering Management  
 Bachelor of Science in Engineering Physics  
 Bachelor of Science in Mechanical Engineering  
 Bachelor of Science

Master of Science in Engineering Science

## Majors Offered

Computer Science

## Minors

Computer Science  
 Engineering Management  
 International Engineering  
 Project Management (for non-engineering majors)  
 Sustainability  
 Technology (for non-engineering majors)

## Mission

The mission of the School of Engineering and Computer Science is to provide a superior, student-centered learning environment which emphasizes close faculty-student interaction, experiential education, and distinctive research opportunities. Graduates will be prepared to excel as professionals, pursue advanced degrees, and possess the technical knowledge, critical thinking skills, creativity, and ethical values needed to lead the development and application of technology for bettering society and sustaining the world environment.

## Engineering

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 and Computer Science, 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, health care 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;
3. On-the-job experience in the Cooperative Education (Co-op) Program described below. Through this threefold program, theory and practice are brought together; 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.

## Computer Science

The Computer Science Department provides an undergraduate education in computer science which features current and emerging technologies and experiential learning. The major offers a strong background in the theory and practice of computer science. Students select one or more areas of concentration based on their post-graduation plans. Selection of an area of concentration guides students in the selection of elective courses. Students trained in computer science will be among the change agents responsible for forging new computing breakthroughs and new interactions with other disciplines.

The computer science program includes a general education component, a math and science component, a computer science core component and electives selected according to the student's chosen area of concentration.

## Degrees in Engineering and Computer Science

The School of Engineering and Computer Science offers eight undergraduate degree programs: Bioengineering, Civil Engineering, Computer Engineering, Computer Science, Electrical Engineering, Engineering Management, Engineering Physics, and Mechanical Engineering. The curricula are divided into lower-division and upper-division segments.

The lower-division engineering curriculum 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.

The Computer Science Department offers a BS degree with a major in Computer Science. A minor program is also available. The curriculum for the Computer Science major includes a core of courses that give students a solid understanding of fundamental computing knowledge and skills. The major has a variety of concentrations that offer a course of study around a theme. The concentrations offer a flexible range of courses that promote a student's specific interests and post-graduate plans. They also guide the selection of elective courses. The available concentrations are Networking and Computer Security, Games and Simulation, Software Engineering, Computational Modeling, Information Systems, Theoretical Foundations, and Computational Biology.

The School of Engineering and Computer Science offers a Master of Science in Engineering Science (MSES) degree with a concentration in Civil Engineering. The MSES is designed to strengthen students' technical, analytical, and professional breadth and depth. Students are introduced to techniques and best practices of professional research and learn the foundations for assessing the merits of published technical findings

### Accelerated Five-Year 4+1 Blended Program

The accelerated five-year 4+1 Blended Program provides an excellent opportunity for students to begin their graduate work while completing their undergraduate degree requirements. Students can pursue the accelerated 4 + 1 Blended Program which allows them to complete their bachelors and masters degree in a total of five years. This five year period will include some summer sessions, depending upon if advanced placement units were earned prior to starting at Pacific.

Students would begin by enrolling in an undergraduate program in the Pacific SOECS. Following acceptance into the Blended Program, students may begin taking graduate level courses at any time after they reach senior status, allowing the bachelors and masters degrees to blend together. The two degrees are awarded on the same date.

### Accreditation

Civil Engineering, Computer Engineering, Electrical Engineering, Engineering Management, Engineering Physics, and Mechanical Engineering are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology Inc., the nationally recognized accrediting body for engineering curricula. In 2005, ABET formally changed its name from the "Accreditation Board for Engineering and Technology" to ABET, Inc.. The Computer Science major leading to a BS degree with a major in Computer Science is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc.

### Engineering Industry Fellowship Program (EIF)

The Engineering Industry Fellowship Program (EIF) is a dual-purpose partnership between industry and the University of the Pacific School of Engineering and Computer Science. 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 four or 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 University, and student fellows while they pursue their degrees at Pacific. Student fellows receive paid summer internships, one or two paid co-op assignments, \$2,000 per year in additional scholarship funding, and an industry mentor from their sponsoring company. The student fellow agrees to maintain high academic achievement and to perform satisfactorily on the job.

### Engineering Tuition

Most of the Engineering curricula at Pacific include a mandatory 32-unit 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, plus any additional costs of summer school tuition.

During the last two years of the program, the students are required to complete a seven-month summer-fall or spring-summer cooperative education assignment. Many students opt for an additional semester of co-op, adding up to a total of 12 months of co-op experience. Students receive fourteen units of credit for the summer term, and eighteen units for the fall and/or

spring term. The tuition rate for fall or spring semesters of co-op is one half the normal rate. There is no tuition charge for the summer of co-op. Further, for each fall and spring semester that students are on co-op, they are entitled to a summer of courses free of tuition up to a maximum of 20 units. Any units over 20 will be charged at the prevailing summer rate. (See Cooperative Education Schedule). Students should complete the application for summer tuition remission at the earliest possible date. Applications are available in the Co-op Office.

### Computer Science Tuition

Computer Science at Pacific is a four-year program with a mandatory senior project component. A cooperative education component is strongly encouraged and is available in any term including the summer. Students electing to take a Cooperative Education component during a Fall or Spring term should work with their advisor to ensure that progress in their academic program is not impacted. The student's fee structure follows University guidelines.

### Cooperative Education for Engineering Programs

Cooperative Education is an integral part of the engineering curriculum at University of the Pacific. Engineering students alternate between terms in the classroom and periods of full-time, paid professional practice. The co-op program is coordinated through the School of Engineering and Computer Science 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 students graduating with a BS in Engineering. There are three 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. Students who are non-citizens of the U.S. that elect not to participate in the Co-op must complete a Petition for Co-op Waiver for Non-U.S. Citizens and submit it to the Co-op Office in the School of Engineering and Computer Science. 2) Students who have prior work experience in engineering may file a petition for equivalent Co-op credit

prior to the end of their 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 and Computer Science. 3) Bioengineers following the Bio-medical Career Pathway. For more information, contact the Co-op Office at (209) 946-2151.

Students should be in residence at Pacific for one semester immediately prior to their first Co-op experience. Students on academic probation are generally 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 and Computer Science guarantees all such students Co-op placements.

All lower-division courses, as well as Fundamental Skills requirements should be completed before a student goes out on their 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 their major area.

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.

### Cooperative Education For Computer Science Programs

Experiential learning is an integral part of the computer science curriculum at University of the Pacific. All computer science students are required to complete a senior project, which is a primary experiential learning experience. Computer Science students are strongly encouraged to also elect a co-op experience or undergraduate research, to further enhance their experiential learning. Cooperative Education employment enhances a computer science 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, and improves student's understanding of their future career prospects.

Computer science students who elect a co-op experience spend at least one term in their placement(s). The co-op program is coordinated through the School of Engineering and Computer Science Office of Cooperative Education.

Faculty coordinators keep in close contact with students and their employers during the work periods.

Students should be in residence at Pacific for one semester immediately prior to their first Co-op experience. Students on academic probation are generally 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 work aggressively with the Co-op Coordinators in preparing resumes, developing interviewing skills and seeking appropriate placement.

All lower-division core courses, as well as Fundamental Skills requirements should 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 their major area.

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.

### Student Organizations

All students are encouraged to actively participate in a professional society appropriate to their major.

#### *National Honor Societies*

Tau Beta Pi (Engineering Honor Society - all engineering majors)

Eta Kappa Nu (Honor Society for Electrical, Computer Engineering, Engineering Physics majors)

#### *Student Affiliates of Professional Organizations*

American Society of Civil Engineers (ASCE)

American Society for Engineering Management (ASEM)

American Society of Mechanical Engineers (ASME)

Association of Computing Machinery (ACM)

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)

Biomedical Engineering Society (BMES)

Engineers Without Borders

### 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 Multicultural 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 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 and Computer Science. MEP seeks to fulfill the above goals through collaborations and partnerships with an Industrial Advisory Board, three student chapters of related professional organizations, 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 for Engineering Programs

The general education requirements for engineering students are as follows: all entering freshmen must take Pacific Seminar 1-What is a Good Society?, and Pacific 2 Topical Seminar on a Good Society. As seniors they must take Pacific Seminar 3. All students must take ENGR 030, Engineering Ethics and Society which is in Category IIB of the general education program. In addition, they must take a total of three courses: two from Category I-The Individual and Society and one from Category II-Human Heritage. Only one class can come from each subdivision (A, B or C) within each category. 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.

Beginning Fall 2008, Pacific accepts a 4 or higher for Advance Placement and a 5 or higher for Higher Level International Baccalaureate

and that a maximum of 28 units total from Advanced Placement, International Baccalaureate DANTES and/or CLEP test results may be applied toward a Pacific degree including General Education and major requirements.

### General Education Requirements for Computer Science Programs

The general education requirements for students majoring in Computer Science are as follows: all entering freshmen must take Pacific Seminar 1-What is a Good Society?, Pacific 2-Topical Seminars on a Good Society and Pacific Seminar 3, The Ethics of Family, Work, and Citizenship. All students must take ENGR 30, Engineering Ethics and Society which is in Category IIB of the general education program. Each student must also take four additional courses chosen from categories IA, IB, IC, IIA and IIC. Each of these four courses must be from a different category. The University's category III requirement is fulfilled by courses required by the major. In addition to these general education requirements, student must complete 30 units of humanities and social science courses. The Pacific Seminar courses and all category I and II general education courses count towards this 30 unit requirement.

Beginning Fall 2008, Pacific accepts a 4 or higher for Advance Placement and a 5 or higher for Higher Level International Baccalaureate and that a maximum of 28 units total from Advanced Placement, International Baccalaureate DANTES and/or CLEP test results may be applied toward a Pacific degree including General Education and major requirements.

Community college students can transfer to the School of Engineering and Computer Science at any point in their academic program. It is important that each student contact the appropriate Department at Pacific as early as possible and arrange for faculty assistance in planning his or her transfer.

The School of Engineering and Computer Science 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 backgrounds with program requirements. Students are encouraged to complete introductory math and science courses prior to entering the program. An introductory object-oriented programming course (C++ or Java) is beneficial for some. Check with your program in advance.

### Transfer General Education

The School of Engineering and Computer Science will accept the transfer general education program (IGETC - the transfer core curriculum which fulfills the lower division general education requirements) from any community college. All students must take Pacific Seminar 3 during their senior year. All students must take a 3-unit course in engineering and computing ethics.

### General Academic Policies

#### Engineering and Computer Science Prerequisite Requirement

All engineering and computer science course prerequisites must be passed with a C- or higher grade.

#### 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 Office of the Registrar before the deadline established by the Office of the Registrar (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 GE 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 and Computer Science 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 as an elective, ap-

proval 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.

#### Maximum Summer Course Load and Credits

The maximum number of classes, excluding physical activity courses, that an engineering or computer science 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 20 units. Additional units must be petitioned through the School of Engineering and Computer Science Academic 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 or computer science courses.

#### Graduation Requirements (Engineering Majors)

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:

Successful completion of at least 120 units.

Successful completion of all courses required in the student's major.

3. Successful completion of a minimum of 32 Cooperative Education credits and the Professional Practice Seminar.
4. A GPA of at least 2.0 on all letter-graded work completed at Pacific.
5. A GPA of at least 2.0 for all engineering courses completed at Pacific.
6. Engineering Management students must have at least a 2.0 GPA in their business/management classes.
7. Submission of application for graduation to the Office of the Registrar. Refer to the Academic Regulations section of the catalog.

### *Graduation Requirements (Computer Science Majors)*

1. Successful completion of at least 120 units.
2. Successful completion of all courses required in the student's major.
3. A GPA of at least 2.0 on all letter-graded work completed at Pacific.
4. A GPA of at least 2.0 for all major courses, including cognates, completed at Pacific.
5. Submission of application for graduation to the Office of the Registrar. Refer to the Academic Regulations section of the catalog.

### *Limitation on obtaining two degrees*

The SOECS, in conjunction with the Office of the Registrar, will approve the student receiving a second bachelor of science degree subject to the following conditions:

1. The student must meet all requirements for each degree and must file a study plan, approved by his/her adviser, with the Office of the Registrar.
2. The pursuit of a double major is not a valid reason for waiving any SOECS or University requirements.

## Bioengineering

Phone: (209) 946-2575

Location: Anderson Hall

Website: [www.pacific.edu/eng/Programs/bio-engineering.html](http://www.pacific.edu/eng/Programs/bio-engineering.html)

### Degrees Offered

Bachelor of Science in Bioengineering

### Educational Objectives

1. Our graduates will have a thorough foundation in engineering, and relevant knowledge of life sciences and ethical issues, that enables a successful career in bioengineering.
2. Our graduates will be qualified to practice as an engineer and/or pursue advanced study in bioengineering and related fields (e.g. MS, Ph.D., MD, DDS).
3. Our graduates will have a breadth and depth of opportunities, both academic and extracurricular, to enable them to develop their leadership skills, including the ability to communicate effectively to diverse audiences.
4. Our graduates will develop practical skills and experience due to the co-op in industry, government or academia.

### Bachelor of Science in Bioengineering

In order to earn the bachelor of science in bioengineering, students must adhere to the University's graduation requirements for bachelor degrees, completing a minimum of 120 units of academic work. Bioelectrical and Biomechanical Career Paths require a minimum of 32 units of Cooperative Education. Cooperative Education for the Biomedical Career Path is optional.

#### I. General Education Requirements

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

#### Social and Behavioral Sciences

Two courses from the following:

- IA. Individual and Interpersonal Behavior (PSYC 031 recommended)
- IB. U.S. Studies (BUSI 053 recommended)
- IC. Global Studies

#### Arts and Humanities

IIB. ENGR 030

One course from the following categories:

- IIA. Language and Literature (CLAS 053 recommended)
- IIC. Visual and Performing Arts

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) Only one course can come from each subdivision (A, B, or C). 3) No more than 8 units from a single department may be applied to meet the breadth program requirements.

### II. Degree Requirements

Mathematics:

MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4
MATH 057	Ordinary Differential Equations	4
MATH 039	Probability with Application to Statistics	4

Basic Science:

BIOL 051	Principles of Biology	4
BIOL 061	Principles of Biology	4
CHEM 025	General Chemistry	5
CHEM 027	General Chemistry	5
PHYS 053	Principles of Physics I	5
PHYS 055	Principles of Physics II	5

General Engineering:

ENGR 010	Dean's Seminar	1
ENGR 015	Engineering Graphics	3
ENGR 019	Computer Applications in Engineering	3
ENGR 020	Engineering Mechanics I (Statics)	3
ENGR 045	Materials Science – Properties and Measurements	4
ENGR 120	Engineering Mechanics II (Dynamics)	3
ENGR 025	Professional Practice Seminar	1

Bioengineering Core:

BENG 005	Introduction to Bioengineering	1
BENG 103	Biomaterials	4
BENG 124	Biomechanics	4
BENG 171	Bioelectricity	4
BENG 108	Engineering Physiology	4
BENG 195	Senior Project	4
ENGL 105	Technical Writing	4
ECPE 041	Circuits	3
ECPE 041L	Circuits Laboratory	1
Electives	3 additional courses	14

Cooperative Education:

Minimum 32 units, including:		
ENGR 181	Professional Practice	14-18
ENGR 182	Professional Practice	14-18
ENGR 183	Professional Practice	14-18

**Note:** Cooperative Education is optional for biomedical career path.

## Civil Engineering

Phone: (209) 946-2153

Location: Anderson Hall

Website: [www.pacific.edu/eng/Programs/civil-engineering.html](http://www.pacific.edu/eng/Programs/civil-engineering.html)

### Degrees Offered

Bachelor of Science in Civil Engineering

The Civil Engineering program at the University of the Pacific subscribes to the following program objectives:

### Educational Objectives

- To develop graduates who have the technical knowledge and skills necessary to analyze and solve open-ended problems in civil engineering, with emphasis in construction, environmental, structural, and water resources engineering.
- To develop graduates who have the communication and management skills appropriate to practice civil engineering.
- To develop graduates who are capable of professional licensure, post-graduate studies, or leadership in the civil engineering profession.

### Bachelor of Science in Civil Engineering

In order to earn the bachelor of science in civil engineering degree, students must adhere to the University's graduation requirements for bachelor degrees, completing a minimum of 120 units of academic work and a minimum of 32 units of Cooperative Education.

#### I. General Education Requirements

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific 2 Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

#### Social and Behavioral Sciences

Two courses from the following:

- Individual and Interpersonal Behavior
- U.S. Studies
- Global Studies

#### Arts and Humanities

IIB. ENGR 030

One course from the following categories:

- Language and Literature
- Visual and Performing Arts

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) Only one course can come from each subdivision (A, B, or C). 3) No more than 8 units from a single department may be applied to meet the breadth program requirements.

#### II. Degree Requirements

Mathematics and Science (minimum 32 units):

MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4

MATH 057	Ordinary Differential Equations	4
PHYS 053	Principles of Physics I	5
CHEM 025	General Chemistry	5
	Math and Science Electives	6

Engineering Science:

ENGR 010	Dean's Seminar	1
ENGR 015	Engineering Graphics	3
ENGR 019	Computer Applications in Engineering	3
ENGR 020	Engineering Mechanics I (Statics)	3
ENGR 025	Professional Practice Seminar	1
ENGR 045	Materials Science	4
ENGR 120	Engineering Mechanics II (Dynamics)	3
ENGR 121	Mechanics of Materials	4

One of the following: 3-4

ENGR 122	Thermodynamics I	
ECPE 041	Circuits	

Professional Practice (minimum 32 units):

ENGR 181	Professional Practice	14-18
ENGR 182	Professional Practice	14-18
ENGR 183	Professional Practice	14-18

Civil Engineering Core:

CIVL 022	Surveying	3
CIVL 060	Water Quality	4
CIVL 100	Introduction to Structural Engineering	4
CIVL 130	Fluid Mechanics I	3
CIVL 130L	Fluid Mechanics I Lab	1
CIVL 132	Introduction to Environmental Engineering	4
CIVL 133	Water Resources Engineering	4
CIVL 140	Introduction to Geotechnical Engineering	4
EMGT 170	Engineering Management	4
CIVL 180	Engineering Synthesis	4

Four of the following from a and b: 10-12

a. Civil Engineering Analysis Electives:

CIVL 134	Groundwater	
CIVL 145	Engineering Geology	
CIVL 160	Advanced Structural Analysis	
CIVL 161	Matrix Analysis of Engineering Systems	
CIVL 171	Water and Environmental Policy	
CIVL 191	Independent Study	
CIVL 193	Special Topics	
CIVL 197	Undergraduate Research	
EMGT 174	Engineering Project Management	

b. Civil Engineering Design Electives:

CIVL 136	Design of Wastewater Facilities	
CIVL 141	Foundation Design	
CIVL 150	Transportation Engineering	
CIVL 151	Heavy Construction Methods	
CIVL 165	Structural Steel Design	
CIVL 166	Reinforced Concrete Design	
CIVL 167	Earthquake Engineering	
CIVL 193	Special Topics	

**Note:** 1) 4 units must be taken from design electives. 2) 4 units must be taken from structural design electives

## Department of Electrical and Computer Engineering

### Degrees Offered

Bachelor of Science in Computer Engineering

Bachelor of Science in Electrical Engineering

Bachelor of Science in Engineering Physics

The goals of the ELECTRICAL and Computer 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

Phone: (209) 946-2153

Location: Anderson Hall

Website: [www.pacific.edu/eng/Programs/computer-engineering.html](http://www.pacific.edu/eng/Programs/computer-engineering.html)

### Computer Engineering Program (BSCpE) Objectives

Graduates of the BSCpE degree program will be prepared to build and sustain successful careers in computer engineering, and actively engage in life-long learning.

### Computer Engineering Program (BSCpE) Outcomes

Upon graduation, graduates will have:

- an ability to apply knowledge of mathematics, science, and engineering.
- an ability to design and conduct experiments, as well as to analyze and interpret data.
- an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- an ability to function on multidisciplinary teams.
- an ability to identify, formulate, and solve engineering problems.
- an understanding of professional and ethical responsibility.
- an ability to communicate effectively.

- the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- a recognition of the need for, and an ability to engage in life-long learning.
- a knowledge of contemporary issues.
- an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
- clearly defined career objectives, and be able to market themselves via an effective, professional resume and behavior-based interview techniques.

### Bachelor of Science in Computer Engineering

In order to earn the bachelor of science in computer engineering, students must adhere to the University's graduation requirements for bachelor degrees, completing a minimum of 120 units of academic work and a minimum of 32 units of Cooperative Education.

All Computer Engineering students must pass the Fundamental Chemistry Skills requirement or pass CHEM 023 before they can take ECPE 131 / 131L.

All Computer Engineering students must successfully pass the Computer Engineering Core Assessment Exam as a prerequisite for ECPE 196 – Senior Project II. The objective of the Core Assessment Exam is to ensure that all graduating Computer Engineering students have a satisfactory level of knowledge of fundamental concepts of their major.

#### I. General Education Requirements

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*

#### Social and Behavioral Sciences

Two courses from the following:

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

IIB. ENGR 030

One course from the following categories:

- IIA. Language and Literature
- IIC. Visual and Performing Arts

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) Only one course can come from each subdivision (A, B, or C). 3) No more than 8 units from a single department may be applied to meet the breadth program requirements.*

#### II. Degree Requirements

Mathematics and Science (minimum of 32 units):

MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4
MATH 057	Applied Differential Equations I	4
PHYS 053	Principles of Physics I	5
PHYS 055	Principles of Physics II	5



One Science elective from the following courses:	3-5
CHEM 025 General Chemistry	
CHEM 027 General Chemistry	
BENG 193 Biology for Engineers	
BIOL 051 Principles of Biology	
BIOL 061 Principles of Biology	
One Math elective from the following courses:	4
MATH 110 Numerical Analysis	
MATH 145 Applied Linear Algebra	
MATH 152 Applied Analysis	
MATH 157 Applied Differential Equations II	
MATH 174 Graph Theory	
Engineering Science:	
ENGR 010 Dean's Seminar	1
ECPE 005 Introduction to Electrical and Computer Engineering	1
ECPE 041 Circuits	3
ECPE 041L Circuits Laboratory	1
ECPE 071 Digital Design	3
ECPE 071L Digital Design Laboratory	1
Computer Engineering Core:	
ECPE 121 Systems Analysis	4
ECPE 131 Electronics	3
ECPE 131L Electronics Laboratory	1
ECPE 127 Random Signals	3
ECPE 170 Computer Systems & Networks	4
ECPE 172 Microcontrollers	4
ECPE 173 Computer Organization	3
ECPE 174 Advanced Digital Design	2
COMP 051 Introduction to Computer Science	4
COMP 053 Data Structures	4
COMP 157 Design and Analysis of Algorithms	3
ECPE 195 Senior Project I	2
ECPE 196 Senior Project II	2
ENGR 025 Professional Practice Seminar	1
Technical Electives:	
Electives 4 courses from technical elective options	12
<b>Note:</b> 1) See Program Worksheet for list of appropriate courses.	
Cooperative Education:	
Minimum 32 units, including:	
ENGR 181 Professional Practice	14-18
ENGR 182 Professional Practice	14-18
ENGR 183 Professional Practice	14-18

## Electrical Engineering

Phone: (209) 946-2575

Location: Anderson Hall

Website: [www.pacific.edu/eng/Programs/electrical-engineering.html](http://www.pacific.edu/eng/Programs/electrical-engineering.html)

### Electrical Engineering Program (BSEE) Objectives

Graduates of the BSEE degree program will be prepared to build and sustain successful careers in electrical engineering, and actively engage in life-long learning.

### Electrical Engineering Program (BSEE) Outcomes

Upon graduation, graduates will have:

1. an ability to apply knowledge of mathematics, science, and engineering.
2. an ability to design and conduct experiments, as well as to analyze and interpret data.
3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
4. an ability to function on multidisciplinary teams.
5. an ability to identify, formulate, and solve engineering problems.
6. an understanding of professional and ethical responsibility.
7. an ability to communicate effectively.
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. a recognition of the need for, and an ability to engage in life-long learning.
10. a knowledge of contemporary issues.
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
12. clearly defined career objectives, and be able to market themselves via an effective, professional resume and behavior-based interview techniques.

### Bachelor of Science in Electrical Engineering

In order to earn the bachelor of science in electrical engineering, students must adhere to the University's graduation requirements for bachelor degrees, completing a minimum of 120 units of academic work and a minimum of 32 units of Cooperative Education.

All Electrical Engineering students must pass the Fundamental Chemistry Skills requirement or pass CHEM 023 before they can take ECPE 131 / 131L.

All Electrical Engineering students must successfully pass the Electrical Engineering Core Assessment Exam as a prerequisite for ECPE 196 – Senior Project II. The objective of the Core Assessment Exam is to ensure that all graduating Computer Engineering students have a satisfactory level of knowledge of fundamental concepts of their major.

**I. General Education Requirements**

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.*

**Social and Behavioral Sciences**

Two courses from the following:

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

**Arts and Humanities**

IIB. ENGR 030

One course from the following categories:

- IIA. Language and Literature
- IIC. Visual and Performing Arts

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) Only one course can come from each subdivision (A, B, or C). 3) No more than 8 units from a single department may be applied to meet the breadth program requirements.*

**II. Degree Requirements**

Mathematics and Science (minimum of 32 units):

MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4
MATH 057	Applied Differential Equations I	4
PHYS 053	Principles of Physics I	5
PHYS 055	Principles of Physics II	5

One Science elective from the following courses: 3-5

- CHEM 025 General Chemistry
- CHEM 027 General Chemistry
- BENG 193 Biology for Engineers
- BIOL 051 Principles of Biology
- BIOL 061 Principles of Biology

One Math elective from the following courses: 4

- MATH 110 Numerical Analysis
- MATH 145 Applied Linear Algebra
- MATH 152 Applied Analysis
- MATH 157 Applied Differential Equations II
- MATH 174 Graph Theory

Engineering Science:

ENGR 010	Dean's Seminar	1
ECPE 005	Introduction to Electrical and Computer Engineering	1
ECPE 041	Circuits	3
ECPE 041L	Circuits Laboratory	1
ECPE 071	Digital Design	3
ECPE 071L	Digital Design Laboratory	1

Electrical Engineering Core:

ECPE 121	Systems Analysis	4
ECPE 127	Random Signals	3
ECPE 131	Electronics	3
ECPE 131L	Electronics Laboratory	1

ECPE 132	Advanced Electronics	4
ECPE 162	Communication Systems	4
ECPE 163	Energy Conversion	4
ECPE 172	Microcontrollers	4
ECPE 174	Advanced Digital Design	2
PHYS 101	Electricity and Magnetism	4
COMP 051	Introduction to Computer Science	4
COMP 053	Data Structures	4
ECPE 195	Senior Project I	2
ECPE 196	Senior Project II	2
ENGR 025	Professional Practice Seminar	1

Technical Electives:

Electives 4 courses from technical elective options 12

*Note: 1) See Program Worksheet for list of appropriate courses.*

Cooperative Education:

Minimum 32 units, including:

ENGR 181	Professional Practice	14-18
ENGR 182	Professional Practice	14-18
ENGR 183	Professional Practice	14-18

**Engineering Physics**

Phone: (209) 946-2575

Location: Anderson Hall

Website: [www.pacific.edu/eng/Programs/engineering-physics.html](http://www.pacific.edu/eng/Programs/engineering-physics.html)

**Degrees Offered**

Bachelor of Science in 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 Computer Science, 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.

**Engineering Physics Program (BSEPhys) Objectives**

Graduates of the BSEPhys degree program will be prepared to build and sustain successful careers in engineering and science, and actively engage in life-long learning.

**Engineering Physics Program (BSEPhys) Outcomes**

Upon graduation, graduates will have:

1. an ability to apply knowledge of mathematics, science, and engineering.
2. an ability to design and conduct experiments, as well as to analyze and interpret data.
3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
4. an ability to function on multidisciplinary teams.

5. an ability to identify, formulate, and solve engineering problems.
6. an understanding of professional and ethical responsibility.
7. an ability to communicate effectively.
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. a recognition of the need for, and an ability to engage in life-long learning.
10. a knowledge of contemporary issues.
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
12. clearly defined career objectives, and be able to market themselves via an effective, professional resume and behavior-based interview techniques.

### Bachelor of Science in Engineering Physics

In order to earn the bachelor of science in engineering physics, students must adhere to the University's graduation requirements for bachelor degrees, completing a minimum of 120 units of academic work and a minimum of 32 units of Cooperative Education.

All Engineering Physics students must successfully pass the Engineering Physics Core Assessment Exam as a prerequisite for ECPE 196 – Senior Project II. The objective of the Core Assessment Exam is to ensure that all graduating Engineering Physics students have a satisfactory level of knowledge of fundamental concepts of their major.

#### I. General Education Requirements

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific 2 Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

#### Social and Behavioral Sciences

Two courses from the following:

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

IIB. ENGR 030

One course from the following categories:

- IIA. Language and Literature
- IIC. Visual and Performing Arts

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) Only one course can come from each subdivision (A, B, or C). 3) No more than 8 units from a single department may be applied to meet the breadth program requirements.

#### I

#### I. Degree Requirements

Mathematics and Science (minimum of 32 units):

MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4
MATH 057	Applied Differential Equations I	4
MATH 039	Probability with Application to Statistic	4
CHEM 025	General Chemistry	5
PHYS 053	Principles of Physics I	5
PHYS 055	Principles of Physics II	5

Engineering Science:

ENGR 010	Dean's Seminar	1
COMP 051	Introduction to Computer Science	4
ENGR 020	Engineering Mechanics I (Statics)	3
ECPE 041	Circuits	3
ECPE 041L	Circuits Laboratory	1
ECPE 071	Digital Design	3
ECPE 071L	Digital Design Laboratory	1
ENGR 045	Materials Science	4

Engineering Core:

ECPE 121	Systems Analysis	4
ECPE 131	Electronics	3
ECPE 131L	Electronics Laboratory	1
ENGR 120	Engineering Mechanics II (Dynamics)	3
CIVL 130	Fluid Mechanics I	3
CIVL 130L	Fluid Mechanics I Lab	1
ECPE 195	Senior Project I	2
ECPE 196	Senior Project II	2
ENGR 025	Professional Practice Seminar	1

Physics Core:

PHYS 057	Modern Physics	4
PHYS 101	Electricity and Magnetism	4
PHYS 161	Thermal Physics	4

Technical Electives:

Electives	5 courses from technical elective options	18
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**Note:** 1) See Program Worksheet for list of appropriate courses.

Cooperative Education:

Minimum 32 units, including:

ENGR 181	Professional Practice	14-18
ENGR 182	Professional Practice	14-18
ENGR 183	Professional Practice	14-18

## Mechanical Engineering

Phone: (209) 946-2377

Location: Khoury Hall

Website: [www.pacific.edu/eng/Programs/mechanical-engineering.html](http://www.pacific.edu/eng/Programs/mechanical-engineering.html)

### Degrees Offered

Bachelor of Science in Mechanical Engineering

### Educational Objectives

Mechanical Engineering graduates will demonstrate:

- competency in their engineering careers and profession;
- adaptability to changes in science and technology;
- awareness of humanistic and societal issues on a global scale;
- and the ability to communicate on technical and non-technical levels.

*Students who are U.S. citizens are required to possess one year of engineering work experience by participating in the Co-op program. The Mechanical Engineering program strives to meet standards established by the Accreditation Board for Engineering and Technology (ABET).*

### Bachelor of Science in Mechanical Engineering

In order to earn the bachelor of science in mechanical engineering, students must adhere to the University's graduation requirements for bachelor degrees, completing a minimum of 120 units of academic work and a minimum of 32 units of Cooperative Education.

#### I. General Education Requirements

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

#### Social and Behavioral Sciences

Two courses from the following:

- Individual and Interpersonal Behavior
- U.S. Studies
- Global Studies

#### Arts and Humanities

IIB. ENGR 030

One course from the following categories:

- Language and Literature
- Visual and Performing Arts

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) Only one course can come from each subdivision (A, B, or C). 3) No more than 8 units from a single department may be applied to meet the breadth program requirements.

#### II. Degree Requirements

Mathematics/Basic Science:

MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4
MATH 057	Applied Differential Equations I	4
PHYS 053	Principles of Physics I	5
PHYS 055	Principles of Physics II	5
CHEM 025	General Chemistry	5
Elective	1 Math or Science Elective	3-4

Engineering Science:

ENGR 010	Dean's Seminar	1
ENGR 015	Engineering Graphics	3
ENGR 019	Computer Applications in Engineering	3
ENGR 020	Engineering Mechanics I (Statics)	3
ENGR 025	Professional Practice Seminar	1
ECPE 041	Circuits	3
ECPE 041L	Circuits Laboratory	1
ENGR 045	Materials Science – Properties and Measurements	4
ENGR 120	Engineering Mechanics II (Dynamics)	3
ENGR 121	Mechanics of Materials	4
ENGR 122	Thermodynamics I	3
CIVL 130	Fluid Mechanics I	3
CIVL 130L	Fluid Mechanics I Lab	1

Mechanical Engineering:

MECH 100	Manufacturing Process	4
MECH 110	Instrumentation and Experimental Methods	3
MECH 120	Machine Design and Analysis I	3
MECH 125	Machine Design and Analysis II	3
MECH 129	Vibrations	3
MECH 140	Engineering Design / Senior Project I	3
MECH 141	Engineering Design / Senior Project II	3
MECH 150	Heat Transfer	3
MECH 157	Thermodynamics II	3
MECH 175	Systems Analysis and Control	4
MECH	Electives (2 additional courses from approved list)	6
Engineering	Elective (1 additional engineering course from approved list)	3-4

Cooperative Education:

Minimum 32 units, including:

ENGR 181	Professional Practice	14-18
ENGR 182	Professional Practice	14-18
ENGR 183	Professional Practice	14-18

## Engineering Management

Phone: (209) 946-2575

Location: Baun Hall

Website: [www.pacific.edu/eng/Programs/engineering-management.html](http://www.pacific.edu/eng/Programs/engineering-management.html)

### Degrees Offered

#### Bachelor of Science in Engineering Management

The Bachelor of Science in Engineering Management provides academic preparation for individuals who plan a systems engineering, project management or 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.

The Engineering Management core consists of courses covering key topics within engineering management and business administration. In addition, students elect an option (Civil, Computer, Electrical, Mechanical, or General) in which they take additional selected courses.

The Engineering Management Program at the University of the Pacific seeks to graduate engineers ready to enter professional practice or pursue graduate level studies. The objectives of the Engineering Management Program are to graduate engineers that:

1. Are ready to enter professional practice or pursue graduate level studies,
2. Have the knowledge base to correctly frame engineering problems and corresponding solution approaches,
3. Possess the skills to successfully implement solutions within their organizations,
4. Exhibit the abilities to continuously promote excellence in themselves and others, and
5. Have a well developed sense of civic awareness rooted in ethical societal and global consciousness.

### Bachelor of Science in Engineering Management

In order to earn the bachelor of science in engineering management, students must adhere to the University's graduation requirements for bachelor degrees, completing a minimum of 120 units of academic work and a minimum of 32 units of Cooperative Education.

#### I. General Education Requirements

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific 2 Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units complete 2 additional General Education elective courses from below in place of taking PACS 001 and 002.

#### Social and Behavioral Sciences

The following:

- IA. Individual and Interpersonal Behavior (ECON 053)
- IB. U.S. Studies
- IC. Global Studies

#### Arts and Humanities

IIB. ENGR 030

One course from the following categories:

IIA. Language and Literature

IIC. Visual and Performing Arts

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) Only one course can come from each subdivision (A, B, or C). 3) No more than 8 units from a single department may be applied to meet the breadth program requirements.

#### II. Degree Requirements

##### Mathematics and Science (32 units minimum):

MATH 051	Calculus I	4
MATH 053	Calculus II	4
MATH 055	Calculus III	4
MATH 057	Applied Differential Equations I	4
MATH 039	Probability with Applications to Statistics	4
PHYS 053	Principles of Physics I	5
Electives	2 from Math above 057 or Science courses	8

##### Engineering Science (13 units minimum):

ENGR 010	Dean's Seminar	1
ENGR 020	Engineering Mechanics I (Statics)	3
ENGR 019	Computer Applications in Engineering	3
Electives	2 Engineering Science courses	6

##### Engineering Management Core (32 units minimum):

BUSI 031	Principles of Financial Accounting	4
BUSI 033	Principles of Managerial Accounting	4
Electives	2 Approved electives	8
EMGT 170	Engineering Administration	4
EMGT 174	Engineering Project Management	3
EMGT 176	Systems Engineering Management	4
Elective	1 Engineering Management elective	4
ENGR 025	Professional Practice Seminar	1

##### Engineering Discipline Electives (27 units minimum)

EMGT 195	Engineering Management Synthesis	4
Electives	Engineering discipline electives	23

**Note:** Each student works with their advisor to develop a customized set of Engineering Discipline electives to meet student specific goals and objectives. The Engineering Management website describes potential sets of electives for different career paths.

#### Cooperative Education:

Minimum 32 units, including:

ENGR 181	Professional Practice	14-18
ENGR 182	Professional Practice	14-18
ENGR 183	Professional Practice	14-18

## Computer Science

Phone: (209) 946-2355

Location: Computer Science Building

Website: [www.pacific.edu/eng/Programs/computer-science.html](http://www.pacific.edu/eng/Programs/computer-science.html)

### Degrees Offered

Bachelor of Science

### Majors Offered

Computer Science

### Computer Science Program (BS) Objectives

- Graduates will employ design skills and technical knowledge that contribute to building or utilizing computing systems.
- Graduates will have motivation and skills to apply computing technology in a variety of professional careers.
- Graduates will work effectively in team environments, utilize communication skills, and will grow and adapt to a world of evolving technology.
- Graduates will be good citizens contributing to society and behaving in an ethical manner.

### Computer Science Program (BS) Outcomes

Upon graduation a student will

1. Be able to apply knowledge of computing and mathematics appropriate to the area of concentration.
2. Be able to deal with a variety of problems and define the computer requirements appropriate to each solution.
3. Be able to design and develop software systems of varying complexity and evaluate the systems in terms of specified requirements and understand the design tradeoffs.
4. Be able to apply elements of computer science theory appropriate to their area of concentration.
5. Be able to use current techniques and tools in their area of concentration.
6. Have functioned effectively in team projects.
7. Have illustrated good communication skills in a variety of media.
8. Have demonstrated the ability for self-learning.
9. Be able to demonstrate an understanding of professional, ethical and social responsibilities and an ability to analyze the impact of computing on individuals, organizations and society.

### Computer Science Major

The computer science major provides a strong core of computer science and concentrations which deal with current and emerging technologies. The core gives students a solid understanding of fundamental computer science. The concentrations offer courses of study around a theme and promote a student's specific interests and post-graduate plans. Each concentration includes mathematics and science courses that reinforce the theme of the concentration.

In order to earn the bachelor of science with a major in computer science, students must complete a minimum of 120 units with a Pacific cumulative and major/program grade point average of 2.0.

#### I. General Education Requirements

Minimum 30 units, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 28 or more transfer units are exempt from PACS 001 and PACS 002, additional General Education elective courses may be required to meet the programs requirement for 30 units of humanities and social science courses.*

Four course each in a different category from: 16

##### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

##### Arts and Humanities

- IIA. Language and Literature
- IIC. Visual and Performing Arts

One additional course:

IIB. ENGR 030 Engineering Ethics and Society	3
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*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) The student must select 4 courses from categories IABC and IIAC, each in separate area, and the courses must total at least 16 units. 3) No more than 8 units from a single department may be applied to meet the breadth program requirements.*

#### II. Major Requirements

##### Mathematics and Science

Minimum 30 units and must include a minimum of 15 units in mathematics:

COMP 047	Discrete Mathematics for Computer Science	4
One of the following courses:		4

- MATH 037 Introduction to Statistics and Probability
- MATH 039 Probability with Applications to Statistics

One of the following courses: 4

- MATH 045 Introduction to Finite Mathematics and Calculus
- MATH 051 Calculus I

Electives 2 laboratory science courses 8

Electives Mathematics and science courses that may include COMP 147 10

##### Computer Science Core

Minimum 22 units including:

ENGR 010	Dean's Seminar	1
COMP 051	Introduction to Computer Science	4
COMP 053	Data Structures	4
ECPE 170	Computer Systems and Networks	4
COMP 101	Application Programming	4
ENGR 025	Professional Practice Seminar	1
COMP 188	Senior Project I	2
COMP 189	Senior Project II	2

## CS Electives and Areas of Concentration

Minimum 20 units

Students complete their degree with 20 additional units of computer science courses, beyond the core courses. These courses must include the specified courses in each concentration and other courses approved by the adviser. Areas of concentration are selected by students to allow them to specialize in an area appropriate for their post-graduation plans.

### Networking and Computer Security

COMP 175	System Administration and Security	3
COMP 173	Operating Systems	3
COMP 177	Computer Networking	4
COMP 178	Computer Security	4
Electives	Selected with adviser	6

### *Career Options*

Systems administrator, security specialist, network administrator, network appliance developer

### Software Engineering

COMP 127	Client-Server Systems	3
COMP 129	Software Engineering	3
COMP 141	Programming Languages	3
COMP 157	Design and Analysis of Algorithms	3
Electives	Selected with adviser	8

### *Career Options*

Application developer, software engineer, software architect, quality assurance

### Games and Simulation

COMP 135	Human-Computer Interface Design	3
COMP 153	Computer Graphics	3
COMP 155	Computer Simulation	4
COMP 159	Computer Game Technologies	4
COMP 157	Design and Analysis of Algorithms	3
Elective	Selected with adviser	3

### *Career Options*

Game engine developer, simulation/training system developer, scientific application developer, games/animation tools developer, graphics/multimedia application developer

### Theoretical Foundations

COMP 141	Programming Languages	3
COMP 157	Design and Analysis of Algorithms	3
COMP 173	Operating Systems	3
Electives	Selected with adviser	11

**Note:** COMP 147 *Computing Theory* (4) must be included in the mathematics electives.

### *Career Options*

Graduate school, combine a classical computer science education with another major or minor.

### Information Systems

COMP 175	System Administration and Security	3
COMP 127	Client-Server Systems	3
COMP 135	Human-Computer Interface Design	3
COMP 163	Database Management Systems	3
COMP 177	Computer Networking	4
Elective	Selected with adviser	4

### *Career Options*

Systems analyst, database developer/administrator, business application developer, Web developer, network/telecommunication specialist

Students interested in Information Systems are strongly encouraged to pursue a minor in Management or a double-major in Business.

### Computational Modeling

COMP 151	Artificial Intelligence	3
COMP 155	Computer Simulation	4
COMP 157	Design and Analysis of Algorithms	4
COMP 163	Database Management Systems	4
Elective	Selected with adviser	5

### *Career Options*

Computational physics, economics, scientific computing

## 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 development. Students must take three core courses and three elective courses that can be tailored to a specific interest. It is recommended that students begin the minor program early in their college career (21-24 units).

### Minor in Computer Science Requirements

In order to earn a minor in computer science, students must complete a minimum of 21 units and 6 courses with a Pacific minor grade point average of 2.0.

COMP 051	Introduction to Computer Science	4
COMP 053	Data Structures	4
COMP 101	Application Programming	4
A COMP course numbered above 101		3-4
Two courses from the following list:		6-8
Any 3 or 4 unit COMP or ECPE course or BUSI 137, 138, 139		

**Note:** 1) Electives are to be chosen in consultation with an adviser; 2) Only one of these electives can be lower division.

## 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 and Computer Science 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.

### Minor in International Engineering Requirements

In order to earn a minor in international engineering, students must complete a minimum of 21 units and 6 courses with a Pacific minor grade point average of 2.5.

Students must have proficiency in a foreign language at the second semester level and perform one of their Co-op assignments overseas in order to be awarded the minor in international engineering.

### Minor in Engineering Management

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.

#### Minor in Engineering Management Requirements

In order to earn a minor in engineering management, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

BUSI 031	Principles of Financial Accounting	4
EMGT 170	Engineering Administration	4
EMGT 174	Engineering Project Management	3
One of the following courses:		4
EMGT 176	Systems Engineering Management	
BUSI 104	Operations Management	
One of the following management courses:		4
BUSI 033	Principles of Managerial Accounting	
BUSI 100	Management Information Systems	
BUSI 105	Financial Management	
BUSI 107	Marketing Management	

*Note:* 1) At least four of the courses in the 20 unit requirement must be taken at Pacific. 2) All courses must be taken for a letter grade. 3) ENGR 025 may be used to provide 1 additional unit.

### Minor in Project Management (for Non-Engineering Students Only)

Non-engineering major students may seek a Minor in Project Management in order to gain understanding of the specific issues and approaches to management in an engineering or high technology context. This minor requires a tightly knit suite of at least six engineering, computer science and business courses, providing complementary insights into technology and the challenges of project management within an engineering or technical organization. Though some courses are open to engineering and computer science majors, the nature of the material is such that non-engineering students are able to understand the material and successfully complete course requirements.

The Minor in Project Management is particularly useful to those students anticipating a career in organizations having a:

- Significant number of engineers
- Project orientation
- Reliance on technology, or
- Emphasis on manufacturing

#### Minor in Project Management Requirements

In order to earn a minor in project management, students must complete a minimum of 21 units and 6 courses with a Pacific minor grade point average of 2.0.

EMGT 170	Engineering Administration	4
EMGT 174	Engineering Project Management	3
EMGT 176	Systems Engineering Management	4

Three of the following courses: 10-12

BUSI 031	Principles of Financial Accounting
BUSI 109	Management and Organizational Behavior
ENGR 015	Engineering Graphics
COMP 025	Computers and Information Processing
COMP 051	Introduction to Computer Science

*Note:* 1) Students must not be majoring in engineering. 2) All courses that count toward the minor must be taken for a letter grade.

### Minor in Sustainability

Sustainability requires that short and long-term social, economic, and environmental impacts of products and processes be considered. With globalization of the world's economies, continuing challenges with depletion of resources and increased global pollution, the well-being of society will require application of the principles of sustainability. The Minor in Sustainability is suggested for students who desire an understanding of sustainability or those who anticipate working for trans-national or development organizations. The interdisciplinary Minor in Sustainability is open to students of all majors.

Objectives:

Identify and explain concepts and application of sustainability principles at the global, national, and local levels.

Apply an interdisciplinary and 'systems' approach to meet a need or analyze a product or process

#### Minor in Sustainability Requirements

In order to earn a minor in project management, students must complete a minimum of 20 units with a Pacific minor grade point average of 2.0.

*Note:* Prerequisites of each course must be met.

Both of the following:		
CIVL 173	Sustainable Engineering	3
EMGT 176	Systems Engineering Management	4
One of the following*:		4
ECON 157	Environmental and Natural Resource Economics	
INTL 165	Development, Modernization, and Cultural Change	
INTL 174	Global Environmental Policy	
One of the following*:		3-4:
CIVL 171	Water and Environmental Policy	
ECON 157	Environmental and Natural Resource Economics	
INTL 174	Global Environmental Policy	
MECH 155	Solar Energy Engineering	
ENGR	Undergraduate research or independent study related to sustainability	1-4
One of the following:		4
BUSI 053	Legal and Ethical Environment of Business (GE I-B)	
ECON 071	Global Economic Issues	
GEOS 045	Soil, Water, and War	
INTL 077	Contemporary World Issues	
PHIL 035	Environmental Ethics (GE II-B)	

*Note:* \*The same course may not be used to satisfy course requirements.



## 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 and Computer Science 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.

### Minor in Technology Requirements

In order to earn a minor in technology, students must complete a minimum of 20 units and 5 courses with a Pacific minor grade point average of 2.0.

1) Students must not be majoring in engineering. 2) Students must complete a program approved by the minor adviser. 3) A minimum of 12 units must be taken at Pacific. 4) At least one course must be a computing course, and at least three must be from the School of Engineering and Computer Science.

### Course Descriptions

Courses are numbered in accordance with the general University system.

Courses labeled “ENGR” are intended for all engineering students, while courses labeled “BENG,” “CIVL,” “ECPE,” “EMGT” or “MECH” are primarily intended for majors in the Bioengineering, Civil (CE), Electrical and Computer (ECE), Engineering Management (EMGT), and Mechanical (ME) departments. Courses labeled “COMP” are taught in the Computer Science Department.

All engineering and computer science course prerequisites must be passed with a C- or higher grade.

\* *Note: Transfer courses must be graded C or better.*

### Bioengineering

**BENG 005. Introduction to Bioengineering (1)**  
Introduction to the various sub-disciplines (biomedical, electrical, and mechanical) of bioengineering. *Prerequisite: ENGR 010 (Spring).*

**BENG 103. Biomaterials (4)**  
This course will discuss biomaterials and lay the ground work for topics such as mechanical chemical, and thermal properties of replacement materials and tissues. Implantation of materials in the body will be studied from the biological point of view. *Prerequisite: ENGR 045 and BIOL 061 (Fall).*

**BENG 108. Engineering Physiology (4)**

A lecture and lab-based study of the major organ systems in the human body. Lectures cover basic anatomy, function and regulation of the nervous,

endocrine, sensory, muscular, cardiovascular, respiratory, and excretory systems, with the underlying theme of maintaining homeostasis while responding to physiological disturbances. Lectures also compare each system to abiotic models, utilizing basic principles of physics, math, and chemistry. Lab exercises demonstrate basic physiological processes and emphasize techniques of instrument-based data acquisition and data presentation. Students also create virtual instruments (Vis) using the program LabVIEW and apply the VIs in a final independent lab project. *Prerequisites: BIOL 051, 061 and CHEM 025; or permission of instructor.*

**BENG 124. Biomechanics (4)**

This goal of this course is to gain an introductory understanding of the fundamentals of biomechanics, starting with the physics of motion, then continuing with skeletal anatomy and finally bone and muscle tissue mechanics. *Prerequisite: ENGR 120.*

**BENG 161. Introduction to Bioinformatics (4)**  
(Also listed as COMP 161)

This course provides an introduction to the field of Computational Biology known as Bioinformatics. The course provides an overview of genomics, proteomics, and pharmacogenomics. Students will use contemporary databases to research such topics as protein structure and function, hereditary disease, homology and phylogenetic inference, epidemiology and forensics, and drug discovery and design. Also included is an introduction to the methods used by computational scientists for sequence alignment, data visualization and analysis, data mining and pattern matching, and modeling and simulation. All classes are held in a computer lab and will include tutorial examples and hands-on experience working with a broad range of computer applications and databases. *Prerequisites: COMP 051, BIOL 051 and 061; or permission of instructor. Prerequisite, may be taken concurrently: BIOL 101 or permission of the instructor.*

**BENG 171. Bioelectricity (4)**

This course provides the student with an understanding of the origins, function, and measurement of electrical potentials and currents within biological tissues, such as nerve, muscle, and heart. Topics include: the bioelectrical properties of ion channels, neurons, the synapse and neuromuscular junction, adaptation and learning in small networks of neurons, the functional organization of bioelectrical systems, and bioelectrical measurement and stimulation of tissues such as the heart and brain. *Prerequisites: BIOL 061, ECPE 041/041L, MATH 055; or Permission of the instructor. (Fall)*

**BENG 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.*

**BENG 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.

**BENG 195. Senior Project (4)**

Students apply basic sciences, mathematics and engineering topics to meet a stated objective; students will establish design objectives and criteria, and analyze solution alternatives, synthesize a problem, implement a solution, then evaluate design performance. Design documentation and demonstration are required. Includes both written and oral reports and presentations. *Permission of the instructor. (Spring)*

**BENG 197. Undergraduate Research (1-4)**

Applied or basic research in bioengineering under faculty supervision. Approval by the faculty supervisor and department chair is required. Students must be in good academic standing.

**Civil Engineering****CIVL 022. 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: MATH 041 or equivalent college course or proficiency evidenced by successful completion of the University's trigonometry placement test. (Spring).*

**CIVL 060. Water Quality (4)**

Chemical reactions and processes in aquatic systems with engineering applications. Chemical equilibrium and kinetics associated with acid-base, dissolution-precipitation, complexation, and reduction-oxidation reactions in natural and engineered environments. Laboratory included. *Prerequisites: CHEM 025, MATH 051.*

**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: ENGR 019, ENGR 121 (Spring).*

**CIVL 130. Fluid Mechanics I (3)**

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. *Prerequisite: ENGR 120, corequisite: CIVL 130L (Fall).*

**CIVL 130L. Fluid Mechanics I Lab (1)**

Experimental analysis of concepts discussed in CIVL 130. *Prerequisite: ENGR 120, corequisite: CIVL 130L (Fall)*

**CIVL 132. Introduction to Environmental Engineering (4)**

Physical, chemical, and biological processes associated with water quality in natural environments and engineering systems. Operation and design of water and wastewater treatment facilities. The occurrence, behavior and control of indoor and regional air pollution. *Prerequisite: CHEM 025, ENGR 019, CIVL 130 highly recommended (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)**

Groundwater hydraulics in confined and unconfined aquifers. Processes controlling the transport and fate of minerals and contaminants in subsurface environments. Computer simulation of groundwater flow and contaminant movement. Strategies for removing and controlling contaminant plumes in aquifers. *Prerequisites: CHEM 025, CIVL 130, MATH 057.*

**CIVL 136. Design of Water Quality Control 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 138. Solid Waste Systems Design and Management (3)**

Introduction to solid waste systems; analysis of problems associated with storage, collection, transport, processing, and disposal of solid wastes. Review of current and expected regulatory requirements. Planning and design of solid waste management components including systems and processes for solid waste prevention, recycling/composting, incineration, and landfilling. *Prerequisite: CIVL 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 (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.*

**CIVL 145. Engineering Geology (4)  
(Also listed as GEOS 145)**

An introduction to the study of applied geology in which geologic principles, data and techniques are applied to civil engineering problems. *Prerequisite: GEOS 051 or 061 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: CIVL 022, CIVL 140.*

**CIVL 151. Heavy Construction Methods (4)**

This course covers a variety of topics in the areas of construction engineering and construction management. Construction engineering topics include construction methods of conventional and special structures such as bridges, tunnels and marine structures. Construction management topics include planning, bidding, scheduling and cost control are covered. A case study approach is used along with field trips and guest speakers. A term project is required. Intended for upper division students. *Prerequisite: Approval of the instructor.*

**CIVL 160. Structural Analysis (3)**

Analysis of buildings and bridges. Determination of earthquake and wind loadings by static and dynamic methods. Other topics include: analysis of shear wall – diaphragm buildings; use of structural analysis software; buckling of frames. Case studies of structures will be emphasized. *Prerequisites: CIVL 100 and MATH 057. (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 160 or MECH 120, MATH 005, MATH 110 recommended.*

**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. Earthquake Engineering (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 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 and environmental impact assessment. Relevant case studies and examples and monitoring and enforcement issues.

**CIVL 173. Sustainable Engineering (3)**

Interdisciplinary course providing an introduction to principles and practice of sustainable engineering. Analysis of economic, social, and environmental factors; life cycle assessment; resource use and waste generation in engineering products and processes. Case studies, readings, and class discussion emphasize analysis and development of sustainable solutions. *Prerequisite: senior standing.*

**CIVL 180. Engineering Synthesis (4)**

A culminating experience wherein a group of students synthesize their previous class work 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 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.

**Computer Science****COMP 023. 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 025. *Prerequisite: students must have completed the basic math skills requirement or completed MATH 005 or 035.*

**COMP 025. Computers and Information Processing (4)**

An introductory information technology course that focuses on computer architecture, networking, Internet technologies and the integration of productivity software. Lectures, readings, hands-on projects and lab assignments give a variety of learning experiences. Specific topics include computer architecture, digital data, networking, file management, spreadsheets, database systems and presentation applications. Students are exposed to Javascript and Visual Basic scripting. Particular emphasis is placed on HTML programming and creating an interactive student website for homework and lab linking throughout the semester. *Prerequisite: students must have completed the basic math skills requirement or completed MATH 005 or 035 (Fall Spring Summer).*

**COMP 041. Great Ideas in Computing (4)**

A broad introduction to the field of computing. The concepts that are the foundation of computing are presented and placed in historical context. Discussion topics include the ways of thinking and working that make computing effective, and the future of the field. Example topics include number representation, architecture of computing systems, intelligent computing systems, and the use of computing in art and games. *Prerequisite: students must have completed the basic math skills requirement.*

**COMP 047. Discrete Math for Computer Science (4)**

Designed to develop skills in deductive reasoning and applying concepts of discrete mathematics to computer science. Topics include logic, deductive reasoning, mathematical induction, set theory, functions, recurrence relations, combinatorics and probability, graphs, trees, and Boolean Algebra. *Prerequisites: Students must have completed the basic math skills requirement.*

**COMP 051. Introduction to Computer Science (4)**

The course emphasizes program design and problem solving techniques using a high-level programming language. Introduces basic concepts such as assignment, control flow, iteration, and basic data structures. Course includes a supervised lab. *Prerequisites: Students must have completed the basic math skills requirement.*

**COMP 053. Data Structures (4)**

The course continues the development of program design and problem solving techniques. Development of fundamental data structures and their associated algorithms, including array-based algorithms, recursion, lists, generics, dynamic memory, binary trees and associative structures. *Prerequisites: COMP 051.*

**COMP 093. Special Topics (3-4)****COMP 101. Application Programming (4)**

This course is intended to prepare students to transition to upper division courses. Students will learn to apply their existing knowledge and skills in the design and development of contemporary applications. This course includes a basic introduction to advanced topics such as graphical user interfaces, interfaces to database and file servers, event handling, multi-threaded applications and networking programming. *Prerequisites: COMP 053.*

**COMP 127. Client-Server Systems (3)**

Client-server systems are networked computer applications in which one or more computers provide services that are utilized by one or more client computers. In the current Internet environment, services are provided by web servers and clients operate inside of web browsers. Students will understand client-server architectures and become familiar with a variety of client-server programming tools such as client-side scripting, server-side scripting and the Common Gateway Interface (CGI). *Prerequisites: COMP 101.*

**COMP 129. Software Engineering (3)**

Students will gain practical experience in dealing with medium to large scale software systems. Students will learn how current analysis and design methodologies are used to develop the abstractions necessary to understand large systems. Students will also learn how such methodologies and abstractions are used to communicate with coworkers and clients about the analysis and design. Because communication is an essential skill in large system development, students will be expected to produce documents and presentations of professional quality and depth. *Prerequisites: COMP 101.*

**COMP 135. Human-Computer Interface Design (3)**

Human-Computer Interface (HCI) design focuses on the relationship between humans and computers or other physical devices. This course helps students develop an understanding of the common problems in designing these interfaces and presents a set of design techniques for ensuring that designs are both useful and usable. *Prerequisites: Junior or Senior standing.*

**COMP 137. Distributed Computing (3)**

Distributed computing is a science which solves a large problem by giving small parts of the problem to many computers to solve and then combining the solutions for the parts into a solution for the problem. This course introduces architectures and implementation techniques to support distributed computation. Students will learn synchronization and communication techniques for dealing with distributed application states. Students will gain practical experience using current middleware architectures to support

applications operating over heterogeneous networks. Students will also be expected to design and implement an original distributed application as a term project. *Prerequisites: COMP 101.*

**COMP 141. Programming Languages (3)**

Topics in the evaluation, design, and development of programming languages. Topics include type systems, variables and scope, functions, parameter passing, data hiding and abstractions, recursion, memory allocation, grammars and parsing, compiler architecture, programming paradigms, and comparison of programming languages and environments. *Prerequisites: COMP 053 and COMP 047.*

**COMP 147. Computing Theory (4)**

Study of automata, formal languages and computability. Topics include: finite state automata, regular languages, pushdown automata, context-free languages, Turing machines, decidability, reducibility, time complexity including NP-completeness, intractability. *Prerequisites: COMP 047 or MATH 055.*

**COMP 151. Artificial Intelligence (3)  
(Also listed as ECPE 151)**

Basic concepts, techniques and tools used in Artificial Intelligence. Knowledge representation, search techniques, and problem solving strategies. Introduction to AI programming languages. *Prerequisite: COMP 051 (Spring, odd years).*

**COMP 153. Computer Graphics (3)  
(Also listed as ECPE 153)**

An introduction to two and three dimensional computer graphics. Basic representations and mathematical concepts, object modeling, viewing, lighting and shading. Programming using OpenGL and other computer graphics applications. *Pre-requisites: COMP 053 (Spring, even years).*

**COMP 155. Computer Simulation (4)  
(Also listed as EMGT 155)**

This course explores digital simulation, in which a model of a system is executed on a computer. The course will focus on modeling methodologies, mathematical techniques for implementing models, and statistical techniques for analyzing the results of simulations. Students will develop simulations using both simulation development toolkits and general purpose programming languages. *Prerequisite: MATH 037 or 039, 045 or 051 and COMP 051 or ENGR 019. (Fall, even years)*

**COMP 157. Design and Analysis of Algorithms (3)**

Topics include complexity analysis, algorithms for searching, sorting, pattern matching, combinatorial problems, optimization problems, backtracking, algorithms related to number theory, graph algorithms, and the limitations of algorithm power. *Prerequisites: COMP 047, 053 and MATH 053 or permission of the instructor.*

**COMP 159. Computer Game Technologies (4)**

This course surveys the technologies and processes used for modern video game development. Course topics include software engineering, media creation and management, hardware interfaces, user interaction, 3D mathematics and common algorithms and data structures to support graphics, physics and artificial intelligence. *Prerequisites: COMP 101, MATH 051. (Fall, odd years)*

**COMP 161. Introduction to Bioinformatics (4)  
(Also listed as BENG 161)**

This course provides an introduction to the field of Computational Biology known as Bioinformatics. The course provides an overview of genomics, proteomics, and pharmacogenomics. Students will use contemporary databases to research such topics as protein structure and function, hereditary disease, homology and phylogenetic inference, epidemiology and forensics, and drug discovery and design. Also included is an introduction to the methods used by computational scientists for sequence alignment, data visualization and analysis, data mining and pattern matching, and modeling and simulation.

All classes are held in a computer lab and will include tutorial examples and hands-on experience working with a broad range of computer applications and databases. *Prerequisites: COMP 051, BIOL 051 and 061 and concurrent enrollment in BIOL 101.*

**COMP 163. Database Management Systems (3)**

A database management system (DBMS) is a computer application designed for the efficient and effective storage, access and update of large volumes of data. This course will look at such systems from two perspectives. The user-center perspective focuses on how a DBMS is used to build support for a data intensive application. This perspective includes examination of common data models, query languages and design techniques. The system implementation perspective focuses on the policies, algorithms and data structures used to design and implement a DBMS. *Prerequisites: COMP 101. (Fall, even years)*

**COMP 173. Operating Systems (3)**

An introduction to the fundamental concepts of modern operating systems. Topics include an overview of the computer 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 053 and ECPE 173 or permission of instructor. (Fall, odd years)*

**COMP 175. System Administration and Security (3)**

An introduction to operating system from an administrator's standpoint. Installation is considered with the proper allocation of disk resources, maintaining the operating system and various subsystems, security issues including server hardening, host firewalls and network security issues, account administration in a networked environment, change management and intrusion detection. *Prerequisites: Familiarity with console-based operating systems commands and junior standing.*

**COMP 177. Computer Networking (4)  
(Also listed as ECPE 177)**

Computer Networks and the Internet. LAN, WAN and Internet architectures. The 7-layer OSI model. The Internet protocol stack. Circuit-switched and packet switched networks. Connection oriented and connectionless networks. Routing. Security. Includes laboratory. *Prerequisites: ECPE 071, 071L or ECPE 170 and junior or senior standing (Fall).*

**COMP 178. Computer Network Security (3)  
(Also listed as ECPE 178)**

An introduction to security of computer systems and security of communication on networks of computers. Topics include TCP/IP protocols, Internet cryptography, Internet authentication, Trojans, viruses, worms. Emphasis is on network/system attack methods, and how to defend against those attacks. *Prerequisites: ECPE 177 or COMP 177 or permission of instructor. (Spring)*

**Experiential Learning**

**COMP 187. Internship in Computer Science (4)**

Cooperative employment in a professional computer science environment. Requires satisfactory completion of the work assignment and written reports. *Prerequisites: COMP 101 and ENGR 025. (Fall, Spring, Summer) Pass/No Credit only*

**COMP 188. Senior Project I (2)**

Students will establish design objectives and criteria, analyze solution alternatives and evaluate design performance for a medium scale software application. Results will include analysis and design documents and a presentation of the system design. *Prerequisite: senior standing.*

**COMP 189. Senior Project II (2)**

Continuation of Senior Project I. Student's will implement, test and evaluate their software application. Results will include final design documents, test reports and a presentation and demonstration of the project. *Prerequisites: COMP 188.*

**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 (3, 4)**

Special courses will be offered from time to time to meet the interests of a group of students and/or faculty. *Prerequisite: Approval of the instructor.*

**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.*

**Electrical Engineering/Computer Engineering****ECPE 005. 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 010 (Spring).*

**ECPE 041. Circuits (3)**

Concepts of voltage, current, power, energy. Ideal circuit elements and their I/V characteristics. Kirchhoff's laws. Circuit analysis using node voltage and mesh current methods. Thevenin's and Norton's theorems, maximum power transfer. Operational amplifier circuits. Step response of 1st order (RC, RL) and 2nd order (RLC) circuits. Phasor analysis, impedance calculations, sinusoidal steady state response. Instantaneous, average, and reactive power. Frequency response, bandwidth of first order lowpass and highpass filters. *Corequisite: ECPE 041L. Prerequisite: PHYS 053. Prerequisite, may be taken concurrently: MATH 055, COMP 051. (Fall, Spring, Summer).*

**ECPE 041L. Circuits Laboratory (1)**

Use of standard test equipment to make DC and AC measurements and characterize electric circuits. Circuit simulation using software tools. *Corequisite: ECPE 041. Prerequisite: PHYS 053. Prerequisite, may be taken concurrently: MATH 055, COMP 051. (Fall, Spring, Summer).*

**ECPE 071. Digital Design (3)**

Number systems, binary arithmetic, Boolean logic. Analysis and synthesis of combinational and sequential circuits. Use of MSI, LSI, FPGA and CPLD devices. *Prerequisites: Completion of basic math skills requirement, COMP 051, computer literacy. Corequisite: ECPE 071L (Fall, Spring).*

**ECPE 071L. Digital Design Lab (1)**

Laboratory treatment of the concepts discussed in ECPE 071. *Prerequisites: Completion of basic math skills requirement, COMP 051. Corequisite: ECPE 071 (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 041. Prerequisite, or can be taken concurrently: MATH 057 (Fall, Spring).*

**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, or can be taken concurrently: ECPE 121. (Spring).*

**ECPE 131. Electronics (3)**

Introduction to semiconductor physics. Modeling, analysis, and simulation of analog and digital circuits containing diodes, bipolar junction transistors, and MOSFETs. Analysis and design of single stage amplifiers. Frequency response of amplifiers, gain, bandwidth. DC biasing and small signal analysis of amplifiers. *Corequisite: ECPE 131L. Prerequisite: ECPE 041, 041L, MATH 055, PHYS 055, passed Fundamental Chemistry Skills requirement or completion of CHEM 023. (Fall, Spring)*

**ECPE 131L. Electronics Lab (1)**

Use of standard electronic test equipment and simulation tools to analyze, design, and test electronic circuits. Emphasis on analog circuits. *Corequisite: ECPE 131. Prerequisite: ECPE 041, 041L, MATH 055, PHYS 055, passed Fundamental Chemistry Skills requirement or completion of CHEM 023. (Fall, Spring)*

**ECPE 132. Advanced Electronics (4)**

Multistage amplifiers. Amplifier design to meet gain and bandwidth specifications. Feedback and stability of electronic systems. Operational amplifier circuits. Active filters. Oscillators and wave shaping circuits. Analog to digital converters. Design using off-the-shelf IC components. Includes laboratory. *Prerequisites: ECPE 131, ECPE 131L, ECPE 121. (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.*

**ECPE 136. VLSI Design (4)**

Issues in VLSI design including: logic families, sizing, timing models, fabrication, layout, high speed and low power design tradeoffs, circuit simulation and device modeling. *Prerequisites: ECPE 071, 071L, 131, 131L (Spring, odd years).*

**ECPE 141. Advanced Circuits (4)**

Power in AC circuits. Three phase power systems. Frequency response. Operational amplifier circuits and applications. Filter design. *Prerequisites: ECPE 041, 041L. Prerequisite, may be taken concurrently: 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 055, MATH 057, ECPE 041.*

**ECPE 151. Artificial Intelligence (Also listed as COMP 151) (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 051 (Spring, odd years).*

**ECPE 153. Computer Graphics (Also listed as COMP 153) (3)**

An introduction to two and three dimensional computer graphics. Basic representations and mathematical concepts, object modeling, viewing, lighting and shading. Programming using OpenGL and other computer graphics applications. *Prerequisites: COMP 053 (Spring, even years)*

**ECPE 155. Autonomous Robotics (4)**

Overview of design of autonomous robotics. Study of architectures for robot organization and control. Configurations of fixed and mobile robots, sensors and actuators. Design of algorithms and knowledge representations. *Prerequisites: COMP 053, ECPE 071 or permission of the instructor.*

- 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*).
- ECPE 162. Communication Systems (4)**  
Signal characterization in time and frequency domains. Baseband communication, pulse code modulation, multiplexing. Complex envelope representation of bandpass signals. AM, FM, and digital modulations. Applications to radio, television, telephone, and cellular phone systems. Includes laboratory. *Prerequisite: ECPE 121. (Spring)*
- ECPE 163. Energy Conversion (4)**  
Three phase power systems. Magnetic circuits, transformers, rotating machines: DC, induction, and synchronous machines. Equivalent circuits and characteristic curves of transformers and rotating machines. Renewable energy sources and technologies. Includes laboratory. *Prerequisite: ECPE 041, ECPE 041L, PHYS 055. (Spring)*
- 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.*
- ECPE 170. Computer Systems and Networks (4)**  
This course is a comprehensive and holistic examination of the modern computing environment. Students will gain an understanding of the various hardware and software components that enable computers and networks to process information and execute applications. Students will be able to apply this knowledge in the development of efficient and robust software applications. *Prerequisites: COMP 051 or equivalent experience programming in a modern high-level programming language. (Fall, Spring)*
- ECPE 172. Microcontrollers (4)**  
Design and implementation of digital monitoring and control systems using micro-controllers. Hardware and software development. Interfacing input and output devices. Assembly and C programming. Representative applications. Includes laboratory. *Prerequisites: ECPE 071, 071L (Fall).*
- ECPE 173. Computer Organization & Arch (3)**  
The objective of this course is to give you an understanding of how a complete modern computer system operates. You will learn about design of control, datapath and arithmetic-logic units. Other topics include pipelining, memory hierarchy and assembly language programming. *Prerequisites: ECPE 170 and (ECPE 071 or COMP 047). (Spring)*
- ECPE 174. Advanced Digital Design (2)**  
Analysis, design, and implementation of synchronous state machines using programmable logic devices. CAD-based simulation and development using schematic capture and hardware description languages. Representative applications. Includes Laboratory. *Prerequisites: ECPE 071, 071L. (Fall)*
- 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.*
- ECPE 177. Computer Networking (Also listed as COMP 177) (4)**  
Computer Networks and the Internet. LAN, WAN and Internet architectures. The 7-layer OSI model. The Internet protocol stack. Circuit-switched and packet switched networks. Connection oriented and connectionless networks. Routing. Security. Includes laboratory. *Prerequisites: ECPE 071, 071L or ECPE 170 and junior or senior standing (Fall).*

- ECPE 178. Computer Network Security (Also listed as COMP 178) (3)**  
An introduction to security of computer systems and security of communication on networks of computers. Topics include TCP/IP protocols, Internet cryptography, Internet authentication, Trojans, viruses, worms. Emphasis is on network/system attack methods, and how to defend against those attacks. *Prerequisites: ECPE 177 or COMP 177 or permission of instructor. (Spring)*
- 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)**  
Instruction in and application of design processes and teamwork; includes multiple interdisciplinary team design experiences of increasing complexity. Projects incorporate consideration of engineering standards and realistic constraints such as economics, the environment, sustainability, manufacturability, and safety. Instruction and practice in documentation and oral and written communications skills. Review and assessment of core objectives of EE, CpE and EPh majors. *Prerequisites: Completion of core course requirements for major and senior standing. (Fall, Spring)*
- ECPE 196. Senior Project II (2)**  
Capstone design course that integrates earlier studies, including ECPE 195, to perform interdisciplinary team design projects. Student design teams define a requirements document, a test document, and a design document for a prescribed product, then design, build and test a prototype. Complete documentation is expected. Final oral and written reports and project demonstrations are required. *Prerequisite: ECPE 195; completion of core skills requirement for major. (Fall, Spring).*
- 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.*
- Engineering Management**
- EMGT 155. Computer Simulation (Also listed as COMP 155) (4)**  
This course explores digital simulation, in which a model of a system is executed on a computer. The course will focus on modeling methodologies, mathematical techniques for implementing models, and statistical techniques for analyzing the results of simulations. Students will develop simulations using both simulation development toolkits and general purpose. *Prerequisite: MATH 037 or 039, 045 or 051 and COMP 051 or ENGR 019. (Fall, even years)*
- EMGT 170. Engineering Administration (4)**  
Decision-making based upon engineering economy studies. This area covers techniques for economic evaluation of alternatives including time value of money, risk costs, effects of inflation, compound interest calculation, minimum attractive rate of return, capital budgeting, break-even analysis, sensitivity analysis and risk analysis. A second facet of the course covers the fundamental aspects of business management within an engineering context. This area covers the engineering procurement process, project management and project scheduling. *(Summer, Fall)*

**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.

**EMGT 176. Systems Engineering Management (4)**

This course provides an introduction to the concepts and processes of systems engineering. It uses interactive lectures, participatory class exercises and case studies to illustrate the framing and solution of problems through a systems engineering approach. The course stresses an understanding of the interdisciplinary aspects of systems development, operations and support. *Prerequisites: MATH 039 and 055 or permission of the instructor.*

**EMGT 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 faculty member involved. Student must be in good academic standing.*

**EMGT 193. Special Topics (1-4)**

Special courses will be organized and offered from time to time to meet the needs of interests of a group of students. *Prerequisite: Approval 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.

**EMGT 197. Undergraduate Research (2-4)**

Applied or basic research in focused topics within Engineering Management under faculty supervision. *Approval by the faculty supervisor and the department chairperson is required.*

**General Engineering****ENGR 010. Dean's Seminar (1)**

A survey of the profession and practice of engineering and computer science. Overview of the programs and methodologies of the School of Engineering and Computer Science, including educational requirements, professional and career opportunities, introduction to the history of engineering and computing, and entrepreneurship. Hands-on activities and guest lecturers are included to complement the discussion sessions. The course provides basic skills, tools, and techniques applied to problem solving, teamwork and communication necessary for academic and professional success. Students will be required to complete a design project, write a basic technical report and present their results. *(Fall).*

**ENGR 015. 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.

**ENGR 019. Computer Applications in Engineering (3)**

Introduction to binary arithmetic; numerical methods applicable to engineering problems and their solution using a programming language and computation tools. Topics include root finding, solving systems of equations, curve fitting and interpolation, numerical integration and differentiation, and numerical solution of ordinary differential equations. Students will develop programming skills in a high level language and will learn to use mathematical computation tools including spreadsheets. *Prerequisite: MATH 053.*

**ENGR 020. Engineering Mechanics I (Statics) (3)**

The fundamental principles of static equilibrium resulting from the application of forces on particles and bodies. *Prerequisites: MATH 053, PHYS 053 (Fall and Spring).*

**ENGR 025. 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 030. Engineering Ethics and Society (3)**

Major engineering achievements are explored with an emphasis on ethical principles and the global impact these achievements have on society and the environment. Societal needs, personal rights, whistle blowing, conflicts of interest, professional autonomy, risk assessment, sustainable development and the application of engineering codes of ethics. Contemporary technological controversies are examined along with future developments that require engineers to stay current in their field. Student participation is expected in classroom discussions, oral presentations, and written analyses.

**ENGR 045. 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 025, MATH 053 (Fall, Spring).*

**ENGR 120. Engineering Mechanics II (Dynamics) (3)**

The fundamental principles of particles and bodies in motion under the action of external forces. *Prerequisite: ENGR 020 (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: ENGR 020. Prerequisite, may be taken concurrently: MATH 057. (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 025, PHYS 053 (Fall, Spring).*

**ENGR 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.

**Mechanical Engineering****MECH 100. Manufacturing Processes (4)**

A study of traditional manufacturing processes such as forming, 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 045 or permission of the instructor (Fall).*

- MECH 104. Introduction to Mechatronics (3)**  
A broad understanding of the main components of mechatronic systems. Understanding of the general principles involved in computer-controlled machinery, including sensing, actuation and control; practical knowledge of the development of simple embedded computer programs; understanding of the practical application of mechatronic systems in applications such as manufacturing, automobile systems and robotics. *Prerequisites: ECPE 041, ENGR 120, MECH 110 or permission of the instructor (Spring).*
- MECH 110. Instrumentation and Experimental Methods (3)**  
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 057, ENGR 045 or permission of the instructor (Fall).*
- MECH 120. Machine Design and Analysis I (3)**  
This course builds on fundamental principles learned in statistics, dynamics, and mechanics of materials, and applies them to the design and analysis of machines. Methods for performing load and stress analysis will be learned along with analytical methods for solving deflection and stability problems. Static, impact, and fatigue failure theories for machines will also be studied. Statistical methods for solving machine design problems will be presented, and engineering design practices will be integrated throughout the course. *Prerequisites: ENGR 045, 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 125. Machine Design and Analysis II (3)**  
Students learn how to design, analyze, and incorporate a variety of standard parts and devices into machines. These parts and devices include fasteners, gear systems, belt drives, chain drives, shafts, couplings, bearings, springs, clutches, and brakes. Principles of tribology (friction, wear, & lubrication) are introduced and applied to the design of machines. Engineering design practices will be integrated throughout the course. *Prerequisites: MECH 120 (Spring).*
- 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 057, ENGR 120, MECH 019 or permission of the instructor (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, may be taken concurrently: MECH 120 or 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, MECH 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. *Prerequisite: ENGR 122 and MATH 057 (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, insulation on surfaces, principles of solar collectors, applications such as space heating and solar ovens, photovoltaics, laboratory experiments. *Prerequisites: MECH 150, 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 (4)**  
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: ECPE 041, MECH 110, 129 or permission of the instructor (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, CIVL 130, MECH 150 (Fall).*
- 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 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.*



## School of Engineering and Computer Science 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.

**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.

**Louise Stark**, 1992, Associate Dean and 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.

### Bioengineering Program

**Jeffrey S. Burmeister**, 2002, Program Director and Associate Professor of Bioengineering, B.S., Mechanical Engineering, 1988, University of Delaware; Ph.D. 1995, Duke University, Biomedical Engineering.

**James C. Eason**, 2008, Assistant Professor of Bioengineering, B.S., Electrical Engineering, 1988, North Carolina State University; Ph.D. 1995, Duke University, Biomedical Engineering. Cardiovascular electrophysiology, computational modeling, system dynamics.

**Chi-Wook Lee**, 1998, Associate 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.

**Douglas Modlin**, 2005, Visiting Assistant Professor, B.S., California State Polytechnic University, 1975; M.S., Stanford University, 1978; Ph.D., Stanford University, 1983.

**Camille Troup**, 2005, Visiting Assistant Professor, B.A., University of Minnesota, 1986; Ph.D., University of California San Francisco, 1996.

### Civil Engineering Department

**Hector Estrada**, 2006, Professor and Chair of Civil Engineering, B.S., University of Illinois, 1993; M.S., 1994; Ph.D., 1997. Registered Professional Engineer; structural engineering and engineering mechanics.

**Abel A. Fernandez**, 2000, Professor of Civil Engineering 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.

**Luke Lee**, 2008, Assistant Professor of Civil Engineering, B.S., University of California, Los Angeles, 1997; M.S., University of California, Berkeley, 1998, University of California, San Diego, 2005; structural engineering and rehabilitation and monitoring of infrastructure systems.

**Gary M. Litton**, 1993, 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, Associate 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, 2003. Environmental Engineering, water resources, hydrodynamic and water quality modeling, fluid mechanics.

### Computer Science Department

**William H. Ford**, 1974, Professor and Chair of Computer Science, B.S., Massachusetts Institute of Technology, 1967; Ph.D., University of Illinois, 1972. Discrete mathematics, computing theory, algorithms, numerical methods.

**Emma Bowring**, 2007, Assistant Professor of Computer Science, B.S., University of Southern California, 2003; Ph.D., University of Southern California, 2007. Artificial Intelligence, multi-agent systems, computer science education.

**Daniel Cliburn**, 2006, Assistant Professor of Computer Science, B.S., Illinois College, 1997; M.S., University of Kansas, 1999; Ph.D., University of Kansas, 2001. Computer graphics, visualization, virtual reality, computer science education.

**Michael Doherty**, 1998, Associate Professor of Computer Science, B.S., University of Florida, 1983; M.S., University of Rhode Island, 1992; Ph.D. University of Colorado at Boulder, 1998. Simulation, video game technology, database applications, computer graphics.

**Jinzhong Gao**, 2008, Assistant Professor of Computer Science, B.S. Computer Science and Engineering, Huazhong University of Science and Technology, 1995; M.S. Mechanical Engineering, Huazhong University of Science and Technology, 1998; Ph.D. Computer and Information Science, Ohio State University, 2004. Scientific visualization, computer graphics, large scale data management, data analysis and visualization, data-intensive computing, remote visualization, Web-based applications.

**David A. Lundy**, 1983, Senior Lecturer in Computer Science, B.S., University of Oregon, 1975; MBA, California State College, Stanislaus, 1987.

**Cathi Schuler-Sawyer**, 1993, Assistant Visiting Professor in Computer Science, B.A., University of California, Santa Barbara, 1974; MSW, California State University, Sacramento, 1976. Business software consulting and training, technical writing, Web development.

**Doug Smith**, 1970, Emeritus Professor of Computer Science, B.S., University of Washington, 1964; MAT, Harvard University, 1965; Ph.D., University of Washington, 1970. GUI programming, computing theory, discrete mathematics, cooperative education.

**William R. Topp**, 1970, Emeritus Professor of Computer Science, B.A., St. Louis University, 1963; M.A., 1964, M.S. University of Washington, 1967; Ph.D., 1968. Data structures, numerical methods, applied scientific programming.

### Electrical and Computer Engineering Department

- Computer Engineering Program
- Electrical Engineering Program
- Engineering Physics Program

**Charian Mathews**, 2005, Chair and Professor of Electrical and Computer, B.E. in Electrical Engineering, Anna University, Chennai, India, 1987; M.S. in Electrical Engineering, Purdue University, 1989; Ph.D. in Electrical Engineering, Purdue University, 1993; Statistical signal processing, Array signal processing, Direction of arrival estimation, Real-time digital signal processing using DSP processors, Microcontroller applications.

**James C. Eason**, 2008, Assistant Professor of Bioengineering, B.S., Electrical Engineering, 1988, North Carolina State University; Ph.D. 1995, Duke University, Biomedical Engineering. Cardiovascular electrophysiology, computational modeling, system dynamics.

**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.

**Rahim Khoie**, 2002, Professor of Electrical and Computer Engineering, BSEE, 1977, Abadan Institute of Technology, Abadan, Iran; M.S., 1980, University of Pittsburgh.; Ph.D., 1986, University of Pittsburgh. High speed electron devices, Quantum effect devices, Solid state physics, Renewable energy, Analog and digital electronics, and Embedded Systems.

**W. Joseph King**, 1983, Professor of Electrical 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. **Louise Stark**, 1992, Associate Dean and , 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.

#### *Engineering Management Program*

**Abel A. Fernandez**, 2000, Professor of Civil Engineering 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.

**Justin M. Reginato**, 2005, Assistant Professor of Civil Engineering and Engineering Management, B.S., Geological Engineering, University of Nevada, Reno, 1995; M.S., University of California, Berkeley, 1997; Ph.D., 2005. Registered Professional Engineer; Project management, project finance, management of technology, geotechnical and geological engineering.

#### *Mechanical Engineering Department*

**Brian L. Weick**, 1995, Chair and 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.

**Jeffrey S. Burnmeister**, 2002, Associate Professor of Bioengineering, B.S., Mechanical Engineering, 1988, University of Delaware; Ph.D. 1995, Duke University, Biomedical Engineering.

**Chi-Wook Lee**, 1998, Associate 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.

**Jian Cheng Liu**, 2006, Assistant Professor of Mechanical Engineering, B.S., Taiyuan University of Technology (China), 1984; M.S., 1987; Ph.D., Himeji Institute of Technology, now named University of Hyogo (Japan), 1996. Manufacturing, machine design.

**Kyle A. Watson**, 2003, Assistant Professor of Mechanical Engineering, B.S.M.E., Villanova University, 1995; M.S., North Carolina State University, 1997; Ph.D., 2002. Thermal sciences, fluid mechanics, combustion.

#### *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.

**Calvin P Chen**, 2006, Assistant Professor and Coordinator of Cooperative Education, B.S.C.E., Rice University, 2000; M.B.A., Rice University, 2005.

**Juliet C. Ellinger**, 2007, Assistant Professor and Coordinator of Special Programs, B.A., California State University Long Beach, 2001; M.B.A., Regis University, 2006.

**Elisa Orosco Anders**, 2006, Assistant Professor and Assistant Director of Outreach, B.S. Business Administration, Pacific, 2001; MBA, Pacific, 2002; Doctorate of Educational Administration, Pacific, 2008.

#### *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.

# school of international studies

Phone: (209) 946-2650

Location: George Wilson Hall

Website: [www.pacific.edu/sis](http://www.pacific.edu/sis)

Margee Ensign, Dean/Associate Provost for International Initiatives

Mary-Lou Tyler, Assistant to the Dean/Director of Student Affairs

## Degrees Offered

Bachelor of Arts

Master of Arts (see Graduate Catalog for information)

## Majors Offered

International Relations (BA)

Global Studies (BA)

Development and Cultural Change (BA)

International Affairs and Commerce (BA)

Intercultural Relations (MA)

## Minors Offered

International Studies

Diverse Academic Track

Foreign Language Track

Study Abroad Track

Anthropology

## Certificate Offered

Inter-American Professionals

Latin American Track

U.S./Latino Track

*An undergraduate professional school devoted to the study of global affairs, offering students four majors including one or two semesters of study abroad in more than 100 locations in over 50 countries.*

## Mission

The newest school at University of the Pacific, one of only six undergraduate schools of international studies in the country, the School of International Studies (SIS) offers a unique and challenging program of study. It is the only school in the country to require study abroad. The school's comprehensive cross-cultural training program prepares students well for this life changing experience. The faculty brings to the school a wide range of knowledge and experience from all regions of the world and in many different academic disciplines including politics, economics, history, geography, and anthropology. The four majors in the School of International Studies, International Relations, Global Studies, Development and Cultural Change, and International Affairs and Commerce are designed to prepare students for careers in government, business, law, journalism, education and other professions in the most globally integrated society in human history.

The School stresses close faculty-student contact, student participation in School governance, and a supportive and intellectually challenging 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 public service, research, business, or policy analysis and advocacy in a cross-cultural and/or international environment the School of International Studies provides a community of students and scholars dedicated to understanding and helping to shape the world of the 21st century.

## Degree Program Requirements

In order to earn the bachelor of arts degree in International Relations, Global Studies, Development and Cultural Change, or International Affairs and Commerce, students must complete a minimum of 128 units with a Pacific cumulative and major/program grade point average of 2.0.

### I. General Education Requirements

Students entering college for the first time are required to take Pacific Seminars I, II and III in addition to six courses from the breadth program. These breadth courses must come from categories IA, IB, IIA, IIC, IIIA and IIIB. Courses taken for the major can also fulfill these general education requirements.

Transfer students with 28 or more transfer units are not required to take Pacific Seminars I, and II. They are required to take Pacific Seminar 3 and complete nine courses from the breadth program by taking at least one course in each of the nine categories. Courses taken for the major can also fulfill these general education requirements.

#### Pacific Seminars

PACS 001	Pacific Seminar 1: What is a good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	4
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

*Note: 1) Pacific Seminars cannot be taken for Pass/No Credit.*

#### Breadth

##### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior (ECON 053\*)
- IB. U.S. Studies (ECON 055\* is required for all majors except Global Studies)
- IC. Global Studies (ANTH 053\*)

##### Arts and Humanities

- IIA. Language and Literature
- IIIB. Worldviews and Ethics (INTL 081\*)
- IIC. Visual and Performing Arts

##### Natural Sciences and Mathematics

- IIIA. Natural Sciences
- IIIB. Mathematics and Formal Logic
- IIIC. Science, Technology, and Society (Transfer Students only) or a second Natural Science

*Note: 1) A complete list of the courses that satisfy the subdivisions above can be found in the General Education section in the front of this catalog and online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program. 3) \* Courses satisfy both GE and major requirements, except as noted.*

### II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

*Note: 1) A detailed description of how you can satisfy the fundamental skills above can be found in the General Education section in the front of this catalog.*

### III. Core Requirements

INTL 010	Dean's Seminar (first year students only)	1
INTL 077	Contemporary World Issues	4
INTL 081	Perspectives on World History	4
INTL 101	International Research Methods	4

One course from the following two:		4
INTL 113	World Geography for the Social Sciences	
INTL 115	Pacific Rim Geography	
INTL 151	Cross-cultural Training I	2
INTL 161	Cross-cultural Training II	2
INTL 185	SIS Capstone	2
ANTH 053	Cultural Anthropology	4
ECON 053	Introductory Microeconomics	4
One course from the following two:		4

- POLS 011 Introduction to Political Science
- POLS 151 Principles of Comparative Politics

Competence in a Modern Foreign Language at the level of 4th semester college course or equivalent (typically demonstrated through LANG 025)

SABD 000	At least one semester of study abroad	12
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*Note: 1) The semester abroad must be in a program approved by the adviser as appropriate to the major. 2) Mirror Image students are exempt from SABD 000*

*Note: 1) Seniors with a 3.0 GPA or above may choose to complete a four unit senior thesis/independent research project (INTL 197) under the supervision of a cooperating professor. Students completing a Senior Thesis with a B+ or better grade will earn an SIS Honors Research designation.*

### IV. Major Requirements

Complete one of the following majors

#### International Relations

The International Relations major is designed for students with a particular interest in comparative and international politics. In addition to the CORE Requirements, students take additional coursework in Economics and substantial upper division work in Political Science. While all majors provide an excellent foundation for a range of careers, as evidenced by SIS alumni, this major prepares students for careers in government and law in particular, as well as for graduate school.

POLS 051	International Politics	4
ECON 055	Introductory Macroeconomics	4
ECON 071	Global Economic Issues	4
One course from the following:		4

- MATH 037 Introduction to Statistics and Probability
- MATH 051 Calculus I
- ECON 190 Econometrics

Four courses from the following:		16
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- POLS 141 W. European Comparative Politics
- POLS 146 Latin American Politics
- POLS 148 Politics of the Middle East
- POLS 150 Political Development
- POLS 151 Principles of Comparative Politics
- POLS 152 Politics of Asia
- POLS 160 Theories of International Politics
- POLS 162 International Organizations
- POLS 164 International Political Economy
- POLS 166 International Conflict and Conflict Management
- POLS 168 Comparative Foreign Policy
- POLS 170 US Foreign Policy
- POLS 172 Inter-American Relations
- INTL 174 Global Environmental Policy

## Global Studies

The Global Studies major is designed for students who are seeking a more general global education. In addition to the CORE Requirements, students are required to take a course on Globalization and spend a second semester abroad. Their further upper division international studies coursework may be in any discipline offering relevant courses; the program of study will be decided upon by the student in consultation with their advisor.

INTL 105	Globalization, the US and the World	4
SABD 000	A second semester of study abroad	12
Electives	Four 100 level international affairs courses to be approved by the advisor	12-16

## Development and Cultural Change

The Development and Cultural Change major is designed for students with a particular interest in international development issues. In addition to the CORE Requirements, students take some additional coursework in Economics, as well as courses focusing on questions of development from a range of disciplinary perspectives. This major focuses on preparing students for careers and graduate work in development and international aid.

INTL 105	Globalization, the US and the World	4
ECON 055	Introductory Macroeconomics	4
ECON 071	Global Economic Issues	4

One course from the following: 4

- MATH 037 Introduction to Statistics and Probability
- MATH 051 Calculus I

Three courses from the following: 12

- ECON 125 Economic Development
- POLS 150 Political Development
- INTL 165 Development, Modernization and Cultural Change
- ANTH Upper Division Anthropology course (to be approved by the advisor)
- INTL/ANTH 197 Independent Research

**Note:** A student in this major is strongly encouraged to complete an education abroad program in a developing country.

## International Affairs and Commerce

The International Affairs and Commerce major is designed for students with a particular interest in economics, or an intention of working in international business. In addition to the CORE Requirements, students take further coursework in economics, as well as a two-course business sequence. The major prepares students for careers in business and economics, as well as for graduate school.

ECON 055	Introductory Macroeconomics	4
ECON 121	International Trade	4
ECON 123	International Finance	4
BUSI 031	Principles of Financial Accounting	4

One course from the following: 4

- MATH 037 Introduction to Statistics and Probability
- MATH 051 Calculus I
- ECON 190 Econometrics

One of the following two-course sequences: 8

- a) BUSI 053 The Legal and Ethical Environment of Business
- BUSI 177 International Trade Law OR
- BUSI 178 International Commercial Law

b) BUSI 105	Financial Management
BUSI 163	International Financial Management
c) BUSI 107	Marketing Management
BUSI 165	International Marketing
d) BUSI 109	Management and Organizational Behavior
BUSI 169	Comparative Management

## Modifications in SIS Major for Students From Abroad (Mirror Image Students) and Global Nomads

1. Study Abroad requirement: May be waived by the SIS Academic Standards and Curriculum Committee, on petition by the student.
2. Language requirement: This may be waived by the Director of Student Affairs, on petition by the student who is fluent in a first language other than English.
3. Cross-cultural Training I (INTL 151) and Cross-cultural Training II (INTL 161) may be waived for Mirror Image and Global Nomad students who do not go on a Pacific Education Abroad program. In substitution of study abroad and Cross-cultural Training, students will be required to complete 16-20 units of courses about the United States in consultation with their adviser.

## Minor in Anthropology

The Anthropology Minor is designed to allow students with an interest in Anthropology the opportunity to combine a generalized sequence of courses into a program. An Anthropology Minor broadens a student's major field of study by exposing the student to the diverse ways of life of people around the globe. Students who complete the Anthropology Minor will have a greater knowledge of the theories, concepts, and methods used by Anthropologists in the study of human cultures, past and present. A Minor in Anthropology is excellent preparation for further study in any field that requires the abilities to understand and engage with people from other cultures (including teaching, medicine, pharmacy, dentistry, business, law, and counseling).

In order to earn a minor in anthropology, students must complete a minimum of 20 units and five courses with a minimum grade point average of 2.0.

**Note:** 1) At least 10 units of the minor must come from courses taken at Pacific or through an approved education abroad program 2) At least three courses taken in the School of International Studies at Pacific as specified below:

One of the following: 4

- ANTH 053 Cultural Anthropology
- ANTH 054 Antropologia cultural

One of the following: 4

- ANTH 112 Physical Anthropology
- ANTH Approved course

Two of the following advanced anthropology electives: 8

- ANTH 153 Language and Culture
- ANTH 172 Culture and Power
- ANTH Approved Course

One of the following groups: 4-14

- a) ANTH Anthropology 4 unit elective
- b) SABD 000 One semester of an approved education abroad program
- INTL 151 Cross-cultural Training I
- INTL 161 Cross-cultural Training II

## Minor in International Studies

The minor in International Studies helps students from other disciplines 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 20th century, followed by one of three different international tracks. Students pursuing a major in the School of International Studies are not eligible for an SIS minor. A student interested in the International Studies minor should consult with the SIS Director of Student Affairs early in his or her academic planning.

In order to earn a minor in international studies, students must complete the required courses with a minimum grade point average of 2.0.

**Note:** 1) At least 10 units of the minor must come from courses taken at Pacific or through an approved education abroad program.

### Diverse Academic Track (Minimum 22 units)

INTL 077	Contemporary World Issues	4
INTL 081	Perspectives on World History	4
Electives	Courses selected from SIS Core and/or Major Requirements	14

**Note:** 1) 8 of the units may include Modern Language and Literature courses.

### Foreign Language Track (Minimum 20 units)

INTL 077	Contemporary World Issues	4
LANG 025	Competence of a 4th semester college level Modern Foreign Language or equivalent	

**Note:** 1) This language may not be the same one used to complete a major in the Department of Modern Language and Literature.

LANG	Elective (One course in Modern Language and Literature taken at the University of the Pacific or on an approved education abroad program.)	4
Electives	Courses selected from SIS Core and/or Major Requirements	12

### Study Abroad Track (Minimum 20 units)

INTL 077	Contemporary World Issues	4
INTL 151	Cross-cultural Training I	2
INTL 161	Cross-cultural Training II	2
SABD 000	One semester of an approved education abroad program	12
Electives	Courses selected from SIS Core and/or Major Requirements	10

## Inter-American Professionals Certificate

The Inter-American Professionals Certificate is designed to prepare professionals in all disciplines to work either abroad in a Spanish-speaking country or in the Hispanic communities within the United States. Students currently enrolled in a degree program at any of the three University of the Pacific campuses may participate in the Certificate program. Through 12-15 units of course work and 4-12 units of experiential learning students will gain the basic cultural knowledge necessary to operate successfully in a bilingual professional setting. All Certificate students are strongly encouraged to live in the Spanish immersion "Casa Covell" campus residence. Upon completion of coursework and experiential learning, candidates for the Certificate must complete the American Council on the Teaching of Foreign Languages (ACTFL) Oral Proficiency Test (OPI) and achieve a minimum score of "Advanced Low" in order to receive the Certificate. Students may consult with faculty regarding the need for additional language training prior to ACTFL OPI testing. Students will choose either the *Latin America Track* or the *U.S./Latino Track* for their Certificate course work. A maximum of nine transfer units may be counted

toward the Certificate. No more than 8 units of academic credit may be double-counted toward a major as appropriate with approval of the department offering the major.

### **Latin America Track**

ANTH 054	Antropología cultural	4
INTL 152	Inter-American Cross-cultural Training	4
One of the following:		4
HIST 041	The Problem with Latin America	
SPAN 110	Civilización hispanoamericana	
One of the following:		4
SPAN 103	Introducción a la literatura hispánica	
SPAN 135	Literatura hispanoamericana del siglo XX	
INTL 187	Internship	4-12

**Note:** Internship or practicum in Latin America or in an appropriate Spanish-speaking U.S./Latino community setting

ACTFL Certification in Spanish at the Advanced Low Level

### **U.S./Latino Track**

ANTH 054	Antropología cultural	4
INTL 152	Inter-American Cross-cultural Training	4
One of the following:		4
HIST 137	Hispanic USA	
HIST 139	Borderlands	
SPAN 124	Escritores hispanos en los Estados Unidos	4
INTL 187	Internship	4-12

**Note:** Internship or practicum in Latin America or in an appropriate Spanish-speaking U.S./Latino community setting

ACTFL Certification in Spanish at the Advanced Low Level

## Master of Arts in Intercultural Relations

The Master's degree in Intercultural Relations is for adult professionals who wish to earn an advanced credential in a two-and-one-half to three-year period while maintaining employment or other commitments. This limited-residency program is intended to meet the needs of individuals who find the schedule and structure of a traditional full-time MA program inappropriate for their situation. For this reason, the core courses of the MAIR program are taken over eighteen months. Students are in residence in Portland every six months for two weeks, in January and July.

For more information or to request an application packet, please contact Katrina Alison Jaggears, MAIR Associate Director, at [kjaggears@pacific.edu](mailto:kjaggears@pacific.edu)

## Education Abroad – International Programs and Services

University of the Pacific sponsors a wide variety of education abroad options for all students. Currently, International Programs and Services in the Bechtel International Center makes available 100 locations in more than 50 countries. Students should consult the most recent edition of the Education Abroad Directory, which is available in the Education Abroad library. The Directory gives brief descriptions of programs, admissions requirements, University policies pertaining to education 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 education abroad program requires a minimum Pacific grade point average of 2.75. SIS students must have a least a 2.75 Pacific GPA and have completed all university fundamental skills requirements at the time they apply for an education abroad program. Many programs require higher GPAs.

## Course Offerings

### Anthropology

#### ANTH 053. Cultural Anthropology (4)

An introduction to the anthropological view of humanity, the character and nature of culture, and the diversity of the human species. The major concepts, methods, and theoretical assumptions of the discipline will be illustrated by applying anthropological perspectives to peoples from around the world. Topics include culture, ethnicity, and language; kinship, marriage, and social organization; time and space; religion, magic and rituals; gender and sexuality; power, inequality, and political relations; economic production, circulation, and consumption; social control; and the various forces and forms of change. General Education IC.

#### ANTH 054. Antropologia cultural (4)

Cultural Anthropology (ANTH 053) taught in Spanish. See course description above.

#### ANTH 093. Special Topics (1-4)

Occasional offerings on topics of current interest to faculty and students.

#### ANTH 112. Physical Anthropology (4)

A detailed examination of human origins and an evaluation of humanity's place in the natural world. This course examines processes and principles of human evolution from an anthropological perspective, emphasizing the interaction between biology and culture. Major topics of include reproduction and genetics, human variation, primate studies, and the fossil record. After reviewing the basic tenets of the "anthropological perspective" and evolutionary science, the course examines micro and macro level processes of evolution, focusing on the origins and dispersal of our own species, *Homo sapiens sapiens*. Finally, the course evaluates the current state of human bio-cultural evolution, the significance of human diversity, and the role of humans in ongoing planetary processes of change and interaction. General Education IIIC.

#### ANTH 153. Language and Culture (4)

In this seminar, the interconnections between language and culture are explored from an anthropological perspective, including approaches to the Education of language within anthropology, methods of linguistic anthropological research, linguistic relativity, conversational styles, and links between language and power.

#### ANTH 172. Culture and Power (4)

What is power? How are power relations configured differently across cultures? How is power institutionalized and contested in an increasingly interconnected world? The theme that unites all these concerns is the politics of everyday life: how power works in and through culture to shape the lives of individuals and societies. Topics of discussion include: conflict and conflict resolution; law and custom; leadership and authority; social and cultural control; ritual and symbolism; gender, ethnicity, and identity politics; nationalism and colonialism; representation; agency and political subjectivity; civil society organizations and social movements; borders, boundaries and citizenship.

#### ANTH 187. Internship (1-4)

An internship, approved and supervised by a faculty adviser, is an opportunity for a student to intellectually reflect on a supervised work experience in a setting appropriate for the student's career and life goals. *Prerequisites: Minimum GPA 2.5, completion of at least two advanced anthropology courses.*

#### ANTH 191. Independent Education (1-4)

Ordinarily limited to juniors and seniors. *Permission of instructor.*

#### ANTH 193. Special Topics (1-4)

Occasional offerings on topics of current interest to faculty and students.

#### ANTH 197. Independent Research (1-4)

Advanced students are offered the opportunity to design and complete an independent research project under the direction of a faculty member beyond the requirements of other coursework. *Prerequisites: 3.0 Pacific GPA and completion of a minimum of two advanced anthropology courses. Permission of instructor.*

### International Studies

#### INTL 010. Dean's Seminar (1)

A general introduction to making a successful transition to college. Emphasis on styles of learning, research, writing and presentation skills, collaborative learning, critical thinking and self-assessment. *Required for all SIS first year students.*

#### INTL 061. The UN System (2)

An in-depth examination of the formation, development and organization of the United Nations with special emphasis on its missions, priorities and activities on the international stage.

#### INTL 067. Introduction to Model United Nations (MUN I) (1-2)

An overview of the workings of the United Nations with particular attention paid to current world issues before that body. Emphasis will be placed on developing critical thinking and oral advocacy skills in preparation for attending a competitive Model United Nations conference in California. *(May be taken for up to 2 units)*

#### INTL 069. Introduction to International Law (4)

An in-depth examination of the intersection between international relations, economic globalization and national security – an intersections that has given rise to international law. In particular, the course will address the growing cadre of actors (international as well as regional, inter-governmental and non-governmental) in this field.

#### INTL 077. Contemporary World Issues (4)

An introduction to the most important current global issues through a look at their contemporaneous history over the last century. Examines the political, economic, and cultural changes around the world that have led to today's problems and opportunities.

#### INTL 077L. Twentieth Century Thru Videos (1)

Complementing INTL 077 (Contemporary World Issues), this video course offers historical footage of significant persons, events, and movements around the world throughout the 20th century. The discussion of the videos seeks to deepen our understanding of the atmosphere and attitudes surrounding significant events of the 20th century. *Corequisite: INTL 077 or permission of the instructor.*

#### INTL 081. Perspectives on World History (4)

A Education 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. General education IIB.

#### INTL 093. Special Topics (1-4)

Occasional offerings on topics of current interest to faculty and students.

#### INTL 101. International Research Methods (4)

An introduction to how research is conducted in the social sciences, with emphasis on the problems that which occur in international studies research. Shows how qualitative and quantitative research complements each other. Compares research methodologies in the different social science disciplines. Introduces basic statistical methods for analyzing social scientific data, and introduces the use of computers for quantitative analysis. *Prerequisite: Algebra skills as evidenced by a passing score on the General Education quantitative skills examination or MATH 005 or 035 or a score of 540 or above on the Mathematics Level 1 SAT Subject Test, or 520 or above on the Mathematics Level 2 SAT Subject Test.*

**INTL 105. Globalization, the U.S. and the World (4)**

This interdisciplinary course surveys the changing nature of global relations, focusing on political, economic, and cultural aspects of globalization and the US role in global affairs. Studies US governance (including the institutions of government) in comparative perspective in order to better understand the country's position in the world. Addresses the meaning and implications of globalization: what impact does it have on democracy in the world, the global environment, etc. *Prerequisites: INTL 077, ECON 053, sophomore standing.*

**INTL 113. World Geography for the Social Sciences (4)**

An interdisciplinary course on economic, political, and cultural geography around the world, emphasizing the evolving pattern of globalization. Shows how the physical geography and historical geography in ten world regions have led to today's differences in economies, governance systems, and cultural patterns in those regions. Examines the extent to which convergence may be occurring due to globalization. *Prerequisite, may be taken concurrently: ECON 053, sophomore standing.*

**INTL 113L. Video Lab for World Geography (2)**

Complementing INTL 113 (World Geography), this course offers documentary videos that which bring to life geographical concepts. Each video focuses on a different society, showing insights into the way that geography influences the economy, politics, and culture of a society. The discussion of each video gives a deeper appreciation of human geography – the similarities and differences among people and societies around the world. The discussion also shows the importance of geography in understanding the current international news. *Corequisite: INTL 113 or permission of the instructor.*

**INTL 115. Pacific Rim Geography (4)**

This course will cover the geography of the Americas, East Asia, and Southeast Asia. The physical geography of each region will be explored followed by an examination of the economic, political, social/cultural, and environmental patterns and issues in each of these regions of the world. Emphasis will be placed on the countries with the largest populations in the regions surrounding the Pacific Rim, including: China, the US, Indonesia, Brazil, Japan, and Mexico. *Prerequisites: Sophomore standing and ECON 051 or 053 or 055.*

**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 or Sao Paulo, Tokyo, Paris or Mobile. Emphasis on conflicts arising from post colonialism. General Education IC.

**INTL 151. Cross-cultural Training I (2)**

A course designed to prepare the student, American or foreign, for Education and life abroad. Topics include American values and assumptions, cross-cultural communication, cross-cultural adjustment and problems, and research on the host country. *Prerequisite: Students must have a Pacific GPA of at least 2.50 and have completed all university fundamental skills requirements at the time of enrollment.*

**INTL 152 Inter-American Cross-cultural Training (2)**

Inter-American Cross Cultural Training deals with the theory and practice of living and working in US Latino and Latin American cultures. It is intended to prepare students to operate successfully in a professional context either abroad in a Spanish-speaking country or in Hispanic communities within the United States. Through course work leading up to an internship requiring experiential learning, students will increase their understanding of the general character of the cross-cultural experience, explore learning and coping strategies to maximize that experience, amplify their understanding of themselves as cultural beings so that they can better understand others, and

gain basic cultural knowledge necessary for them to operate successfully in bilingual (English/Spanish) professional settings. It is designed to build both culture-general skills as well as culture-specific ones. That is, students will learn skills that will serve them in intercultural encounters with people from all over the world, but will emerge with particular preparation to productively engage across difference in Latin America and with US Latinos. *Permission of instructor.*

**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, communication styles and channels, alterations in value structure, and models for characterizing personal and cultural change. *Prerequisite: INTL 151 and study abroad (SABD).*

**INTL 165. Development, Modernization, and Cultural Change (4)**

The purpose of this course is to examine what we know about defining and measuring sustainable human development in the areas of: economic development; political development (governance, democracy and civil society); human development (health, population, nutrition and gender issues); health, education, environmentally-sustainable development, and the areas of disasters and failed states. This course is interdisciplinary and problem-oriented. Using databases that will be made available, students will undertake country and context specific analyses and case studies. The successful completion of this course will equip students with an interdisciplinary and holistic understanding of sustainable human development. Finally the emphasis placed on comparative analysis will help the student to gain a deeper understanding of a country in a broader regional and international context. *Prerequisites: POLS 011 or 051, ANTH 053, ECON 053 or permission of the instructor.*

**INTL 167. Advanced Model United Nations (MUN II) (1-2)**

Advanced instruction on the workings of the specialized agencies of the United Nations and other international organizations with particular attention paid to current world issues before those bodies. Emphasis will be placed on independent research and writing, as well as leadership skills, in preparation for attending a competitive Model United Nations conference at United Nations Headquarters in New York City." *Prerequisites: POLS 051 (May be taken for up to 2 units)*

**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 051.*

**INTL 175. SIS Mentor III: Ethics Across Cultures (4)**

An interdisciplinary approach to helping students become aware of how they think about ethics. Puts students' experiences in more than one culture into an ethical framework, and prepares students for ethical action in their professional lives. Looks at philosophical and religious bases for ethical decision making in different cultures. Uses case studies to show applications of different ways of approaching ethical dilemmas. As a capstone course for international studies students, it explores ethical issues associated with human rights, development, the environment, sovereignty, war, refugees, and international business practices. Students prepare an ethical biography of a significant person who has spent considerable time in two different cultures. Students also prepare their own ethical autobiographies. *Prerequisite: INTL 151 (Cross Cultural Training I) and a semester of Education abroad, or a bi-cultural background (with instructor's permission).*



**INTL 185. SIS Capstone (2)**

Integrates the interdisciplinary and multidisciplinary SIS core curriculum with the experiential learning of Education abroad. This is accomplished through analysis of the role of the individual in a variety of cultural and historical contexts, paying particular attention to questions of identity and ethics in a complex global environment. *Prerequisites: Senior standing, a semester of Education abroad or permission of instructor.*

**INTL 187. Internship (4)**

An internship, approved and supervised by a faculty adviser, is an opportunity for a student to intellectually reflect on a supervised work experience in a setting appropriate for the student's career and life goals. *Prerequisites: Minimum GPA 2.5, completion of at least two SIS core courses.*

**INTL 191. Independent Education (1-4)**

Ordinarily limited to SIS juniors and seniors. *Prerequisites: good academic standing, permission of instructor.*

**INTL 193. Special Topics (1-4)**

Occasional offerings on topics of current interest to faculty and students.

**INTL 197. Independent Research (2-4)**

Advanced students are offered the opportunity to design and complete an independent research project under the direction of a faculty member beyond the requirements of other course work. *Prerequisite: GPA 3.0 and permission of instructor.*

### Additional Courses of Particular Interest to SIS Majors

#### National Courses

ARTH 120	Chinese Art History
ARTH 122	Japanese Art History
ENGL 043	British Literature after 1800
HIST 061	A Global History of Food
HIST 114	Modern Germany
HIST 115	History of Modern Russia
HIST 116	History of Soviet Foreign Policy
HIST 142	Modern Chinese History
HIST 143	Modernization of Japan
HIST 151	History of Mexico
FREN 051	French Literature in English
FREN 114	Civilisation Française B
FREN 118	Littérature Française B
FREN 120	Le Cinéma Française
FREN 124	Individu et Societe
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 Translation
JAPN 172	Japanese Culture and Civilization
JAPN 174	Modern Japanese Theatre
JAPN 180	Modern Japanese Fiction

PORT 126	Reading and Discussion on Luso-Brazilian Culture
RUSS 073	Russian Culture and Civilization
RUSS 120	Russian Cinema
RUSS 193	Special Topics
SPAN 112	Civilización española
SPAN 120	Narrativa hispanica
SPAN 128	Teatro hispanico
SPAN 135	Literatura hispanoamericana del siglo XX

#### Regional Courses

ARTH 009	Survey of Western Art After 1400
ARTH 112	19th Century European Art
ARTH 114	20th Century European Art and Film
CHIN 120	Asian Cinema
HIST 011	History of Western Civilization II
HIST 031	East Asian Civilization II
HIST 041	Latin American Civilization II
HIST 104	The European Age, 1815-1914
HIST 111	Europe in Turmoil, 1900-1945
HIST 112	History of the Holocaust
HIST 113	Europe Since 1945
HIST 140	Southeast Asia and the West
HIST 150	Women in Latin America
POLS 141	West European Comparative Politics
POLS 146	Latin American Politics
POLS 148	Politics of the Middle East
SPAN 135	Literatura Hispanoamericana del siglo XX

#### Courses Comparing World Regions

ARTH 116	Contemporary Art and Film
BIOL 035	Environment: Concepts & Issues
BUSI 169	Comparative Management (see catalog description for prerequisites)
COMM 143	Intercultural Communications
ECON 125	Economic Development
INTL 123	Literature Across Cultures
MHIS 006	Music of the World's Peoples
POLS 150	Political Development
POLS 152	Politics of Asia
POLS 168	Comparative Foreign Policy
RELI 074	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

**Courses on Global and International Interaction**

BUSI 163	International Financial Management
BUSI 165	International Marketing
BUSI 167	International Business Law
ECON 071	Global Economic Issues
ECON 121	International Trade
ECON 123	International Finance
HIST 062	History of Warfare
HIST 064	Peace and War-Honors
HIST 065	Women and War
HIST 116	History of Soviet Foreign Policy
HIST 140	Southeast Asia and the West
INTL 174	Global Environmental Policy
POLS 051	International Politics
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 Courses**

POLS 141	Western European Comparative Politics
POLS 146	Latin American Politics
POLS 148	Politics of the Middle East
POLS 150	Political Development
POLS 152	Politics of Asia

**Foreign Policy Courses**

HIST 116	History of Soviet Foreign Policy
POLS 168	Comparative Foreign Policy
POLS 170	U.S. Foreign Policy

**International Politics Courses**

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

**Global Economic Relations Courses**

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
POLS 162	International Organization
POLS 164	International Political Economy

**Affiliated Faculty**

**Margee Ensign**, 1998, Associate Provost for International Initiatives, Professor and Dean, B.A., New College, 1977; Ph.D., University of Maryland, 1982.

**Laura Bathurst**, 2005, Assistant Professor of Anthropology, B.A., Kansas State University, 1997; M.A., University of California, Berkeley, 1999; Ph.D., 2005.

**Nathan Batto**, 2006, Assistant Professor of Political Science, A.B., Dartmouth College, 1992; M.A., National Chengchi University, 1999; Ph.D., University of California, San Diego, 2006.

**Gene E. Bigler**, 2005, Visiting University Professor/Practitioner, B.A., University of the Pacific, 1967; M.A., Johns Hopkins University 1972; Ph.D., 1979.

**Martin Burt**, 2005, Visiting Professor of Social Entrepreneurship, B.A., University of the Pacific, 1980; M.A., George Washington University, 1983.

**Arturo Giraldez**, 1990, Professor, B.A., Universidad Com-plutense de Madrid, 1976; M.A., 1979; Ph.D., Spanish and Portuguese, University of California, Santa Barbara, 1990; Ph.D., History, University of Amsterdam, 1999.

**William E. Herrin**, 1985, Professor of Economics, B.S., Wilkes College, 1980; M.A., State University of New York, Binghamton, 1982; Ph.D., 1985.

**Gerald J. Hewitt**, 1969, Professor Emeritus, B.A., University of Notre Dame, 1963; M.A., University of Chicago, 1966; Ph.D., 1973.

**Katrina A. Jaggars**, 2004, Lecturer, B.A., Mills College, 1982; M.L.A., Stanford University, 2000.

**David Keefe**, 1978, Associate Professor of Economics, B.S., Cornell University, 1965; Ph.D., University of California, Berkeley, 1980.

**Bruce W. LaBrack**, 1975, Professor Emeritus, B.A., University of Arizona, 1967; M.A., 1969; M.Phil., Syracuse University, 1975; Ph.D., 1979.

**Sarah M. Mathis**, 2008, Assistant Professor of Anthropology, B.S., Principia College, 1997; M.A., University of Notre Dame, 1999; Ph.D., Emory University, 2008.

**Howard Moseley**, 2005, Instructor, B.A., University of the Pacific, 1989; J.D., University of the Pacific, McGeorge School of Law, 1996.

**Analiese M. Richard**, 2006, Assistant Professor of Anthropology, B.A., Southwestern University, 1999; M.A., University of California, Berkeley, 2001; Ph.D., University of California, Berkeley, 2005.

**Susan G. Sample**, 1999, Associate Professor of Political Science, B.A., University of Missouri, 1991; Ph.D., Vanderbilt University, 1996.

**Elena Savelieva**, 1992, Instructor, Area Studies in Russian, B.A., Leningrad State University, 1969; M.A., 1971.

**Cortlandt B. Smith**, 1970, Professor Emeritus, B.A., University of California, Berkeley, 1968; M.A., 1969; Ph.D., 1975.

# the thomas j. long school of pharmacy and health sciences

Phone: 209.946.2561

Website: [www.pacific.edu/pharmacy](http://www.pacific.edu/pharmacy)

Phillip R. Oppenheimer, Dean

Eric G. Boyce, Associate Dean, Academic Affairs

Donald G. Floriddia, Associate Dean, Student Affairs & Professionalism

Xiaoling Li, Associate Dean, Graduate Education & Research

Nancy L. DeGuire, Assistant Dean, External Relations

Linda L. Norton, Assistant Dean, Operations

## Contents

Pharmacy

Pharmaceutical and Chemical Sciences (see Graduate Catalog for information)

Physical Therapy (see Graduate Catalog for information)

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 offers degrees in four areas of study: the Doctor of Pharmacy Program, the Pharmaceutical and Chemical Sciences Graduate Program, the Doctor of Physical Therapy Program and the Speech Language Pathology Baccalaureate and Masters Programs.

## Pharmacy Programs

### Pharmacy Mission

Our mission is to provide an exemplary educational experience leading to highly competent and practice-ready, caring pharmacists and pharmaceutical scientists who will be accountable for improving the health and well-being of society. We seek to advance knowledge through collaborative education, science, research, service, patient care and advocacy. We strive to achieve academic and professional excellence.

By virtue of their innate abilities and their education and experiences at Pacific, our graduates will:

- be accomplished and compassionate practitioners dedicated to improve inpatient care in traditional and emerging roles in all practice settings;
- be capable of critical thinking, problem solving and strong individual and team leadership;
- have the desire, knowledge and skills to serve their diverse communities and professions locally, regionally, nationally and globally;
- advance the profession of pharmacy by providing high quality health care, innovative practice models and leadership in healthcare policy to meet the needs of an increasingly diverse population;
- advance the pharmaceutical sciences by developing cutting-edge research and contributing to scientific discovery;
- be prepared and inspired to seek postgraduate and continuing professional development; and
- be ambassadors for preventive health and wellness

### Degrees in Pharmacy

The Thomas J. Long School of Pharmacy and Health Sciences offers the Doctor of Pharmacy degree and graduate degrees in the pharmaceutical and chemical sciences.

### Doctor of Pharmacy Program

Satisfactory completion of the Doctor of Pharmacy degree enables a student to sit for pharmacy licensing examinations throughout the United States, and eventually practice pharmacy. The basic residence requirement for completion of the Doctor of Pharmacy degree is eight semesters, which is completed in approximately two and two-thirds years. This has been made possible by utilizing the summer months for instruction, thus providing the same number of instructional semesters 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 advanced experiential component in the senior year in addition to introductory experiences in the first two years. These components are described below, and the advanced experiences are also described in other literature available from the Admissions Office.

### Pre-Pharmacy Advantage Program

The University of Pacific offers first-time undergraduate freshmen three options that can lead to guaranteed 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 request information about the Pacific Pre-Pharmacy Advantage Program from the Admissions Office or visit [http://www.pacific.edu/admission/academics/accel\\_programs/pharmacy](http://www.pacific.edu/admission/academics/accel_programs/pharmacy).

### **Accreditation**

Organized in 1955, the Thomas J. Long School of Pharmacy and Health Sciences is a member of the American Association of Colleges of Pharmacy, and its Doctor of Pharmacy Program is fully accredited by the Accreditation Council for Pharmacy Education (ACPE). Accreditation information can be found online at <http://www.acpe-accredit.org/> or by contacting ACPE at 20 North Clark Street, Suite 2500 Chicago, IL 60602-5109; Phone: (312) 664-3575, Fax: (312) 664-4652, E-mail: [info@acpe-accredit.org](mailto:info@acpe-accredit.org).

### **Pharmacy Licensure**

For California pharmacy licensure requirements see <http://www.pharmacy.ca.gov/> or contact the California State Board of Pharmacy, 1625 N. Market Blvd., Suite N219, Sacramento, CA 95834. Contact information for boards of pharmacy from other states can be found through the National Association of Boards of Pharmacy at <http://www.nabp.net/>.

### **General Education Requirements**

Students must pass the basic skills competency in quantitative skills and writing and satisfy any general education and liberal arts course requirements 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**

At least sixty four (64) transferable semester units are required prior to entry into the Doctor of Pharmacy program. Those courses are listed below. The liberal arts requirements must total a minimum of twenty eight (28) semester or forty two (42) quarter units. No more than two semester units of physical education may be used to fulfill the electives requirements.

- 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.
- Writing for College or equivalent: One semester, minimum.
- Reading for College or equivalent: One semester, minimum.
- 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 of the Pacific's General Education Program.

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 University of the Pacific's 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 Admission manages the admissions process. Questions regarding admission should be directed to the Office of Admission. The program places strong emphasis on the academic record, verbal and written communication skills, demonstrated interest and experience 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 Admission will invite qualified candidates to participate in interviews on campus and a writing demonstration. Admissions decisions will be based on the application, letters of recommendation, the interviews and the writing sample.

### **Continuation/Progression Requirements**

Students must successfully pass each required course in each semester in order to be allowed to enroll in the subsequent semester. Because of the integrated nature of the pharmacy curriculum, students are not permitted to enroll in pharmacy

courses out-of-sequence. In order to remain in good academic standing, a student must maintain a "C" average (a grade point average of 2.0 on a 4-point scale) in (1) all required professional course work in the Doctor of Pharmacy curriculum and (2) all University course work. A student who has a major grade point deficiency may not enroll in clinical experience rotations until the deficiency is corrected.

Entrance and progression in the Doctor of Pharmacy program requires that students provide documentation of receiving the required immunizations and disease screening. Participation in introductory and advanced pharmacy practice experiences requires a California pharmacy intern license in addition to certain background checks. Drug screening and background checks may also be a requirement in select experiential settings or under other circumstances.

All requirements for the Doctor of Pharmacy degree must be completed within five (5) calendar years of the student's initial enrollment in the Doctor of Pharmacy program.

### **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**

Completion of the Doctor of Pharmacy degree requires a minimum of 205 semester units (pre-pharmacy plus pharmacy) in the new curriculum and 198 semester units (pre-pharmacy plus pharmacy) in the old curriculum.

### **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) all required Doctor of Pharmacy courses and (2) all courses taken while in residence in the professional program.

### **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 course grade point deficiency of 0.1 to 7.9 will be placed on probation. Students with a major, required course grade point deficiency of from 8.0 to 12.0 are placed on probation and are not permitted to enroll in new required courses. Students with a major, required course grade point deficiency of 12.0 or greater will be disqualified from the professional program. Students must pass all required courses. A grade of C or better is required to pass the four practicum courses in semesters 1 through 6 and the six advanced pharmacy practice experience courses in semesters 7 and 8 of the program. As noted above, a grade point average in all courses of 2.0 or better and a required grade point deficiency of zero or better is required for graduation.

### Professional Electives

All candidates for the Doctor of Pharmacy degree are required to complete a minimum of four (4) semester units of career-related electives while in residence. These may be pharmacy electives or approved 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. Students are also required to complete twelve (12) semester units of elective advanced pharmacy practice experiences in the senior year.

### Professional Curriculum for the Doctor of Pharmacy Degree

This new curriculum replaces the old curriculum beginning with the 2009 entering class. A minimum of 141 units are required in the professional curriculum, which includes a total of 4 units of electives prior to program semester 7 and 12 units of elective rotations in semesters 7 and 8.

*Note: The following courses must be taken in the prescribed semester sequence because of the integrated nature of the pharmacy curriculum. The IPPEs noted below with the '#' mark can be taken in Semesters 3, 4 or 5. A grade of C or better is required to pass the four practicum courses in semesters 1 through 6 and the advanced pharmacy practice experiences in semesters 7 and 8. [IPPE stands for Introductory Pharmacy Practice Experiences and APPE stands for Advanced Pharmacy Practice Experiences.]*

#### Semester 1: 19 units

- PHRM 111 Pharmacy Practice & Professionalism (3 units)  
 PHRM 112 Dispensing, Compounding & Calculations (3 units)  
 PHRM 113 Molecular & Cellular Biochemistry (4 units)

- PHRM 114 Physical Pharmacy & Dosage Forms (5 units)  
 PHRM 115 Nonprescription Therapy & Self Care (2 units)  
 PHRM 118 Practicum I (2 units)

#### Semester 2: 16-18 units

- PHRM 121 Informatics, Statistics & Research Design (3 units)  
 PHRM 122 Physiology & Pathophysiology I (5 units)  
 PHRM 123 Physiology & Pathophysiology II (5 units)  
 PHRM 124 Drug Metabolism & Disposition (3 units)  
 PHRM 129 Community I IPPE (2 units)

#### Semester 3: 16-18 units

- PHRM 134 Pharmacokinetics & Advanced Drug Delivery Systems (4 units)  
 PHRM 135 Pharmacology & Medicinal Chemistry I (4 units)  
 PHRM 136 Pharmacology & Medicinal Chemistry II (4 units)  
 PHRM 138 Practicum II (2 units)  
 PHRM 139 Geriatrics IPPE (2 units)  
 Elective(s) (0-2 units)

#### Semester 4: 17-19 units

- PHRM 142 Physiology & Pathophysiology III (5 units)  
 PHRM 145 Pharmacology & Medicinal Chemistry III (4 units)  
 PHRM 146 Therapeutics I Neuro-Psychiatry (4 units)  
 PHRM 147 Therapeutics II GI/Hepatic/Nutrition (2 units)  
 PHRM 149 Hospital IPPE (units 2)  
 Elective(s) (0-2 units)

#### Semester 5: 16-18 units

- PHRM 151 Pharmacoeconomics, Benefits & Outcomes (2 units)  
 PHRM 152 Pharmacy Law & Ethics (4 units)  
 PHRM 156 Therapeutics III Cardiology (4 units)  
 PHRM 157 Therapeutics IV Renal/Respiratory (units 3)  
 PHRM 158 Practicum III (units 1)  
 PHRM 159 Community II IPPE (2 units)  
 Elective(s) (0-2 units)

#### Semester 6: 15-17 units

- PHRM 161 Pharmacy Management (2 units)  
 PHRM 165 Therapeutics V Infectious Diseases (4 units)  
 PHRM 166 Therapeutics VI Oncology/Transplantation (3 units)  
 PHRM 167 Therapeutics VII Endocrine/Muskuloskeletal (4 units)  
 PHRM 168 Practicum IV (1 unit)  
 PHRM 169 Health Care Outreach IPPE (1 unit)  
 Elective(s) (0-2 units)

#### Semester 7 and 8: 36 units

- PHRM 171 Internal Medicine APPE (6 units)  
 PHRM 172 Ambulatory Care APPE (6 units)  
 PHRM 173 Hospital Pharmacy APPE (6 units)  
 PHRM 174 Community Pharmacy APPE (6 units)  
 PHRM 184 Elective APPE I (6 units)  
 PHRM 185 Elective APPE II (6 units)

#### Substitutions for Required Courses

- PHRM 160 Practice-Based IPPE (2 units) may be substituted for PHRM 159 Community II IPPE  
 PRAC 143 Health Care Outreach IPPE – Medicare Part D (1 unit) may be substituted for PHRM 169 Health Care Outreach IPPE

### Professional Curriculum for the Doctor of Pharmacy Degree for the 2008 and Earlier Entering Classes

Details on the old curriculum may be found in the 2008-2009 University Catalog. Students who entered under this curriculum but have failed to progress as expected will be transitioned into the new curriculum with a course of study that takes into account courses successfully completed.

### Pharmacy Practice Experience

All pharmacy students are required to complete introductory and advanced pharmacy practice experiences as part of their formal program of study. The introductory pharmacy practice experiences in the new curriculum include experiences in community pharmacy, hospital pharmacy, geriatrics pharmacy, and health care outreach during the first six semesters of the program. The advanced practice experience consists of two semesters during the senior year. The student is required to enroll in four required six-week rotations including Community Practice, Hospital Pharmacy Practice, Ambulatory Care Rotation and Internal Medicine Rotation. In addition, each student must 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. The selection of the sites for inpatient and outpatient experiences is made at the sole discretion of the University of the Pacific Thomas J. Long School of Pharmacy and Health Sciences.

## Course Offerings - Departmental

### *Department of Pharmaceutics and Medicinal Chemistry*

Bhaskara Jasti, Chairman

Professors: Chan, Floriddia, Fries, Li

Associate Professor: Jasti, Uchizono

Assistant Professor: Guo, Park, Russu

Assistant Clinical Professor: Wagner

*Adjunct Faculty: Listed at the end of the Pharmacy and Health Sciences section.*

#### **PMED 111a, b. Teaching the Pharmaceutical Dosage Forms Laboratory (1)**

A course designed to train pharmacy students in supervising a laboratory as a teaching assistant. Prerequisite: this course will be open to students who have completed all first year courses and are in good standing.

#### **PMED 121. Professional Communications and Interviewing (1)**

This course will instruct students on the principles of professional communication and interviewing. After appropriate training, students will participate in different aspects of the interview of candidates for the pharmacy program. At the end of their participation, students will evaluate the program. *Prerequisite: Second year Pharm.D. student.*

#### **PMED 129. Dynamics of Student Leadership (2)**

Exploration and application of basic leadership theories and processes which foster personal and interpersonal development via cognitive experiential classroom methods and mentoring relationships with experienced peer leaders. *Prerequisite: Professional Pharm.D. standing.*

#### **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 143. Facilitating Molecular and Cellular Biochemistry (MCB) Lab Sessions (2)**

This course provides academic units for second-year students who assist with teaching/facilitating laboratory discussion sessions for first-year Molecular and Cellular Biochemistry (MCB) students. *Prerequisite: Second-year pharmacy students who had earned an "A" in PHRM 113 (MCB) or PHAR 113 (IBS-1) and permission by instructor.*

#### **PMED 149. Special Topics (1-4)**

#### **PMED 153. Pharmaceutical Compounding (2)**

Study of current compounding practice, regulations governing compounding, USP recommendations and making compounded products with evaluation and analysis as is currently part of a pharmacy practice. *Prerequisite: professional school standing and PHAR 114, 123 and 125.*

#### **PMED 164. Advances in Applied Pharmacokinetics (2)**

A systematic approach to a rational application of basic pharmacokinetics to patient specific clinical practice.

#### **PMED 185. Cosmetics: Formulation & Function Lab (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 193. Undergraduate Independent Study (1-5)**

Independent study involving library and/or laboratory.

## Department of Pharmacy Practice

William Kehoe, Chairman

Professors: Abood, Boyce, Carr-Lopez, Gundersen, Kehoe, Lee, Norton, Oppenheimer, Williams

Associate Professors: Kang, Lee, Moon, Palmieri, Ravnan, Shek

Associate Clinical Professor: Jankowski, Kaye

Assistant Professors: Crockell, Halilovic, Kim, Nguyen, O'Dell, Patel, Pollard, Shah, K. Smith, Song, Woelfel

Assistant Clinical Professors: Bearce, DeGuire, Tovar-Bandy, Wataoka, Young

Regional Coordinators, Adjunct: Farrar, Klaus

*Adjunct Faculty: Listed at the end of the Pharmacy and Health Sciences section.*

#### **PRAC 070. Clinical Experience Rotations (18)**

#### **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 127a-f. RxTract Writer (1)**

Students write and publish pharmacotherapy reports in a newsletter format.

#### **PRAC 128. Gerontology and Geriatric Therapy (2)**

An exploration of the social and psychological 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 130. Practice of Pharmacy- A Multicultural and International Approach (2)**

The focus of this course is to develop a culturally competent and multifaceted approach to patient care in a diverse cultural and dynamic healthcare setting. This will take into consideration the various health and illness needs, religious beliefs, complementary health practices, cultural orientation of various ethno cultural groups as well as the dynamics of transcultural communications between patients and healthcare professionals. *Prerequisite: Successful completion of semester 1 in the Doctor of Pharmacy program or permission of instructor.*

#### **PRAC 131. Managed Care – Formulary Management (1)**

A course which will focus on introducing fundamental concepts about the role and influence Pharmacists have on formulary management in managed care settings, understanding the steps involved in evaluating the AMCP (Academy of Managed Care Pharmacy) Dossier format of pharmaceutical products, additional literature search and evaluation, interpreting pharmacoeconomic/cost-impact analysis, monograph creation and presentation to a Pharmacy and Therapeutics Committee. *Prerequisite: Doctor of Pharmacy student.*

#### **PRAC 135. Student Journal Club (2)**

An application of principles of literature analysis and evaluation including statistics, study design and coverage of therapeutics and treatment recommendations. *Prerequisite: PHAR 121. (Course may be repeated 1 time)*

- 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 141. Medicare Part D- Fundamentals, Application and Outreach (2)**  
A course which will focus on introducing fundamental concepts about Medicare Part D, understanding real-world implications of Medicare Part D, and performing community outreach activities which assist Medicare-eligible patients to identify the most cost appropriate prescription drug plan. *Prerequisites: none.*
- PRAC 143. Health Care Outreach IPPE – Medicare Part D (1)**  
Community health care outreach introductory pharmacy practice experiences are a method to enhance each student's understanding, participation, and commitment to enhancing the health of the public, with a focus on enhancing Medicare beneficiary understanding and enrollment in a Medicare Part D prescription drug plan. Groups of students will work to develop, organize, manage, implement, deliver, and assess Medicare Part community outreach activities in settings serving Medicare beneficiaries. This course will be given in conjunction with PRAC 141 Medicare Part D- Fundamentals, Application and Outreach. Students will also reflect on their activities to determine the impact of those activities on both the beneficiaries they serve and on themselves. Successful completion of this course satisfies completion of PHRM 169 Health Care Outreach Introductory Pharmacy Practice Experiences. *Prerequisites: Successful completion of (passing grade in) all required courses in Semester 1 of the Doctor of Pharmacy program or permission of the instructor; Current Pharmacy Intern license, Current blood borne pathogen and CPR certifications, Concurrent registration in PRAC 141 Medicare Part D- Fundamentals, Application and Outreach.*
- PRAC 145. Foundations of Clinical Outcomes Research (2)**  
An introduction to the design and implementation of clinical/outcomes research studies. Emphasis will be placed on methods appropriate for evaluating health care services and assessing the long term outcomes of pharmacological interventions. The course is designed for students who have an interest in conducting clinical and outcomes research. The multidisciplinary focus of the course makes it appropriate for students in Pharmacy, Physical Therapy, and Speech Language Pathology. *Prerequisites: PHAR 111, PHAR 112, PHAR 121, or permission of the instructor.*
- PRAC 146. Developmental Disabilities (2)**  
Pharmaceutical care for the patient with developmental disabilities, with a focus on appropriate drug therapy in the management of specific conditions. *Prerequisites: Second year standing in the professional program.*
- PRAC 147. Pharmaceutical Care in Chronic Conditions (1)**  
Pharmaceutical care for patients with multiple health conditions, emphasizing identification of medication-related problems, development of care plans, and presentation of patients. *Prerequisite: Successful completion of all courses in semesters 1-4 of the Doctor of Pharmacy program.*
- PRAC 148. Introductory Biostatistics (2)**  
An introductory course in the terminology and use of biostatistics.
- PRAC 149. Special Topics (1-4)**
- PRAC 151. Introduction to Pediatrics (2)**  
Introduction to the pediatric patient, physiologic considerations, population-specific disease states and pharmacotherapy. *Prerequisites: Successful completion of all courses in the first three semesters of current Pharm.D curriculum and current enrollment in fourth semester coursework or higher.*
- 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.
- PRAC 160. Pain Management (2)**  
Pharmaceutical care for the patient with pain disorders, emphasizing pathophysiology, pharmacology and toxicology, pain assessment skills, appropriate medication therapy, side effect management and non-medication management of these disorders. *Prerequisites: Successful completion of all courses in semesters 1-4 of the Doctor of Pharmacy program.*
- PRAC 164. Applied Therapeutics and Managed Care (2)**  
A blend of therapeutics and pharmacoconomics that will apply the principles of outcome research situations in managed care (real-life situations).. *Prerequisite: Second year Pharm.D. student.*
- PRAC 165. Business Law for the Pharmacist (2)**  
An introduction to the business laws affecting the pharmacist.
- PRAC 176a. Anticoagulation Clinic Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176b. Antimicrobial Drug Monitoring Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176c. Critical Care Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176d. Drug Information Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176e. Cardiology Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176f. Clinical Pharmacokinetics Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176g. Gynecology (OB/GYN) Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176h. Home Health Care Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176i. Industrial Pharmacy Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176j. Geriatrics/Long Term Care Facility Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176k. Psychopharmacy Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176l. Institutional Pharmacy Administration Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176m. Community Pharmacy Management Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176n. Neurology Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176o. Oncology Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176p. Pediatrics Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176q. Quality Assurance Rotation (6)**  
A grade of C is required to pass this course.
- PRAC 176r. Non-Prescription Therapy and Management Rotation (6)**  
A grade of C is required to pass this course.

**PRAC 176s. Surgery Rotation**

A grade of C is required to pass this course.

**PRAC 176t. Total Parenteral Nutrition Rotation**

A grade of C is required to pass this course.

**PRAC 176u. Drug Utilization Review Rotation**

A grade of C is required to pass this course.

**PRAC 176v. Association Management Rotation**

A grade of C is required to pass this course.

**PRAC 176x. Poison Control Rotation**

A grade of C is required to pass this course.

**PRAC 176y. Women's Health Rotation**

A grade of C is required to pass this course.

**PHAR 176z. Advanced Community Rotation**

A grade of C is required to pass this course.

**PRAC 175. Elective Rotation**

A grade of C is required to pass this course.

**PRAC 177. Elective Rotation**

A grade of C is required to pass this course.

**PRAC 181. Advanced Elective Rotation**

A grade of C is required to pass this course.

**PRAC 182. Advanced Elective Rotation**

A grade of C is required to pass this course.

**PRAC 184. Advanced Elective Rotation**

A grade of C is required to pass this course.

**PRAC 185. Advanced Elective Rotation**

A grade of C is required to pass this course.

**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. May be re-elected for a maximum of three units. *Prerequisite: Permission of the instructor.*

**(6) Department of Physiology and Pharmacology**

Timothy J. Smith, Chairman

(6) Professors: Blankenship, Halliwell, T. Smith

(6) Associate Professors: Livesey, Meerdink, Rahimian, Thomas

Assistant Professors: Faridi

**(6) PHYP 111. Veterinary Pharmacology (2)**

The application of pharmacology to the problems of animal health. One two-hour lecture per week.

**(6) 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: Prior or concurrent enrollment in PHYP 146, or permission of instructor.*

**(3) PHYP 113. Teaching Anatomy and Physiology Laboratory (1)**

Preparation necessary to act as a teaching assistant in PHAR 123.

*Prerequisites: Permission of the instructor and grade of C or better in the course. Course may be repeated twice for credit.*

**(3) PHYP 114. Teaching Anatomy and Physiology Laboratory II (2)**

This course provides academic credit for second year students who assist with teaching laboratory and discussion sessions for first-year Anatomy and Physiology courses. Assistance may be for demonstrations, wet laboratory procedures, or discussion sessions in PHAR 125. *Prerequisites: Permission of instructor and grade of "C" or better in the course in which teaching assistance will be provided.*

**(6) PHYP 130. Science Education Experiences (SEE) (2)**

The course will prepare second year pharmacy students for outreach to elementary school classrooms to teach science information and concepts. Students will receive training to prepare for the classroom environment and will then make 6-7 visits to assigned classrooms to present science information and direct hands-on science activities. *Prerequisites: Second year Doctor of Pharmacy students in good standing.*

**(6) PHYP 149. Special Topics (1-4)****(6) PHYP 158. Fundamentals of Toxicology (2)**

An introduction to the general principles of toxicology. The toxic effects of various classes of non-medical 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: PHAR 144.*

**(6) 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.*

**Course Offerings - Interdepartmental Pharmacy****New Curriculum****PHRM 111. Pharmacy Practice and Professionalism (3)**

An introduction to the roles and responsibilities of the pharmacist in general and in various practice settings with a focus on leadership and professional development. *Prerequisite: Admission to the Doctor of Pharmacy Program.*

**PHRM 112. Dispensing, Compounding and Calculations (3)**

This course will present mathematical concepts as they apply to the practice of pharmacy. The course will also present information on the techniques needed for the proper compounding and dispensing of medication as well as those techniques needed for communicating effectively with patients and health care professionals. *Prerequisite: Admission to the Doctor of Pharmacy program.*



**PHRM 113. Molecular and Cellular Biochemistry (4)**

A conceptual study of cellular function and control mechanisms at the molecular level. *Prerequisite:* Admission to the Doctor of Pharmacy program.

**PHRM 114. Physical Pharmacy and Dosage Forms (5)**

A study of dosage forms and the relationship between the physicochemical properties of drugs and drug reaction. *Prerequisite:* Admission to the Doctor of Pharmacy program.

**PHRM 115. Nonprescription Therapy and Self Care (2)**

Principles of triage and self care using non-prescription pharmacotherapy and dietary supplements. *Prerequisite:* Admission to the Doctor of Pharmacy Program.

**PHRM 118. Practicum I (2)**

Pharmacy practice skills and knowledge will be developed through completion of self-study modules and guided practice simulations. The practicum experiences relate to effective patient counseling for the most commonly prescribed and select non-prescription medications, smoking cessation products, and immunizations in addition to application of appropriate techniques for measurement of blood pressure, blood glucose and administration of immunizations for adults. *Prerequisite:* Admission to the Doctor of Pharmacy Program.

**PHRM 121. Informatics, Statistics and Research Design (3)**

Students will develop an understanding of the availability, selection and use of electronic and printed sources of medical and pharmacy information. Approaches to effectively responding to drug information questions in addition to analyzing and critiquing medical and pharmacy literature based on knowledge of the essentials of study design and statistics. Students will also understand the research steps prior to and following drug approval by the Food and Drug Administration. *Prerequisite:* Successful completion of (passing grade in) all required courses in Semester 1 in the Doctor of Pharmacy program.

**PHRM 122. Physiology and Pathophysiology I (5)**

An integrated study of the cellular, anatomical, physiological, and pathophysiological components of the nervous and gastrointestinal systems. *Prerequisite:* Successful completion of (passing grade in) all required courses in Semester 1 of the Doctor of Pharmacy program. *Concurrent enrollment or prior successful completion of PHRM 123 Physiology & Pathophysiology II.*

**PHRM 123. Physiology and Pathophysiology II (5)**

An integrated study of the cellular, anatomical, physiological, and pathophysiological components of the pulmonary, cardiovascular and renal systems. *Prerequisite:* Successful completion of (passing grade in) all required courses in Semester 1 of the Doctor of Pharmacy program. *Concurrent enrollment or prior successful completion of PHRM 123 Physiology & Pathophysiology I.*

**PHRM 124. Drug Metabolism and Disposition (3)**

A continuation of PHAR 114 (Physical Pharmacy and Dosage Form) utilizing the LADME framework (Liberation, Absorption, Distribution, Metabolism, and Excretion) to understand the biopharmaceutic, biometabolic and pharmacokinetic concepts underlying drug action. *Prerequisite:* Successful completion of (passing grade in) all required courses in Semester 1 of the Doctor of Pharmacy program.

**PHRM 129. Community I IPPE (2)**

A practice-based introductory experience focusing on the role of the Pharmacist/Pharmacy Intern in a community pharmacy practice. This course is designed to allow students to participate in the delivery of pharmaceutical care. *Prerequisite:* Successful completion of (passing grade in) all required courses in Semester 1 of the Doctor of Pharmacy Program. *Current Pharmacy Intern license.*

**PHRM 134. Pharmacokinetics and Advanced Drug Delivery Systems (4)**

A continuation of PHRM 114 Physical Pharmacy & Dosage Forms and PHRM 124 Drug Metabolism & Disposition utilizing the LADME framework (Liberation, Absorption, Distribution, Metabolism, and Excretion) to understand biopharmaceutic and pharmacokinetic/pharmacodynamic principles governing drug behavior in the body. Additionally, the design of modified release drug delivery systems will be covered. *Prerequisite:* Successful completion of (passing grade in) all required courses in Semesters 1 to 2 in the Doctor of Pharmacy program.

**PHRM 135. Pharmacology and Medicinal Chemistry I (4)**

A continuation of PHRM 114 Physical Pharmacy & Dosage Forms and PHRM 124 Drug Metabolism & Disposition utilizing the LADME framework (Liberation, Absorption, Distribution, Metabolism, and Excretion) to understand biopharmaceutic and pharmacokinetic/pharmacodynamic principles governing drug behavior in the body. Additionally, the design of modified release drug delivery systems will be covered. *Prerequisite:* Successful completion of (passing grade in) all required courses in Semesters 1 to 2 in the Doctor of Pharmacy program.

**PHRM 136. Pharmacology and Medicinal Chemistry II (4)**

The second course in the Pharmacology and Medicinal Chemistry series, effects of antimicrobial, hematologic, and gastrointestinal therapeutic agents and the mechanisms whereby these effects are induced. Drug classes will be presented to illustrate the effects of drug classes in the treatment of diseases. The mechanisms of drug toxicity is also covered. *Prerequisite:* Successful completion of (passing grade in) all required courses in Semester 1 to 2 of the Doctor of Pharmacy program.

**PHRM 138. Practicum II (2)**

Students will develop communication, assessment and documentation abilities to prepare them for didactic courses and practice experience. Students will learn to conduct a patient history, perform basic physical examinations, interpret common clinical laboratory data and diagnostic tests, and document pharmacist directed patient care using standardized approaches. Students will assess simulated patient scenarios using a standardized SOAP (subjective data, objective data, assessment, plan) format. Each student will be expected to demonstrate proficiency in each major ability. *Prerequisite:* Successful completion of (passing grade in) all required courses in Semesters 1 to 2 of the Doctor of Pharmacy program.

**PHRM 139. Geriatrics Introductory Pharmacy Practice Experience (2)**

An introductory practice-based introductory experience focusing on long term care, senior care, and geriatric patients. It is designed as a method to enhance each student's understanding of the role and responsibilities of pharmacists in the long term care and other geriatric care settings through the provision of pharmaceutical care to patients. *Prerequisite:* Successful completion of (passing grade in) all required courses in Semesters 1 and 2 of the Doctor of Pharmacy program. *Current Pharmacy Intern license.*

**PHRM 142. Physiology and Pathophysiology III (5)**

An integrated study of the cellular, anatomical, physiological, and pathophysiological components of the pulmonary, cardiovascular and renal systems. *Prerequisite:* Successful completion of (passing grade in) all required courses in Semester 1 to 3 of the Doctor of Pharmacy program.

**PHRM 145. Pharmacology and Medicinal Chemistry III (4)**

The third course in the Pharmacology and Medicinal Chemistry series, effects of cardiovascular, endocrine, cancer chemotherapy, immunologic therapeutic agents and the mechanisms whereby these effects are induced. Drug classes will be presented to illustrate the effects of drug classes in the treatment of diseases. *Prerequisite:* Successful completion of (passing grade in) all required courses in Semester 1 to 3 in the Doctor of Pharmacy Program.

**PHRM 146. Therapeutics I Neuro-Psychiatry (4)**

Students will develop the abilities to assess and develop patient-specific care plans for patients with specific conditions, diseases, disorders, and drug-induced problems utilizing basic and applied pharmaceutical science abilities. Lectures, readings, and discussion will enable students to develop the abilities to assess, manage, and document simple to complex patients. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 to 3 in the Doctor of Pharmacy program.*

**PHRM 147. Therapeutics II GI/Hepatic/Nutrition (2)**

Students will develop the abilities to assess and develop patient-specific care plans for patients with gastrointestinal, hepatic, nutrition, and anemia conditions, diseases, disorders, and drug-induced problems utilizing basic and applied pharmaceutical science abilities. Lectures, readings, and discussion will enable students to develop the abilities to assess, manage, and document simple to complex patients. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 to 3 in the Doctor of Pharmacy program.*

**PHRM 149. Hospital IPPE (2)**

Hospital introductory pharmacy practice experiences are a method to enhance each student's understanding of the role and responsibilities of pharmacists in the institutional setting and to gain experiences with the medication use system and with other health care providers within a hospital. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 and 2 of the Doctor of Pharmacy program. Current Pharmacy Intern license.*

**PHRM 151. Pharmacoeconomics, Benefits and Outcomes (2)**

The description and application of economic-based evaluation methods to pharmaceutical products, treatments and services. This includes understanding principles which will help decision makers maximize clinical and/or humanistic outcomes given economic constraints. Additionally, this course will provide an introduction to managed care and Medicare and its role in US health care delivery. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 to 4 in the Doctor of Pharmacy program.*

**PHRM 152. Pharmacy Law and Ethics (4)**

Discussions and analysis of federal and state law, regulations, standards of practice, case law and ethics related to pharmacy practice and drug development and distribution. Focus is upon analyzing, understanding and applying these issues through case studies and hypotheticals. Considerable emphasis on professionalism and the historical events that have shaped today's professional pharmacy practice, as well as the drug development and distribution system. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 to 4 in the Doctor of Pharmacy program.*

**PHRM 156. Therapeutics III Cardiology (4)**

Students will develop the abilities to assess and develop patient-specific care plans for patients with specific cardiovascular diseases utilizing basic and applied pharmaceutical science abilities. Lectures, readings, and discussion will enable students to develop the abilities to assess, manage, and document simple to complex patients. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 to 4 in the Doctor of Pharmacy program.*

**PHRM 157. Therapeutics IV Renal/Respiratory (3)**

Students will develop the abilities to assess and develop patient-specific care plans for patients with renal and respiratory diseases. Lectures, readings, and discussion will enable students to develop the abilities to assess, manage, and document simple to complex patients with renal and respiratory-related issues. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 to 4 in the Doctor of Pharmacy program.*

**PHRM 158. Practicum III (1)**

Problem solving and critical thinking skills will be developed through the discussion and solution of complex cases and problems, with a focus on patients with multiple disorders and patients from various cultures or diverse populations and pediatric and geriatric populations. Problem solving and critical thinking skills will also be developed through the discussion and solution of cases and problems involving the clinical pharmacokinetics of select drugs, including the determination and documentation of initial dosing recommendations, dosage adjustments, drug concentration predictions, and monitoring plans. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 to 4 of the Doctor of Pharmacy program. Concurrent enrollment or prior successful completion of PHRM 156-157 Therapeutics III-IV.*

**PHRM 159. Community II IPPE (2)**

Community II introductory pharmacy practice experiences are a method to enhance each student's understanding of the role and responsibilities of pharmacists in the community setting and to gain experiences with the medication use system within a community pharmacy and expand the abilities developed in Community I introductory pharmacy practice experience. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 and 2 of the Doctor of Pharmacy Program. Current Pharmacy Intern license.*

**PHRM 160. Practice-Based IPPE (2)**

The Practice-Based introductory pharmacy practice experience is another method to enhance each student's understanding of the role and responsibilities of pharmacists and medication distribution and use process in any one of a variety of pharmacy practice settings. *Prerequisite: Successful completion of this course satisfies completion of PHRM 159 Community II Introductory Pharmacy Practice Experiences.*

**PHRM 161. Pharmacy Management (2)**

An analysis of financial management principles applicable to pharmacy practice. An analysis of human resources management applicable to pharmacy practice. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 to 5 in the Doctor of Pharmacy program.*

**PHRM 165. Therapeutics V Infectious Diseases (4)**

Infectious Disease Therapeutics is an integrated course where students will be taught to bring Medical Microbiology, Pharmacology, Physiology, Immunology, Pharmacokinetics, Pharmacodynamics and Chemotherapeutics together in order to care for patients with treatable infectious diseases. Students will develop the ability to assess and develop patient-specific care plans for patients with infectious disease conditions, including prevention and drug-induced problems utilizing applied pharmaceutical science principles and knowledge. Lectures, readings, presentations and discussions will enable students to develop the ability to assess, manage, and document therapeutic care plans of varying complexity for patients with infectious disease. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 to 5 in the Doctor of Pharmacy program.*

**PHRM 166. Therapeutics VI Oncology/Transplantation (3)**

Students will develop the abilities to assess and develop patient-specific care plans for patients with specific conditions, diseases, disorders of cancers and transplants and drug-induced problems utilizing basic and applied pharmaceutical science abilities. Lectures, readings, and discussion will enable students to develop the abilities to assess, manage, and document simple to complex patients with cancers or transplants. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 to 5 in the Doctor of Pharmacy program.*

**PHRM 167 Therapeutics VII Endocrine/Muskuloskeletal (4)**

Students will develop the abilities to assess and develop patient-specific care plans for patients with endocrine, musculoskeletal, pain, dermatologic, and ophthalmic conditions, diseases, disorders, and drug-induced problems utilizing basic and applied pharmaceutical science abilities. Lectures, readings, and discussion will enable students to develop the abilities to assess, manage, and document simple to complex patients. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 to 5 in the Doctor of Pharmacy program.*

**PHRM 168 Practicum IV (1)**

This course is a continuation of Practicum III. Problem solving and critical thinking skills will be developed through the discussion and solution of complex cases and problems, with a focus on patients with multiple disorders and patients from various cultures or diverse populations and pediatric and geriatric populations. Problem solving and critical thinking skills will also be developed through the discussion and solution of cases and problems involving the clinical pharmacokinetics of select drugs, including the determination and documentation of initial dosing recommendations, dosage adjustments, drug concentration predictions, and monitoring plans. *Prerequisite: Successful completion of (passing grade in) all required courses in Semesters 1 to 5 of the Doctor of Pharmacy program. Concurrent enrollment or prior successful completion of PHRM 165-167 Therapeutics V-VII.*

**PHRM 169 Health Care Outreach IPPE (1)**

Community health care outreach introductory pharmacy practice experiences are a method to enhance each student's understanding, participation, and commitment to enhancing the health of the public. Groups of students will work with community agencies and organizations in the development, organization, management, implementation, delivery, and assessment of health care outreach activities in local communities. Many of these activities will be managed through professional student organizations. Students will also reflect on their activities to determine the impact of those activities on the public and on themselves. *Prerequisite: Successful completion of (passing grade in) all required courses in Semester 1 of the Doctor of Pharmacy program. Current Pharmacy Intern license. Current blood borne pathogen and CPR certifications.*

**PHRM 171 Internal Medicine APPE (6)**

A clinical pharmacy practice rotation at an affiliated health care facility with emphasis on the medical management of disease states, rational drug therapy, and patient monitoring using the pharmaceutical care practice model. *Prerequisite: Successful completion of (passing grade in) all required courses and 4 units of elective courses in semesters 1 to 6 of the Doctor of Pharmacy program. Satisfy academic standards for entry into advanced pharmacy practice experiences. Satisfy the institution's policies and procedures on healthcare trainee or worker eligibility, such as background.*

**PHRM 172 Ambulatory Care APPE (6)**

A clinical pharmacy practice rotation at an affiliated clerkship site with emphasis on providing pharmaceutical care for ambulatory care patients, including the medical management of disease states, rational drug therapy, and patient monitoring. *Prerequisite: Successful completion of (passing grade in) all required courses and 4 units of elective courses in semesters 1 to 6 of the Doctor of Pharmacy program. Satisfy academic standards for entry into advanced pharmacy practice experiences. Satisfy the institution's policies and procedures on healthcare trainee or worker eligibility, such as background checks and screenings, HIPAA training, etc. Valid pharmacy intern license.*

**PHMR 173 Hospital Care APPE (6)**

A hospital pharmacy practice rotation at an affiliated clerkship site with enhanced experience in selecting drug products, compounding, dispensing, monitoring and evaluation, as well as understanding pharmacy operations and administration, communicating with patients and other health professionals, and providing drug information. *Prerequisite: Successful completion of (passing grade in) all required courses and 4 units of elective courses in semesters 1 to 6 of the Doctor of Pharmacy program. Satisfy academic standards for progression into Advanced Pharmacy Practice Experiences. Satisfy the institution's policies and procedures on healthcare trainee or worker eligibility, such as background checks and screenings, HIPAA training, etc. Valid pharmacy intern license.*

**PHRM 174 Community Pharmacy APPE (6)**

The Advanced Pharmacy Practice Experience in Community Pharmacy Practice is designed to provide students hands-on experience in selecting drug products, compounding, dispensing, monitoring and evaluating, communicating with patients, communicating with other health professionals, drug information, public health, and pharmacy operations and management. This required experiential learning rotation will allow students to integrate their pharmacy knowledge with patient care skills, further develop effective communication skills, develop pharmacy management skills, and engage in innovative practice experiences when possible. Students will actively participate in the day-to-day activities that comprise the work of a pharmacist practicing in the community setting. In addition, students will have the opportunity to engage in pharmacy practice activities including pharmacy management, medication therapy management and other pharmaceutical care services, and public health promotion and preventive care services. *Prerequisite: Successful completion of (passing grade in) all required courses and 4 units of elective courses in semesters 1 to 6 of the Doctor of Pharmacy program. Satisfaction of academic standards for progression into Advanced Pharmacy Practice Experiences. Satisfy the institution's policies and procedures on healthcare trainee or worker eligibility, such as background checks and screenings, HIPAA training, etc. Valid pharmacy intern license.*

**PHRM 184 APPE Elective I (6)**

This is the first of two elective advanced pharmacy practice experiences that allow the student to explore and develop abilities in an area of interest within the health care industry. This experience may be in a variety of biomedical settings including patient care, administrative, health care system, public health, governmental agency, professional organization, research, academic, pharmaceutical company, and other biomedical or health related settings. *Prerequisite: Successful completion of (passing grade in) all required and 4 units of elective courses in semesters 1 to 6 of the Doctor of Pharmacy program. Satisfy academic standards for progression into Advanced Pharmacy Practice Experiences. Satisfy the institution's policies and procedures on healthcare trainee or worker eligibility, such as background checks and screenings, HIPAA training, etc. Valid pharmacy intern license.*

**PHRM 185 APPE Elective II (6)**

This is the second of two elective advanced pharmacy practice experiences that allow the student to explore and develop abilities in an area of interest within the health care industry. This experience may be in a variety of biomedical settings including patient care, administrative, health care system, public health, governmental agency, professional organization, research, academic, pharmaceutical company, and other biomedical or health related settings. *Prerequisite: Successful completion of (passing grade in) all required courses and 4 units of elective courses in semesters 1 to 6 of the Doctor of Pharmacy program. Satisfy academic standards for progression into Advanced Pharmacy Practice Experiences. Satisfy the institution's policies and procedures on healthcare trainee or worker eligibility, such as background checks and screenings, HIPAA training, etc. Valid pharmacy intern license.*

### Old Curriculum Courses

- PHAR 111. Pharmacy Systems and Experience I (5)**  
An exploration of the place of pharmacy in the healthcare system with emphasis on oral, written, electronic communication and development of initial practice competencies. Five lectures per week or equivalent. *Prerequisite: First year standing in the Doctor of Pharmacy program.*
- 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. *Prerequisite: First year status in the Doctor of Pharmacy program.*
- PHAR 113. Integrated Biological Sciences I (5)**  
A conceptual study of cellular function and control mechanisms at the molecular level. *Prerequisite: First year status in the Doctor of Pharmacy program.*
- 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 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: 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. *Prerequisite: Professional school standing.*
- PHAR 123. Integrated Biological Sciences II (5)**  
An introduction to the biology, anatomy, and physical assessment of the nervous and cardiovascular organ systems.
- PHAR 124. Integrated Pharmaceutical Sciences II (2)**  
A continuation of PHAR 114, with emphasis on parenteral dosage forms, biopharmaceutics and basic pharmacokinetics.
- PHAR 125. 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. *Prerequisite: Professional school standing.*
- 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. *Prerequisite: 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. *Prerequisite: Professional school standing.*
- 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, PHAR 125.*
- PHAR 135. Integrated Pharmaceutical Sciences III (4)**  
A continuation of PHAR 114 and PHAR 124. Utilizing the L.A.D.M.E. framework to understand biopharmaceutic and pharmacokinetic/pharmacodynamic principles governing drug behavior in the body. The design of advanced controlled drug delivery systems will be covered.
- 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, 121 and 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: PHAR 144 (may be taken concurrently). 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. *Prerequisite: Professional school standing.*
- PHAR 149. Prof. Comm. and Interviewing (1)**
- 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: Fifth semester standing in the Doctor of Pharmacy program.*
- PHAR 153. Renal and Respiratory 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. *Prerequisite: Successful completion of all courses in semester 1-4 of the Doctor of Pharmacy program.*
- 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. *Prerequisite: Sixth semester standing in the Doctor of Pharmacy program.*
- PHAR 162. Self Care and Triage (2)**  
Principles of triage and self care using non-prescription pharmacotherapy and dietary supplements. *Prerequisite: Successful completion of all courses in semesters 1-5 and sixth semester standing in the Doctor of Pharmacy program.*
- PHAR 163. Infectious Diseases Pharmaceutical Care (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.*

**PHAR 171. Internal Medicine Rotation (6)**

A clinical pharmacy practice rotation at an affiliated hospital or medical center with emphasis on the medical management of disease states, rational drug therapy and patient monitoring using the pharmaceutical care practice model. A grade of C is required to pass this course. *Prerequisites: Successful completion of all courses in semesters 1 through 6.*

**PHAR 172. Ambulatory Care Rotation (6)**

A clinical pharmacy practice rotation at an affiliated clerkship site with emphasis on providing pharmaceutical care for ambulatory care patients, including the medical management of disease states, rational drug therapy and patient monitoring. A grade of C is required to pass this course. *Prerequisites: Completion of all courses in semesters 1 through 6.*

**PHAR 173. Hospital Pharmacy Practice (6)**

A clinical pharmacy practice rotation at an affiliated clerkship site with emphasis on providing hospital pharmacy practice skills. Students will have experience in selecting drug products, compounding, dispensing, monitoring and evaluation, communicating with patients, communicating with other health professionals, drug information, public health and management. A grade of C is required to pass this course. *Prerequisites: Successful completion of all courses in semesters 1 through 6.*

**PHAR 174. Community Pharmacy Practice (6)**

A required experiential learning rotation designed to teach students community pharmacy practice oriented skills. Students will have experience in selecting drug products, compounding, dispensing, monitoring and evaluating, communicating with patients, communicating with other health professionals, drug information, public health and management. A grade of C is required to pass this course. *Prerequisites: Successful completion of semesters 1 through 6.*

**Graduate Degree Programs in Pharmacy**

The Thomas J. Long School of Pharmacy and Health Sciences, in conjunction with the Office of Graduate Studies, offers programs leading to the Master of Science and Doctor of Philosophy degrees and the combined Pharm.D./Ph.D. and Pharm.D./M.S. degree programs. The Pharm.D./MBA degree program is offered in conjunction with the Eberhardt School of Business. These unique dual-degree programs are intended for students who are interested in careers in research, teaching or business but who wish to also possess a professional degree in pharmacy. The entrance requirements for these combined programs include all pre-pharmacy Pharm.D. requirements, a baccalaureate degree with a minimum GPA of 3.0 and certain other standards.

The school provides a scholarly environment to support research in basic and applied pharmaceutical sciences, 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.

Additional information on the graduate program and dual-degree programs may be found in the Office of Graduate Studies Catalog for the Ph.D. and M.S. programs and in the Eberhardt School of Business section of this Catalog for the Pharm.D./MBA dual-degree program. Interested individuals may obtain further information by writing directly to the Associate Dean for Graduate Education and Research in the Thomas J. Long School of Pharmacy and Health Sciences for the Pharmaceutical and Chemical Sciences Graduate Program or the Eberhardt School of Business for the Pharm.D./MBA dual-degree program.

**Speech-Language Pathology**

Phone: (209) 946-2381

Location: Health Sciences and Learning Center

Website: <http://www.pacific.edu/pharmacy/speechpathologyprogram>

Robert Hanyak, Chair

**Degrees Offered**

Bachelor of Science

Master of Science (see Graduate Catalog for information)

**Majors Offered**

Speech-Language Pathology

**Minors Offered**

Speech-Language Pathology

**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 experiential 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 implement 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 disorders.
2. The ability to perform comprehensive evaluation of individuals with communicative disorder.

3. The ability to effect positive changes in the communicative skills of individuals with communicative disorders.
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 program in 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 18 therapy rooms. Facilities allow for close student-faculty interaction and clinical experiences incorporating all persons involved in the therapeutic process. The University Speech, Language and Hearing Center and the Scottish Rite 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.

### Speech-Language Pathology Advantage

Students who complete their speech-language pathology major requirements at the University of the Pacific are given priority admission to the Master's degree program provided that they meet all of the following conditions:

1. Obtain a Speech – Language Pathology faculty advisor and complete the prerequisite requirements, including general education courses in an approved sequence.
2. Complete a minimum of 54 semester units that must be taken at the University of the Pacific (124 units are necessary for the bachelor's degree)

3. Complete all coursework and clinical practicum requirements and meet overall and departmental grade point averages upon the completion of the Bachelor's degree.

4. Maintain a minimum grade point average in both of the following categories:

Overall GPA 3.2 all transferable college level courses.

Major GPA 3.5 all required speech-language pathology courses, all SLPA courses must be completed with a grade of B or better, all others C or better.

(The University Grade Replacement Policy applies to both grade point averages)

5. Satisfactorily complete the prerequisite clinical practicum with a grade of B+ or better, both semesters.

6. Submit satisfactory scores from the Graduate Record Examination by February 1 of the calendar year in which the student expects to begin the graduate program. **Minimum satisfactory scores are Verbal + Quantitative > 1000; Verbal > 450; Quantitative > 450; and Written > 4.5. The Graduate School must receive official results directly from ETS.**

7. Apply to the Graduate School:

Application will consist of completing an abbreviated form accompanied by a non-refundable deposit that will reserve a space in the program. This deposit will be applied to tuition for the first semester if the student attends Pacific.

### Admission Criteria

To be accepted into the Speech-Language Pathology Advantage Program the student must be admitted to the University and have:

Freshman: High school GPA of 3.4 and SAT combined score of 1100 (with at least a 500 in both Verbal and Math)

Transfers: Overall GPA of 3.2

This policy applies to all freshman, sophomore and junior speech-language pathology students enrolling at the University of the Pacific after Fall, 2006 and is subject to change for anyone entering the program after that date. Students may reapply to the program at the junior level if not accepted earlier.

### 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 051- Introduction to Communication Disorders 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 3.2 GPA all required courses for the degree and no less than a B- in all SLPA courses.

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.

## Bachelor of Science

### Major in Speech-Language Pathology

In order to earn the bachelor of science degree with a major in speech-language pathology, students must complete a minimum of 124 units with a Pacific cumulative and major/program grade point average of 2.0.

#### I. General Education Requirements

Minimum 42 units and 12 courses, including:

PACS 001	Pacific Seminar 1: What is a Good Society?	4
PACS 002	Pacific Seminar 2: Topical Seminar	3
PACS 003	Pacific Seminar 3: The Ethics of Family, Work, and Citizenship	3

**Note:** 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 24 or more transfer units complete 2 additional General Education elective courses from below in place of taking PASC 001 and 002.

One course from each subdivision below:

##### Social and Behavioral Sciences

- IA. Individual and Interpersonal Behavior
- IB. U.S. Studies
- IC. Global Studies

##### Arts and Humanities

- IIA. Language and Literature
- IIB. Worldviews and Ethics
- IIC. Visual and Performing Arts

##### Natural Sciences and Mathematics

- IIIA. Natural Sciences
- IIIB. Mathematics and Formal Logic
- IIIC. Science, Technology, and Society  
or a second Natural Science

**Note:** 1) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog and the online course search. 2) No more than 8 units from a single discipline may be applied to meet the requirements of the general education program.

#### II. Fundamental Skills

Demonstrate competence in:

- Reading
- Writing
- Quantitative analysis

**Note:** 1) A detailed description of how you can satisfy the fundamental skills above can be found in the front General Education section of this catalog.

#### III. Major Requirements

SLPA 051	Introduction to Communication Disorders	3
SLPA 101	Clinical Methods I	1
SLPA 103	Clinical Methods II	1
SLPA 105	Clinical Methods III	1
SLPA 107	Clinical Methods IV	1
SLPA 121	Speech and Language Development	3
SLPA 123	Language Disorders I	3
SLPA 125	Articulation and Phonology	3
SLPA 127	Audiology	3
SLPA 129	Anatomy and Physiology of Speech	3
SLPA 131	Phonetics	3

SLPA 137	Speech and Hearing Science	3
SLPA 139	Diagnostics	3
SLPA 143	Multicultural Populations	3
SLPA 145	Disorders of Fluency	3
SLPA 151	Behavior Modification for SLPs	3
	One of the following courses:	1
	SLPA 183 Diagnostic Lab	
	SLPA 181 Diagnostic Observation	
	One of the following courses:	1
	SLPA 189a Beginning Clinic	
	SLPA 110a Clinical Observation	
	One of the following courses:	1
	SLPA 189b Intermediate Clinic	
	SLPA 110b Clinical Observation	
PSYC 029	Child Development	4
	One of the following courses:	4
	MATH 035 Elementary Statistical Inference	
	MATH 037 Introduction to Statistics and Probability	
	PSYC 103 Statistical Inference in Behavioral Sciences	
	One of the following introduction to psychology/sociology courses:	4
	PSYC 031 Introduction to Psychology	
	SOCL 051 Introduction to Sociology	
	One of the following biology courses:	4
	BIOL 011 Human Anatomy and Physiology	
	BIOL 041 Introduction to Biology	
	One of the following physical science courses:	4
	CHEM 023 Elements of Chemistry	
	PHYS 017 Concepts of Physics	
	PHYS 039 Physics of Music	
	Additional requirement for LSH credential:	
SPED 123	The Exceptional Child	3

### 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, Psychology, Communication and Pre-Health Profession Preparation.

#### Minor in Speech-Language Pathology

In order to earn a minor in Speech-Language Pathology, students must complete a minimum of 20 units with a Pacific minor grade point average of 2.0.

##### Minor Requirements:

SLPA 051	Introduction to Communicative Disorders	3
SLPA 121	Speech and Language Development	3
SLPA 127	Audiology	3
SLPA 129	Anatomy and Physiology of Speech	3
SLPA 131	Phonetics	3
	Electives from the following:	5-6
	SLPA 053 Sign Language I	
	SLPA 123 Language Disorders I	
	SLPA 125 Articulation and Phonology	

- SLPA 137 Speech and Hearing Science  
 SLPA 143 Multicultural Populations  
 SLPA 145 Disorders of Fluency

*Note:* 1) 12 of these units must be completed at the University of the Pacific. 2) Electives to be chosen in consultation with a departmental adviser.

## Course Offerings

### JCTR 075. Introduction to Helping Professions (2)

The purpose of this course is to familiarize undergraduate students with the fields providing health and education services to individuals and their families. Students will be introduced to various career options through panel presentations, discussions, and case studies focusing on prevention, assessment, treatment, and intervention issues. Faculty from several departments on campus, including Speech-Language Pathology, Special Education, Education, Counseling Psychology, Psychology, Physical Therapy, Pharmacy, Music Therapy, and Adapted Physical Education, will present information on their respective professions during the course of the semester. Other related fields such as Occupational Therapy, Nursing, and Social Work will be integrated into the design.

**SLPA 051. Introduction to Communicative Disorders (3)**  
 An introduction to language, voice, fluency, articulation and hearing disorders in children and adults. Open to non-majors.

**SLPA 053. Sign Language I (3)**  
 An introduction to comprehension and expression through sign language. Open to non-majors.

**SLPA 055. 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.

**SLPA 101. Clinical Methods I (1)**  
 Observations and analysis of: therapy, materials, teaching methods, behavioral management and data collection

**SLPA 103. Clinical Methods II (1)**  
 Methods, materials, treatment of communicative disorders: staffings, case studies, presentations, demonstrations, and class discussion.

**SLPA 105. Clinical Methods III (1)**  
 To assist the beginning clinician with: writing professional reports, accountability issues, exploring a variety of therapy delivery models.

**SLPA 107. Clinical Methods IV (1)**  
 Discussion and analysis of current clinical experiences. Exploration of different disorders, populations and work environments.

**SLPA 110a/SLPA 110b. Clinical Observations (1)**  
 Structured clinical observations for seniors not enrolled in SLPA 189a or 189b. Pass/No-Credit only.

**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.

**SLPA 125. Articulation and Phonology (3)**  
 Etiology, development and management of articulation and phonologic disorders.

**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.

**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.

**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 (2)**  
 A study of the structure and function of the human nervous system as it relates to speech, language and hearing. *Prerequisite:* SLPA 129.

**SLPA 151. Behavior Modification For SLPs (3)**  
 This class will focus on basic and advanced principles of behavior modification as they relate to the area of communication sciences and disorders. Multiple strategies to increase, decrease, or modify behaviors will be introduced. Theoretical and applied experiences in planning intervention strategies, measurement techniques, generalization and maintenance of changed behaviors will be emphasized.

**SLPA 181. Diagnostic Observation (1)**  
 Structured observations for senior not enrolled in SLPA 183.. Pass/No credit only.

**SLPA 183. Diagnostic Laboratory (1)**  
 A weekly three-hour lab experience that includes demonstration and practicum in assessment of speech and language disorders.

**SLPA 189a. Beginning Clinic (1)**

**SLPA 189b. Intermediate Clinic (1)**

**SLPA 191. Independent Study (1-4)**

**SLPA 193. Special Topics (2 or 4)**



## Course Offerings

### Graduate

See Graduate Catalog for course descriptions

SLPA 201.	Professional Issues	(1)
SLPA 205.	Adult Neurological Disorders	(3)
SLPA 209.	Language Disorders II	(3)
SLPA 211.	Language Disorders III	(3)
SLPA 213.	Advanced Clinical Audiology	(3)
SLPA 215.	Aural Rehabilitation	(3)
SLPA 217.	Voice Disorders	(3)
SLPA 219.	Phonological Disorders	(3)
SLPA 221.	Motor Speech Disorders	(2)
SLPA 225.	Public School Issues	(1)
SLPA 229.	Dysphagia/Swallowing Disorders	(3)
SLPA 231.	Augmentative/Alternative Communication	(2)
SLPA 233.	Cleft Palate and Syndromes	(2)
SLPA 237.	Managed Care	(1)
SLPA 245.	Disorders of Fluency	(2)
SLPA 285.	Colloquium in Speech-Language Pathology	(2)
SLPA 287a.	Internship in Speech and Hearing	(2-4)
SLPA 287b.	Fieldwork in Speech and Hearing	(2)
SLPA 288.	Externship	(9)
SLPA 289a.	Advanced Clinic	(1-3)
SLPA 289b.	Advanced Clinic	(1-3)
SLPA 291.	Independent Graduate Study	(1-4)
SLPA 293.	Special Topics	(2-4)
SLPA 297.	Graduate Research	(1-4)
SLPA 299.	Thesis	(2 or 4)

### Administrative Officers

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- Timothy H. Baird**, 1998, Adjunct Professor, Pharm.D., University of the Pacific, 1971.
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**Susan Wong**, 2000, Adjunct Professor, B.S., University of California, Irvine, 1982; Pharm.D., University of California, San Francisco, 1986.

**Tracy Wong**, 2008, Adjunct Professor, Pharm.D., University of California San Francisco, 1988.

**Christopher A. Woo**, 1991, Adjunct Professor, Pharm.D., University of the Pacific, 1988.

**Kenneth Woo**, 2007, Adjunct Professor, Pharm.D., University of Mississippi, 2000.

**Margie M. Woo**, 1988, Adjunct Professor, Pharm.D., University of the Pacific, 1987.

**Christopher Wood**, 2007, Adjunct Professor, B.A., Chaminade University, 1987; MPH, University of Hawaii, 1991; M.D., University of Hawaii, 1998.

**Frank C. Wood**, 2005, Adjunct Professor, Pharm.D., University of the Pacific, 1985.

**James W. Wright**, 1983, Adjunct Professor, B.S., University of California, Davis, 1976; Pharm.D., University of California San Francisco, 1980.

**Peggy Yang**, 1997, Adjunct Professor, Pharm.D., University of Southern California, 1994.

**Lowelle M. Yano**, 2000, Adjunct Professor, B.A., San Francisco State University, 1985; M.A., 1994; Pharm.D., University of California, San Francisco, 1998.

**Martha E. Yasavolian**, 1995, Adjunct Professor, B.S., University of Wisconsin, 1984.

**Alan S. Yayasaki**, 2005, Adjunct Professor, B.S., University of California, Davis, 1977; Pharm.D., University of the Pacific, 1980.

**Betty W.S. Yee**, 1995, Adjunct Professor, A.A., City College of San Francisco, 1970; Pharm.D., University of California, San Francisco, 1994.

**Chester Yee**, 2005, Adjunct Professor, B.S., Idaho State University, 1961; B.S. Pharm., 1962.

**Christy J. Yee**, 2005, Adjunct Professor, B.S., University of California, San Diego, 1996; Pharm.D., University of California, San Francisco, 2001.

**Florence Yee**, 2003, Adjunct Professor, Pharm.D., University of California, San Francisco, 1973.

**Fred Yee**, 1987, 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.

**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.

**Goldie Yip**, 1999, Adjunct Professor, Pharm.D., University of the Pacific, 1990.

**Alison Yoshida**, 2000, Adjunct Professor, Pharm.D., University of the Pacific, 1997.

**Iris C. Young**, 2005, Adjunct Professor, A.S., West Valley College, 1989; Pharm.D., University of the Pacific, 1992.

**Winnie Zing**, 2005, Adjunct Professor, Pharm.D., University of California, San Francisco, 1988.

# research and graduate studies

Phone: 209.946.2765

Location: Knoles Hall, Room 204

Website: [www.pacific.edu/graduate](http://www.pacific.edu/graduate)

Jin K. Gong, Ph.D., Dean

Cerena Sweetland-Gil, MA, Director, Graduate School Operations

## Unique and Distinctive Programs

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.

Available through the School of Dentistry is a graduate program in orthodontics leading to a certificate and the Master of Science in Dentistry; a graduate program in oral and maxillofacial surgery leading to a certificate; an International Dental Studies program, and through McGeorge School of Law a Juris Doctor degree in a full-time or part-time program, and Master of Laws (LL.M. and J.S.D.) degrees in Government and Public Policy, Transnational Business Practice, Advocacy Practice and Teaching and International Water Resources.

Students interested in these programs should apply directly to the appropriate school. The distinctiveness of graduate studies lies in our academic programs, which emphasize various forms of creative scholarship, training of students in the principles and methods of research and developing professional competence, by limiting the number of students enrolled in order to allow them to work more directly with faculty members. Many degree programs are small, and in place of seminar experience students work relatively independently under close supervision of the faculty (Waiting on approval of text from Marketing and Communication.)

## Degrees

Biological Sciences (MS)  
 Business Administration (MBA, MBA/JD, MBA/PharmD)  
 Communication (MA)  
 Education (MA, MEd EdS, EdD, PhD)  
 Engineering and Computer Science (MSES)  
 Intercultural Relations (MA)  
 Music Education (MM)  
 Music Therapy (MA)  
 Pharmaceutical/Chemical Sciences (MS, PhD)  
 Physical Therapy (DPT)  
 Psychology (MA)  
 Speech-Language Pathology (MS)  
 Sport Sciences (MA)

Degree programs leading to the PhD are offered in a newly redesigned interdisciplinary program with faculty from physiology-pharmacology, chemistry, pharmaceuticals, clinical pharmacy and chemistry.

Degree programs leading to the EdD are offered in the following areas: educational administration and curriculum and instruction.

A degree program leading to the EdS and a PhD is offered in School Educational/Psychology.

## Credential Programs

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]).

## Pharmaceutical & Chemical 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. Therefore, its programs emphasize a multi-disciplinary perspective and skills for solving basic problems in individual and community health. In conjunction with the College of the Pacific students can also earn a MS or Ph.D in Chemistry. Students in the Pharmaceutical and Chemical Sciences Program may pursue studies in the areas of bioanalytical and physical chemistry, chemical synthesis and drug discovery/design, drug targeting and delivery, molecular/cellular pharmacology and toxicology, and clinical pharmacy and transitional studies. In addition to Master of Science and Doctor of Philosophy degree programs, combined Pharm.D./MS, PharmD/PhD, and PharmD/MBA programs are available.

### 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, for example. They learn a variety of techniques such as slab gel electrophoresis, electron microscopy and computerized data reduction. The MS Program in Biological Sciences enables students to work closely with faculty members in research and in teaching. Graduate study in molecular and cellular biology, physiology, microbiology, ecology, paleontology and plant and animal systematics provides a good background for advanced study at the PhD level, for entry into professional school (dentistry, pharmacy, medicine), education, or industry. Some biology graduate students also participate in research in the Thomas J. Long School of Pharmacy and Health Sciences.

### Education

The Gladys L. Benerd School of Education prepares 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, and professional preparation programs are developed in accordance with state and national accreditation standards and guidelines to ensure that students who complete these programs will represent the best professional practice in their positions of future leadership in schools and the community.

The Gladys L. Benerd School of Education offers master's, educational specialist, and/or doctoral degree programs, including relevant state cre-

dentials in teaching, curriculum and instruction, school psychology, educational psychology, and educational administration.

The School also has numerous units that publish research and provide opportunities for the practical application of theory and pedagogical procedure. These practica and intern sites are available in close proximity to the University.

Graduate assistantships are available, as well as research assistantships, for full-time doctoral students to participate in the scholarly activities carried on in the units of the Benerd School of Education. Some full- and part-time scholarship assistance is available for students who wish to study at the master's level.

### Communication

Students in communication may pursue degrees in a number of areas including communication education, political communication and media and public relations. Special or topical areas of worthy interest also may be proposed as well as interdisciplinary programs in conjunction with other departments. Programs may include field studies, internships and other learning experiences as appropriate and approved by the department.

### Business

The focus of the Eberhardt MBA is to allow students to work with professionals throughout their studies. Through internships, consulting projects and career management seminars, students research and solve actual business problems in the workplace they are likely to encounter in their careers.

The Pacific MBA is designed for recent college graduates, those working individuals with limited managerial experience or business professionals seeking to change careers. The design of the Pacific MBA provides significant opportunities to gain experience through internships and experiential course work in a variety of settings. For the more experienced working professional, it provides a broadening of functional knowledge into all areas of management, and the development of skills necessary for senior management and executive positions.

The Eberhardt School of Business MBA Program has a curriculum that includes leadership, innovation, communications and teamwork as learning objectives. The MBA integrates the classroom with the real business world through interaction with the Pacific Business Forum, Invention Evaluation Service, Westgate Center for Management Development and Institute for Family Business.

All MBA candidates are assigned class projects in

cooperation with local companies and agencies and for those with limited work experience, an internship working within a faculty-supervised position is assigned. Ultimately the program will prepare students for successful careers as leaders of business, government and not-for-profit organizations.

### Psychology

In psychology, students work toward a Master of Arts degree in behavioral psychology emphasizing either applied behavior analysis/therapy or behavioral medicine. Students prepare for positions that provide 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 elsewhere for those students who wish to study beyond the master's degree.

Students are prepared for careers using applied behavioral techniques in clinical or business settings with several employment options after the master's degree, or for entry into doctoral programs in areas such as applied behavior analysis, behavioral medicine and clinical psychology. Both practical experience in a variety of community settings and research experience are emphasized.

### Speech Language Pathology

The Master of Science 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.

Graduates of the Speech-Language Pathology program are academically and clinically prepared for a professional career in Speech-Language Pathology. Clinical practica are performed in the on-campus Speech, Hearing and Language Center as well as at off-campus sites. Options for employment include schools, hospitals and rehabilitative centers. Close student-faculty interaction encourages students to realize their potential in rehabilitative skills.

### Music Therapy and Music Education

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.

In music education, students already credentialed as music teachers have a wide variety of electives available, in addition to the core courses in research, current topics, music history, and music theory/composition. Electives include advanced conducting, pedagogy, advanced study on instruments or voice, and specialized ensembles such as jazz, wind ensemble, orchestra, choir, opera, or chamber music. There is a thesis option. Students may pursue advanced pedagogical and conducting skills through microrehearsal opportunities and are encouraged to work with rehearsal settings on campus and in local schools. Students earning their teaching credential in combination with their master's degree are given multiple fieldwork and student teaching opportunities utilizing resources from the Conservatory of Music and the Benerd School of Education.

University of the Pacific students pursuing the Master of Arts in Music Therapy are able to focus on their specific personal career goals, by selecting one of two tracks supporting:

Development of advanced clinical, administrative, and program development skills, or,

Preparation for eventual entry into teaching and research careers.

### Physical Therapy

The mission of the Physical Therapist Professional Education Program is to provide 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 Doctor of Physical Therapy (D.P.T.) 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.

Students in the Doctor of Physical Therapy Program become lifelong learners who are skilled, reflective, autonomous practitioners advocating for optimal health, wellness and performance for all members of society. The concise curriculum emphasizes development of a strong foundation upon which clinical skills are developed in the context of critical thinking and evidence-based decision making. Each term includes a combination of learning in the classroom and lab, as well as structured opportunities for exposure to patient care. Students complete the program by

participating in three full-time clinical internships in a variety of settings throughout the country and internationally.

After successful completion of the entire 25-month program, graduates are eligible to take the licensing examination. The three year licensure pass rate for Pacific graduates is 99%. Once licensed, physical therapist options for employment are extremely varied and our graduates are in high demand as indicated by a 100% employment rate.

The Doctor of Physical Therapy (DPT) degree requires a high level of competency in all practice parameters within the scope of physical therapy. The specific criteria for graduation and permission to sit for professional licensure are enveloped by the national accrediting body. In the spring of 2002, the University of the Pacific and Department of Physical Therapy was granted a full 10-year accreditation cycle, the maximum length for any re-accreditation. Students entering into this professional degree program must have graduated from an accredited undergraduate college or university and received a baccalaureate degree in a major of choice. All prerequisites must be fulfilled prior to the beginning of the fall semester of the acceptance year. All candidates must apply and be offered an interview within the department prior to acceptance. Formal invitations to become a member of the incoming class are given within the spring semester following the interview. This professional program is demanding and requires all students to enroll in a continuous educational experience for 25 months beginning in late August during the year of acceptance.

### Sport Sciences

The Master of Arts program in sport sciences provides for scholarly study in the areas of sport pedagogy, sports medicine, sport management, adapted physical education sport psychology and sociology of sport.

Graduate studies in the sport sciences are frequently interdisciplinary. Although the majority of research studies in some way deal with one or more aspects of human movement, the specific focus of student research may be psychological, sociological or physiological.

Following are some examples of the scope of research done by students in the department: sex role identity, spectator aggression, relaxation training, aerobic and blood lipid capacities, biomechanical analyses of movement, prescriptive exercise, women in sports, travel patterns of commercial recreation visitors, comparative coaching styles, personnel selection process and invention of new games.

## Engineering and Computer Science

The School of Engineering and Computer Science offers a Master of Science in Engineering Science. The program is designed to strengthen students' technical, analytical, and professional breadth and depth. Students will be introduced to techniques and best practices of professional research and learn the foundations for assessing the merits of published technical findings. Students interested in eventually pursuing a PhD will want to build upon this training by engaging in research and completing a thesis. Other students interested in applied technology may prefer to enhance their studies with a grade-level practicum experience in industry, or by taking additional coursework.

### Intercultural Relations

The School of International Studies, in a partnership with the Intercultural Communication Institute in Portland, Oregon, offers a Master of Arts degree in Intercultural Relations. The program is limited residency, and designed to meet the needs of working professionals who wish to earn an advanced degree while maintaining employment or other commitments. Students complete their core coursework in 18 months, through attendance at three 2-week residencies in Portland, every January and July. The core curriculum emphasizes a theory-into-practice model, stressing the application of relevant theoretical frameworks and concepts to real-world contexts, including both domestic diversity and international settings. Students develop knowledge and skills in the principles of intercultural relations, leadership and managing change across cultures, problem-solving in intercultural settings, adult learning in a cultural context, culture in the organization, and research and analysis. The program requires a thesis.

# arthur a. dugoni school of dentistry

Dean: Patrick J. Ferrillo, Jr., B.S., D.D.S.  
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 Website: www.dental.pacific.edu

The Arthur A. Dugoni School of Dentistry is a fully-accredited professional school offering the Doctor of Dental Surgery degree. This unique 36-month program prepares graduates to provide quality dental care and to supplement and adapt their knowledge and skills throughout their professional lives. The school prides itself on producing competent general dentists in a humanistic educational environment whose graduates have a reputation for high standards of clinical excellence and are active and successful members of the profession. The school's vision is to lead the improvement of health by advancing oral health, which is supported by its core values of humanism, innovation, leadership, reflection, stewardship, collaboration, and philanthropy.

The dental program, located in San Francisco, includes didactic, laboratory, and clinical instruction as well as research opportunities. The school also has nearby, reasonably-priced student housing, a completely renovated community-based teaching clinic in Union City, and a state-of-the-art dental clinic on the Stockton campus.

In addition to the Doctor of Dental Surgery degree, the School of Dentistry has a graduate program in orthodontics leading to a certificate and the Master of Science in Dentistry; a graduate program in oral and maxillofacial surgery leading to a certificate; an International Dental Studies program which grants a DDS degree after two years of training to individuals who have graduated from a foreign dental school; a baccalaureate program in dental hygiene offered in conjunction with the College of the Pacific; and a residency program in Advanced Education in General Dentistry (AEGD) with locations in Union City and Stockton.

The School of Dentistry is an active member of the American Dental Education Association and its educational programs are fully accredited by the Commission on Dental Accreditation. In 2004 the school was named in honor of its long-standing dean, Dr. Arthur A. Dugoni. Upon Dr. Dugoni's retirement in 2006, Dr. Pat Ferrillo assumed the deanship.

## 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 that demonstrates the highest standards of service achievable.
3. Conduct research and disseminate findings that 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 an integrated program that prepares graduates to provide excellent quality 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 between one and four weeks.

During the first quarter, students practice use of dental instruments and materials, develop a working position and posture using direct and indirect vision, hone 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 rigorous curriculum. Biomedical science instruction in anatomy, biochemistry, physiology, pharmacology, and microbiology is offered in the first eight quarters, followed by multi-disciplinary, integrated presentations of basic science foundations for clinical topics such as the importance of saliva, tissue aging, nutrition, and infection control. Throughout the program, students learn application of basic sciences to biomedical problems of dentistry using the scientific method of inquiry.

Pre-clinical instruction takes place in the first four quarters with students learning to work from a seated position in a modern preclinical simulation laboratory 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 philosophy 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 number of clinical hours increases to 29 per week (evening clinic appointments supplement patient care opportunities 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, orthodontics, and removable prosthodontics. Oral and maxillofacial surgery, pediatric dentistry, and radiology are learned in respective specialty clinics. Students participate with faculty and orthodontic residents 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. Second- and third-year students participate in patient care at over 30 extramural sites. Extramural clinics are located in numerous treatment facilities in Northern California, and include hospitals, community clinics, and skilled nursing facilities. At extramural clinic sites students are taught by Pacific faculty in conditions that more closely mirror private practice. Students typically treat from 4-6 patients per day. Rotations at these sites occur at a number of different times, including weekdays during the academic year, weekends, and vacation periods. Students typically find these experiences highly

educational, teaching them how to provide excellent patient care in a more condensed time frame. Every student must participate in extramural rotations during their enrollment.

Behavioral science aspects of human and practice management, critical thinking, ethics, and dental jurisprudence are woven 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 in the third year.

Students are counseled individually with regard to establishing a practice 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 units, 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

\* Pre-dental students are advised to complete one course in anatomy or physiology as part of the biological sciences requirement. The admissions committee requires applicants to complete two semesters of organic chemistry or, upon direction of the pre-dental adviser, one semester each of organic chemistry and biochemistry.

\*\* 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 DAT is available on almost any day of the year. To be considered for admissions the exam must have been taken within 18 months of the date of the application. Preference for admission is given to students who provide scores no later than September for the class entering the following July. Information and applications are available from the Dental Admission Test Program, Division of Education, American Dental Association at 800-621-8099 or online at [www.ada.org](http://www.ada.org).

#### Application Materials

The School of Dentistry participates in the American Association of Dental Schools Application Service (AADSAS). AADSAS is an information clearinghouse which transmits to a dental school the biographical and academic data required by admission committees, thereby relieving the applicant of the burden of completing multiple and repetitious individual applications. All AADSAS applicants must submit an online application at the ADEA web site, [www.adea.org/aadsas](http://www.adea.org/aadsas). Submit official transcripts from each college and university attended\*, three letters of evaluation, and a check or money order for the AADSAS processing fee to AADSAS, 1400 K Street, Suite 1100, Washington DC 20005. Completed application materials must be received by AADSAS no later than December 1 for an applicant to be considered for the class entering in

July; however, it is recommended that students apply as early as June. A nonrefundable fee of \$75 is required by the school before processing of an application is initiated. The University of the Pacific does not require any secondary application.

\*If the applicant's undergraduate institution has a pre-health science advisory committee, a committee evaluation is recommended. Otherwise, three letters of evaluation are required, two of which should come from pre-dental or upper division science course professors. At the applicant's discretion, additional letters may be submitted if these provide supplemental information regarding the applicant's character, special abilities, and professional motivation. Evaluations from health care professionals who know the applicant well are encouraged.

### 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 phone 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, personal statement, 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.

## Accelerated Programs

In cooperation with College of the Pacific, the School of Dentistry offers three accelerated 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, students are 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 Critical Reading and Math score of 1350 with a minimum Critical Reading 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 may be admitted into 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. 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 31 or a combined SAT Critical Reading and Math score of 1350 with a minimum Critical Reading score of 630.
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 years earning a bachelor's degree in any discipline, and then complete their dental education at the School of Dentistry. Students benefit by knowing early in their careers that they will be granted an interview 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. An ACT composite score of 27 or a combined SAT Critical Reading and Math of 1210 with a minimum Critical Reading 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, accelerated students must: (1) meet all course requirements for the pre-dental programs, including grade point standards; (2) achieve scores of 18 or above in all categories on the Dental Admission Test (DAT); (3) successfully complete an interview at the School of Dentistry; (4) file a competitive and complete AADSAS application by September 1; (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 27-month graduate program in orthodontics. Instruction prepares the resident to provide excellent treatment based on contemporary biologic orthodontic principles and is recognized for education eligibility by the American Board of Orthodontics.

Courses of instruction include principles of orthodontics, cephalometrics, biomechanics, craniofacial biology, research methodology, appliance laboratory, pediatrics, statistics, anatomy, oral pathology, research design, oral physiology, cleft lip and palate, comparative appliances, occlusion and gnathology,

orthodontic surgery, restorative-orthodontic relationships, practice management, and periodontic/orthodontic care. Faculty fosters a collegial atmosphere with informal professional relationships and mutual respect between 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 starts 55 to 60 new patients and 80-90 transfer patients during their training. Residents are also rotated through facial pain research clinic and the Kaiser Craniofacial Panel. All residents participate in a 5-7 day mission for the care of craniofacial cases. Fixed appliance treatment employs the edgewise technique, although instruction permits a wide latitude of clinical variation based on patient needs and special faculty expertise. Experience in treating the entire range of orthodontic problems is provided. Each resident will also start 5 to 7 micro-implant anchorage supported patients. From 1998 to 2002 the orthodontic department was the initial testing site for the new Invisalign technology, and today provides a state-of-the-art approach to treating a wide variety of patients with Invisalign. Each resident generally starts 5 to 7 patients with this appliance.

Each resident engages in an investigative project and completes an acceptable thesis to qualify for the Master of Science in Dentistry degree. Theses are 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 on the school

website and in a separate brochure available from the International Dental Studies Program coordinator at

University of the Pacific Arthur A. Dugoni  
School of Dentistry  
2155 Webster Street  
San Francisco, CA 94115-2399, U.S.A.  
Phone: (415) 929-6428  
(415) 929-6688  
Email: IDS@pacific.edu

The International Dental Studies (IDS) curriculum includes pre-clinical and clinical instruction in dental subjects in the school's traditional DDS program, as well as instruction in pharmacology, oral pathology, differential diagnosis of oral diseases, facial pain, special needs patients, hospital dentistry, and preparation for state and regional 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 consideration requirements and application procedures are described on the school website and in a separate brochure available from the coordinator of the International Dental Studies program. Basic prerequisites for consideration are: 1) a certified or notarized copy of a dental degree from a foreign dental school (any degree in a language other than English must be accompanied by a certified translation from a bona fide U.S. translator); 2) successful completion of all four sections of Part I of the National Dental Board Examination with a minimum composite score of 80; 3) a minimum score of 92 or above on the internet-based or 580 or above on the paper-based version of the Test of English as Foreign Language (TOEFL), and if applicable, an English proficiency examination administered at the School of Dentistry; 4) a course-by-course transcript evaluation from Educational Credential Evaluators (ECE) with a minimum Grade Point Average of 2.0; 5) two to four letters of recommendation no more than 12 months old at the time of application; and 6) a curriculum vitae (CV) describing the applicant's dental experience since receiving the dental degree. Any notarized copy received by the Dental School must bare the original notary stamp. Copies of a notarized copy are not acceptable. Provisional degrees are not accepted.

The IDS admissions committee will consider the following factors in selecting applicants for admission: dental school achievement, National Dental Board Examination Part1 score, English language proficiency, professional experience and advanced degrees. Applicants selected for the technique exam and interview will be selected from those who meet preliminary admissions requirements..

### Advanced Education in General Dentistry Program

The School of Dentistry has two sites for its Advanced Education in General Dentistry Program. The Union City site is located approximately 35 miles southeast of San Francisco. The second site is in the Thomas J. Long Health Sciences Center on the University of the Pacific Stockton campus in Stockton.

The AEGD program is a one-year, accredited postgraduate residency in general dentistry with an optional second year. The core of the program involves advanced clinical treatment of patients requiring comprehensive general dental care. There is a comprehensive seminar series attended by residents at both sites that covers all of the dental specialties. The residents provide dental care to people with complex medical, physical, and psychological situations.

At both sites AEGD residents provide comprehensive dental care, attend supplemental seminars and rotations, and supervise dental students. In Union City, residents are directly involved in the clinical education of dental students, which give residents at this site unique teaching experience. In Stockton, AEGD residents not only supervise and instruct dental students they work with dental hygiene students in the combined hygiene and dental services in their community clinic.

The program offers the opportunity to gain more in-depth training in an optional accredited second year residency training program. The second year allows greater flexibility to pursue individual interests, advanced clinical cases, teaching, or research projects.

The start date for the program is July 1. Residents have time off during school holidays including the school's holiday winter break and 10 days leave.

There is no tuition to participate in the program. Residents receive an educational stipend. The program uses the American Dental

Education Association's PASS application to receive application materials. For on-line information about Pacific's AEGD Program application process, please visit our site on the Web at <http://www.dental.pacific.edu>. Follow the links to Academic Program, and Advanced Education in General Dentistry; Application Process.

### Oral and Maxillofacial Surgery Residency Program

The School of Dentistry offers a residency program in oral and maxillofacial surgery housed at Highland Hospital in Oakland, California. The program has been in place since 1926, and in 2001 became affiliated with the University of the Pacific. The program is accredited by the Commission on Dental Accreditation. Upon completion of the program the resident is prepared to practice the full scope of oral and maxillofacial surgery and is eligible to apply for certification by the American Board of Oral and Maxillofacial Surgery.

Residents are educated in the basic sciences— anatomy, pathology, pharmacology, and physiology. Clinical practice includes dentoalveolar surgery, comprehensive management of the implant patient, comprehensive management of dentofacial and craniofacial deformities, surgical management of pathologic lesions, temporomandibular joint surgery, aesthetic surgery, reconstructive surgery and management of cleft lip and palate, and trauma management.

There are several hospitals and clinics to which the resident is assigned including Highland Hospital, Kaiser Hospital in Oakland, Oakland Children's Hospital, and the University of the Pacific School of Dentistry clinics.

One of the programs most desirable qualities is the large volume and variety of clinical material.

The residency lasts 48 months, and is made up of 30 months of oral and maxillofacial surgery, and 18 months of medical rotations including medicine, surgery, plastic surgery, oral pathology, and anesthesiology as well as electives in various surgical or medical subspecialties.

A dental degree is prerequisite to apply to the program. A candidate must submit an application package including a completed PASS application and three letters of recommendation. University of the Pacific/Highland participates in the National Matching Service.

## Dental Hygiene

Recognizing the ever-increasing need for dental hygienists, the Arthur A. Dugoni School of Dentistry and the University have combined forces to offer a 36 month accelerated Bachelor of Science Degree in dental hygiene. Pacific has created this distinctive three-year baccalaureate program (seven semesters and a summer session) to attract highly qualified students. In addition to clinical practice, the baccalaureate hygiene degree allows entry into many positions in teaching, research, administration, public health, private industry, and other areas of hygiene practice, as well as eligibility for entry into advanced degree programs.

### Mission

The mission of the University of the Pacific Baccalaureate Dental Hygiene program is consistent with the mission and educational goals of the University and the Arthur A. Dugoni School of Dentistry.

The dental hygiene program will:

- Educate individuals who, upon completion of the program will be professionally competent to provide quality dental hygiene care in an evolving profession
- Provide patient-centered, quality care in an efficient clinical model that demonstrates the highest standards of service achievable
- Provide opportunities for community based, experiential learning

The program 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 dental hygiene, education, and our communities

### The Study of Dental Hygiene

Dental hygiene is a professional program where students learn to provide preventive related clinical care for patients with emphasis on recognition, treatment, and prevention of oral diseases. In addition to performing a variety of preventive and therapeutic functions, the dental hygienist also has a major role in counseling and educating patients, community groups, and other health professionals. The curriculum

helps student build educational, communicative, and clinical skills necessary for the dental hygienist to work in co-therapy with the dental team.

### Facilities

The program is located on the University's Stockton campus in a state of the art facility shared with Pharmacy, Physical Therapy and Speech-Language Pathology Programs, as well as the Arthur A. Dugoni School of Dentistry's newest Advanced Education in General Dentistry (AEGD) program. The AEGD clinic, staffed by dental residents and faculty, provides outstanding comprehensive restorative care and patient co-therapy experiences for both dental hygiene students and dental students on extramural rotation from the San Francisco campus. The University of the Pacific's Health Sciences Learning Center and Clinics offers students an exceptional learning environment and the community an excellent resource for dental services.

### Admission Requirements

Admission to the Dental Hygiene Program is competitive, based on merit. Students may apply either as a freshman student, doing pre-requisite coursework at Pacific, or as a transfer student, completing pre-requisites at another institution. After review of the completed application, the Office of Admissions will invite qualified candidates to participate in interviews on campus. In addition to a personal interview, applicants are invited to take part in orientation and financial aid seminars, meet informally with current students, and tour the campus. Admission will be based on the combination of application information and interview.

#### Freshman Application

The Freshman application deadline is November 15 for the following fall semester. Students are notified of their acceptance after March 15.

Recommended High School Preparation: Completion of high school or its equivalent is mandatory. Pass/Fail evaluations in required subjects are acceptable only when accompanied by a narrative transcript provided by the awarding school.

Required courses: Students applying to dental hygiene must take two years of high school algebra. High school physics is recommended. Applicants are also expected to complete a college preparatory program. Preparatory courses are those in the fields of English, social sciences, foreign languages, laboratory sciences, and mathematics.

It is strongly recommended, to all students applying to the University, that the following be included in the secondary school program: four years of English; at least three years of mathematics, including geometry and intermediate algebra; at least two years of a laboratory science in at least two disciplines (biology, chemistry, or physics); at least two years of the same foreign language; three years of social science; one year of fine or performing arts; and additional academic courses - all aiming at improving analytical abilities, promoting artistic development, and strengthening written skills.

#### Recommended Courses:

English	4 years
Fine Arts/Performing Arts	1 year
Foreign Language (one)	2 years
Social Science	2 years
Mathematics*	4 years
Laboratory sciences**	3 years
Academic Electives***	1 year

\*Suggested math sequence for science majors (including dental hygiene): algebra, geometry, algebra II, trigonometry or calculus.

\*\*Physics biology and chemistry are recommended for dental hygiene applicants.

\*\*\*Academic elective courses should be advanced foreign languages, mathematics, laboratory science or other solid college preparatory courses.

GPA: Special emphasis is placed on coursework selected, the grades achieved in those courses, and the cumulative grade point average.

SAT or ACT Exams: The Admissions Committee will review the results of the student's SAT or ACT scores.

Essay: An essay may be required of University applicants.

Recommendation: One academic recommendation on official letterhead is required. It should be from a science instructor, counselor or adviser. Additional letters of evaluation from health care professionals are recommended.

Extracurricular activities: Other factors considered (but not required) in selecting the class include: work experience in the dental field, community service and involvement, and volunteer activities.

#### Transfer Student Application:

Transfer application deadline for entry into the program is August 1 for the following spring semester. Applicants are notified by December 1.

Transfer students will be asked to meet the requirements listed above, with the following exceptions: SAT or ACT exam scores will NOT be required.

Sixty-three units of lower division college courses that are Pacific transferable and include the following prerequisites or equivalents are required:

- General Biology and lab (one year or 3 quarters) must articulate to Pacific BIOL 051/061
- General Chemistry and lab (one year or 3 quarters) must articulate to Pacific CHEM 025/027
- Microbiology (minimum of one 3 unit semester course or one 4 unit quarter class) must articulate to Pacific BIOL 145
- General (Introductory) Psychology (minimum of one 3 unit semester course or one 4 unit quarter class) must articulate to Pacific PSYC 031
- Introductory Sociology (minimum of one 3 unit semester course or one 4 unit quarter class) must articulate to Pacific SOCI 051
- Mathematics (statistics) (minimum of one 3 unit semester course or one 4 unit quarter class) must articulate to Pacific MATH 037
- English Composition (minimum of one 3 unit semester course or one 4 unit quarter class) must articulate to Pacific ENGL 025
- Communication (Speech) (minimum of one 3 unit semester course or one 4 unit quarter class) must articulate to Pacific COMM 027
- Anatomy and Physiology (one semester or 2 quarters) must articulate to Pacific BIOL 111
- Organic Chemistry (one semester or 1 quarter/ no lab) must articulate to Pacific CHEM 033
- One course that must articulate with Pacific General Education Category I-C Societies and Cultures Outside the United States
- One course that must articulate with Pacific General Education Category II-B Fundamental Concerns
- One course that must articulate with Pacific General Education Category II-C Practice and Perspectives in the Visual and Performing Arts

#### Health Requirements:

Prior to entry into the professional portion of the program (final 4 semesters), health requirements must be met and documentation submitted to the University's Cowell Wellness Center as follows:

- Medical Examination: Following acceptance for admission, submit the University's "Entrance History and Physical," form signed by a physician confirming that a medical examination was completed within 3 months of the date of matriculation into the professional portion of the Dental Hygiene program.
- Measles, Rubella (German Measles), and Mumps: Provide documentation of presence of positive titres. Documented vaccination with two dose series MMR given one month apart with live attenuated measles and rubella virus is adequate. A history of measles and rubella as childhood diseases is not sufficient.
- Tuberculosis: Submit the report of a two-step PPD tuberculosis skin test done within 3 months of entering professional program. With a history of tuberculosis OR a positive skin test, submit the physician's report of a chest X-ray taken within the year prior to matriculation. Chest X-rays may be required at intervals, and suppressive medication may be recommended.
- Hepatitis B: Every student is required to submit documented proof of presence of antibodies to the Hepatitis B virus or to complete the Hepatitis B three-dose vaccination series and Hepatitis B antigen test at least one month after completion of series. It is recommended that this be done prior to matriculation; in all cases, however, it must be done before a student is allowed to treat patients. If a student does not have documented proof of having antibodies to this virus, the vaccination series is available at the school for a fee.
- Tetanus Diphtheria Vaccination within past 10 years
- Varivax (Chicken Pox) Provide documentation of 2 dose vaccination series or presence of titer if history of having chicken pox.

Inquiries about health requirements and supporting documentation are handled through the University's Cowell Wellness Center (209) 946-2315.



## Program Description

The B.S. degree in Dental Hygiene is a professional program presented in an accelerated year-round format of eight semesters including summer sessions. Students accepted into the program as freshmen complete all sessions with the University. Transfer level program entrants, with prerequisites fulfilled, complete the final four semesters of professional coursework only.

Presented in the first half of the program are general education courses providing a strong science background, and a broad base in the humanities designed to provide prerequisite strengths for dental hygiene science and clinical practice. Students will undertake this portion of their course work, which is provided by the College of the Pacific, with the general undergraduate student population on the main campus. The student must maintain a 2.7 GPA or better in lower division coursework to proceed into the professional portion of the program.

The professional portion of the program is a highly structured four semesters of upper division coursework including both didactic and clinical experience. This portion of the program is presented by the Arthur A. Dugoni School of Dentistry on the Stockton campus.

## Dental Hygiene Licensure

Completion of the program enables graduates to take national and state licensure examinations. For California examination information contact: California Department of Consumer Affairs Committee on Dental Auxiliaries 2005 Evergreen Street., Suite 1050 Sacramento, CA 95815, www.comda.ca.gov/, (916) 263-2595.

### Degree Requirements

#### General Education Curriculum

<b>First Semester</b>	<b>(16 units)</b>
Biology 051 (General Education III requirement fulfilled)	(4 units)
English 025 (Intro) (Gen. Ed. II requirement fulfilled)	(4 units)
Psychology 031 - Intro (General Education I requirement fulfilled)	(4 units)
Pacific Seminar 1	(4 units)
<b>Second Semester</b>	<b>(16 units)</b>
Biology 061	(4 units)
Chemistry 025 (General Education III requirement fulfilled)	(5 units)
Sociology 051 (Intro) (General Education I requirement fulfilled)	(4 units)
Pacific Seminar 2	(3 units)
<b>Third Semester Summer Session</b>	<b>(16 units)</b>
Chemistry 027	(5 units)
Elective	(4 units)
Mathematics 037 - Statistics	(4 units)
Organic Chemistry Chem 033 - without lab	(3 units)
<b>Fourth Semester</b>	<b>(15 units)</b>
General Education: (Gen. Ed. II, section b or c, requirement fulfilled)	(4 units)
Communications 027 (Public Speaking)	(3 units)
Biology 145 - Microbiology	(4 units)
Biology 111 - Anatomy and Physiology	(4 units)
<b>Total Units:</b>	<b>63 units</b>

#### Dental Hygiene Curriculum

<b>Fifth Semester</b>	<b>(14 units)</b>
Head & Neck Anatomy	
Dental Anatomy	
Oral Radiology	
Oral Histology/Embryology	
Dental Hygiene Practice	
Pre-Clinical Dental Hygiene	
Oral Health Education	
<b>Sixth Semester</b>	<b>(17 units)</b>
Medical & Dental Emergencies (Incl. BLS) I	
Pharmacology	
Dental Hygiene Clinic I	
General & Oral Pathology	
Periodontics I	
Pain Management	
<b>Seventh Semester</b>	<b>(17 units)</b>
Medical & Dental Emergencies II	
Dental Hygiene Clinic II	
Biochemistry and Nutrition	
Community Oral Health and Research	
Patient Management/ Special Needs	
<b>Eighth Semester</b>	<b>(17 units)</b>
Periodontics II	
Dental Materials	
Dental Hygiene Clinic III	
Ethics & Jurisprudence	
Senior Project	
<b>Total:</b>	<b>65 units</b>
<b>Major Total:</b>	<b>128 units</b>

## Course Offerings

- DHYG 110. Oral Health Education (1)**  
Students are introduced to principles and practices of prevention and control of oral disease. Oral health promotion, to include plaque control, patient education, and behavior modification are stressed.
- DHYG 111. Head and Neck Anatomy (2)**  
This course is designed to expand student knowledge of the anatomical structures of the head and neck. Students examine clinical correlations relevant for dental professionals.
- DHYG 112. Dental Anatomy (1)**  
The study of dental terminology, tooth morphology and the relationship of teeth in form and function to each other and to supporting structures. Root morphology, occlusion and dental anomalies correlated to basic clinical applications.
- DHYG 113. Oral Radiology (1)**  
This course is designed to examine the fundamentals of dental radiography to include history, principles, legal considerations, and radiation safety. Clinical applications including exposure technique, film processing, preparing and interpreting dental radiographs, and correction of technical error are performed.
- DHYG 114. Oral Histology and Embryology (2)**  
Lectures, clinical examples, classroom discussions and slide materials designed to help student develop knowledge of oral histology and embryology, to be applied to the clinical practice of dental hygiene.

- DHYG 115. Dental Hygiene Practice (3)**  
An introduction to the contemporary role of the dental hygienist, the evolving profession of dental hygiene, procedures and techniques utilized in the dental hygiene process of care. Emphasis is placed on development of a comprehensive medical and dental database and history, diagnostic tools, oral cancer examination, clinical systems and protocol, infection control, basic instrumentation and polishing, and patient communication.
- DHYG 116. Pre-Clinical Dental Hygiene (3)**  
Provides the opportunity for application of information presented concurrently in DHYG 115.
- DHYG 118. Oral Radiology Lab (1)**  
Clinical applications during the laboratory experience include radiographic exposure technique, film processing, preparing and interpreting dental radiographs, and correction of technical errors are performed.
- DHYG 120. Periodontics I (2)**  
Introduction to periodontology. Emphasis is placed on etiology, histology and epidemiology, diagnosis and classification of periodontal disease. Principles of periodontal disease preventive therapy, treatment planning, reassessment and supportive periodontal therapy will be introduced. Students learn under which circumstances referral to periodontal specialty practices is appropriate.
- DHYG 121. Pharmacology (3)**  
This course is designed to classify and study therapeutic agents commonly encountered and/or utilized in the practice of dentistry. Students learn chemical and physical properties, therapeutic effect, methods of administration, dosage, contraindications and side effects of these agents.
- DHYG 122. Oral Pathology (2)**  
Study of etiology, pathogenesis, clinical and histogenic features oral diseases. Recognition of basic tissue reaction and lesions that occur in the mouth, jaws, and neck formulation of differential diagnosis of lesions seen in the practice of dentistry.
- DHYG 123. Medical and Dental Emergencies I (1)**  
Students learn basic methods of medical and dental emergency prevention and management in the dental office. Emphasis on recognizing signs, symptoms, and treatment of the more common emergencies which may occur in the dental setting. Drugs and equipment utilized in the management of medical emergencies are outlined. Students are trained in Basic Life Support Systems (BLS).
- DHYG 124. Local Anesthesia/Pain Management (2)**  
Comprehensive information and skills for providing comfortable dental treatment. Local anesthesia and nitrous oxide-oxygen administration are stressed.
- DHYG 125/126. Dental Hygiene Clinic I (2)/(5)**  
This lecture/lab/clinic course is designed to provide students beginning clinical experience in the treatment of child, adolescent, adult, and geriatric patients. Promotion of oral health and wellness is stressed through lecture and clinical experiences in: patient assessment; dental hygiene care treatment planning; case presentation and implementation; and treatment outcomes evaluation. Principles, rational and application of ultrasonic scaling are introduced. Cariology considerations and additional fluoride delivery options are discussed. Students integrate knowledge and skills developed in DHYG110 DHYG 115, DHYG 116, DHYG 120, and DHYG 124.
- DHYG 130. Periodontics II (2)**  
This course is designed to enable students to enhance and develop knowledge and skills applicable in the treatment of patients with advanced periodontal disease. Concepts and treatment techniques of surgical and non-surgical periodontal therapy are stressed.
- DHYG 131. Community Oral Health (4)**  
This course is designed to enable students to examine the principles and practices of oral health in diverse public health settings. Emphasis is placed on the role of the dental hygienist as an innovator and educator in community dental health programs with consideration to needs assessment, research study utilization, biostatistic utilization, program planning, and results evaluation. The social and professional responsibility of the dental professional with regard to public promotion of oral health and access to care is examined. Students design and implement a community –based research project that culminates in a class presentation and may be submitted in to the professional association's table clinic competition
- DHYG 132. Patient Management/ Special Needs (2)**  
This course is designed to enlighten the viewer to the world of people with special needs, the issues they face, the programs in place to help them, and dental treatment modalities.
- DHYG 133. Medical and Dental Emergencies II (1)**  
This course provides a continuation of DHYG 123, Medical and Dental Emergencies I. Students review methods of medical and dental emergency prevention and management in the dental office. Emphasis on recognizing signs, symptoms, and treatment of the more common emergencies which may occur in the dental setting. Drugs and equipment utilized in the management of medical emergencies are outlined.
- DHYG 135/136. Dental Hygiene Clinic II (1)/(7)**  
This lecture/ lab/ clinic course is designed to enable students to expand their experience in treatment of the periodontally involved patient. Students refine techniques for treatment planning, root planing, and non-surgical periodontal treatment. Desensitization techniques, and pit and fissure sealants, are introduced. Utilization of radiographs, local anesthesia and nitrous oxide sedation in patient care is further developed. Students integrate knowledge and skills developed in DHYG 130, DHYG 132, and all previous course work to-date.
- DHYG 141. Dental Materials (2)**  
This course is designed to examine structure and physical properties of dental materials utilized in the practice of dental hygiene. Emphasis on concepts and principles of clinical application.
- DHYG 142. Ethics and Jurisprudence (2)**  
Students study ethical theories and issues related to the practice of dental hygiene. A personal philosophy of professional conduct, continuous quality assurance and self-assessment is explored. Fundamental factors necessary to practice within existing regulatory frameworks are stressed.
- DHYG 143. Biochemistry and Nutrition (2)**  
Basic principles of biochemistry and nutrition related to dentistry. Students complete patient dietary surveys and develop correctional nutritional plans.
- DHYG 144. Senior Project (3)**  
This course is designed to provide students the opportunity for supervised practical application of previously studied theory in a variety of settings. Through outside program affiliation, faculty assistance, and mentorship, students choose a specific area of hygiene practice to explore in depth.
- DHYG 145/146. Dental Hygiene Clinic III (1)/(7)**  
This course is designed to provide advanced clinical experience in performing treatment for a variety of clinical patient cases. Students use local anesthesia, nitrous oxide, oral antimicrobials, and nutritional analysis. State Board Examination requirements and protocol, are reviewed and simulated through practical exercises. Identification of an appropriate patient for licensure examination is made. Students integrate knowledge and skills developed in all previous course work to-date.

## Dental Hygiene Faculty

**Shelly Azevedo**, Clinical Instructor, Department of Peridontology, BS, Loma Linda University, 1984, MS, Touro University International, 2007.

**Dorothy T. Burk**, Associate Professor of Anatomy, BA, University of New Hampshire, 1972, PhD, University of Michigan, 1976, MA, University of the Pacific, 1994.

**William M. Carpenter**, Professor of Pathology and Medicine, DDS, University of Pittsburgh, 1964, MS, George Washington University, 1973.

**Howard H. Chi**, Assistant Professor of Dental Practice, BA, University of the Pacific, 1985, DMD, Temple University, 1989, MA, University of the Pacific, 2000.

**Cathleen Dornbush**, Clinical Instructor, Department of Periodontology, BS, University of Southern California, 1977, RDHAP, University of the Pacific, 2004.

**Elena Francisco**, Clinical Instructor, Department of Periodontology, BS, Loma Linda University, 1976, RDHAP, University of the Pacific, 2005.

**Rebecca N. Gibson**, Clinical Instructor, Department of Periodontology, BS, University of the Pacific, 2005.

**Diljot Goraya**, Clinical Instructor, Department of Periodontology, BS, University of the Pacific, 2007

**June Harelson**, Clinical Instructor, Department of Periodontology, AA, Diablo Valley College, BS, Northern Arizona University, 2006

**Lisa A. Harpenau**, Associate Professor of Peridontics, BS, Loyola Marymount University, 1986, DDS, University of California, San Francisco, 1990, DDS, University of California, San Francisco, 1990, BS, University of California, San Francisco, 1990, MS, Baylor University, 1992, MBA, University of the Pacific, 1999.

**Deborah Horlak**, Assistant Professor, Department of Peridontology, BA, Ohio State University, 1973; MA, California State University, Fresno, CA, 2003.

**Tanya Jones**, Clinical Instructor, Department of Periodontology, BA, Brigham Young University, 1982, RDHAP, University of the Pacific, 2004.

**Kimi Kan**, Clinical Instructor, Department of Peridontology, BS, University of the Pacific 2006.

**William P. Lundergan**, Professor of Periodontics, AA, College of the Sequoias, 1970, BS, University of California, Irvine, 1973, DDS, University of the Pacific, 1981, MA, University of the Pacific, 1994.

**Karen Marston**, Clinical Instructor, Department of Peridontology, BS, University of the Pacific 2006.

**John Muller**, Clinical Instructor, Department of Periodontology, BS, University of San Francisco, 1978, DDS, University of the Pacific, 1985.

**Marlene Storz**, Clinical Instructor, Department of Peridontology, BS, University of the Pacific 2006.

**Paula Watson**, Assistant Professor, Department of Periodontology, AA, Foothill College, 1990, BS, Chapman University, 2001, MS, University of New Haven, 2004, RDHAP, West Los Angeles College, 2003.

**Christine Zinke**, Clinical Instructor, Department of Periodontology, BS, Loma Linda University, 2003.

# mcgeorge school of law

Phone: 916.739.7191  
 Website: www.mcgeorge.edu  
 Elizabeth Rindskopf Parker, Dean

*A professional school offering a Juris Doctor degree in a full-time or part-time program, and Master of Laws (LL.M. and J.S.D.) degrees in Government and Public Policy, Transnational Business Practice, Advocacy Practice and Teaching and International Water Resources.*

Founded in 1924, the University of the Pacific, McGeorge School of Law (Pacific McGeorge) has grown into one of the leading law schools in the country. Its 13-acre campus in Sacramento is a dynamic center for legal education, research and training in the skills of legal advocacy and practice.

Approximately 1,020 students are enrolled in the school's full-time and part-time divisions as well as its graduate law program. More than 100 undergraduate institutions are represented in a typical entering class.

Pacific McGeorge is less than three miles from the State Capitol and surrounding federal, state, and local offices and courts. Students are able to observe law and decision-making processes at their sources and enjoy many opportunities to learn from supervised placements in state, federal, local and public interest agencies.

## Accreditation

Pacific McGeorge is a member of the Association of American Law Schools, is fully accredited by the American Bar Association and by the Committee of Bar Examiners of the California State Bar, and is 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 Pacific McGeorge campus features some of the finest legal education facilities in the nation, including on-campus housing, dining facilities and a recreational center with swimming pool. In addition to modern classrooms, the campus houses one of the largest private law libraries in California and a courtroom. Facilities are accessible to the handicapped.

The Gordon D. Schaber Law Library is a comprehensive legal research facility of more than 500,000 volumes, and extensive electronic legal databases. Law librarians, experts in legal research methodology, are available to assist patrons in using the library's print and electronic resources. The library makes a variety of study accommodations available to McGeorge students, including individual carrels, group study rooms, and video viewing rooms all equipped with wireless technology for laptop access. The Information Commons, a computer learning and research center, contains computers available for use by McGeorge students for computerized legal research, Internet search, word processing and e-mail.

The law school's Center for Advocacy and Dispute Resolution 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. The Pacific McGeorge 3+3 Program, described later, also allows gifted undergraduate students at the University of the Pacific to begin work on their law degree after their junior year on the Stockton campus.

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  
University of the Pacific  
McGeorge School of Law  
3200 Fifth Avenue  
Sacramento, CA 95817

or e-mail: admissionsmcgeorge@pacific.edu

or online: www.mcgeorge.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 requires three years of law study, while the part-time program requires four years. Part-time 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 more than 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
- 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 Eberhardt 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. A J.D./M.S. (Accounting) is available in cooperation with CSUS, as is a J.D./M.S. (Information Science) joint degree.

The faculty is composed of 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 help create an environment where 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 that leads to enrollment at the University's McGeorge School of Law during their 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 the law school, as well as have a minimum LSAT score within the 50<sup>th</sup> percentile range. Further information is available from the Dean of Admissions or the Pre-Law Adviser on the Stockton campus and the Office of Admissions at Pacific McGeorge.

### Activities

The *McGeorge Law Review*, published quarterly, is edited and managed by a board of student editors. The law school's location in the state capital has led to a natural emphasis on California legislation, and a special supplement, "Review of Selected California Legislation," is published annually. *The Pacific McGeorge Global Business & Development Law Journal*, 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 coordinates a number of activities through its elected Board of Governors. Organizations open to all law students include the Governmental Affairs Student Association, Women's Caucus, minority law students' organizations, legal fraternities, Nevada Law Students Association, religiously affiliated organizations, the Environmental Law Forum, the International Law Society, the Public Legal Services Society and other interest and social groups.

Pacific McGeorge mock trial, appellate advocacy and international advocacy teams compete with other law schools in regional, national and international competitions. In 2008, Pacific McGeorge held its 3<sup>rd</sup> Annual National Ethics Mock Trial Competition, which featured some of the finest mock trial teams from across the country.

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 their graduating class are eligible for election to The Order of the Coif.

### Special Curricular Programs

#### Governmental Affairs Certificate

A unique 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 participate in research studies, symposiums and seminars sponsored by the school's Capital Center for Public Law and Policy, a highly regarded non-partisan source of public policy legal analysis.

#### Advocacy Certificate

A specialized curriculum leads to a J.D. degree with a Certificate in Advocacy. Pacific McGeorge offers students exceptional faculty and facility resources in advocacy. Students receive specialized practical training to prepare for effective careers in litigation, civil, and/or criminal trial and appellate work, or dispute resolution.

#### International Legal Studies Certificate

A structured curriculum leads to a J.D. degree with a Certificate in International Legal Studies. Pacific McGeorge is an internationally recognized leader in this field of legal education and J.D. students have the opportunity to take many courses right alongside foreign attorneys in Pacific McGeorge's acclaimed LL.M. Transnational Business Practice Program.

#### Criminal Justice Concentration

A structured curriculum leads to a J.D. degree with a concentration in Criminal Justice — offering required and elective courses selected to provide students seeking a career in criminal law with a firm foundation.

## Intellectual Property Law Concentration

A specialized curriculum leads to a J.D. degree with a concentration in Intellectual Property Law. Core courses in this growing legal field include Patent Law, Intellectual Property and Unfair Competition, Copyright Law, and Trademark Law.

## Tax Concentration

Pacific McGeorge has fashioned one of the strongest tax programs in the West and offers a tailored curriculum leading to a J.D. degree with a Tax Concentration. Law students who seek to enter the tax field will benefit from an outstanding faculty, excellent library resources, and a curriculum that features a broad array of tax and business electives.

## Graduate Programs

Pacific McGeorge offers a full-time graduate program leading to the Master of Laws (LL.M.) in Transnational Business Practice that combines an on-campus study with class work in Salzburg, Austria, and an externship placement in a foreign law office. The law school also offers an LL.M./J.S.D. program in International Water Resources. The Master of Laws in Government and Public Policy offers a one- or two-year program designed for young attorneys who wish to pursue a career in the public sector. An LL.M. in Advocacy Practice and Teaching became Pacific McGeorge's newest graduate program in 2008.

## Clinical Programs

Pacific McGeorge has been a leader in clinical legal education for more than three decades. The on-campus Community Legal Service Center develops student skills through clinics in administrative adjudication, bankruptcy, business and community development, civil practice, immigration law, parole representation, and crime victims' representation. Students may also earn unit 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 Employees 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 and the San Joaquin County District Attorney.

## Capital Center for Public Law & Policy

Founded in 1995, the Capital Center for Public Law & Policy promotes effective government by providing policy makers with nonpartisan legal analysis of public policy issues. Students have the opportunity to participate in all center activities including drafting of legislation. A new addition to the Capital Center for Public Law & Policy is the Center for Health & Aging, dedicated to the study and analysis of these issues in the law and to play an advisory role to public and private organizations concerned with health and aging issues.

## Global Center for Business and Development

The Global Center for Business and Development pursues educational, scholarly and practical initiatives addressing the interface between the global economy and the legal profession. The Center directs its attention to three principal areas of concern, each of which is the focus of one of the institutes within the Center. The Institute for Global Business examines the legal implications of the globalization of business enterprises and business transactions. The Institute for Sustainable Development undertakes a wide range of projects concerning emerging legal regimes for global resources for sustainable development. The Institute for Development of Legal Infrastructure is concerned with studying – and aiding in the development of – legal infrastructures that are preconditions for global business and economic development.

## Center for Advocacy & Dispute Resolution

The Center for Advocacy and Dispute Resolution was founded in 1973 with the opening of the first experimental courtroom facility among American law schools. The “Courtroom of the Future” has served for more than three decades as a threshold in training future attorneys in the highest degree of effective trial skills.

## Summer Programs Around the World

Since 1974, Salzburg, Austria has been the site of the Institute on International Legal Studies. Associate Justice Anthony M. Kennedy of the Supreme Court of the United States teaches annually in a three-week program that is open to American and international law students. In addition, Pacific McGeorge offers summer programs in China, England and Russia to American and international law students.

## Institute for Administrative Justice

The Institute for Administrative Justice (IAJ), established in 1972, has gained national recognition as a leading source of expertise on administrative hearing practices. Many public agencies contract with the IAJ to provide training and systems management. McGeorge students working for the Institute gain direct experience in the practice of administrative law. The IAJ now holds the contract for parole hearings for the state of California.

## McGeorge School of Law Catalogue

Complete information and a course listing can be found in Pacific McGeorge's 2008/2009 Course Catalogue or online at [www.mcgeorge.edu](http://www.mcgeorge.edu).

# center for professional and continuing education

Phone: (209) 946-2424  
 Location: Burns Tower, 5th floor  
 Website: [www.pacific.edu/cpce](http://www.pacific.edu/cpce)  
 Barbara Shaw, Associate Provost

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continuing education

*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 community and campus 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 completion programs, 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 mature adult learners. The Center is designed to help students and community members 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 Completion Program

The Evening Degree Completion Program in Organizational Behavior is designed to meet the needs of adult students who may have started but never finished their college degree.

The Bachelor of Science in Organizational Behavior major is an intensified degree completion 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 complete their degree over a 20-month period by taking two 3-unit classes every eight weeks. If you are interested in the program but have not earned the minimum transfer units, please contact the Adult Student Services Coordinator at (209) 946-2424 for academic advising.

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.

A maximum of 20 units may be earned through a combination of concurrent enrollment in classes at other colleges and universities while enrolled at Pacific, including transferable online and extension courses from other regionally accredited colleges and universities, and military courses evaluated by the American Council on Education

Pacific offers a generous Educational Benefit Program for the Evening Degree student whose employer contributes to meeting his or her tuition expenses. Pacific will match an employer's contribution up to 20% of tuition. This matching grant combined with the employer's contribution can significantly help the employee-student meet his or her educational goals. For more details, please contact the Adult Student Services Coordinator at (209) 946-2424.

## Adult Student Services

The Center for Professional and Continuing Education provides student services specifically for adult learners, 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 Center 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. Student Services begins by providing assistance in discovering the 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, Student Services' staff is prepared to assist students with the transition to the University.

Staff also help students with "mainstreaming" programs, which integrate adult learners with "traditional" students. The majors chosen by adult learners are taken from the traditional curriculum and are taught by highly qualified full-time University faculty members. Adult students work with a faculty adviser to integrate curricular demands with life responsibilities. Currently adult learners are majoring in areas such as Business, Computer Science, Biology, Chemistry, Communication, English, Art, and Education. 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 Gender Studies.

Adult learners have several opportunities to earn elective unit credit previous to enrolling at Pacific. 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 for a maximum of 20 units. 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 at Pacific offers special opportunities for adult learners with early morning, daytime and limited evening classes at a reduced tuition as well as online courses. 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. 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 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 but vary depending on academic department.) Courses are offered both on campus and online.

### 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 of varying lengths of time and online courses are also available. Students may register by mail, in person or online. 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 or visit the CPCE website at [www.pacific.edu/cpce](http://www.pacific.edu/cpce) to download the Summer Sessions' catalog.

### 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 at Pacific.

**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.

**Certificate Programs** are designed to enhance specific skill sets for working professionals. Programs offered include Records Management, International Trade (online), Substance Abuse Counseling, Supervision and Civic Leadership.

**Non-credit courses** are offered for both personal and professional enrichment.

**Special Programs** are offered throughout the year for youth (Summer Scholars) as well as for mature adult learners (Osher Lifelong Learning Institute).



# university administration

## *The Board of Regents*

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## *Office of the Provost*

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 Director of Summer Sessions ..... Barbara L. Shaw  
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 Assistant Provost for Faculty Development and Director of the  
 Center for Teaching Excellence ..... Jace Hargis  
 Dean of the Library ..... C. Brigid Welch  
 Director of Institutional Research ..... Mike Rogers  
 University Registrar ..... Cecilia M. Rodriguez  
 Director of Admission ..... Richard Toledo  
 Director of Financial Aid ..... S. Lynn Fox

## *School and College Deans*

Dean, College of the Pacific ..... Thomas Krise  
 Senior Associate Dean ..... Edith Sparks  
 Associate Dean and Director of General Education ..... Lou Matz  
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 Dean, Conservatory of Music ..... Giulio Maria Ongaro  
 Assistant Dean ..... David M. Chase  
 Dean, Eberhardt School of Business ..... Richard Flaherty  
 Associate Dean, Undergraduate Programs ..... Ray Sylvester  
 Associate Dean, Graduate Programs ..... Cynthia Eakin  
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 Assistant Dean ..... Dennis Brennan  
 Dean, School of Engineering and Computer Science ..... Ravi K. Jain  
 Associate Dean ..... Louise Stark  
 Assistant Dean ..... Gary R. Martin  
 Associate Provost for International Initiatives and  
 Dean, School of International Studies ..... Margee Ensign  
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 Associate Dean for Academic Affairs ..... Eric Boyce  
 Associate Dean for Graduate Education and Research ..... Ziaoling Li  
 Assistant Dean of Operations ..... Linda Norton  
 Assistant Dean for External Relations ..... Nancy DeGuire

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Dean, McGeorge School of Law .....Elizabeth Rindskopf Parker  
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Associate Dean, Special Counsel .....Glenn A. Fait  
Associate Dean, Faculty Scholarship .....Thom Main  
Principal Assistant Dean, Academics and  
Student Life .....Timothy E. Naccarato  
Assistant Dean, Student Affairs, .....Mary McGuire  
Executive Assistant Dean, Administrative Affairs .....Mary Lou Lackey  
Assistant Dean, Enrollment Management .....Adam Barrett  
Assistant Dean, Career and  
Professional Development.....David James  
Assistant Dean, Strategic Marketing and  
Communications.....John McIntyre  
Assistant Dean, Library and Research Services.....Matthew Downs  
Assistant Dean, Advancement.....Charlene Mattison  
Dean, Arthur A. Dugoni School of Dentistry .....Patrick J. Ferrillo, Jr.  
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Executive Associate Dean.....Craig S. Yarborough  
Associate Dean, Administration .....Eddie K. Hayashida  
Associate Dean, Academic Affairs.....Nader Nadershahi  
Associate Dean, Clinical Services .....Richard E. Fredekind  
Associate Dean, Operations .....Robert Christoffersen  
Director, Human Resources .....Kara Bell  
Director, Budget and Data Analysis .....Roy Bergstrom  
Director, Student Services .....Kathy Candito  
Director, Fiscal Services .....Audrey Goodell

#### *Office of Vice President for Business and Finance*

Vice President for Business and Finance .....Patrick D. Cavanaugh  
Associate Vice President, Chief Investment Officer.....Larry G. Brehm  
Assistant Vice President, Controller .....Deborah Denney  
Assistant Vice President, Budget and  
Risk Management.....Marcus Perrot  
Assistant Controller.....Audrey George  
Assistant Director of Investments .....Bayani Manilay  
Bursar .....Suzette Calderone  
Payroll Manager .....Tara Juano  
Bookstore Manager .....Nicole Castillo  
Assistant Vice President, Human Resources.....Jane Lewis  
Director, Internal Audit.....Winnie Ravinius  
Director, Support Services .....Scott Heaton  
Purchasing Manager .....Ronda Marr  
Pacific One-Card Manager.....Robert Miller

#### *Office of Vice President for University Advancement*

Vice President for University Advancement .....Ted Leland  
Executive Director, Pacific Alumni Association.....Bill Coen  
Director of Advancement Operations .....Susan LeGreco  
Director of the Pacific Fund .....Jim Dugoni  
Director of Corporate and Foundation Relations .....Scott Soder  
Director of Planned Giving.....Cathy Dodson

#### *Office of Vice President for Student Life*

Vice President for Student Life .....Elizabeth Griego  
Dean of Students.....Joanna Royce-Davis  
Assistant Dean of Students.....Peggy Rosson  
Assistant VP for Student Leadership and Recreation.....Dan Shipp  
Assistant VP for Residential Living and  
Dining Services .....Steven Jacobson  
Assistant VP for Diversity and  
Community Engagement.....John Carvana  
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Director, Community Involvement Program .....Pov Chin  
Director, University Center and Student Activities .....Jason Velo  
Director, Cowell Wellness Center and Health Services.. Kathy Hunter  
Director, Counseling Services.....Stacie Turks  
Director, Center for Social & Emotional Competence.....Craig Seal  
Director, Educational Equity Programs.....Anita Bautista  
University Multifaith Chaplain.....Donna McNiel  
Director, Pacific Recreation Programs and Services...Wendy Stratton  
Director, New Student Programs.....Linda Dempsey  
Director, Public Safety.....Mike Belcher  
Director, Judicial Affairs .....Heather Dunn-Carlton  
Director, Retention Services .....Sandy Mahoney

### *Intercollegiate Athletics Coaches and Administrators*

**Lynn King**, 2000, Director of Athletics, B.A., University of Northern Iowa, 1969; M.A., 1971.

**Jodi Baker**, 2002, Athletic Training Education Program Director, B.A., Whitworth College, 1997; M.A., San Diego State University, 2002.

**Don Barbara**, 2008, Assistant Baseball Coach, B.A. Long Beach State University, 2001.

**Gustavo Barrios**, 2008, Assistant Men's and Women's Swimming Coach, B.A., Cleveland State University, 2001; M.Ed., 2007.

**Jeff Bolognini**, 2005, Supervisor of Facilities and Event Management, B.S., Cal State Stanislaus, 2003.

**Rachel Booth**, 2009, Head Women's Cross Country Coach, B.S., Northwestern University, 2003; M.S., Florida State University, 2004.

**Mikel Candrea**, 2006, Assistant Softball Coach, B.A., University of Arizona, 2004.

**Bob Chiene**, 2003, Head Women's Tennis Coach, B.S., University of Oregon, 1976.

**Keith Coleman**, 1994, Head Women's Soccer Coach, B.S., California Polytechnic State University, San Luis Obispo, 1991.

**Michelle Coleman**, 1995, Assistant Women's Soccer Coach, B.A., California State University, Chico, 1994.

**Michael Dalgety**, 2006, Assistant Director of Athletics for Internal Affairs, B.A., University of the Pacific, 1997; M.A., University of Arizona, 2003.

**Bradley Davis**, 2006, Assistant Women's Basketball Coach, B.A., University of California, Berkeley, 1995.

**Marcus Dorin**, 2008, Assistant Director of Athletic Performance, B.A., California State University, Chico, 2001, M.A. 2006.

**Zhauntel Fields**, 2008, Academic Counselor, B.A., University of California, Berkeley, 2001, M.A. 2002.

**Jeremy Fletcher**, 2007, Assistant Men's Golf Coach, B.A., Drake University, 2005.

**Andrew Gepford**, 2008, Assistant Director of Athletic Training, B.S., University of Idaho, 2005; M.A., Morehead State University, 2007.

**Brandon Goethals**, 2005, Head Men's Golf Coach, B.A., UNLV, 1992.

**James Graham**, 2008, Head Men's Water Polo Coach, B.S., University of Redlands, 2003.

**Jeff Hall**, 2007, Assistant Men's Volleyball Coach, B.F.A., University of the Pacific, 1999.

**Christine Hammerberg**, 2006, Athletic Business

Manager.

**Adam Jacobsen**, 2003, Assistant Men's Basketball Coach, B.A., University of the Pacific, 1997.

**David Johnson**, 2001, Assistant Women's Volleyball Coach, B.S., University of California, Davis, 1995.

**Adam Kennedy**, 2008, Head Men's and Women's Swimming Coach, B.A., Davidson College, 2001; M.S., Ohio University, 2004.

**Brian Kolze**, 1992, Head Softball Coach, B.A., California State University, Northridge, 1984.

**Georgia Kovich-Lee**, 2003, Director of Athletic Marketing and Promotions, B.A. Brock University, 1994; M.S., Pennsylvania State University, 1995.

**Ben Laskey**, 2005, Athletic Media Relations Assistant, B.A., University of the Pacific, 2003; M.A., University of the Pacific, 2005.

**Aven Lee**, 2009, Assistant Women's Volleyball Coach, B.A., University of Hawaii, 2002.

**Matt Lucas**, 2009, Director of Tennis and Head Men's Tennis Coach, B.A., North Carolina State University, 2002.

**Christopher Ludwig**, 2007, Lecturer/Athletic Training Education Program Clinical Coordinator, B.S., California State University Fresno, 2002; M.S., California State University Fullerton, 2007.

**Linda MacDonald**, 1987, Head Field Hockey Coach, B.A., Springfield College, 1973; M.A., University of the Pacific, 1991.

**Annette Martinez**, 2007, Assistant Director of Athletic Training, B.A., University of the Pacific, 2002.

**Dan McCabe**, 2008, Ticket Operations Manager.

**Mike McCormick**, 2008, Assistant Baseball Coach, B.A., Chico State University, 1995; M.A., Azusa Pacific University, 1998.

**Morgan McSweeney**, 2009, PTAA Sales Account Manager, B.A., University of the Pacific, 2008.

**Mike Millerick**, 1991, Assistant Director of Athletics for Communications, B.A., University of the Pacific, 1991.

**Carmen Padilla**, 2009, Assistant Soccer Coach, B.S., University of the Pacific, 2007.

**Christopher Pond**, 1990, Director of Athletic Training, B.S., Utah State University, 1988; M.S., University of Arizona, 1990.

**Lynne Roberts**, 2006, Head Women's Basketball Coach, B.A., Seattle Pacific University, 1997; M.S., 2000.

**Judy Rosenquist**, 2000, Assistant Director of Athletics for External Affairs/Executive Director PTAA.

**Antonio Sandoval**, 2007, Director of Athletic Performance, B.S., California State University San Bernardino, 2003; M.S., California State University Sacramento, 2006.

**Laura Severson**, 2006, Assistant Softball Coach, B.A., Stanford University, 2006; M.A., University of the Pacific, 2009.

**Andrea Smith**, 2009, Assistant Director of Compliance, B.S., University of Minnesota, 2003; M.Ed., 2004; J.D., University of Saint Thomas, 2007.

**Ed Sprague**, 2003, Head Baseball Coach, Stanford University.

**Bob Thomason**, 1988, Head Men's Basketball Coach, B.A., University of the Pacific, 1972; M.A., 1985.

**Megan Thomson**, 2006, Head Women's Water Polo Coach, Certificate in Exercise Science, Central Institute of Technology, Wellington, NZ, 1998; B.A., Hartwick College, 2002.

**Holly Trexler**, 2005, Associate Director of Athletics for Student-Athlete Services and Compliance/SWA, B.A., University of Kansas, 1995; J.D., 1998; MS.Ed., 1999.

**Alisha Valavanis**, 2006, Associate Head Women's Basketball Coach, B.A., California State University, Chico, 1999; M.A., 2002.

**Ron Verlin**, 1994, Associate Head Men's Basketball Coach, B.S., California State University, Sacramento, 1990.

**Charlie Wade**, 2006, Head Women's Volleyball Coach, B.S., California State University, Fullerton, 1991.

**Julie Wendland**, 1989, PTAA Business Manager.

**Justin Wilson**, 2006, Assistant Women's Basketball Coach, B.A., California State University, Chico 2003.

**Aaron Woliczko**, 2000, Assistant Men's Basketball Coach, B.A., University of the Pacific, 1997.

**Joe Wortmann**, 1991, Head Men's Volleyball Coach, B.A., Loyola Marymount University, 1978; M.A., University of the Pacific, 1998.

### **Library Faculty**

**C. Brigid Welch**, 2008, Dean of the University Library, Professor, B.A. Arizona State University, 1977; M.L.S., University of Texas at Austin, 1979.

**Emily Chan**, 2008, Assistant Professor, Sciences Librarian, B.A., Grinnell College, 2000; M.L.I.S., San Jose State University, 2007.

**A. Craig Hawbaker**, 1991, Professor, Reference Librarian & Collection Development Coordinator, B.S., Drake University, 1973; M.S.L., Western Michigan University, 1975.

**Cynthia C. Hsieh**, 2003, Assistant Professor, Head of Technical Services, B.A., National Taiwan University, 1984; M.L.S., University of Wisconsin-Madison, 1985.

**Robin L. Imhof**, 2002, Assistant Professor, Reference Librarian, B.A., UC, Los Angeles, 1987; M.L.I.S., San Jose State University, 1995; M.A., San Francisco State University, 2000.

**Lorrie Knight**, 1996, Associate Professor, Instruction Librarian, B.A., University of Texas, Austin, 1975; M.L.I.S., Louisiana State University, 1989.

**Michelle Maloney**, 2007, Assistant Professor, Reference Librarian, B.A. University of Massachusetts, Amherst, 2000, M.L.I.S., University of Illinois at Urbana-Champaign, 2006.

**Rhonelle R. Runner**, 2002, Assistant Professor, Humanities/Music Reference Librarian, B.A., University of the Pacific, 1991; B.M., University of the Pacific, 1992; M.L.I.S., UC, Los Angeles, 1997; M.A., UC Riverside, 1995.

**Shan C. Sutton**, 2004, Associate Professor, Head of Special Collections, B.S., Wright State University, 1990; M.H., Wright State University, 1993; M.A. in Library Science, University of Arizona, 1996.

### Emeritus Faculty/Staff

**Glen A. Albaugh**, 1971, Professor of Sport Sciences, Emeritus, 1999.

**Steven C. Anderson**, 1970, Professor of Biological Sciences, Emeritus, 1997.

**Judith K. Andrews**, 1966, Associate Professor, University Libraries, Emerita, 2001.

**Michael H. Ballott**, 1971, Professor of Business, Emeritus, 2005.

**David P. Baral**, 1981, Professor of Education, Emeritus, 1999.

**Roger Barnett**, 1965, Professor of Geography, Emeritus, 1999.

**Kenneth L. Beauchamp**, 1969, Professor of Psychology, Emeritus, 2007.

**Stanworth R. Beckler**, 1955, Professor of Music Theory, Emeritus, 1990.

**David F. Besch**, 1985, Assistant Professor of Electrical and Computer Engineering, Emeritus, 2002.

**Robert W. Blaney**, 1966, Professor of Religious Studies, Emeritus, 1996.

**John W. Blasingame**, 1982, Associate Professor of Business, Emeritus, 1999.

**William H. Brennan**, 1976, Associate Professor of History, Emeritus, 2006.

**George P. Blum**, 1962, Professor of History, Emeritus, 1999.

**Gwenneth L. Browne**, 1968, Professor of Philosophy, Emerita, 1997.

**Donald W. Bryan**, 1974, Associate Professor of Business, Emeritus, 2007.

**George L. Buckbee**, 1973, Professor of Music, Emeritus, 1996.

**Erwin C. Burnmeister**, 1962, Professor, University Libraries, Emeritus, 1994.

**Gaylon L. Caldwell**, 1970, Dean of Elbert Covell College 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.

**Patrick N. Catania**, 1970, Professor of Clinical Pharmacy, Emeritus, 2006.

**Kishori Chaubal**, 1972, Associate Professor of Biological Sciences, Emerita, 1999.

**Madhukar G. Chaubal**, 1964, Professor of Medicinal Chemistry, Emeritus, 1999.

**Roy Childs**, 1973, Professor of Sociology, Emeritus, 2008.

**Deann J. Christianson**, 1967, Professor of Mathematics, Emerita, 2006.

**Lee Christianson**, 1967, Professor of Biological Sciences, Emeritus, 2006.

**Elmer U. Clawson**, 1974, Professor of Education, Emeritus, 1995.

**Robert S. Cox**, 1971, Professor of English, Emeritus, 2005.

**Thomas A. Coyne**, 1978, Professor of Law, Emeritus, 2000.

**Donald DaGrade**, 1970, Professor of Bassoon and Saxophone, Emeritus, 2007.

**Mamie Darlington**, 1992, Associate Professor of Sociology, Emerita, 2005.

**Robert W. Dash**, 1964, Professor of Modern Language and Literature, Emeritus, 2001.

**Gilbert L. Dellinger**, 1973, Professor of Art, Emeritus, 2000.

**Roland B. di Franco**, 1972, Professor of Mathematics, Emeritus, 2001.

**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.

**Arthur A. Dugoni**, 1951, Dean of the Dugoni School of Dentistry and Professor of Dentistry, Emeritus, 2006.

**I. Dale Dunmire**, 1973, Professor of Electrical and Computer Engineering, Emeritus, 1990.

**Mark E. Ealey**, 1969, Associate 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 Ertlinger**, 1982, Professor of Music Management/Business, Emeritus, 2000.

**Lee C. Fennell**, 1968, Professor of Political Science, Associate Provost and University Registrar, Emeritus, 1999.

**U. Wolfgang Fetsch**, 1967, Professor of Piano, Emeritus, 1991.

**Dale Fjerstad**, 1974, Associate Professor of Trumpet, Emeritus, 1986.

**David Q. Fletcher**, 1973, Professor of Civil Engineering, Emeritus, 2006.

**Anne Funkhouser**, 1966, Professor of Biological Sciences, Emerita, 1991.

**Joan E. Coulter Garn**, 1973, Assistant Professor of Music, Emerita, 1997.

**George Gould**, 1983, Professor of Law, Emeritus, 2008.

**Fay Goleman**, 1937, Professor of Education and Sociology, Emerita, 1976.

**Alex T. Granik**, 1982, Associate Professor of Physics, Emeritus, 2005.

**Paul H. Gross**, 1966, Professor of Chemistry, Emeritus, 1999.

**Fay B. Haisley**, 1984, Dean, Gladys L. Benerd School of Education and Professor of Education, Emerita, 1999.

**Robert E. Hamernik**, 1962, Professor of Civil 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.
- Wilbur R. Hughes**, 1980, Professor of Dentistry, Emeritus, 1995.
- J. Carolyn Hultgren**, 1989, Assistant Professor of Physical Therapy, Emerita, 2002.
- 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.
- Roger C. Katz**, 1974, Professor of Psychology, Emeritus, 2006.
- Robert T. Knighton**, 1967, Professor of English, Emeritus, 2001.
- J. Curtis Kramer**, 1975, Professor of Geosciences, Emeritus, 2005.
- Janine Kreiter**, 1959, Professor of Modern Language and Literature, Emerita, 1994.
- Robert A. Kreiter**, 1960, Professor of Modern Language and Literature, Emeritus, 1994.
- W. Anthony Kulisch**, 1981, Associate Professor of Business, Emeritus, 2007.
- Bruce LaBrack**, 1975, Professor of Anthropology, Emeritus, 2008.
- Milton Lambertson**, 1954, Associate Dean for Business and Financial Services, School of Dentistry, Emeritus, 1996.
- Charles DeWolf LaMond**, 1948, Associate Professor of Piano and Theory, Emeritus, 1982.
- Margaret A. Langer**, 1981, Associate Professor of Education, Emerita, 2002.
- Neil L. Lark**, 1962, Professor of Physics, Emeritus, 1999.
- Estelle P. Lau**, 1977, Professor of Education, Emerita, 2000.
- Arthur M. LaVere**, 1968, Professor of Dentistry, Emeritus, 1998.
- Alan S. Leider**, 1975, Professor of Dentistry, Emeritus, 1998.
- 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.
- B. Jean Longmire**, 1976, Professor of Education, Emerita, 2005.
- Armand P. Maffia**, 1971, Associate Professor of Education, Emeritus, 1983.
- Douglas W. Matheson**, 1968, Professor of Psychology, Emeritus, 2004.
- O. Boyd Mathias**, 1965, Associate Professor of Mathematics, Emeritus, 1991.
- Alice Jean Matuszak**, 1963, Professor of Medicinal Chemistry, Emerita, 2000.
- Charles A. Matuszak**, 1963, Professor of Chemistry, Emeritus, 2000.
- Hugh J. McBride**, 1975, Professor of Education, Emeritus, 1996.
- Maurice L. McCullen**, 1970, Professor of English, Emeritus, 2002.
- Dale W. McNeal**, 1969, Professor of Biological Sciences, Emeritus, 2002.
- 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 Physical Education, Emerita, 1990.
- Sally M. Miller**, 1967, Professor of History, Emerita, 1999.
- James P. Morgali**, 1961, Professor of Civil Engineering, Emeritus, 1999.
- Robert D. Morrow**, 1975, Professor of Education, Emeritus, 2002.
- Roger C. Mueller**, 1969, Professor of English, Emeritus, 1997.
- John M. Nagle**, 2000, Dean of the Benerd School of Education and Professor of Education, Emeritus, 2006.
- George L. Nemeth**, 1970, Professor of Horn and Music History, Emeritus, 2005.
- 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.
- J. Ronald Pecchenino**, 1970, Professor of Art, Emeritus, 1996.
- Newman Peery**, 1982, Professor of Business, Emeritus, 2008.
- Edwin R. Pejack**, 1982, Professor of Mechanical Engineering, Emeritus, 2007.
- Richard L. Perry**, 1961, Professor of Physics, Emeritus, 1997.
- Sandra L. Persels**, 1976, Professor of Drama, Emerita, 1996.
- John F. Pfaff**, 2001, Professor of Business, Emeritus, 2006.
- John C. Phillips**, 1976, Professor of Sociology, Emeritus, 2008.
- Larry L. Pippin**, 1965, Professor of Political Science and Geography, Emeritus, 1994.
- Edward T. Pohlman**, 1961, Professor of Education, Emeritus, 1995.
- Max Polinsky**, 1961, Professor of Pharmaceutics, Emeritus, 1981.
- Virginia L. Puich**, 1969, Associate Professor of Communicative Disorders, Emerita, 1997.
- Herbert R. Reinelt**, 1962, Professor of Philosophy, Emeritus, 1999.
- Claude D. Rohwer**, 1964, Professor of Law, Emeritus, 2005.
- Howell L. Runion**, 1969, Professor of Physiology and Pharmacology, Emeritus, 2003.
- Robert Sarka**, 1982, Professor of Dentistry, Emeritus, 2004.
- Darwin Sarnoff**, 1972, Professor of Pharmacy Practice, Emeritus, 2004.
- Ralph L. Saroyan**, 1970, Director of Pharmacy Pre-Health Programs, Emeritus, 2002.
- Barbara Sayles**, 1962, Associate Professor of Modern Language and Literature, Emerita, 2002.
- Gilbert W. Schedler**, 1967, Professor of English and Religious Studies, Emeritus, 2004.
- Charles Schilling**, 1956, Professor of Music, Emeritus, 1985.
- John V. Schippers**, 1962, Professor of Education, Emeritus, 1990.
- George W. Schroeder**, 1981, Professor of Electrical Engineering, Emeritus, 2005.
- Glendee Scully**, 1976, Professor of Law, Emerita, 2008.
- Jed Scully**, 1977, Professor of Law, Emeritus, 2008.
- John E. Seaman**, 1969, Professor of English, Emeritus, 1999.
- Francis Michael Sharp**, 1979, Professor of Modern Language and Literature, Emeritus, 2008.
- Clark Shimeall**, Assistant Professor of Geology, Emeritus, 1986.
- Donald Y. Shirachi**, 1971, Professor of

Physiology and Pharmacology, Emeritus, 1994.

**Anthony Skrocki**, 1973, Professor of Law, Emeritus, 2004.

**Douglas Smith**, 1970, Professor of Computer Science, Emeritus, 2007.

**John D. Smith**, 1970, Professor of English, Emeritus, 1999.

**Reuben W. Smith III**, 1972, Dean of the Graduate School and Professor of History, Emeritus, 1994.

**Roland C. Smith**, 1971, Professor of Dentistry, Emeritus, 1998.

**Donald L. Sorby**, 1984, Dean of the School of Pharmacy, Emeritus, 1995.

**Elizabeth Spelts**, 1948, Professor of Voice, Emerita, 1985.

**S. Thomas Stubbs**, 1963, Associate Professor of Sport Sciences, Emeritus, 1999.

**J. Connor Sutton**, 1963, Associate Professor of Sport Sciences, Emeritus, 1999.

**Arthur W. Swann**, 1970, Associate Professor University Libraries, Emeritus, 1982.

**Ted T. Takaya**, 1979, Professor of Modern Language and Literature, Emeritus, 1996.

**Paul A. Tatsch**, 1980, Associate Professor of Business, Emeritus, 2005.

**Douglas Tedards**, 1982, Associate Professor of English, Emeritus, 2007.

**B. Jan Timmons**, 1971, Assistant Dean of the

College of the Pacific and Professor of Communication, Emerita, 2000.

**William Topp**, 1970, Professor of Computer Science, Emeritus, 2008.

**Richard H. Turpin**, 1984, Professor of Electrical and Computer Engineering, Emeritus, 2005.

**Darcy Umphred**, 1987, Professor of Physical Therapy, Emerita, 2006.

**Warren van Bronkhorst**, 1967, Professor of Violin, Emeritus, 1991.

**Judith L. Van Hoorn**, 1982, Professor of Education, Emerita, 2007.

**Ray VarnBuhler**, 1980, Professor of Art, Emeritus, 1998.

**Ravindra C. Vasavada**, 1973, Professor of Pharmaceutics, Emeritus, 2000.

**William H. Wadman**, 1955, Professor of Chemistry, Emeritus, 1988.

**Patricia Wagner**, 1962, Professor of Sociology, Emerita, 1981.

**Coburn C. Ward**, 1977, Professor of Mathematics, Emeritus, 2001.

**Lori D. Warner**, 1987, Associate Professor of Economics, Emerita, 2007.

**Donald K. Wedegaertner**, 1963, Professor of Chemistry, Emeritus, 2004.

**Philip Wile**, 1987, Professor of Law, Emeritus, 2007.

**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.

**Harvey R. Williams**, 1977, Professor of Sociology, Emeritus, 2005.

**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.

**William Wolak**, 1975, Professor of Theatre Arts, Emeritus, 2007.

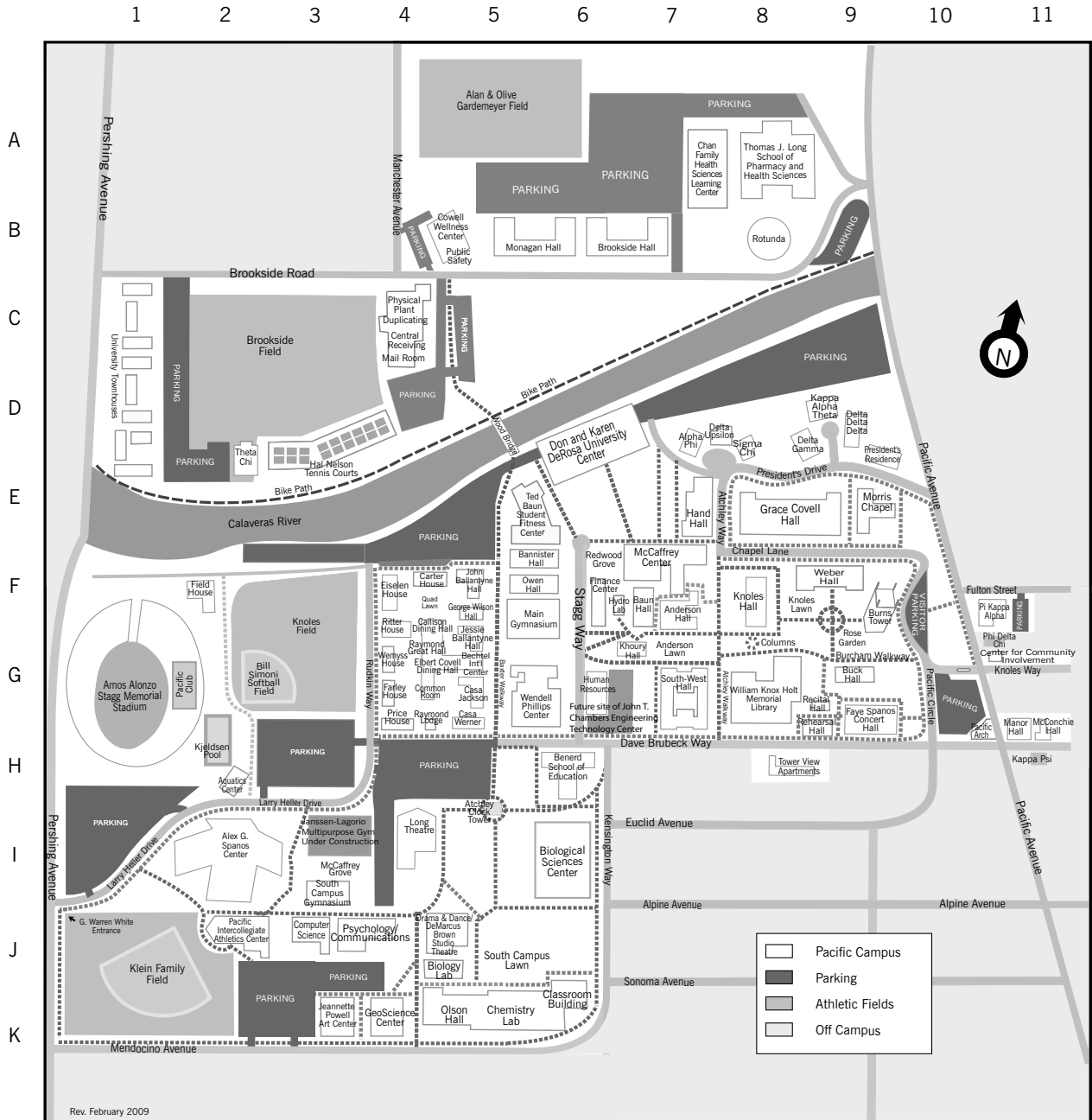
**David E. Wolfe**, 1987, Professor of Music Therapy, Emeritus, 2007.

**Carl E. Wulfman**, 1961, Professor of Physics, Emeritus, 1996.

**Walter Zimmermann**, 1970, Professor of Mathematics, Emeritus, 2008.

# University of the Pacific

campus map



Rev. February 2009

## Campus Map

## CAMPUS MAP LEGEND

**Campus Buildings and Facilities**

- Alex G. Spanos Center (I,2)  
 Albright Auditorium (Wendell Phillips Center: H,6)  
 Alpha Phi (E,7)  
 Amos Alonzo Stagg Memorial Stadium (G,1)  
 Anderson Hall (F,7)  
   1st floor: President's Office, Presidents Room, Regents Dining Room, Engineering Lab, Pacificcard office  
   2nd floor: Provost's Office, Engineering  
 Anderson Lawn (F,7)  
 Aquatics Center (H,2)  
 Art Center, Jeannette Powell (K,3)  
 ASUOP Office (DeRosa University Center: E,6)  
 Atchley Clock Tower (I,6)  
 Bannister Hall (F,6)  
   1st floor: SUCCESS, Community Involvement Program, Education Resource Center, Supportive and Disabled Services  
   2nd floor: Residential Life & Housing  
 Baun Hall (F,7)  
 Baun Fitness Center (E,6)  
 Bechtel International Center (F,5)  
 Benerd School of Education (H,6)  
 Biological Sciences Center (J,5)  
 Biology Lab (J,5)  
 Bookstore (DeRosa University Center: F,7)  
 Box Office (Long Theatre: I,5)  
 Brandenburger Welcome Center (Burns Tower lobby: G,10)  
 Brookside Hall (B,6)  
 Brookside Playing Field (D,3)  
 Buck Hall (G,9)  
 Burns Tower, Robert E. (G,10)  
 Business, Eberhardt School of (Weber Hall: F,9)  
 Career Resource Center (Hand Hall: E,7)  
 Carter House (F,5)  
 Casa Jackson (G,5)  
 Casa Werner (H,5)  
 Center for Community Involvement (G,11)  
 Center for Professional and Continuing Education Burns Tower: G,10)  
 Central Receiving and Mail Services (C,4)  
 Chapel, Morris (E,10)  
 Chemistry Laboratory (K,6)  
 Classroom Building (K,6)  
 Colliver Hall (Morris Chapel: E,10)  
 Common Room, Raymond (H,5)  
 Communication Arts (J,4)  
 Community Involvement Program (Bannister Hall: F,6)  
 Computer Science Dept. (J,3)  
 Conservatory of Music (H,10)  
 Copy Center (Duplicating: C,4)  
 Counseling Center (Cowell Wellness Center: B,5)  
 Cowell Wellness Center (B,5)  
   1st floor: Public Safety  
   2nd floor: Counseling Center, Student Wellness Center  
 Dance Studio (J,5)  
 Delta Delta Delta (D,10)  
 Delta Gamma (E,9)  
 Delta Upsilon (E,7)  
 DeMarcus Brown Studio Theatre (J,5)  
 Dental Clinic (HSLC: B,7)  
 DeRosa University Center, Don and Karen (E,6)  
 Dining and Catering Services, Bon Appetit (DeRosa University Center: E,6)  
 Drama & Dance Building (J,5)  
 Duplicating Services (C,4)  
 Eberhardt School of Business (Weber Hall: F,9)  
 Education, Gladys L. Benerd School of (H,6)  
 Educational Resource Center (Bannister Hall: F,6)  
 Eiselen House (F,4)  
 Elbert Covell Hall (G,5)  
 Engineering, School of (Baun Hall: F,7)  
 Farley House (H,4)  
 Faye Spanos Concert Hall (Conservatory: H,10)  
 Field House (F,2)  
 Finance Center (F,7)  
 Fitness Center, Baun (F,6)  
 Food Service (DeRosa University Center: E,6)  
 Gardemeyer Field, Alan & Olive (A,5)  
 George Wilson Hall (I)  
 Geosciences Center (K,4)  
 Grace Covell Hall (F,9)  
 Graduate Studies (Knoles Hall: F,8)  
 Grove, The (McCaffrey Center: E,7)  
 Gymnasium, Main (F,6)  
 Gymnasium, South Campus (I,3)  
 Hand Hall (E,7)  
 Hand Hall Lawn (E,7)  
 Health Sciences Learning Center (B,7)  
 Health Services, Student (B,5)  
 Human Resources (G,6)  
 Hydraulics Laboratory (F,7)  
 Information Technology (H,6)  
 International Programs & Services (Bechtel Center: G,5)  
 International Studies, School of (George Wilson Hall: F,5)  
 Jessie Ballantyne Hall (G,5)  
 John Ballantyne Hall (F,5)  
 Judicial Affairs (Raymond Lodge, H,5)  
 Kappa Alpha Theta (D,9)  
 Kappa Psi (H,11)  
 Khoury Hall (G,7)  
 Kjeldsen Pool (H,2)  
 Klein Family Field (J,1)  
 Knoles Field (G,3)  
 Knoles Hall (F,8)  
   1st floor: Admission, Registrar, Financial Aid  
   2nd floor: Classrooms, Enrollment, Graduate Studies, Sponsored Programs  
   3rd floor: Classrooms, Institutional Research  
 Knoles Lawn (F,9)  
 Learning Resources Center (Benerd School of Education: H,6)  
 Library, William Knox Holt Memorial (G,9)  
   Basement: Technical Services, Holt Atherton Special Collections  
   1st Floor: Main Library, Music AV, Community Room, conference and classrooms, Information Commons, Davey Café  
   2nd Floor: Study Rooms, Faculty Center Stacks  
   3rd Floor: Administrative Offices, Taylor Conference Room  
 Long Theatre, Thomas J. (I,4)  
 Mail Services (C,4)  
 Manor Hall (H,11)  
 McCaffrey Center (F,7-8)  
   1st floor: The Grove, Student Lounge, CIP/Multicultural Affairs, Pacific Theatre  
   2nd floor: ASUOP, Pine & Spruce Rooms  
   3rd floor: Student Apartments  
 McCaffrey Grove (I,4)  
 McConchie Hall (H,11)  
 Monagan Hall (B,6)  
 Morris Chapel (E,9)  
 Muir Center for Regional Studies, John (Wendell Phillips Center: H,6)  
 Multicultural Affairs (McCaffrey Center: F,7)  
 Music Buildings  
   Buck Hall (G,10)  
   Faye Spanos Concert Hall (H,10)  
   Owen Hall (F,6)  
   Recital Hall (G, 9)  
   Rehearsal Hall (H,9)



Olson Hall (K,5)  
 Pacific Club (G,2)  
 Pacific Intercollegiate Athletics Center (J,2)  
 Pacifican (South/West: H,8)  
 Pharmacy and Health Sciences, Thomas J. Long School of (B,9)  
 Phi Delta Chi (G,11)  
 Physical Plant (C,4)  
 Physical Therapy (Rotunda: B,8)  
 Pi Kappa Alpha (F, 10)  
 President's Office (Anderson Hall: G,7)  
 President's Residence (E,10)  
 Presidents Room (Anderson Hall: G,8)  
 Price House (H,4)  
 Psychology (J,4)  
 Public Safety (Cowell Wellness Center: C,5)  
 Quad Lawn (F,4)  
 Raymond Great Hall (G,5)  
 Raymond Lodge (H,5)  
 Recital Hall (G,9)  
 Redwood Grove (F,7)  
 Regents Dining Room (Anderson Hall: G,8)  
 Rehearsal Hall (H,9)  
 Reynolds Art Gallery (Geosciences Center: K,4)  
 Ritter House (G,4)  
 Rotunda (B,8)  
 Sears Hall (Morris Chapel: E,10)  
 Sigma Chi (E,8)  
 Simoni Softball Field (G,3)  
 South Campus Gym (I,3)  
 South/West Hall (H,8)  
 South/West Lawn (G,7)  
 Spanos Center, Alex G. (I,3)  
 Spanos Concert Hall, Faye (Conservatory: H,10)  
 Speech, Hearing and Language Center (A,7)  
 Sports Medicine Clinic (J,2)  
 Stagg Memorial Stadium, (G,1)  
 Student Academic Support Services (Raymond Lodge: H,5)  
 Taylor Conference Room (William Knox Holt Library: G,9)  
 Tennis Courts, Hal Nelson (E,3)  
 Theta Chi (E,2)

Tower, Robert E. Burns (G,10)  
 Tower View Apartments (H,9)  
 Townhouse Apartments, University (McCaffrey Center: D,1)  
 University Police (Lower Level Cowell Health Center: B,5)  
 University Townhouses (D,1)  
 Weber Hall (F,9)  
 Welcome Center, Brandenburger (Burns Tower Lobby: G,10)  
 Wemyss House (G,4)  
 Wendell Phillips Center (H,6)  
 West Memorial Hall (Finance Center: F,6)  
 Westgate Management Center (Weber Hall: F,9)  
 Wilson Hall, George (G,5)  
 Wood Bridge, Donald B. (E,5)

### Administrative Offices

President's Office (Anderson Hall: G,7)  
 Vice Presidents  
     University Advancement (Hand Hall: E,7)  
     Provost's Office (Anderson Hall: G,7)  
     Student Life (Hand Hall: E,7)  
     Finance (Finance Center: F,7)  
 Admissions (Knoles Hall: F,8)  
 Alumni Relations (Hand Hall: E,7)  
 Center for Intercollegiate Athletics (J,2)  
 Buildings and Grounds (Physical Plant: C,4)  
 Development (Hand Hall: E,7)  
 Financial Aid (Knoles Hall: F,8)  
 Housing (Bannister Hall: F,5)  
 Holt Atherton Depart. of Special Collections (Library: G,9)  
 Human Resources (H,6)  
 Information (Burns Tower: G,10)  
 Marketing and University Communications (Hand Hall: E,7)  
 Office of Information Technology (G,4)  
 Registrar (Knoles Hall: F,8)  
 Spanos Center Office (I,3)  
 Student Advising (Raymond Lodge: H,5)  
 Student Activities (DeRosa University Center: E,6)  
 Tours of Campus (Burns Tower: G,10)

### College, School and Department Headquarters

College of the Pacific (Wendell Phillips Center: H,6)  
     Biological Sciences (J,5)  
     Chemistry (K,6)  
     Communication (J,4)  
     Earth and Environmental Sciences (K,4)  
     Economics (WPC: H,6)  
     English (WPC: H,6)  
     Film Studies (WPC: H,6)  
     Gender Studies (WPC: H,6)  
     History (WPC: H,6)  
     Humanities Hub (WPC: H,6)  
     Mathematics (Classroom Bldg: K,6)  
     Modern Languages & Literature (WPC: H,6)  
     Philosophy (WPC: H,6)  
     Physics (Classroom Bldg: K,6)  
     Political Science (WPC: H,6)  
     Psychology (J,4)  
     Religious and Classical Studies (WPC: H,6)  
     Sociology (WPC: H,6)  
     Sport Sciences (Main Gym: G,6)  
     Theatre Arts (J,5)  
     Visual Arts (K,4)  
 Center for Professional and Continuing Education (Burns Tower: G,9)  
 Conservatory of Music (Faye Spanos Concert Hall: H,10)  
 Business, Eberhardt School of (Weber Hall: F,9)  
 Education, Gladys L. Benerd School of (H,6)  
 Engineering and Computer Science, School of (Baun Hall: F,7)  
 Graduate Studies and Research (Knoles Hall: F,8)  
 International Studies, School of (George Wilson Hall: F,5)  
 Pharmacy and Health Sciences, Thomas J. Long School of (B,9)

# academic calendar 2009-2010

## 2009 Fall Semester

*(All Schools and Colleges except Pharmacy)*

Orientation and Registration	
Session 1 (Freshmen)	June 23 – 24
Session 2 (Freshmen)	June 26 – 27
Payment Deadline for Fall 2009	August 1
International Student Orientation and Registration	August 18
Session 3 (Transfers)	August 18
Session 4 (Freshmen)	August 19 – 20
Graduate Student Orientation and Registration	August 20
Classes Begin	August 24
Registration re-opens	August 24
Last Day to Add Classes	September 4
Last Day for Pass/No Credit or Letter Grade Option	September 4
Labor Day Holiday	September 7
Last Day to Drop Classes without a 'W' Grade	September 18
Fall Student Break	October 9
Advising for Spring Semester	October 12 – 30
Parent and Family Weekend	October 16 – 18
Last Day for Pro-Rated Refund	October 19
Last day to Withdraw	October 30
Early Registration for Spring 2010	October 30 – November 13
Thanksgiving Vacation	November 25 – 27
Classes Resume	November 30
Classes End	December 11
Final Examination Period	December 14 – 18

## 2010 Spring Semester

*(All Schools and Colleges except Pharmacy)*

Payment Deadline for Spring 2010	January 1
International Student Orientation and Registration	January 7
New Student Orientation & Registration	January 8
Classes Begin	January 11
Registration re-opens	January 11
Martin Luther King Jr. Holiday	January 18
Last Day to Add Classes**	January 22
Last Day for Pass/No Credit or Letter Grade Option**	January 22
Last Day to Drop Classes without a 'W' Grade	February 8
President's Day	February 15
Spring Break	March 8 – 12
Last Day for Pro-Rated Refund	March 5
Advising for Fall '09 Semester*	March 24–April 14
Last day to withdraw	March 26
Student Travel Day	April 5
Classes Resume	April 6
Deadline to Apply for Fall 2009, Spring 2010, Summer 2010 graduation — Undergraduates	April 7
Early Registration	April 14 – 28
Classes End	May 4
Study Day	May 5
Final Examination Period	May 6, 7, 10 – 12
Commencement Weekend	May 15

\*Limited to currently enrolled students.

\*\*Advisers should arrange to be available on this day.

## School of Pharmacy and Health Sciences

*2009 Fall Term*

Registration – incoming 1st year/graduate students	July 6 -13
Payment deadline for Fall 2009	August 1
Advanced Pharmacy Practice Experiences	Aug 17 – Dec 18
Pharmacy Orientation	August 20 & 21
Classes Begin	August 24
Registration, re-opens	August 24
Last Day to Add Classes	September 4
Labor Day Holiday	September 7
Last Day to Drop Classes without a 'W' Grade	September 18
Mid Term Exam Week	October 5 – 9
Last Day for Pro-rated refund	October 12
Advising for Winter 2009	October 19 – 23
Parent and Family Day	October 16 – 18
Early Registration for Winter 2009	October 23 – 30
Last Day to Withdraw	October 30
Thanksgiving Vacation	November 25 – 27
Classes End	November 24
Final Examination Period	November 30 – December 4

*2010 Winter Term*

Payment deadline for winter 2010	December 1
Classes Begin	January 4
Registration re-opens	January 4
Advanced Pharmacy Practice Experiences	January 4 – May 7
Martin Luther King Jr. Holiday	January 18
Last Day to Add Classes	January 22
Last Day to Drop Classes without a 'W' Grade	February 8
President's Day	February 15
Mid Term Exams	February 16 -19;22
Last Day for Pro-Rated Refund	February 22
Advising for Spring 2010	March 1 -5
Early Registration for Spring 2010	March 8 – 15
Last day to Withdraw	March 12
Student Travel Day	April 5
Classes End	April 6
Deadline to Apply for Fall 2009/Spring 2010 Summer 2010 graduation	April 7
Final Examination Period	April 7 – 9; 12 – 13
Spring Semester Break	April 14 – 25

*2010 Spring Term*

Payment deadline for Spring 2010	April 1
Classes Begin	April 26
Registration re-opens	April 26
Last Day to Add Classes	May 7
Commencement Weekend	May 15
Advising for Fall 2010	May 17 – 21
Last Day to Drop Classes without a 'W' Grade	May 21
Early Registration for Fall 2010	May 24 – 28
Memorial Day Holiday	May 31
Mid Term Exams	June 8 – 11
Last Day for Pro-Rated Refund	June 11
Last day to Withdraw	July 2
Fourth of July holiday observed	July 5
Fall 2010/2011 registration for incoming 1st year/graduate students	July 6 – 13
Classes End	July 26
Final Examination Period	July 27 – 30

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