Academic Divisions of the University

College of the Pacific (Arts and 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
Arthur A. Dugoni School of Dentistry
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University of the Pacific was established by pioneer Methodist ministers in 1851 as California’s first chartered institution of higher learning. Pacific has earned widespread recognition for its student-centered approach to education, its many firsts and innovations and the accomplishments of its 55,000 living alumni.

As an innovator and leader in higher education, Pacific provided the West Coast with its first medical school in 1858 (which later became part of Stanford, and today is California Pacific Medical Center), its first coeducational campus in 1871, and its first conservatory of music in 1878. In the 1960s, Pacific was the first university in the nation to offer “cluster colleges.” It was the nation’s first to offer an undergraduate teacher corps program, the first to send an entire class to an overseas campus, the first to offer a four-year guarantee, and the first to establish a Spanish-speaking inter-American college. With its move from San Jose to Stockton in 1924, Pacific became the first private four-year 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.

Pacific has enjoyed extraordinary stability in administration. Dr. Pamela A. Elbeek began her service in 2009 as only the sixth President since the University’s move to Stockton in 1924 and the 24th since its founding in 1851.

The University experienced its greatest growth and an expansion into graduate and professional education under the administration of Dr. Robert Burns (1947–1971). The School of Pharmacy opened in 1955. It is now the Thomas J. Long School of Pharmacy and Health Sciences, in honor of the benefactor and University Regent who, with his brother Joseph Long, founded Longs Drugs Stores. In 1956 the graduate school was created, and in 1957 the School of Engineering was established.

Computer Science joined the school in 2002, and it was renamed the School of Engineering and Computer Science. In 1962, the College of Physicians and Surgeons, a school of dentistry founded in San Francisco in 1896, was acquired by the University and became the San Francisco campus. In 2004, the school was named the Arthur A. Dugoni School of Dentistry in honor of its dean of 28 years. It was the first time any university in the United States or Canada had named its dental school for the current dean.

A new concept in higher education in the United States found expression in the establishment of cluster colleges in the 1960s. These colleges adapted the Oxford and Cambridge model to an American setting, integrating faculty and students into living and learning communities. Raymond College, was established in 1962. Elbert Covell College established in 1963 was the first bilingual-bicultural college in the country. Callison College, was established in 1967 and focused on non-Western studies with a year of study in an Asian culture. The cluster colleges were absorbed into the rest of the University in 1982. Their emphasis on global education continued in a new School of International Studies established in 1987 with a gift from George and Isabel Wilson. It was 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 and sciences core of the University, recognized for preparing responsible citizen leaders who will contribute in lasting ways to careers and communities.

The expansion of graduate and professional education continued when McGeorge College of Law, an independent law school founded in Sacramento in 1924, merged with the University in 1966 as McGeorge School of Law. The department of business administration in College of the Pacific was reorganized in 1977 as the School of Business and Public Administration. It was renamed Eberhardt School of Business in 1995 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, now the Center for Professional and Continuing Education.

During the administration of President Don DeRosa (1995-2009) a new era of expansion and innovation began. Accelerated programs were initiated enabling students to complete undergraduate studies in combination with professional degrees in pharmacy, law, dentistry and business in one to three fewer years than required at most other universities. Pacific completed or launched more than $40,000,000 in new construction and facilities improvements, including a 200-person residence hall, the first in more than two decades, an Art and Geosciences Center, a science laboratory building and the $21-million Health Sciences Learning Center and Clinics.

Since then, the University has added a second new residence hall, greatly expanded its student fitness center and completed a new Humanities Center. It has also completed an addition and renovation of the library, a Biological Sciences Center, and the Janssen Lagorio Gymnasium. The Don and Karen DeRosa University Center and the John T. Chambers Engineering Technology Center are both LEED certified, part of the University’s commitment to sustainability. The new Alex and Jeri Verschagin Alumni House will open in 2011. The law school in Sacramento is planning to add new housing and conduct a major renovation of its library. The dental school in San Francisco has state-of-the-art facilities.

In 1999 jazz legend Dave Brubeck and his wife Iola, both Pacific graduates, announced that their papers, recordings and memorabilia would be deposited at Pacific for study and research. In response to this gift, a treasure of historic American music and memorabilia, President DeRosa announced formation of The Brubeck Institute for the study, promotion and performance of American music.

Pacific’s progress and leadership in higher education have earned national recognition. The University has been listed as a “Best Value” (Top 50) every year since 2000 and is consistently ranked among the top 100 national universities in the country. The Stockton campus was ranked by College Admission Essay as the fifth most beautiful campus in the nation. The three professional schools of dentistry, law and pharmacy have all achieved national prominence.

The University of the Pacific’s mission is to provide a superior, student-centered learning experience integrating liberal arts and professional education and preparing individuals for lasting achievement and responsible leadership in their careers and communities.
The University’s last comprehensive campaign, “Investing in Excellence,” closed in 2007, raising over $330 million and exceeding its $200-million goal by 2006, a year early. Starting in 2007, President DeRosa launched a new emphasis on “whole person” education by introducing a University-wide program for leadership development based on social and emotional competencies and established the Powell Scholars Program, the University’s premier scholarship program for undergraduate student leaders. He also supported the development of a Global Program for Professional Development to deliver distinctive professional and graduate programs abroad, established the Center for Social Entrepreneurship, initiated a unique Inter-American Program, began an accelerated pre-law honors program, launched an environmental sustainability initiative, and strengthened programs in undergraduate writing across the disciplines and undergraduate research.

The University is guided by its strategic plan, Pacific Rising, 2008–2015, adopted by the Board of Regents in April 2007. The plan presents the core values, aspirations, commitments and strategic directions for Pacific. The six commitments are: innovation; distinctive programs of high quality and sustainability; collaborative, multidisciplinary programs; whole student learning; improving strategic partnerships; resource growth and management. The complete plan can be viewed at www.Pacific.edu/IPC.

Dr. Pamela A. Eibeck became President of University of the Pacific on July 1, 2009. Dr. Eibeck dedicated her first year as President to a listening campaign to hear from the local and University community and launched a major community engagement initiative based on a series of forums “Beyond Our Gates, Into the Community.” In addition to community engagement, she is committed to building the University’s national visibility and to enhancing educational quality.
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 allow 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 variety of disciplines 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 5,139 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. Small classes, a faculty deeply committed to undergraduate teaching, and a wide variety of extracurricular organizations and activities further aid students in becoming an integral part of the University community both academically and socially.
Pacific Learning Objectives

Pacific’s approach to teaching gives attention to the whole-person and emphasizes experiential and active forms of learning. The following are Pacific’s university-wide learning objectives adopted in 2009 and subject to review and revision through institutional assessment:

- Major Field Competence
- Critical and Creative Thinking
- Communication
- Collaboration and Leadership
- Intercultural and Global Perspectives
- Ethical Reasoning
- Sustainability

The primary purpose of the objectives is to support teaching and learning at all three campuses of the University. These objectives and accompanying outcomes give specific meaning to the educational goals stated in the University’s Mission and strategic plans.

Pacific’s commitment to a common set of learning objectives will:

- Give students, faculty, administration and staff a clear and concise understanding of the essential learning goals of a Pacific education;
- Create a more coherent educational experience for students as schools and divisions align with these objectives;
- Enable Pacific to assess outcomes at the university-level in order to continuously improve teaching and learning.

It is the responsibility of each School and Division to assess how these objectives are being addressed in their programs. Schools and Divisions are likely to have additional learning goals beyond the university-wide objectives stated here. At the undergraduate level, it is important to recognize that programs and experiences outside of the School or specific program (such as the General Education program and Student Life programming) will address many of the objectives. Each objective is supported by a set of outcome statements as indicated below. The outcomes are provided to illustrate the meanings of the objectives at Pacific and can be adjusted to meet the goals established within each School and Division.

Objectives and Outcomes

Major Field Competence
1. Articulate the essential concepts and methodologies in a major field of study or work.
2. Demonstrate competence in a major field of study as defined by that program’s outcomes or competencies.

Critical & Creative Thinking
1. Apply reasoning and evidence to judge and support claims.
2. Effectively analyze, integrate, and evaluate information.
3. Construct well-reasoned arguments and solutions.
4. Create novel approaches in a variety of contexts.

Communication
1. Prepare and deliver effective forms of communication.
2. Adapt communication style to the occasion, task, and audience.
3. Select and use appropriate communication technologies.

Collaboration & Leadership
1. Work cooperatively with others toward a common goal.
2. Demonstrate effective social interaction skills appropriate to the occasion, task, and audience.
3. Influence others ethically toward achievement of a common goal to effect positive change.
4. Demonstrate accountability for one’s decisions and actions.

Intercultural and Global Perspectives
1. Articulate the broad set of influences that has shaped one’s personal identity.
2. Effectively and appropriately interact in a variety of cultural contexts.
3. Explain the interdependence of nations and peoples.
4. Engage in the civic life of the local, national, and global community.

Ethical Reasoning
1. Articulate one’s own ethical beliefs and their origins.
2. Identify ethical issues in personal, professional, and civic life.
3. Evaluate assumptions and implications of different ethical perspectives.
4. Defend ethical positions with reason and consider alternative courses of action.

Sustainability
1. Identify the interconnectedness between humans and their natural environment.
2. Evaluate the social, economic, and environmental consequences of individual and group actions.
3. Engage in responsible environmental action.

Academic Units

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 across traditional fields of knowledge.

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

Eberhardt School of Business
Students in the Eberhardt School of Business are educated for management positions in business, government and not-for-profit organizations. Approximately 600 students are enrolled in the School’s undergraduate and Eberhardt 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 600 students, offers eight baccalaureate programs: Bioengineering, civil, computer, electrical, and mechanical engineering; engineering physics, engineering management, and computer science. 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. The school also offers a master of science in engineering science with concentrations in civil engineering, computer/electrical engineering/computer science and mechanical engineering.

School of International Studies
The School of International Studies is a professional school devoted to the interdisciplinary study of international affairs, offering students five undergraduate majors and a master of intercultural relations. Study abroad and competency in at least one second language are central to the undergraduate curriculum. Students benefit from the school’s internationally recognized cross-cultural training program. Graduates pursue a wide range of careers including positions in non-governmental organizations, business, the government, and academe.

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 Programs
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, Master of Science in Engineering Science, Doctor of Education, or the Doctor of Philosophy. Dual professional-graduate degree programs exist for the MBA/JD and PharmD/MS, PharmD/PhD 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
All accredited universities require that students complete not only a major but also a program of general education to broaden their education. At Pacific, the general education program exposes students to areas of study outside of their major, and it develops essential knowledge and skills that are transferable to students’ other courses at Pacific as well as to their personal and public lives. It is thus the liberal arts foundation of a Pacific undergraduate education.

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 1-2 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 advisor, 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 two courses from a single department (as defined by subject code, e.g., HIST or ENGL or MPER) to satisfy the breadth requirement; however, there is an exception for area IIC since students may take three 1-unit courses in the same discipline of applied music or dance to meet the 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 IIIA and IIIB. In subcategory IIC, students may take courses in applied music or dance. Independent study courses cannot be used to satisfy general education requirements.

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.

Effective 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 and Computer Science 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**
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.

**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: March 15
- 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)
- January 15
- 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 PharmD website: www.pacific.edu/pharmd for deadline information.

**Early Action Admission Option**
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 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
E-mail: 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
   - 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. One academic recommendation from an academic teacher, counselor or advisor is required.
   Those recommending an applicant may use the on-line form at 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 2011 or Spring 2012 semesters
   - Freshman applicants must submit scores from the SAT and/or 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 or the ACT web site, 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 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 or by calling the Conservatory of Music at (209) 946-2418.
- Dental Hygiene Applicants: www.pacific.edu/dentalhygiene

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 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 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

<table>
<thead>
<tr>
<th>Course</th>
<th>Science &amp; Majors</th>
<th>Technical</th>
<th>All Majors</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4 years</td>
<td>4 years</td>
<td></td>
</tr>
<tr>
<td>Fine Arts/Performing Arts</td>
<td>1 year</td>
<td>1 year</td>
<td></td>
</tr>
<tr>
<td>Foreign Language (one)</td>
<td>2 units</td>
<td>2 years</td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>2 years</td>
<td>3 years</td>
<td></td>
</tr>
<tr>
<td>Mathematics*</td>
<td>4 years</td>
<td>3 years</td>
<td></td>
</tr>
<tr>
<td>Laboratory Science**</td>
<td>3 years</td>
<td>2 years</td>
<td></td>
</tr>
<tr>
<td>Academic Electives***</td>
<td>1 year</td>
<td>1 year</td>
<td></td>
</tr>
</tbody>
</table>

* 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 for the latest policies regarding granting of advanced 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.

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 credit 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 28 units may be applied towards a degree from Advanced Placement (AP), International Baccalaureate (IB), DANTES and/or CLEP tests.

Admission of Undergraduate Transfers

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. Letter of recommendation is optional.

Transferable Courses and Unit Limitations

- In interpreting transfer credit, 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

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 500 (paper-based), 173 (computer-based) or 61 (iBT). The minimum IELTS score accepted for undergraduate admission consideration is 5.5. The minimum TOEFL score for professional PharmD admission consideration is 550 (paper-based), 213 (computer-based) or 80 (iBT). The minimum IELTS score for professional PharmD 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, 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, 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
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
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 3.00 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 of 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 PharmD 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 550 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 PharmD 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 550 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 to any major at Pacific and pursue a Bachelor’s degree, while also completing the pre-requisites for the Doctor of Pharmacy Program. If they complete their Bachelor’s degree in four years (but no more than five years) they will be eligible to advance into the PharmD 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 3.20 (on a 4.0 scale) and either a combined SAT Reading and Math score of 1200 (with at least a 550 in both Reading and Math), or an ACT composite of 22.

* 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/pretend
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 of 2007. Pacific reserves the right to change criteria for 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 DDS 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 DDS 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 DDS 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 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 advisor 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 (JD)
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
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 all University of the Pacific Prepharmacy requirements, prior to matriculation. These units must be in specific courses which meet 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).

Admission of Professional PharmD Students
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, communication skills, 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. Pacific’s application deadlines, and all instructions for applying for this program, can be found at 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.

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:
<table>
<thead>
<tr>
<th>Item</th>
<th>Resident</th>
<th>Non-Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition* per school year, 2010-2011 permitting enrollment for 12 to 18 units in each semester</td>
<td>$35,770</td>
<td>$35,770</td>
</tr>
<tr>
<td>Wellness Center</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>Room and Board</td>
<td>11,688</td>
<td></td>
</tr>
<tr>
<td>ASUOP Student Fee</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Activity &amp; Recreation Fee</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Total, per school year</td>
<td>$47,978</td>
<td>$36,290</td>
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<tr>
<td>School of Pharmacy and Health Sciences Annual Tuition (Eleven-month program, three terms)</td>
<td>$57,975</td>
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</tbody>
</table>

*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 $2,385 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

<table>
<thead>
<tr>
<th>Type</th>
<th>Resident</th>
<th>Non-Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time (12 to 18 units)</td>
<td>$17,885</td>
<td></td>
</tr>
<tr>
<td>Part-time (9 to 11.5 units) per unit</td>
<td>1,555</td>
<td></td>
</tr>
<tr>
<td>Part-time (5 to 8.5 units) per unit</td>
<td>1,235</td>
<td></td>
</tr>
<tr>
<td>Excess units above 18 units, per unit</td>
<td>1,235</td>
<td></td>
</tr>
<tr>
<td>Engineering Co-op (full-time) tuition rate</td>
<td>8,943</td>
<td></td>
</tr>
<tr>
<td>Tuition – School of Pharmacy and Health Sciences (per semester)</td>
<td>Full-time (12 to 19 units)</td>
<td>$19,325</td>
</tr>
<tr>
<td>Part-time (9 to 11.5 units) per unit</td>
<td>1,680</td>
<td></td>
</tr>
<tr>
<td>Part-time (.5 to 8.5 units) per unit</td>
<td>1,333</td>
<td></td>
</tr>
<tr>
<td>Excess units above 19 units, per unit</td>
<td>1,333</td>
<td></td>
</tr>
<tr>
<td>Pharmacy Clerkship Rotation (full-time)</td>
<td>19,325</td>
<td></td>
</tr>
<tr>
<td>Pharmacy Professional Fee*</td>
<td>325</td>
<td></td>
</tr>
<tr>
<td>Pharmacy Technology Fee*</td>
<td>330</td>
<td></td>
</tr>
</tbody>
</table>

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

### Tuition – Graduate Students (per semester)

<table>
<thead>
<tr>
<th>Type</th>
<th>Resident</th>
<th>Non-Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 to 18 units</td>
<td>$17,885</td>
<td></td>
</tr>
<tr>
<td>.5 to 15.5 units, per unit</td>
<td>1,118</td>
<td></td>
</tr>
<tr>
<td>Excess units above 18 units, per unit</td>
<td>1,118</td>
<td></td>
</tr>
</tbody>
</table>

### 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.
- **ASUOP Graduate Student Fee** $30
  - Required for all graduate students and doctoral candidates taking 8.5 units or more. Optional for students with .5 to 8.0 units.
- **Activity & Recreation Fee** $40
  - 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.
- **Wellness Center Fee**

### Special Fees

- **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 $70 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 $200 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. 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 Student Accounts Office.

All email correspondence will be sent to the student’s u.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 1st for the fall semester and January 1st 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. 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. Payments for the intended enrollment 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 can 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; those utilizing the monthly payment plan must enroll online through insidepacific by the payment deadline. In order for a parent or guardian to enroll in the monthly payment plan, their student must officially establish them as an Authorized User. Subsequent 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, cashier’s check, wire transfers, and electronic checks. 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 student’s university 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 can 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. In accordance with California state law, all unpaid balances accrue 10% interest, per annum, on the balance remaining on the date of transfer. 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 standing and exit interviews completed prior to the release of diploma 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 payments will be refunded to the student. A credit balance resulting from a check payment will be refunded after 14 business days. Credit balances resulting from refundable student loans and scholarships will also be refunded upon request. All financial aid must be disbursed on the student account before a refund is processed. Refunds are issued on a weekly basis.

**Refund of Tuition and Fees**

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.

Fees are non-refundable after the last day to add courses for the semester.

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 that includes scholarships, grants, loans and job opportunities. Detailed financial aid
Information and application instructions are available at www.pacific.edu/financialaid. 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 for entering Pacific students 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 semesters or trimesters 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.

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. Details are available on the Financial Aid website under Student Consumer Information.

**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 may receive financial aid, but 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. Access to financial aid to pay for repeated courses is limited by federal regulations.

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 Tracks #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, which includes Pacific Fund gifts. 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 scholarships and scholarship renewal is available from the Financial Aid Office and online at www.pacific.edu/financialaid.

**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. An application form is available on the Financial Aid website.

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.

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- Stockton resident (must have resided in Stockton, i.e. Census Tracks #1-38 boundaries) for the past three years. (Does not apply to transfer students from San Joaquin Delta College)
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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.


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 Cowell Endowed Scholarship.


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.


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 Alberto 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.


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.


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.


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.

Irina E. Pennycook Endowed Scholarship. Established by 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 Calder Lumber Company and the Mildred Kellogg estate.

Alstyne 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. Delete scholarship from here.

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.


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.
scholarships and grants

Annually Funded Academic Scholarships

In addition to the endowed scholarships, the University receives both restricted and unrestricted scholarships annually from a variety of sources.

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.

Center for Professional and Continuing education

Osher Reentry Scholarship Program Endowed Scholarship. Established by gifts from the Osher Foundation.

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 Jediah 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.


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. Established by a bequest.

Howard and Emma Churchill Endowed Scholarship. Established by 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. Collier 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 B. 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.
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 Pacific 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.
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. Vollbrecht Endowed Scholarship.
John D. Valentine Endowed Scholarship for Writing Excellence. Established by a gift from Russell E. and Mary S. Leatherby.
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.
R. Coke Wood Memorial Endowed Scholarship. Established with memorial gifts.
Community Involvement Program
The S. H. Cowell Foundation. Established by the Foundation and a combination of estate gifts.
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.
Robertta Burland Endowed Scholarship.
Ruth J. Camp Scholarship. Funded annually from an outside endowment.
Chrisse 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 Hegin Endowed Memorial Scholarship. Established by a bequest from Gwen Hegin in memory of her husband, a 1937 alumnus.
Gladysh Thelma Ryan King Endowed Scholarship. Established by her bequest.
Lenora 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. Delete this scholarship from here.

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 Alstine Endowed Scholarship.

Eva Varnum Endowed Memorial Scholarship.

Jack and Eleanor Vogel Endowed Scholarship.

C. A. Webster Foundation Endowed Stringed Instrument Scholarship.


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


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.


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.

Andrew and Helen Neumann Endowed Scholarship. Established with their estate

Gregory A. and Amy Lonegran Mitchell Endowed Scholarship.

Andrew and Helen Neumann 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 Do not delete this 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.

Charles Schiffman Endowed Memorial Scholarship. Established with an estate gift from Charlie class of ’40, who was a generous local teacher and administrator for over 40 years. Charlie believed in the power of education and provided guidance; support and intellectual challenges to all knew him.

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 Venduzco Endowed Memorial Scholarship.

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

**School of Engineering and Computer Science**

Andrew C. Ausman Memorial Endowed Scholarship. Established in memory of this son, a former student at Pacific.

James E. 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.

Glady's 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.


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 Economos Endowed Scholarship. Established with memorial gifts from family and friends.

The Lucy and Joseph Floriddia Memorial Endowed Scholarship. Established by Dr. Donald Floriddia in honor and memory of his parents.

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 McGreavy Endowed Memorial Pharmacy Scholarship. Established with a gift from the estate of his wife Lucille McGreavy.

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.

Recaill 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.

Sixties Alumni Memorial Endowed Pharmacy Scholarship. 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. Berenst 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 Leland 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.


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 Pacific for 33 years.

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

University of the Pacific Financial Aid Office determines eligibility and provides application instructions. 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 HPFL 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 Earline 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. Hagan 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.
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 advisor 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 (Room On Line Articulation Reports) regarding transfer work to help you stay on track.

Notify faculty advisor 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 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 the 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. The 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 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 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 re-admitted, 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 required units of completing the bachelor’s degree
- be in the last semester of the bachelor’s degree,
- request that their advisor 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 graduate advisor 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 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 Pacific portal insidePacific if 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 intend to withdraw completely. Official withdrawal must be processed by the Office of the Registrar. The withdrawal date used by Financial Aid in the Return of Title IV Aid calculation and the effective date used by Student Accounts for
tuition refunds are based on the date of your 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. Advisors 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 the 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 fewer 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 and Continuing Education.

**Prerequisites**
Prerequisites for courses should be noted carefully; the responsibility for meeting these requirements rests on the student. The instructor, chair or dean’s office 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 and 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.

- 092/192/292 – Cooperative education. Work experience on a full-time or part-time basis. The Cooperative Education Program in each school or college differs in unit allowance. See the 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
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 P or NC. 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 002-049. 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 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 credit 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 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 education 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 inerdepartmental 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 three to 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 5 times a year Fall, Spring and Summer I, II and III with the exception of the Doctor of Physical Therapy program which has an additional date of September 30th. 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:
  - what work remains to be completed
  - how it is to be evaluated
  - a time indicated for completion within but no later than the following deadlines: for fall semester, by July 1; for spring semester, by October 1; for summer term, by January 1
- **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 programs 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 reaply 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 advisor 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 two or more 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.

**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 fundamental 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. (1) 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 intending to completely withdraw from a semester or from the university will have to initiate the process in the Office of the Registrar. The withdrawal date used by Financial Aid for Return in the return of Title IV Aid calculation and the effective date used by Student Accounts for tuition refunds are based on the date of your notification to the Office of the Registrar. If a student intends 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 Pacific’s nationally recognized MOVE (Mountains Ocean Valley Experience). This event provides students with the choice of one of thirteen shared experiences including: 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.” A complete list of trip options is available at www.pacificmove.org. 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 is to offer. This event welcomes new students into Pacific’s culture of community service.

Environmental Stewardship: Making the Most of Muir through MOVE (Mountains Oceans Valley Experience)
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, the regional network of rivers or one of at least nine other regional sites. 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 learning 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. 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 advisors provide assistance in such areas as time management, taking lecture notes and homework difficulties. In addition, student advisors work with faculty advisors in helping students with program planning and personal adjustment during the critical first year on campus. Peer advisors also assist 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 visit Student Academic Support Services in Hand Hall or call at (209) 946-2177.

Referral Center
The Referral Center at Pacific is a “one-stop” referral center for support services to aid students in their academic success. Any enrolled student may use the Referral Center to access 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 Student Advisors contact the student to help him or her receive the needed services. For more information, call the Referral Center 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
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 (LGBTQIA) 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.

**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 Women’s 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 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 contacts 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. Detailed descriptions of these facilities, including cost are available from Housing and Greek Life Office at 209.946.2331 or iamhome@pacific.edu. Housing is guaranteed for freshmen and sophomores only. Upper-division and Graduate students will be considered on space availability.

**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, an 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 plans, please contact Housing and Greek Life at 209-946-2331 or iamhome@pacific.edu.

Cowbell Wellness Center
Cowbell 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 Health fee pays for unlimited health service visits and up to ten individual therapy appointments through Counseling Services. Students will be accommodated on a case-by-case basis for situations or conditions requiring additional therapy sessions. 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 submit a bill to 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 Cowbell Wellness Center Insurance Office and complete a waiver on-line through the link found on the Health Services web page http://www.pacific.edu/Student-Life/Health-and-Recreation/Health-Services.html. Once at the waiver 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 Anthem Blue Cross, select an outside plan, or be covered under their family’s policy. Students who do not complete the waiver by the posted deadline date will be automatically enrolled in the Anthem Blue Cross 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 Cowbell 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.

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 the McCaffrey Center, 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 that 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: McCaffrey Center, first floor. Telephone: (209) 946-2439; FAX: (209) 946-2984; e-mail: 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, Intervarsity 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) 946-2557 or visit our web site link under Student Life at 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-AA 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 the 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 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. 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
Biomedical 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 Oral Health Society
Pacific Political Science Association
Pacific Pre-Physical Therapy Club
Pacific Pre-Med Club
Pacific Pre-Dental Club
Pacific Pre-Law Club
Pacific Pre-MBA Club
Pacific Pre-Physiology Club
Public Relations Student Society of America
Rho Pi. Pharmaceutical fraternity. Lambda Sigma Delta Chapter.
Sigma Lambda Chi. Alpha Psi Chapter for male pharmacy students.
Sigma Chi. Theta Chi Chapter.
Sigma Xi. Xi Chi Chapter.
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)
Black Student 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/Intervarsity

**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 Slingers)
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 that honors and incorporates various religious and cultural traditions focusing on light, 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 http://www.pacific.edu/Student-Life/Student-Life-Services/Judicial-Affairs/Tiger-Lore-Student-Handbook.html

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 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.

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 advisors 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 Center in the Benerd School of Education is an officially designated national testing center for the Graduate Record Examination in subject matter only. The Testing Center is available for proctoring services for individuals seeking to take an exam of any subject. Proctoring services are open to Pacific students, students attending other institutions, and the general public, whether offered through another college, university, and/or private/public business. Individuals interested in proctoring services should call (209) 946-2559. The Testing Center is located at the Gladys L. Benerd School of Education, Room 101.

**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 Division of Student Life**

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
McCaffrey Center, Room 137
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/ssp
**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 to the first floor of the McCaffrey Center, Room 102 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., Fridays, 8:30 a.m. to 5:00 p.m. and Sunday 4:00 p.m. to 9:00 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.

**University Honors Program**

Pacific’s Honors Program supports an intellectual community of academically outstanding students in all programs and majors who seek added challenge and breadth in their studies, and who wish to more fully develop their talents and potential. 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. By accepting the invitation, students agree to remain in the program for at least one year. 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, 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, 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. 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 or an academic year 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 Education 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 courses 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 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 foreign language proficiency) and all require a minimum grade-point average. Additionally, many programs incorporate home stays with local families and some the opportunity for independent study and/or travel.

Many education abroad programs 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.

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 are listed under SARD 000, 093a-z, and 193a-z.

For more information on education abroad, please call (209) 946-2992, or visit web.pacific.edu/x4291.xml.

**OIT**
The Office of Information Technology (OIT) provides computing and communication services to University students, faculty and staff. The Office of Information Technology maintains e-mail, the learning management system, the university website, the wired and wireless network and telecommunications. OIT also provides IT services related to technology integration, security and troubleshooting.

**Customer Support Center (CSC) Helpdesk** provides computer hardware/software support for students, faculty and staff.

**Student Technology Services (STS)** is a helpdesk staffed by students who provide technical support to other students. Since STS is a subgroup of CSC, students also have access to more experienced technicians when solving student computer problems.

**Technical Support**
The CSC and STS provides assistance with the following:

- PacificNet ID, UMail, and other account password reset help
- Computer security checking (anti-virus, firewall, spyware, etc.)
- Configuration of PCs workstations and laptops
- Software installations
- E-mail questions
- Advice on new technology purchases
- Telecommunications troubleshooting
- Wireless device configuration and troubleshooting
- To obtain support, contact 209.946.7400 or e-mail at helpdesk@pacific.edu

If you don’t see your technical concern listed above, you may still contact the CSC or STS. We may be able to find answers to your questions or refer you to someone else who can help.

**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 Rie-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-Altherton Special Collections**
The Holt-Altherton 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, electronics, an assortment of Pacific emblematic clothing and gift items, magazines, greeting cards, office products, and much more. Other services offered include a complete special order service for books and supply items.

Writing in the Disciplines Program

Mission

The goal of Writing in the Disciplines is to assist faculty and students at Pacific in the improvement of student writing within their majors and individual disciplines and to encourage more active, engaged learning through writing intensive courses, the use of innovative teaching methods in writing instruction, and tutorial support from the Student Writing Center for all levels of writing, from the Pacific Seminars to Senior Capstone Courses.

Academic Initiatives:

I. The Student Writing Center, supported jointly by the Library and the College, opened on the 2nd floor of the main library in the fall of 2009. It is currently staffed by the Director and twenty Writing Mentors, eight of whom work directly in the Center and 12 who work with individual faculty in writing intensive courses across the curriculum.

II. Faculty workshops, consultations, and stipends support and encourage faculty development of writing intensive courses and collective efforts in writing instruction, curriculum revision, and writing assessment at the departmental level.

III. The program provides funding and support for attendance and participation of faculty and students at conferences and workshops related to writing in the disciplines, for campus visits by notable authors or experts in the field of writing and writing instruction, and for the acquisition of texts and materials related to writing instruction in any field or discipline.

For additional information, please contact:
Douglas M. Tedards, Director
Student Writing Center
2nd Floor, Main Library
209-952-2970/Ext. 22970

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, 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
   - University ID number
   - 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, or 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.

11. May disclose education records to officials of another school in which a student seeks or intends to enroll, or where the student is already enrolled so long as the disclosure is for purposes related to the student’s enrollment or transfer.

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 violates 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.
At Pacific, the general education program exposes students to areas of study outside of their major, and they develop essential knowledge and skills that are transferable to other courses at Pacific as well as to their personal and public lives. 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 cogently in writing and orally, to be diligent and careful in the preparation of one’s work, to interpret and evaluate information, to think creatively 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.

**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 1 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 autobiography in order to reflect back on their ethical 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. Freshmen 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 (I 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 must pass Pacific Seminars 1 and 2 in order to graduate. There are no substitutions. 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 pass 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 considerable choice but within a framework that ensures they gain essential knowledge and skills. With the help of their advisors, 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.

Students can satisfy subcategory IIIC by taking a second course in subcategory IIIA.

Students can take a maximum of two courses from a single department (as defined by subject code, e.g., HIST or ENGL or MPER) to satisfy the breadth requirement; however, there is an exception for area IIC since students may take three 1-unit courses in the same discipline of applied music or dance to meet the requirement. Courses in the breadth program component of the general education program will normally have a value of three or four units.

Independent study courses cannot be used to satisfy general education requirements.

The structure of the breadth program is as follows:

**I. Social and Behavioral Sciences**

IA. Individual and Interpersonal Behavior

IB. U.S. Studies

IC. Global Studies

**II. Arts and Humanities**

IA. Language and Literature

IB. Worldviews and Ethics

IC. Visual and Performing Arts

**III. Natural Sciences and Mathematics**

IA. Natural Sciences

IB. Mathematics and Formal Logic

IC. 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.
Students can meet 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 the 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), MATH 035 (Statistics) or PSYC 103 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) or READ 051 with a grade of C- or better during the first full year of study including summer sessions.

**Fundamental Skills Requirements**

Fundamental skills requirements for transfer students include reading, writing and quantitative analysis (math). Students may demonstrate competence in these skills in one of the 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. 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 articulated on a course by course basis upon entry to the University. General education courses taken by transfer students at their previous institution 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 who have completed 28 or more units of transferable, classroom college work that appear on a transcript 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 and Fundamental Skills 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 may not always 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 120 Introduction to Language
ENGL 25 Aesthetics
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 Communication Disorders
SOCI 031 Deviant Behavior
SOCI 133 Criminology

I-B. United States Studies

BUSI 053 Legal and Ethical Environment of Business
COMM 031 Media and Society
ECON 051 Economic Principles and Problems
ECON 055 Introductory Macroeconomics: Theory and Policy
ENGL 051 American Literature Before 1865
ENGL 053 American Literature After 1865
ETHN 011 Introduction to Ethnic Studies
HIST 020 US History I
HIST 021 US History II
HIST 120 Native American History
HIST 133 Women in U.S. History
HIST 134 African-American History
MMGT 011 Music, Entertainment in US Society
POLS 041 U.S. Government and Politics
SOCI 021 Culture and Society
SOCI 051 Introduction to Sociology
SOCI 041 Social Problems
SOCI 125 Sociology of Health and Illness
SPOT 141 Sport in America

I-C. Global Studies

ANTH 053 Introduction to Cultural Anthropology
ANTH 054 Antropología Cultural
CHIN 023 Intermediate Chinese, 3rd Semester
CHIN 025 Intermediate Chinese, 4th Semester
CHIN 125 Advanced Chinese I
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 Intermediate French, 3rd Semester
FREN 025 Intermediate French, 4th Semester
FREN 122 La Francophonie
GERM 023 Intermediate German, 3rd Semester
GERM 025 Intermediate German, 4th Semester
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 A 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 132 History of American Immigration
HIST 141 Pre-Modern China to 1840
HIST 151 People’s History of Mexico
JAPN 023 Intermediate Japanese, 3rd Semester
JAPN 025 Intermediate Japanese, 4th Semester
JAPN 125 Advanced Japanese I
MHIS 006 Music of the World’s People
POLS 011 Introduction to Political Science
POLS 051 International Politics
POLS 152 Politics of Asia
RELI 102 History of Ancient Egypt and the Near East
RELI 104 Religion of the Pharaohs
RELI 124 Ancient Judaism
RELI 130 Christian Tradition
RUSS 023 Intermediate Russian, 3rd Semester
RUSS 025 Intermediate Russian, 4th Semester
SOCI 108 Food, Culture and Society
SPAN 023 Intermediate Spanish, 3rd Semester
SPAN 025 Intermediate Spanish, 4th Semester
XSPG 023 Intermediate Spanish, 3rd Semester in Guatemala
XSPG 025 Intermediate Spanish, 4th Semester in Guatemala

II-A. Language and Literature

CHIN 011A First-Year Chinese, 1st Semester
CHIN 011B First-Year Chinese, 2nd Semester
CLAS 110 Greek Literature in Translation
CLAS 112 Latin Literature in Translation
COMM 027 Public Speaking
EDUC 110 Introduction 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 Semester
FREN 011B First-Year French, 2nd Semester
FREN 051 French Literature in English
GERM 011A First-Year German, 1st Semester
GERM 011B First-Year German, 2nd Semester
GREK 011A First-Year Ancient Greek, 1st Semester
GREK 011B First-Year Ancient Greek, 2nd Semester
HBRW 011A First-Year Biblical Hebrew, 1st Semester
HBRW 011B First-Year Biblical Hebrew, 2nd Semester
JAPN 011A First-Year Japanese, 1st Semester
JAPN 011B First-Year Japanese, 2nd Semester
LANG 11A First-Year Arabic, 1st Semester
LANG 11B First-Year Arabic, 2nd Semester
LATN 011A First-Year Latin, 1st Semester
LATN 011B First-Year Latin, 2nd Semester
RELI 023 Hebrew Bible
RUSS 011A First-Year Russian, 1st Semester
RUSS 011B First-Year Russian, 2nd Semester
SLPA 053 Sign Language I
SPAN 011A First-Year Spanish, 1st Semester
SPAN 011B First-Year Spanish, 2nd Semester
SPAN 013 Introduccion a la literatura hispanica
general education

II.C. Visual and Performing Arts

ARTH 007 Survey of World Art to 1400
ARTH 009 Survey of World Art After 1400
ARTH 101 History of Graphic Design
ARTH 108 Renaissance Art History
ARTH 112 Nineteenth Century European Art
ARTH 114 Twentieth Century European Art and Film
ARTH 116 Contemporary World Art
ARTH 118 Art in the U.S., 1865-1945
ARTH 120 Chinese Art History
ARTH 122 Japanese Art History
ARTH 124 Sex, Gender and the Arts
ARTS 003 Visual Arts Exploration
ARTS 005 Drawing
ARTS 007 Two Dimensional Design & Color
ARTS 009 Three Dimensional Design
ARTS 035 Ceramics
ARTS 037 Sculpture
ARTS 045 Digital Photography
ASIA 120 Asian Cinemas
CLAS 130 Greek Art and Architecture
CLAS 132 Roman Art and Architecture
EDUC 142 Visual Arts in Education
ENGL 031 Film Aesthetics
ENGL 121 Major Filmmakers
ENGL 123 Film, Literature and the Arts
FREN 120 Le Cinéma Français / French Cinema in English
HIST 119 History Goes to Hollywood
MHS 005 Music Appreciation
MUJZ 008 Introduction to Jazz
MPER 066 Jazz Ensemble (Note: 1 unit)
MPER 070 University Symphony Orchestra (Note: 1 unit)
MPER 072 Symphonic Wind Ensemble (Note: 1 unit)
MPER 073 University 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 Dance (Note: 1 unit)
THEA 051B Jazz Dance (Note: 1 unit)
THEA 051C Modern Dance (Note: 1 unit)
THEA 051D Tap Dance (Note: 1 unit)
THEA 071 Beginning Acting
THEA 075 Expressive Movement
THEA 112 Playwriting
THEA 134 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 076 Marine Biology
BIOL 079 California Flora
CHEM 023 Elements of Chemistry
CHEM 025 General Chemistry
CHEM 027 General Chemistry
GEOS 043 Environmental Science for Informed Citizens
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 126 Environment and Literature
ENGL 128 Science and Literature
GEOS 045 Soil, Water, and War
HIST 063 History of Science and Technology
HIST 167 Gender in the History of Science/Medicine/Technology
PHIL 061 Philosophy of Science
SOCI 111 Environment and Society
SPTS 041 Heart, Exercise and Nutrition
SPTS 045 Science of Nutrition
ANY SECOND IIIA COURSE
Diversity Requirement

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.

Diversity Requirement

The diversity course requirement serves as a key curricular component of the University of the Pacific’s commitment to diversity and inclusive excellence. The diversity requirement contributes to students’ intercultural competencies and to an understanding of the complex connections among domestic diversity, globalization, and democracy.

The University of the Pacific requires that all students earning a bachelor’s degree successfully complete at least one 3-unit officially designated diversity course. [Exception: the two-unit INTL 151 and 161 Cross Cultural Training courses may be combined to meet the diversity requirement.] This requirement is applicable to all students who have enrolled at Pacific on or after fall 2010.

Transfer Students

Students transferring into the university on or after fall 2011 are required to complete a designated diversity course prior to graduation. Transfer students are defined in the General Education section of the catalog.

Post Baccalaureate

Students who completed a Bachelor’s degree elsewhere and who are seeking an additional Bachelor’s degree at Pacific are exempt from this requirement.

Transfer Courses

The University diversity requirement can be met entirely, or in part, by the successful completion of an approved course at Pacific or at an approved college and university. Students wishing to meet this requirement by taking a course at a different college or university must first complete a Transfer Course Approval Request form, available at the Office of the Registrar in Knights Hall or online at http://web.pacific.edu/x7909.xml.

Objectives of the Diversity Course Requirement

Students completing any approved diversity course will be able to articulate, in both written and oral forms, how notions of difference work within frameworks of social hierarchy. (Difference may be defined by such notions as age, class, citizenship, disability, ethnicity, gender identity, language, nationality, race, religion, sexual orientation, and/or socioeconomic status.)

Students completing an approved “diversity course” will also be able to do at least three of the following four tasks:
1. Articulate their own developing understanding of social difference and its impact on their discipline(s), personal life and society as a whole;
2. Express, in both written and oral forms, their understanding of how ideas and beliefs about diversity and difference in the United States have changed over time, identifying relevant historical movements and players;
3. Demonstrate a satisfactory understanding of how social institutions and individuals respond to issues of difference;
4. Apply their understanding of relevant theory and/or historical analysis of diversity to a specific “societal problem” for the purpose of developing solutions.

The full Text of the Diversity Course Requirement can be found at: http://web.pacific.edu/Documents/provost/acrobat/DiversityCR.pdf

Diversity Courses

The courses listed below are approved as counting toward the diversity course requirement, which are infused throughout the General Education and major curricula.

The listing of diversity courses being taught during a particular term can be found using the search for class by attribute function on insidePacific.

ANTH 053 Cultural Anthropology
ANTH 054 Antropologia cultural
ANTH 153 Language and Culture
ANTH 172 Culture and Power
ARTH 124 Sex, Gender and the Arts

COMM 133 Documentary Film as Persuasive Communication
EDUC 193 Social Justice and Diversity
ENGL 025 Black Women Writers
ENGL 025 Dementors, Desire, Medievalism
ENGL 025 Multi Ethnic American Literature
ENGL 025 Our Monsters Ourselves
ENGL 025 Sport and Scandal
ENGL 041 British Literature before 1800
ENGL 126 Literature and the Environment
ENGL 131 Shakespeare
ENGL 135 Faulkner and Morrison
ENGL 141 Topics in British Literature pre-1800
ENGL 161 Geo History and Asian American Literature
ENGL 164 War
ENGR 030 Engineering Ethics and Society
ETHN 011 Introduction to Ethnic Studies
GEND 011 Introduction to Gender Studies
HIST 020 United States History
HIST 021 United States History II
HIST 050 World History I
HIST 070 Historical Imagination
HIST 112 History of the Holocaust
HIST 120 Native American History
HIST 121 Colonial America
HIST 122 Revolution and the New Nation
HIST 123 The Civil War Era
HIST 132 American Immigration
HIST 133 Women in United States History
HIST 134 African American History
HIST 135 Women in Time and Place
HIST 167 Gender in History of Science/Medicine/Technology
INTL 151 Cross Cultural Training I
INTL 161 Cross Cultural Training II
MHIS 008 Music of the World’s People
MMGT 111 Music Industry Analysis
POLS 104 Urban Government
PSYC 129 Developmental Psychology
RELI 104 Religion of the Pharaohs
SLPA 143 Multicultural Populations
SOC 021 Culture and Society
SOC 031 Deviant Behavior
SOC 041 Social Problems
SOC 051 Introduction to Sociology
SOC 108 Food, Culture and Society
SOC 111 Environment and Society
SOC 123 Sex and Gender
SOC 125 Health and Illness
SOC 141 Prejudice and Racism
SOC 172 Social Inequality
THEA 113 Theatre Heritage I
THEA 115 Theatre Heritage II

Course Catalog 2011-2012
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.

Departments and Programs

Biological Sciences
Chemistry
Communication
Earth & Environmental Sciences
Economics
English
Ethnic Studies
Film Studies
Gender Studies
History
Jacyob Center
John Muir 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

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 a grounding in the arts, humanities, social and natural sciences deepens students’ understanding of difficult issues and transforms them to become, first and foremost, self-reflective, knowledgeable, and ethical persons. As such they bring a broad perspective to their professional careers and are well prepared to assume the responsibilities of civic 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 generates different types of meaningful discovery.

With the assistance of faculty advisors, 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 Associate Dean and Director of General Education. 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 2009, Pacific accepts a 4 or higher for Advanced Placement and a 5 or higher for Higher Level International Baccalaureate. There is a maximum of 28 units from Advanced Placement, International Baccalaureate DANTES and/or CLEP test results that 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 qualify to host PBJ chapters. 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 Associate 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.

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 that 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 Change of Program 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 advisor.

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 advisors 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.

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)
Economics and Computer Science (BS)
English (BA)
Environmental Studies (BA)
Environmental Science (BS)
Film Studies (BA)
French (BA)
Geology (BA, BS)
Graphic Design (BFA)
History (BA)
Liberal Studies (BA)
Mathematics (BA, BS)
Pacific Humanities Scholars Program
Pacific Legal Scholars Program
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

Ancient Studies
Applied Mathematics
Art History
Biological Sciences
Chemistry
Child Psychology
Chinese Studies
Classical 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 advisors 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 enter The College with their fundamental skills requirement (Math 5 and Write 21) already met and must have a minimum GPA of 2.8 in all articulated coursework upon entering Pacific.

2. 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 determines which courses completed at other institutions will satisfy General Education requirements.

3. Based on university-wide articulation agreements with other colleges and universities, each academic program advisor 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 student’s 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. 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 Communication 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
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

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 2 courses 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. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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.

V. 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.)

VI. 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:
BIOL 175 Ecology 4
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
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.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search.

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 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:

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.) 18

Note: 1) 4 units of BIOL 191 or 197 may count as electives. 2) Students will not receive credit for both BIOL 071 or 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:

a. PHYS 023 General Physics I
b. 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 2 courses 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. Diversity Requirement**
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

**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 82 minimum, including:

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

One of the following courses:

- **BIOL 175** Ecology 4
- **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:

- **CHEM 161** Physical Chemistry 4
- **CHEM 169** Elements of Physical Chemistry 4

**CHEM Electives** (2 additional courses above CHEM 123 excluding CHEM 191 and 197) 10
One of the following groups:

a. **PHYS 023** General Physics I
b. **PHYS 053** Principles of Physics I

**PHYS 025** General Physics II
**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 2 courses 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. Diversity Requirement**
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

**III. Fundamental Skills**
Demonstrate competence in:
- Reading
- Writing
- Quantitative analysis
**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) 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) PHYS 023 and 053 have specific math prerequisites which must be met.

**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. Awarded 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**

**BIOL 011. Human Anatomy and Physiology (4)**

A lecture and laboratory introduction to the structure and function of the various systems of the human body. Intended primarily for non-science majors; not open to biology majors.

**BIOL 035. Environment: Concepts and Issues (4)**

Introduction to principles of ecology as they bear on world environmental problems. Emphasis is on biological aspects of world problems and on the interrelationships between culture and environment. Global dimension of population, resources, food, energy and environmental impact are considered. Course does not count toward a biology major.

**BIOL 041. Introduction to Biology (4)**

A lecture and laboratory introduction to the concepts of biology. Physical structure, physiology, nutrition, reproduction, growth and behavior examined from the perspective of adaptation and interaction with the environment. Human, animal and plant systems will be covered. Recommended for non-majors. Course does not count toward a biology major.

**BIOL 051. Principles of Biology (4)**

A lecture and laboratory introduction to plant and animal diversity, and development, and evolution. Preparation for continued studies in biological science. **Prerequisite:** Fundamental Skills Reading requirement.

**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 and BIOL 061.

**BIOL 072. Vertebrate Biology (4)**

Taxonomy, life history, ecology and evolutionary history of vertebrates. **Prerequisites:** BIOL 051 and BIOL 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 and BIOL 061.

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**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) PHYS 023 and 053 have specific math prerequisites which must be met.
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. 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; CHEM 025. Recommended: one semester of genetics.

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: Sophomore standing. Prerequisites: BIOL 051 and BIOL 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 and BIOL 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 and BIOL 061.

BIOL 129. Histology Online (3)
A non-lab, online version of BIOL 128. Credit only given once for BIOL 128 or 129. Prerequisites: BIOL 051 and BIOL 061.

BIOL 130. Plant Kingdom (4)
Through lectures, laboratories and field trips, students will be introduced to the morphology, reproduction, behavior and ecological 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 and BIOL 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; CHEM 121 with a C- or higher or permission of 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; CHEM 025, 027. Recommended: Organic Chemistry.

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, 071, CHEM 025, 027. Recommended: BIOL 101.

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 and BIOL 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 and BIOL 061. Recommended: BIOL 101.

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 bi-
logical 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 and BIOL 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 and BIOL 061. Recommended: BIOL 101.

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. Recommended: BIOL 071 and BIOL 081.

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 and BIOL 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 (2-4)

BIOL 193. Special Topics (3 or 4)
Prerequisites: BIOL 051 and BIOL 061.

BIOL 197. Undergraduate Research (1-4)

**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 (1-4)
BIOL 295. Graduate Seminar (4)
BIOL 297. Graduate Research (1-6)
BIOL 299. Thesis (2 or 4)
Chemistry

Phone: (209) 946-2271
Location: Classroom Building, South Campus
Website: 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 BS 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 PhD 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 PharmD program. The TJLSPHS courses may only be completed as part of the PharmD 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
IIB. 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 2 courses from a discipline may be applied to meet the requirements of the general education program. 3) * Fulfilled by courses required in the major

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. Fundamental Skills

Demonstrate competence in:
Reading
Writing
Quantitative analysis
V. 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.)

VI. 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 excluding CHEM 132 and CHEM 134) 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 prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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.

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 2 courses 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. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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 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 I: ODEs
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

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 2 courses 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. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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 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:
CHEM 159 Biophysical Chemistry 4
CHEM 161 Physical Chemistry I 4
CHEM 197 Independent Research 4
PHRM 124 Drug Metabolism and Disposition 3
PHRM 135 Pharmacology and 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 2 courses 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. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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 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:
CHEM 159 Biophysical Chemistry 4
CHEM 161 Physical Chemistry I 4
CHEM 197 Independent Research 4
PHRM 124 Drug Metabolism and Disposition 3
PHRM 135 Pharmacology and 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
UNIVERSITY OF THE PACIFIC

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
IIB. Mathematics and Formal Logic
IIC. Science, Technology, and Society or a second Natural Science

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog.

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 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 I 5
- CHEM 123 Organic Chemistry II 5
- One of the following courses: 4
  - CHEM 159 Biophysical Chemistry
  - CHEM 161 Physical Chemistry I
- CHEM Electives (2 additional courses above CHEM 123 courses excluding CHEM 132 and CHEM 134) 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.
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.

**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**

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**

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**

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**

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. **Prerequisites: CHEM 025 and CHEM 027.**

**CHEM 035. Organic Chemistry Primer**

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**

**CHEM 121, 123. Organic Chemistry**

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 for CHEM 121:** CHEM 025 and CHEM 027. **Prerequisite for CHEM 123:** CHEM 121.

**CHEM 132. Teaching and Learning Chemistry**

This course prepares students for participation in peer-led team-learning (PLTL) models of instruction and provides the opportunity for the students to become student leaders. In the PLTL, or General Chemistry Workshops, a small group of students get together under the guidance of the trained student leaders and work through a set of challenging problems prepared by the instructor of the course. The main idea is for all the students in the group to work together and gain experience and confidence solving challenging problems as a group. The Workshop provides an active teaching and learning experience. This course can be taken multiple times. **Prerequisites: CHEM 025 and CHEM 027 and permission of instructor.**

**CHEM 134. Teaching and Learning Organic Chemistry**

This course is designed to introduce the student to the learning and leadership model, Peer-Led Team Learning (PLTL). The student will gain hands-on experience in leading small discussion groups in organic chemistry. Instructor-covered topics in organic chemistry include specific instructions regarding the workshop lessons, strategies in guided problem solving for the groups, and review of organic chemistry materials. Instructor-covered topics in the didactic portion of the course include but are not limited to practical information (understanding motivation, managing time, dealing with dominating students, learning styles, group dynamics, study skills, helping students improve critical thinking, develop logical reasoning, and prepare for tests), and a foundation in learning theory. **Prerequisites: CHEM 025, CHEM 027 with C- or better, CHEM 121 and CHEM 123 with B or better and permission of instructor.**
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 161, or permission of 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. Prerequisite: CHEM 151 or permission of 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; 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 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; PHYS 055 or permission of instructor.

CHEM 163. Physical Chemistry II—Quantum Mechanics (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 027 and MATH 053 and PHYS 053) or 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.

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 instructor.

CHEM 181. Introduction to Molecular Simulation (4)
This course enables Chemistry and other science students to utilize computational tools for molecular simulation. Students completing this class will be able to understand the theory behind molecular dynamics and force-fields. In addition, students will be able to construct and execute molecular simulations using standard tools such as CHARMM, NAMD, VMD and GAUSSIAN. Students will demonstrate an ability to analyze and present the data obtained from such simulations. Prerequisites: CHEM 025 and CHEM 027 with a grade of C- or better and instructor approval.

CHEM 191. Independent Study (2-4)

CHEM 193. Special Topics (1-4)

CHEM 197. Independent Research (1-4)
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. KPMC 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 087/187, to count toward the major; otherwise, (2) students with a minimum overall cumulative GPA of 2.0, may be placed in practicum, COMM 089/189, to serve in an on-campus setting; (3) students should complete the appropriate courses as prescribed by the Faculty Supervisor; (4) undergraduate students may complete a total of 16 units through COMM 087/187 (Internships) and/or Practica, COMM 089/189. 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.

1. 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 2 courses or 8 units from a single discipline may be applied to meet the requirements of the general education program.

**II. Diversity Requirement**
Complete one diversity course 3-4

**Note:** 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

**III. 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.

**IV. 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.

**V. 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.)

**VI. Major Requirements**
Minimum 44 units, including:

Take all core courses:
- COMM 027 Public Speaking 3
- COMM 031 Media and 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:
- COMM 116 Rhetorical Theory and 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:
- COMM 114 Argumentation and Advocacy
- COMM 131 Media Production
- COMM 132 Writing for Media
- COMM 135 Principles of Public Relations
- COMM 137 Public Relations Case Studies and Problems
- COMM 140 Writing for Public Relations
- COMM 152 Public Relations Administration

Minimum 2 units of internship or practicum: 2-4

**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. (Note: A student may not accumulate for credit more than eight units in any specific practicum (a total of four in a COMM 089 course and a total of four in a COMM 189 course).

COMM 114. 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 or 031 or 043 or 050 with a grade of C or higher.

COMM 116. 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 instructor.

COMM 117. Political Advocacy (4)
Principles of persuasion in political contexts in the U.S. (types and characteristics of political audiences, official and unofficial advocacy campaigns, media framing of political news and commentary) from historical and theoretical perspectives. Focus is to make students aware of the constraints and opportunities in policy arguments and their public dissemination.

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 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. 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. 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 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. 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. 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 vocals, haptics, and artifactual codes. Prerequisite: COMM 043 or permission of instructor.

COMM 149. 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. Prerequisites: COMM 027 and COMM 043 or permission of instructor.
COMM 150. Ethical Issues in Communication (4)
This course is a senior level capstone seminar devoted to applying what students have learned in the communication major to contemporary communication issues. Students will undertake research and employ a variety of communication methodologies and theories to uncover the social, historical and ethical implications of their communication interest. 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. Senior standing.

COMM 152. 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. Prerequisite may be taken concurrently: COMM 137. Senior standing.

COMM 155. 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 instructor.

COMM 160. 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, 043 with a C+ or better.

COMM 191. Independent Study (2-4)
COMM 193. Special Topics (1-4)
COMM 197. Independent Research (2-4)

Graduate
See Graduate Catalog for course descriptions.
COMM 261. Critical and Qualitative Research Methods (4)
COMM 262. Quantitative Research Methods (4)
COMM 271. Graduate Seminar: Rhetorical Thought (4)
COMM 272. Graduate Seminar: Interpersonal Communication (4)
COMM 273. Graduate Seminar: Mass Communication (4)
COMM 275. Graduate Seminar in Public Relations (4)
COMM 276. Communication in Learning Settings (4)
COMM 277. Media Relations (4)
COMM 278. 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 (2-4)
COMM 297. Graduate Research (1-4)
COMM 299. Thesis (2 or 4)
Earth & Environmental Sciences

Phone: (209) 946-2482
Location: Geosciences Center, South Campus
Website: http://web.pacific.edu/College-of-the-Pacific/Departments-and-Programs/Earth-and-Environmental-Sciences.html
Lydia Fox, Chair

Degrees Offered
Bachelor of Arts
Bachelor of Science

Majors Offered
Geology (BA, 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 BA 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 BS 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 PhD-level geoscientists have experienced effectively zero unemployment during the past 20 years.

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 provides 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
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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course
3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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.

V. 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.)
VI. Major Requirements

One of the following courses: 4-5
- GEOS 051 Dynamic Planet
- GEOS 053 Earth and 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 and GIS 4
- GEOS 110 Igneous and 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 and 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

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) 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.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front General Education section of this catalog. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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: 4-5
- GEOS 051 Dynamic Planet
- GEOS 053 Earth and Life Through Time
- GEOS 061 Geology of California
- GEOS 065 Regional Geology

All of the following courses:
- GEOS Electives (1 additional course excluding GEOS 105 and 193) 4
- Two of the following chemistry courses: 10
  - GEOS 142 Geochemistry
  - GEOS 144 Geomorphology
  - GEOS 145 Engineering Geology
  - GEOS 148 Hydrogeology

One of the following groups: 10
a. PHYS 023 General Physics I
b. PHYS 025 General Physics II

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 2 courses from a single discipline may be applied to meet the requirements of the general education program.
Both 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 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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

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 144 Geomorphology 4
GEOS 148 Hydrogeology 4
MATH 037 Introduction to Statistics and Probability 4
CHEM 025 General Chemistry 5
BIOL 051 Principles of Biology 4
BIOL 061 Principles of Biology 4
One of the following organismal biology courses: 4
BIOL 074 Biology of Insects
BIOL 076 Marine Biology
BIOL 077 Marine Birds and Mammals
BIOL 079 California Flora
BIOL 130 Plant Kingdom
BIOL 193 Fishes of California
One of the following courses: 4
BIOL 175 Ecology
BIOL 176 Ecology and Conservation Biology
Two of the following chemistry courses: 8
CHEM 141 Analytical Chemistry
CIVL 060 Water Quality
GEOS 142 Geochemistry
One of the following environmental policy/resource management courses: 3-4
GEOS 045 Soil, Water and War
CIVL 171 Water and Environmental Policy
ECON 157 Environmental and Natural Resource Economics
HIST 136 American Environmental History
INTL 174 Global Environmental Policy
SOCI 111 Environment and Society
One of the following humanities courses: 4
ENGL 126 Environment and Literature
PHIL 035 Environmental Ethics
HIST 052 John Muir’s World: Origins of the Conservation Movement
One of the following field methods courses: 3-4
GEOS 163 Environmental Field Methods
BIOL 193 Methods in Field Biology
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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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.

V. 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.)

VI. 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
- GEOS 043 Environmental Science for Informed Citizens 4

One of the following earth science courses: 4-5
- GEOS 051 Dynamic Planet
- GEOS 053 Earth and Life Through Time
- GEOS 055 Physical Geography
- GEOS 061 Geology of California
- GEOS 065 Regional Geology

Two of the following environmental policy and resource management courses: 7-8
- CIVL 171 Water and Environmental Policy
- ECON 157 Environmental and Natural Resource Economics
- GEOS 045 Soil, Water, and War
- HIST 136 American Environmental History
- INTL 174 Global Environmental Policy
- SOCI 111 Environment and Society

Note: 1) ECON 157 has a prerequisite of ECON 053. 2) No prerequisite of POLS 051 required for INTL 174.

Two of the following humanities courses: 8
- ENGL 126 Environment and Literature
- HIST 052 John Muir’s World
- PHIL 035 Environmental Ethics

One course in statistics 4
- MATH 035 Elementary Statistical Inference
- MATH 037 Introduction to Statistics and Probability

One of the following Practicum courses: 3-4
- GEOS 187 Internship in Geosciences
- MUIR 187 Muir Center Internship
- GEOS 197 Undergraduate Research
- BIOL 197 Undergraduate Research

One of the following concentrations:

Biology Concentration
- BIOL 051 Principles of Biology
- BIOL 061 Principles of Biology

One of the following:
- BIOL 175 Ecology
- BIOL 176 Ecology and Conservation Biology

Two of the following organismal classes
- BIOL 074 Biology of Insects
- BIOL 076 Marine Biology
- BIOL 077 Marine Birds and Mammals
Two of the following natural science courses: 8-10

Minor Requirements:
- point average of 2.0.
- complete a minimum of 20 units and 5 courses with a Pacific minor grade

In order to earn the minor in environmental 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: 4-5
- GEOS 051 Dynamic Planet
- GEOS 053 Earth and Life Through Time
- GEOS 055 Physical Geography
- GEOS 057 Earth Systems 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 than 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 126 Environment and Literature
- PHIL 035 Environmental Ethics
- HIST 052 John Muir’s World: Origins of the Conservation Movement
- HIST 136 American Environmental History

Course Offerings

GEOS 020. Living on Planet Earth (1)
Concurrent seminar for participants in the Residence for Earth and Environmental Living and Learning Community (REELL). Students will investigate their impact on Earth and Environment within the context of guest lectures, discussions, and activities related to global environmental change, carbon footprints, management to natural resources, and sustainability. This course involves fieldwork. Prerequisite: Concurrent enrollment in the REELL community or permission of instructor.

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 Systems 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 processes within and interactions between the systems. The course involves laboratory and field work.

GEOS 061. Geology of California (5)
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 (1-4)

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 involves laboratory work. Prerequisites: an introductory GEOS course; CHEM 023 or 025 or 027.

GEOS 105. Field Studies (1-2)
Field study of geological phenomena in western North America. Minimum of three continuous days on a department-supervised field trip. Students may repeat this course for up to 4 units of credit. Prerequisite: an introductory GEOS course and permission of 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 includes 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 108. Geomorphology (4)
The study of the geomorphologic processes, landform development, and landscape evolution. The course includes field work. Prerequisite: GEOS 051 or permission of instructor.

GEOS 109. 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 110. Igneous and Metamorphic Petrology (4)
A study of the characteristics, occurrence, origin and classification of igneous and metamorphic rocks with an emphasis on plate tectonic setting and the physical and chemical processes of the earth’s interior. Methods include field study, hand specimen and thin section analysis. The course includes laboratory and field work. Prerequisite: GEOS 100 or permission of 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 (may be taken concurrently) or permission of 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 116. 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 GEOS 112.

GEOS 117. Geophysical Methods (4)
The application of geophysical methods to the study of geological processes. This course involves laboratory and field work. Prerequisites: an introductory GEOS course; CHEM 025, MATH 041.

GEOS 118. 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; MATH 051; 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. Prerequisites: 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. Senior standing in the Environmental Science major or permission of 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. Prerequisite: GEOS 163. Senior standing in the Environmental Science major.

GEOS 187. Internship in Geosciences (2-4)

GEOS 191. Independent Study (2-4)

GEOS 193. Special Topics (1-4)

GEOS 197. Undergraduate Research (2-4)

Economics
Phone: (209) 946-2258
Location: WPC 212
Website: 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
Computing and Applied Economics (BS)

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.

1. 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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.

V. 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.)

VI. 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:
MATH 037 Introduction to Statistics and Probability 4
MATH 039 Probability with Applications to Statistics 4

VII. 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

International Track:
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 4
ECON 118 Globalization History: Economic, Environmental, and Demographic Interactions 4
INTL 174 Global Environmental Policy 4
POLS 164 International Political Economy 4

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.

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 2 courses from a single discipline may be applied to meet the requirements of
II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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:
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: 4-12
  a. MATH 033 Elements of Calculus
  b. MATH 051 Calculus I
  c. MATH 053 Calculus II
  d. MATH 055 Calculus III

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 ECON 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

Bachelor of Science
Major in Computing and Applied Economics

In order to earn the bachelor of science degree with a major in computing and applied 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
    1A. Individual and Interpersonal Behavior
    1B. U.S. Studies
    1C. Global Studies
  - Arts and Humanities
    1IA. Language and Literature
    1IB. Worldviews and Ethics
    1IC. Visual and Performing Arts
  - Natural Sciences and Mathematics
    1IA. Natural Sciences
    1IB. Mathematics and Formal Logic
    1IC. 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged...
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 Macroeconomics Analysis 4
ECON 161 Computer Applications in Economics 4
ECON 190 Econometrics 4
One of the following courses: 4
   MATH 037 Introduction to Statistics and Probability
   MATH 039 Probability with Applications to Statistics
MATH 051 Calculus I 4
MATH 053 Calculus II 4
MATH 055 Calculus III 4
COMP 047 Discrete Math for Computer Science 4
COMP 051 Introduction to Computer Science 4
COMP 053 Data Structures 4
COMP 101 Application Programming 4
COMP 157 Design and Analysis of Algorithms 3
ECPE 170 Computer Systems and Networks 4
ECON Electives (2 courses ECON 071 or higher) 8
COMP Electives (2 courses, COMP 041, 127 or higher) 8

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 or 007 or 033 or 041 or 045 or 051 or 053, 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 skills examination or the equivalent SAT Subject Test in Math, or MATH 005 or 007 or 033 or 041 or 045 or 051 or 053, 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; ECON 051 or 055. (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. Prerequisites: ECON 053, MATH 033 or 051.

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 ECON 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. Prerequisites: ECON 053, 055; MATH 033, 051.

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. Prerequisites: ECON 053 and ECON 055 or permission of 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 ECON 055, or permission of 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 ECON 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 ECON 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 ECON 055 or permission of 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, ECON 051 or 055.

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 ECON 055, or permission of 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. Recommended: ECON 101.

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; MATH 033, or permission of 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 instructor. Recommended: some familiarity with computer programming.
ECON 171. Political Economy  (4)
This course begins with an examination of the ideology which underlies Neo-classical 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 051 or ECON 053.

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 183. Health Economics  (4)
This course applies the tools of microeconomics to the study of health care. It provides an analysis of how decisions are made by health care providers, consumers, and third parties responsible for payments (e.g. health insurers). The course is built around individuals’ demand for health care and the supply of services by doctors and hospitals. Topics covered include health insurance, managed care and industry competitions, the pharmaceutical industry, the role of the government as a provider of care, long-term care, international health comparisons, and cost-benefit analysis/cost-effectiveness analysis. Prerequisite: ECON 051 or ECON 053.

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; ECON051 or 055; 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
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. These concentrations are optional and encouraged. 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.

1. 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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.

V. 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.)

VI. Major Requirements
A minimum of 11 courses, adding up to at least 40 units, 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 Writing
ENGL 109 Writing in the Workplace
Electives:
ENGL Five electives (4 additional upper-division courses numbered above 100); one elective may be a lower division survey course or ENGL 031 16-20

VII. Concentration Requirements (Optional)
Minimum 3 courses:
Complete a concentration below: These courses satisfy ENGL electives above.

Creative Writing
Complete three of the following:
ENGL 107 Creative Writing: Nonfiction
ENGL 111 Creative Writing: Fiction and Drama
ENGL 113 Creative Writing: Poetry
ENGL 115 Screenwriting

Professional Writing
Complete three of the following:
ENGL 082 How English Works
ENGL 105 Technical Writing
ENGL 109 Writing in the Workplace
ENGL 182 History of the English Language

English Literature
ENGL 043 British Literature after 1800
Complete two of the following
ENGL 130 Chaucer and His Age
ENGL 131 Shakespeare
ENGL 133 Major British Authors
ENGL 134 Jane Austen
ENGL 141 Topics in British Literature pre-1800
ENGL 143 Topics in British Literature after 1800

American Literature
Complete one of the following:
ENGL 051 American Literature before 1865
ENGL 053 American Literature after 1865
Complete two of the following:
ENGL 135 Major American Authors
ENGL 151 Topics in American Literature before 1865
ENGL 153 Topics in American Literature after 1865
ENGL 161 Topics in American Ethnic Literature

World Literature
ENGL 063 Masterpieces of World Literature
Complete two of the following:
ENGL 122 Literature and Psychology
ENGL 123 Film, Literature, and the Arts
ENGL 125 Critical Colloquium
ENGL 126 Literature and the Environment
ENGL 127 Contemporary Critical Issues
ENGL 128 Science and Literature
ENGL 109 (Writing in the Workplace).

Single Subject Credential in English

Students interested in pursuing certification to teach English at the secondary school level should consult with the English Department Credential Advisor, Dr. Amy Smith.

Course Offerings

ENGL 025. English 25
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. Prerequisite: 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
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
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
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
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
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 may include O’Hara, Ginsberg, O’Connor, Snyder, Morrison, Li-Young Lee, and Alice Walker.

ENGL 063. Masterpieces of World Literature
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
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 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. 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. Junior Standing.

ENGL 107. Creative Writing: Nonfiction (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, Scorcese, 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. This course may be taken twice if it is taught with a different theme in each instance.

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, structural, gender and feminist and deconstructionist perspectives offered by designated English Department members and guest lecturers.

ENGL 126. Literature and the Environment (4)
This course examines the impact of science and technology on society with a focus on the environment. We will explore how literature and writings from the natural and social sciences shape our relationship to nature, transform our understanding of the environment, and engage in debates on issues such as the construction of “wilderness” and colonialist practice, ecological crises and environmental racism, globalization and sustainability, as well as the ethical challenges bioengineering poses to society and humanity.

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 Munro/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 156. 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 162. 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 ENGL 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 (2-4)**
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.

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**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 interdisciplinary learning which equips students with the conceptual and practical skills necessary for participating competently and responsibly in all aspects of civic life, which 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...

**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 grade point average of at least 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:

- 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 pre-requisite 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 189. Service Learning Practicum (2 -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. Prerequisites: 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 (1-4)**

**ETHN 197. Undergraduate Research (2-4)**
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, ETHN 011 and another course in Ethnic Studies.

Additional Ethnic Studies Courses:

**Anthropology (SIS)**
- ANTH 053. Cultural Anthropology
- ANTH 054. Antropología cultural (ANTH 053 in Spanish)
- ANTH 112. Physical Anthropology

**Communication**
- COMM 133. Documentary Film as Persuasive Communication
- COMM 143. Intercultural Communication

**Economics**
- ECON 180. Labor Economics

**Education**
- EDUC 129/229. Cultural Basis of Conflict in Education
- EDUC 163. Teaching English Learners
- EDUC 164/264. Introduction to Bilingual Education: Global Perspective
- EDUC 204. Pluralism in American Education

**English**
- ENGL 025. American Dream: Class and Desire in Film and Literature
- ENGL 025. American Families
- ENGL 025. Between Two Worlds: Exile in Contemporary Literature and 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 126. Environment and Literature
- ENGL 161. Topics in American Ethnic Literature

**Ethnic Studies**
- ETHN 011. Introduction to Ethnic Studies
- ETHN 189. Service Learning Practicum
- ETHN 191. Independent Study
- ETHN 193. Special Topics
- 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. American Immigration
- HIST 134. African American History
- HIST 137. “His-panic” USA
- HIST 139. Borderlands: Life on the US-Mexico Border
- HIST 167. Gender in the History of Science/Medicine/Technology

**Modern Languages and Literature**
- SPAN 124. Escritores hispanos en los Estados Unidos/Hispanic Writers in the U.S.

**Music**
- MUJZ 008. Introduction to Jazz

**Political Science**
- POLS 104. Urban Government
- POLS 134. American Political Thought

**Psychology**
- PSYC 129. Developmental Psychology

**Sociology**
- SOCI 041. Social Problems
- SOCI 061. Urban Society
- SOCI 111. Environment and Society
- SOCI 108. Food, Culture, and Society
- SOCI 123. Sex and Gender
- SOCI 133. Criminology
- SOCI 141. Prejudice and Racism
- SOCI 172. Social Inequality
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 goals of the Film Studies major are as follows:

- Place Film Studies in the context of the Liberal Arts where students analyze the elements of film such as narrative, image, theme and persuasive communication techniques
- Provide hands-on experience with film production in a variety of capacities including, camera, editing, screenwriting, acting, music scoring, and direction
- Provide students with the ability to think critically and communicate effectively, recognizing the central role of film and narrative in civic society
- Locate film as a cultural artifact that both represents and constructs historical, socio-economic, political and psychological meaning
- Focus on film aesthetics, international cinemas, individual major filmmakers, film genres, film history and key events in the technological and cultural evolution of cinema
- Develop visual literacy for readings of individual films with attention to editing, camera, shot composition, lighting and sound

The learning outcomes of this major are as follows:

- Identify and apply a variety of critical theoretical approaches and film aesthetics in writing on filmic texts
- Create films using the skills acquired in the production courses
- Operate a variety of film technology including: camera, editing equipment, lighting, and audio equipment
- Assemble groups of students to collaborate on developing and producing scripts and films
- Select an appropriate film format or genre for their productions
• Identify the aesthetic and persuasive messages in their productions as well as in classic and contemporary films

*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 48 units drawn from departments that include English, Visual Arts, Modern Language and Literature, Communication, Religious and Classical Studies and Theater Arts. Self-Designed major forms are available in the Academic Affairs Office of the College (WPC 111). Students pursuing a Self-Designed major in the College work with at least two faculty advisors and may select advisors from two different departments.

*The Minor:* A minimum of five courses and 20 units including the required core course ENGL 031-Aesthetics of Film with a Pacific grade point average of 3.0.

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### 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 4  
- **Electives** Four from the other approved courses list 16

**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 (4)**  
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.

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### Other Approved Gender Studies Courses

Please see the appropriate departments for course descriptions of the following:

- **ARTH 112.** 19th Century European Art  
- **ARTH 114.** 20th Century Art and Film  
- **ARTH 116.** Contemporary World Art 1945-Present  
- **ARTH 118.** Art in the United States: 1865 – 1945  
- **ARTH 124.** Sex, Gender and the Arts  
- **CLAS 120.** Sexuality in Greek Society  
- **CLAS 122.** Sexuality in Roman Society  
- **ENGL 025.** Desire/Power/Gender  
- **ENGL 025.** Dementors, Desire, and Medievalism  
- **ENGL 025.** Black Women Writers  
- **ENGL 025.** Sex, Story, and Cinema  
- **ENGL 025.** Multiethnic American Literature  
- **ENGL 025.** Sport and Scandal
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 the Chair’s seminar and 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, 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

**II. Diversity Requirement**
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

**III. 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.

**IV. 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.

**V. 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.).

**VI. Major Requirements**
Minimum 45 units and 12 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 and transnational courses:
HIST 060 A History of Medicine
HIST 061 Global History of Food
HIST 062 History of Warfare
HIST 065 Women and War
HIST 139 Borderlands

One of the following Environment and Science courses:
HIST 052 John Muir’s World: Origins of the Conservation Movement
HIST 063 History of Science and Technology
HIST 136 American Environmental History
HIST 167 Gender in History of Science/Medicine/Technology

One of the following pre-modern Europe or classics courses:
HIST 100 Renaissance and Reformation
HIST 101 Tudor and Stuart England
HIST 102 The Spanish Empire
HIST 105 History of Ancient Greece
HIST 106 History of Ancient Rome

One of the following 20th century Europe courses:
HIST 111 Europe in Turmoil 1900-1945
HIST 112 History of the Holocaust
HIST 113 Europe Since 1945
HIST 114 Modern Germany
HIST 119 History Goes to Hollywood

One of the following Early North America courses:
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:
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 137 “His-panic” USA

One of the following Asia courses:
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:
HIST 040 Colonialism in Latin America
HIST 041 The Problem with Latin America
HIST 150 Women in Latin America
HIST 151 People’s History of Mexico
When freshmen, it is recommended that students take:

HIST 001 Chair’s Seminar

When sophomores, students must take:

HIST 070 Historical Imagination

When seniors, students must take:

HIST 160 Pacific History Seminar (Capstone)

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 thematic 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.

Minor in Public History and Museum Studies

(Also open to History majors)

In order to earn the minor in public history and museum studies, students must complete 6 courses and a minimum of 20 units, with a Pacific minor grade point average of 2.0.

Minor Requirements:

HIST 070 Historical Imagination 4
HIST 160 Pacific History Seminar (Capstone) 4
HIST 080 Introduction to Public History and Museum Studies 4
HIST 187 Internship (to be completed in an approved public history setting) 2-4
Electives 2 additional courses from the following: HIST 191 Independent Study (of an approved public history field); an approved HIST course from existing listings and including a public history project (such as HIST 112, HIST 121, HIST 122, HIST 123, HIST 132, HIST 133, HIST 134, HIST 135, HIST 136, HIST 137, HIST 140, HIST 144, HIST 151, and HIST 167); COMM 133 Documentary Film as Persuasive Communication; COMM 133B-01

Note: 1) 10 units must be completed at Pacific; 2) Special Topics Courses may satisfy elective requirements with departmental approval.

Below are the recommended coursework options for the BA in Social Sciences for preparation for the CSET-Social Sciences examinations.

Bachelor of Arts
Major in 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 advisor. Please see the College of the Pacific Social Science advisor for a list of specific course recommendations for all courses required for the major. It is recommended (but not required) that freshmen and newly declared majors take HIST 001 Chair’s Seminar.

In order to earn the bachelor of arts degree with a major in social 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 16 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
IIA. Natural Sciences
IIB. 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in
III. 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.

IV. 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.

V. 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.)

VI. Major Requirements

ECON 051 Economic Principles and Problems  3
HIST 020 United States History I  4
HIST 021 United States History II  4
HIST 130 History of California  4
INTL 113 World Geography for the Social Sciences  4
POLS 041 U.S. Federal Government and Politics  4
One of the following groups of World History courses:  8
  a. HIST 010 Western Civilization I
     HIST 011 Western Civilization II
  b. HIST 050 World History I
     HIST 051 World History II
One of the following non-U.S., non-European courses:  4
HIST 030 East Asian Civilization I
HIST 031 East Asian Civilization II
HIST 040 Latin American Civilization I
HIST 041 Latin American Civilization II
HIST 151 History of Mexico
Two of the following basic sociology courses:  8
  SOCI 021 Culture and Society
  SOCI 031 Deviant Behavior
  SOCI 051 Introduction to Sociology
  SOCI 071 Foundations of Sociology
One of the following analysis courses:  4
  ANTH 053 Cultural Anthropology
  SOCI 079 Social Psychology
  SOCI 093 Environment and Society
  SOCI 108 Food and Society
  SOCI 123 Sex and Gender
  SOCI 125 Health and Illness
  SOCI 141 Prejudice and Racism
One of the following local government courses:  4
  POLS 104 Urban Government
  POLS 106 California Government and Politics
One of the following courses:  4
  POLS 051 International Politics
  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 United States Foreign Policy
  POLS 172 Intern American Relations

Recommended for CSET (Optional)
  CURR 105X Introduction to Education

One of the following psychology courses:
  PSYC 031 Introduction to Psychology
  PSYC 131 Adolescence and Young Adulthood

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

Recommended Course

HIST 001. Chair’s Seminar (1)

This course provides freshmen with some essential skills for success in either the History or Social Science major at Pacific. Topics include study, research and writing skills, internships and career planning. Along the way, freshmen are introduced to department faculty, staff, librarians (who they will come to know and love) and their fellow students.

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 Reagan 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 Apocalypto aptly ends at the fist 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 globalizations 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.

**Global and Transnational Courses**

**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. 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 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 139. Borderlands (4)
The relationship between Mexico and the United States has been one of conflict and coexistence, 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.

Environment and Science Courses

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 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 136. American Environmental History (4)
Topical survey of historical roots of environmental crises in contemporary North America beginning with western concepts of natural history. Major 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 167. Gender in the History of Science/Medicine/Technology (4)
This course introduces students to the literature on gender in the history of science, technology, and medicine. Students will learn how to use gender to analyze scientific practice and examine not only the ways it intersects with other historical categories such as race, ethnicity, sexuality, class, and nationality. 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 between 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.

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 long-term 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. History of Ancient Greece (4)
(Religious and Classical Studies Dept.)

HIST 106. History of Ancient Rome (4)
(Religious and Classical Studies Dept.)

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. 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
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.

HIST 119. History Goes To Hollywood (4)
This course examines how films shape our understanding of certain historical events. It will provide students with the tools to watch films critically and to place them in the context of a broader historical time period. The films selected will cover different time periods from the ancient to the modern world and will portray a variety of national and cultural contexts.

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 17th 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 128. 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.

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 19th and 20th 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 women 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.
events, individuals and ideas that shaped this tumultuous period. We will as the next superpower. In this course, you will gain specialized knowledge of a communist party but the newly assertive nation is now heralded by many aged to achieve the heroic modernity imagined by its fervent patriots. The lapsed in 1911 was replaced with a constitutional republic that never man-

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 fail-

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This course focuses on the U.S. since World War II. We will explore how the diplomatic, economic, social, and political changes shaped U.S. culture and society. Specifically, the course examines the origins and characteristics (both domestic and international) of the Cold War, the United States' expanding role as a super power, the struggles and legacies of the Civil Rights Movement, the emergence of the “culture wars,” and the significance of United States' increasing racial, ethnic, religious, sexual, gender, and class diversity. Moreover, we will consider past choices inform current debates such as those regarding the war on terror, immigration, and social reform.

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. Imperial China (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. 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, politics and policies, noted statesmen and rebels, 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 fail-

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.

HIST 080. Introduction to Public History and Museum Studies (4)
This course is an introductory seminar in public history focusing on local and national history. Through readings, discussions, guest lectures, and museum visits, students will learn about various types of public history and deepen their knowledge of historical methods. The course’s experiential learning component will give students the opportunity to talk with people who do public history and try their hand at public history work.

HIST 187. Internship (2-4)
Experiential Learning Opportunity. This may not be substituted for an upper level course.

HIST 191. Independent Study (2-4)

HIST 093, 193. Special Topics (1-4)/(4)
Experiential Learning Opportunity.

Jacoby Center for Public Service and Civic Leadership

Phone: (209) 946-7444
Location: WPC 242
Website: 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 2
  (Internship in a non-profit or governmental organization)

**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
  - SLP A051 Introduction to Communication Disorders
  - SLP A127 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

**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
  - POLS 104 Urban Government
  - POLS 106 California Government and Politics
  - SOCI 061 Urban Society
  - One of the following methods courses: 4
    - COMM 160 Communication Research Methods
    - ECON 161 Computer Application in Economics
    - ECON 190 Econometrics
    - POLS 133 Political Science Research
    - SOCI 171 Social Research Methods
    - SPTS 179 Intro to Research
  - Two of the following courses: 8
    - COMM 143 Intercultural Communication
    - ECON 131 Public Finance
    - ECON 151 Urban Economics
    - ECON 193 Special Topics
    - ETHN 164 Ghetto Life
    - SOCI 181 Delivery of Social Sciences
    - SPTS 141 Sport in America
  - 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 advisor 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.
John Muir Center

Phone: (209) 946-2527
Location: WPC 99
Website: go.pacific.edu/johnmuir
Director: W. R. Swagerty

Program Description
John Muir Center (established in 1989) serves as a liaison between Pacific and the community on environmental issues. This internship is designed to accommodate a broad variety of interests in experiential learning, from library and museum work, to placement with local, state, and federal agencies focusing on environmental policy, research, and education.

Course Offerings
MUIR 187. Internship (2-4)
Supervised experiential learning opportunity (ELO) in (a) library/museum research and operations on a subject connected with John Muir’s life or legacy; (b) field work or office setting within an environmental organization; federal, state, or local environmental agency; or educational work through an environmental institute or institution, to be contracted on an individual basis. Sophomore standing and permission of supervisor.

Mathematics

Phone: (209) 946-2347
Location: Main Office in CR 106
Website: www.pacific.edu/college/math
Dennis Parker, 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 fundamental 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 advisor. 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 Bennerd School of Education offers developmental skill courses in the areas of fundamental 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 advisor 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
- Natural Sciences and Mathematics
- Arts and Humanities
- Social and Behavioral Sciences

**II. Diversity Requirement**

Complete one diversity course 3-4

**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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

**III. 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.

**IV. 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.

**V. 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.)

**VI. 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:

- MATH 037 Introduction to Statistics and Probability 4
- MATH 131 Probability and Mathematical Statistics I 4

One of the following courses:

- MATH 141 Linear Algebra 4
- MATH 145 Applied Linear Algebra 4

One of the following courses:

- MATH 143 Abstract Algebra I 4
MATH 155  Real Analysis I
Three MATH electives:
    MATH Electives (excluding MATH 033, 035, 041, 045, 161, and 162) Minimum 3 units each. 9-12

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 3 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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 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

1. BA for Single Subject Math with CSET (California Subject Exams for Teachers)
   Core:
    MATH 049  Introduction to Abstract Mathematics
    MATH 051  Calculus I
    MATH 053  Calculus II
    MATH 055  Calculus III
    MATH 141  Linear Algebra
    MATH 143  Abstract Algebra I
   One Probability and Statistics course:
    MATH 037  Introduction to Statistics and Probability
    MATH 131  Probability and Mathematical Statistics I
   Recommended Electives:
    MATH 164  Topics in the History of Mathematics
    MATH 166  Mathematics Concepts for Secondary Education
    MATH 168  Modern Geometries

2. BS for Single Subject Math with CSET
   Core:
    MATH 049  Introduction to Abstract Mathematics
    MATH 051  Calculus I
    MATH 053  Calculus II
    MATH 055  Calculus III
    MATH 141  Linear Algebra
    MATH 143  Abstract Algebra I
    MATH 155  Real Analysis I
Recommended Electives:
- MATH 037 Introduction to Statistics and Probability
- MATH 072 Operations Research Models
- MATH 074 Discrete and Combinatorial Mathematics
- 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 037 Introduction to Statistics and Probability
- MATH 049 Introduction to Abstract Mathematics
- MATH 051 Calculus I
- MATH 053 Calculus II
- 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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 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:
- MATH 049 Introduction to Abstract Mathematics
- MATH 057 Applied Differential Equations I: ODEs

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
- 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

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 advisor.

**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:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 049</td>
<td>Introduction to Abstract Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>MATH 051</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 053</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 141</td>
<td>Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td>One of the following courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 037</td>
<td>Introduction to Statistics and Probability</td>
<td>4</td>
</tr>
<tr>
<td>MATH 039</td>
<td>Probability with Applications to Statistics</td>
<td></td>
</tr>
<tr>
<td>MATH 055</td>
<td>Calculus III</td>
<td></td>
</tr>
<tr>
<td>MATH 057</td>
<td>Applied Differential Equations I: ODEs</td>
<td></td>
</tr>
<tr>
<td>MATH 072</td>
<td>Operations Research Models</td>
<td></td>
</tr>
<tr>
<td>MATH 074</td>
<td>Discrete and Combinatorial Mathematics</td>
<td></td>
</tr>
<tr>
<td>One of the following courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 110</td>
<td>Numerical Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH 131</td>
<td>Probability and Mathematical Statistics I</td>
<td></td>
</tr>
<tr>
<td>MATH 132</td>
<td>Probability and Mathematical Statistics II</td>
<td></td>
</tr>
<tr>
<td>MATH 143</td>
<td>Abstract Algebra I</td>
<td></td>
</tr>
<tr>
<td>MATH 148</td>
<td>Cryptography</td>
<td></td>
</tr>
<tr>
<td>MATH 152</td>
<td>Vector Analysis</td>
<td></td>
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<tr>
<td>MATH 154</td>
<td>Topology</td>
<td></td>
</tr>
<tr>
<td>MATH 155</td>
<td>Real Analysis I</td>
<td></td>
</tr>
<tr>
<td>MATH 157</td>
<td>Applied Differential Equations II</td>
<td></td>
</tr>
<tr>
<td>MATH 164</td>
<td>Topics in the History of Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH 166</td>
<td>Mathematical Concepts for Secondary Education</td>
<td></td>
</tr>
<tr>
<td>MATH 168</td>
<td>Modern Geometries</td>
<td></td>
</tr>
<tr>
<td>MATH 174</td>
<td>Graph Theory</td>
<td>3-4</td>
</tr>
</tbody>
</table>

**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:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 035</td>
<td>Elementary Statistical Inference</td>
<td>4</td>
</tr>
<tr>
<td>MATH 037</td>
<td>Introduction to Statistics and Probability</td>
<td></td>
</tr>
<tr>
<td>One of the following courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 051</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 053</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 130</td>
<td>Topics in Applied Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 131</td>
<td>Probability and Mathematical Statistics I</td>
<td>4</td>
</tr>
<tr>
<td>Two additional courses relevant to statistics (at least 3 units each)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 037</td>
<td>Introduction to Statistics and Probability</td>
<td>4</td>
</tr>
<tr>
<td>MATH 039</td>
<td>Probability with Applications to Statistics</td>
<td></td>
</tr>
<tr>
<td>MATH 131</td>
<td>Probability and Mathematical Statistics I</td>
<td></td>
</tr>
<tr>
<td>One of the following courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 051</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 053</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 145</td>
<td>Applied Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td>Two additional courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 074</td>
<td>Discrete and Combinatorial Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH 174</td>
<td>Graph Theory</td>
<td></td>
</tr>
<tr>
<td>MATH Electives:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two Electives, see notes below</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: 1) Electives are to be chosen in consultation of a minor advisor. 2) Units earned for MATH 033, 035, 037, 039, 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 MATH 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 pro-
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 053 or has AP credit in Statistics. Prerequisite: MATH 003 or 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 instructor.

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 151. 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 student has AP Calculus credit. Prerequisite: 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 AP Calculus credit. Prerequisite: 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 MATH 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 instructor.

MATH 051. Calculus I (4)
Differential calculus of algebraic and elementary transcendental functions. Anti-derivatives, introductory definite integrals, and the Fundamental Theorem 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. Prerequisite: MATH 007 or MATH 041 or four years of high school mathematics including Trigonometry and an appropriate score on the placement test or permission of instructor.

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)

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 an 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, 089A. 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 089A will ordinarily participate in more sophisticated projects and take a more responsible role than students in MATH 089A. Pass/No credit. Prerequisite: MATH 033 or 045 or 051, or an appropriate score on the calculus placement test.

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 103. 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 MATH 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 cryptography 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. Prerequisite: MATH 053 or permission of instructor.

MATH 152. Vector Analysis (4)

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 MATH 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 (4)

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 higher, or appropriate score on the algebra placement tests. Not open to freshman. This course does not count as an elective for a BS 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 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. Prerequisite: MATH 053. Junior standing or permission of 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 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. Prerequisite: MATH 051 or MATH 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  (1-4)
MATH 197. Undergraduate Research  (2-4)

Modern Language and Literature
Phone: (209) 946-2291
Location: WPC 1st floor – Annex
Website: 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
  Hispanic 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. 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 of the above 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 (BA) degree. Students who transfer to University of the Pacific with sophomore standing or above, or who seek a Bachelor of Science (BS) degree or a Bachelor of Fine Arts (BFA) 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 (011B) 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 coursework. As with all subjects, students must get prior approval before taking coursework 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, as well as volunteer service opportunity.

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 coursework. Students may petition the department to count additional units from abroad. These petitions will be considered on a case-by-case basis. All majors 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 online 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 and transfer students with a second major in the department of Modern Languages and Literature).

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 cross-listed courses such as the History of French Cinema. All courses in French unless otherwise specified.

The BA 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACS 001</td>
<td>Pacific Seminar 1: What is a Good Society?</td>
<td>4</td>
</tr>
<tr>
<td>PACS 002</td>
<td>Pacific Seminar 2: Topical Seminar</td>
<td>4</td>
</tr>
<tr>
<td>PACS 003</td>
<td>Pacific Seminar 3: The Ethics of Family, Work, and Citizenship</td>
<td>3</td>
</tr>
</tbody>
</table>

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
Bachelor of Arts
Major in French
Concentration in French Studies

In order to earn the bachelor of arts 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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 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 Seminar 2

Note: 1) 3 of these advanced courses must be completed at Pacific and one of these must be completed upon returns from study abroad. 2) At least one semester of study abroad in a French-speaking country is strongly urged.

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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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 9 courses, including:

- FREN Electives (5 courses above FREN 025) 20
- LANG 195 Capstone Seminar 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 such as:

- 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: 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 BA 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
- IIIIC. Science, Technology, and Society
- or a second Natural Science

II. Diversity Requirement

Complete one diversity course 3-4

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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

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 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
- IIIIC. Science, Technology, and Society
- or a second Natural Science

II. Diversity Requirement

Complete one diversity course 3-4

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) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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.
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
IIA. Natural Sciences
IIB. 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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 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 Civilización 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
IIA. Natural Sciences
IIB. 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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 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 avanzada 4
- SPAN 103 Introducción a la literatura hispánica 4
- SPAN 110 Civilización hispanoamericana 4
- SPAN 112 Civilización española 4
- SPAN 114 Cine hispano 4
One of the following courses:
- SPAN 133 Don Quijote 4
- SPAN 135 Literatura hispanoamericana del siglo XX 4
- SPAN 140 Traducción 4
- ANTH 054 Antropología cultural (taught in Spanish) 4
- LANG 195 Capstone Seminar 2
Elective courses to reach 34 units required in the major:
- SPAN 027 Conversación
- LANG 087 Internship
- SPAN 124 Escriptores hispanos en Los Estados Unidos
- SPAN 128 Teatro hispánico
- HIST 040 Colonialismo en Latin America
- HIST 041 El Problema con Latin America
- HIST 150 Women in Latin America
- HIST 151 People's History of Mexico

Asian Language and Studies
Bachelor of Arts
Major in Asian Language and Studies
Concentration in Chinese

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 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. 2) No more than 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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 34 units, including:
- CHIN 023 Intermediate Chinese, Third semester 4
- CHIN 025 Intermediate Chinese, Fourth 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 advisor) may be completed while studying in China/Taiwan.

Four of the following courses: 16
- ASIA 120 Asian Cinemas
- ASIA 124 Society, Gender and 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 China to 1840
- HIST 142 Modern Chinese History
- RELI 135 Asian Religious Tradition
- RELI 152 Confucian Traditions
- POLS 152 Politics of Asia
- ASIA 120 Asian Cinemas
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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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 34 units, including:

- JAPN 023 Intermediate Japanese, Third semester 4
- JAPN 025 Intermediate Japanese, Fourth 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 advisor) may be completed while studying in Japan.

Four of the following courses: 16

- ASIA 120 Asian Cinemas
- ASIA 124 Society, Gender and 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 Traditions
- 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
- Two courses from the following: 8
  - ASIA 120 Asian Cinemas
  - ASIA 124 Society, Gender and 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 China to 1840
  - HIST 142 Modern Chinese History
  - RELI 135 Asian Religious Traditions
  - RELI 152 Confucian Traditions
  - POLS 152 Politics of Asia

Note: 1) At least 3 of the minor courses must be taken in the Department of Modern Language and other departments approved by MLL. 2) Approved semester or year-long program in China or Taiwan recommended. 3) Students can waive 8 minor units if they have already satisfied first and second semester language.

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
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 courses: 8
  - ASIA 120 Asian Cinemas
  - ASIA 124 Society, Gender and 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 Traditions
  - POLS 152 Politics of Asia
  - RELI 152 Confucian Traditions

Note: 1) At least 3 of the minor courses must be taken in the Department of Modern Languages and other departments approved by MLL. 2) A minimum of 12 units must be completed at the University of the Pacific. 3) Students can waive 8 minor units if they have already satisfied first and second semester language.

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)

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
- One of the following courses: 4
  - RUSS 120 Contemporary Russian Film
  - RUSS 073 Russian Culture and Civilization
  - RUSS 191 Independent Study

One of the following courses: 4
- POLS 051 International Politics
- ECON 071 Global Economic Issues
- RUSS 193 Special Topics

Note: 1) 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.

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)
An introductory course on Asian films, focusing on how 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. Possible topics include the relationship between film and literary/cultural discourses, and traditional aesthetic praxis; different film genres; visual images and cinematic techniques; and various thematic concerns. Aims to both expand the knowledge of the cinematic and socio-historical contexts of Asian cinemas and to enhance critical thinking. Lectures and readings in English; all films have English subtitles.

ASIA 124. Society, Gender and Culture in East Asia (4)
The course focuses on the major social, gender and cultural issues in contemporary China, Japan and South Korea in the global and local political and economic contexts. It takes a multidisciplinary approach in reading and examining theoretical, literary and filmic texts. The course satisfies Asian Language & 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.

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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
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<tbody>
<tr>
<td>LANG 191</td>
<td>Independent Study</td>
<td>(2-4)</td>
<td>Ted</td>
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<tr>
<td>LANG 193</td>
<td>Special Topics</td>
<td>(1-4)</td>
<td>Ted</td>
</tr>
<tr>
<td>LANG 195</td>
<td>Capstone Seminar</td>
<td>(2)</td>
<td>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. Open to all MLL majors with senior standing only, or permission of instructor.</td>
</tr>
<tr>
<td>LANG 197</td>
<td>Undergraduate Research</td>
<td>(2-4)</td>
<td>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.</td>
</tr>
<tr>
<td>CHIN 011A</td>
<td>First-Year Chinese, First Semester</td>
<td>(4)</td>
<td>Beginning training in the basic language skills of listening, speaking, reading and writing at the first semester level. Cultural approach. Laboratory.</td>
</tr>
<tr>
<td>CHIN 011B</td>
<td>First-Year Chinese, Second Semester</td>
<td>(4)</td>
<td>Training in the basic language skills of listening, speaking, reading and writing at the second semester level. Cultural approach. Laboratory. Prerequisite: CHIN 011A or permission of instructor.</td>
</tr>
<tr>
<td>CHIN 023</td>
<td>Intermediate Chinese, Third Semester</td>
<td>(4)</td>
<td>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 instructor.</td>
</tr>
<tr>
<td>CHIN 025</td>
<td>Intermediate Chinese, Fourth Semester</td>
<td>(4)</td>
<td>A continuation of cultural themes begun in Ch. Chinese culture and society through readings, videos, conversations on Chinese cultural behaviors and social issues. Continued emphasis on developing critical thinking as well as proficiency of 4-skills in Chinese language at the intermediate level. Prerequisite: CHIN 023 or permission of instructor.</td>
</tr>
<tr>
<td>CHIN 125</td>
<td>Advanced Chinese I</td>
<td>(4)</td>
<td>Selective readings in Chinese that focus on traditions and social issues in contemporary Chinese speaking regions (China &amp; Taiwan). Continuous training in reading, writing and conversation at advanced level. Prerequisite: CHIN 025 or permission of instructor.</td>
</tr>
<tr>
<td>CHIN 126</td>
<td>Advanced Chinese II</td>
<td>(4)</td>
<td>Selective readings in Chinese that focus on Chinese literature and culture. Continues training in reading, writing and conversation at advanced level. Prerequisite: CHIN 125 or permission of instructor.</td>
</tr>
<tr>
<td>CHIN 191</td>
<td>Independent Study</td>
<td>(2-4)</td>
<td>Ted</td>
</tr>
<tr>
<td>CHIN 193</td>
<td>Special Topics</td>
<td>(1-4)</td>
<td>Ted</td>
</tr>
<tr>
<td>FREN 011A</td>
<td>First-Year French, First Semester</td>
<td>(4)</td>
<td>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. Prerequisite: FREN 011A or permission of instructor.</td>
</tr>
<tr>
<td>FREN 011B</td>
<td>First-Year French, Second Semester</td>
<td>(4)</td>
<td>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 instructor.</td>
</tr>
<tr>
<td>FREN 023</td>
<td>Intermediate French, Third Semester</td>
<td>(4)</td>
<td>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 instructor.</td>
</tr>
<tr>
<td>FREN 025</td>
<td>Intermediate French, Fourth Semester</td>
<td>(4)</td>
<td>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 instructor.</td>
</tr>
<tr>
<td>FREN 051</td>
<td>French Literature in English</td>
<td>(4)</td>
<td>A study of selected themes, periods, and genres in French and Francophone literature. For specific topics, see FREN 124, FREN 122, and FREN 128. Readings, discussions, lectures, and exams in English. Applicable to French Studies Majors.</td>
</tr>
<tr>
<td>FREN 107</td>
<td>Introduction to French of Business and Economics</td>
<td>(4)</td>
<td>Studies in French language with a focus on the cultures of business, politics, and social science. Course uses mass media and documents from business and world events to prepare students for work in professional settings. Prerequisite: FREN 025 or permission of instructor.</td>
</tr>
<tr>
<td>FREN 110</td>
<td>Grammaire, Composition et Discussion</td>
<td>(4)</td>
<td>Essential principles of written and oral expression in French at the advanced level, focusing on essays, non-fiction, current events, film, and other media. Prerequisite: FREN 025 or permission of instructor.</td>
</tr>
<tr>
<td>FREN 112</td>
<td>Civilisation Française A</td>
<td>(4)</td>
<td>Topics in the culture and civilization of France from the Middle Ages through the 17th century, including scholastic and gothic cultures; Renaissance connections around the world; politics and the arts; and court culture of the Sun King. Prerequisite: FREN 025 or permission of instructor.</td>
</tr>
<tr>
<td>FREN 114</td>
<td>Civilisation Française B</td>
<td>(4)</td>
<td>Topics in the culture and civilization of France from the 18th century to the present, including philosophers and revolutionaries; development of literary culture; avant-gardes; multi-cultural France; the French nation within Europe. Prerequisite: FREN 025 or permission of instructor.</td>
</tr>
<tr>
<td>FREN 116</td>
<td>Littérature Française A</td>
<td>(4)</td>
<td>Cour et Coeur: An introductory study of French literature from the Middle Ages through the 18th century. Includes works by Chrétiens de Troyes, Marie de France, Rabelais, Villon, Louise Labbé, Montesquieu, Voltaire, Mme de Staël, Rousseau, Graftigny, Diderot, Beaumarchais, and others. Prerequisite: FREN 025 or permission of instructor.</td>
</tr>
<tr>
<td>FREN 118</td>
<td>Littérature Française B</td>
<td>(4)</td>
<td>Révolutions artistiques, politiques, et sociales: An introductory study of French literature from the 19th century to the present. Includes works by Balzac, Mme de Duras, Sand, Flaubert, Zola, Proust, Colette, Gide, Wittig, Modiano, and others. Prerequisite: FREN 025 or permission of instructor.</td>
</tr>
<tr>
<td>FREN 120</td>
<td>Le Cinéma Français/French Cinema in English</td>
<td>(4)</td>
<td>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, Mélès, Vigo, Gance, Renoir, Carné, Godard, Truffaut, Resnais, Chabrol, Tavernier, 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 instructor.</td>
</tr>
</tbody>
</table>
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. Prerequisite: GERM 011A or permission of instructor.

GERM 023. Intermediate German, Third Semester (4)
A continuation of the cultural themes begun in GERM 023. 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 instructor.

GERM 191. Independent Study (2-4)
Ordinarily limited to majors in their senior year.

Japanese

JAPN 011A. First-Year Japanese, First Semester (4)
Beginning training in the basic language skills of listening, speaking, reading and writing at the first semester level. Cultural approach. Laboratory.

JAPN 011B. First-Year Japanese, Second Semester (4)
Training in the basic language skills of listening, speaking, reading and writing at the second semester level. Cultural approach. Laboratory. Prerequisite: JAPN 011A or permission of instructor.

JAPN 023. Intermediate Japanese, Third Semester (4)
Japanese culture and society through readings, videos, conversations on Japanese cultural behaviors and social issues. Emphasis on developing critical thinking as well as proficiency of 4-skills in Japanese language at the intermediate level. Prerequisite: JAPN 011B or permission of instructor.

JAPN 025. Intermediate Japanese, Fourth Semester (4)
A continuation of cultural themes begun in JAPN 023. Japanese culture and society through readings, videos, conversations on Japanese cultural behaviors and social issues. Continued emphasis on developing critical thinking as well as proficiency of 4-skills in Japanese language at the intermediate level. Prerequisite: JAPN 023 or permission of instructor.

JAPN 125. Advanced Japanese I (4)
Selective readings in Japanese that focus on traditions and social issues in contemporary Japan. Continues training in reading, writing and conversation at advanced level. Prerequisite: JAPN 025 or permission of instructor.

JAPN 126. Advanced Japanese II (4)
Selective readings in Japanese that focus on Japanese literature and culture. Continues training in reading, writing and conversation at advanced level. Prerequisite: JAPN 025 or permission of 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 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 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.

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 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 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 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 1980s 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 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 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 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 instructor.

SPAN 029. Lengua hispanohablantes (4)
Study of both the formal use of Spanish by heritage speakers and the diverse cultures of Latin American communities in the United States. Through literature, art, music, cinema and essay students will hone their skills in writing, grammar, orthography, and advanced reading comprehension, while learning about standard versus vernacular usages, and cross language interference. Prerequisite: Native speaking ability in Spanish. Note: Meets College of the Pacific language requirement.

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 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 025 or 101 or permission of 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 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 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 and SPAN 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 SPAN 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 (1-4)

Pacific Legal Scholars Program

Phone: (209) 946-2194
Location: WPC 138
Website: www.go.Pacific.edu/LegalScholars
Cindy Ostberg, Director

Program Description
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. Students work with the program director to design an individualized curriculum based on each student's track and chosen major. The Legal Scholars Program is designed to work with any major to prepare students for advanced legal study (Note: some majors require a 4+3 track). To qualify for the 3+3 program, students must have a 3.5 unweighted, high school GPA and a 1320 SAT, while those in the 4+3 program must have a 3.5 unweighted, high school GPA and a 1320 SAT.

Program Requirements
To complete the undergraduate part of the program, qualified students must complete all major and general education course requirements, 3 seminar classes for law school preparation, an upper-division law course, and a number of off-campus law-related activities. Students in the 4+3 track must complete 60 units on the Stockton campus, while those in the 3+3 track must complete 75 units on the Stockton campus.

Law Seminars

Law Course Requirements

POLS 060. Legal Study Seminar (1)
An introduction to the legal profession, court structure, and practical skills needed for law school. The course also examines current problems in different fields of law through panel discussions by law faculty. Pacific Legal Scholar Student.

POLS 062. Legal Practice Seminar (1)
An examination of different legal career trajectories, legal scholarship, and career exploration. The course also draws connections between academic training and legal practice through panel discussions by legal practitioners, and courthouse visits. Pacific Legal Scholar Student.

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. Prerequisites: POLS 060 and POLS 062. Pacific Legal Scholar Student with junior or Senior standing and an overall GPA of 3.0, or permission of instructor. This course must be taken in the summer after the Junior year (regardless of whether a students in the 3+3 or 4+3 program).

Upper-Division Law Course (4)
Students must complete one upper division law course from the following list or one approved by the Director of the Program: POLS 122, 124, 126, BUSI 127, 157, 159, 167, MMGT 153, INTL 167, and SPTS 165 (4).
Philosophy

Phone: (209) 946-2281
Website: www.pacific.edu/college/philosophy
Ray Rennard, 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 (meta-ethics). The departmental offerings are grouped as follows:

A. Introductory Course: Introduction to Philosophy
B. Formal Reasoning Course: Introduction to Logic
C. Historical Courses: Ancient & Medieval Philosophy; History of Modern Philosophy
D. Specialized Courses: Moral Problems; The Meaning of Life; Fundamentals of Ethics; Environmental Ethics; Philosopher in Depth; Philosophy of Science; Philosophy of Law; Philosophy of Mind; Philosophy of Language; Philosophy of Religion; Political Philosophy; Biomedical Ethics, Special Topics
E. Systematic Courses: Metaphysics; Theory of Knowledge; Meta-Ethics: What Is Morality?

Typical First Year Program

During the freshman year a student interested in pursuing the philosophy major is especially encouraged to take PHIL 011-Introduction to Philosophy, PHIL 037-Introduction to Logic, and one of the following ethics courses: PHIL 021-Moral Problems; PHIL 027-Fundamentals of Ethics; and PHIL 035-Environmental Ethics.

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 2 courses from a single discipline may be applied to meet the requirements of the general education program.
II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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 at the front of this catalog.

V. 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.)

VI. Major Requirements
Minimum 33 units and 9 courses, including:
PHIL 011 Introduction to Philosophy 4
PHIL 037 Introduction to Logic 4
Both of the following historical courses: 8
PHIL 053 Ancient and Medieval Philosophy
PHIL 055 History of Modern Philosophy
Three of the following specialized courses: 12
PHIL 021 Moral Problems
PHIL 025 Meaning of Life
PHIL 027 Fundamentals of Ethics
PHIL 035 Environmental Ethics
PHIL 047 Philosopher In Depth
PHIL 061 Philosophy of Science
PHIL 106 Philosophy of Law
PHIL 121 Philosophy of Mind
PHIL 122 Philosophy of Language
PHIL 124 Philosophy of Religion
PHIL 135 Political Philosophy
PHIL 145 Biomedical Ethics
PHIL 193 Special Topics
Two of the following systematic courses: 8
PHIL 180 Metaphysics
PHIL 182 Theory of Knowledge
PHIL 184 Meta-Ethics: What Is Morality?

Note: 1) 6 of these courses must be completed at Pacific. 2) POLS 130 and POLS 132 are accepted as substitutes for PHIL 135. However, a student cannot get credit toward the philosophy major for taking more than one of these. 3) RELI 145 is accepted as a substitute for PHIL 145.

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. 2) POLS 130 and POLS 132 are accepted as substitutes for PHIL 135. However, a student cannot get credit toward the philosophy minor for taking more than one of these. 3) RELI 145 is accepted as a substitute for PHIL 145.

Course Offerings

PHIL 011. Introduction to Philosophy (4)
An overview of answers that philosophers across the world have provided to questions that most of us ask ourselves at one time or another in life, such as: Can we know anything beyond what our senses tell us? Can we even be sure that what our senses tell us is accurate? Is there a God? Is life after death possible? Do we have free will, and hence moral responsibility for what we do? Are we merely selfish beings or can we do things for the sake of others? Are there moral rules that all cultures and people recognize, or should recognize? Do our lives have meaning without God and without some sort of afterlife?

PHIL 021. Moral Problems (4)
An exploration of some of the “big ticket” moral issues of our time, including, for example: physician-assisted suicide; capital punishment; abortion; animal rights; pornography; the limits of free speech; the legalization and use of drugs; affirmative action; war; torture; civil disobedience; gun control; and the distribution of wealth. The best philosophical arguments on both sides of each issue will be considered, so that each student can decide which positions are most rationally compelling.

PHIL 025. The Meaning of Life (4)
An exploration of one overall question — Do human lives have meaning? — and the answers provided by philosophers, both ancient and modern, across the world. Subsidiary questions include: Is meaning found in this life or in life after death? What makes a life meaningful—is it what we achieve, or the experiences we have, or our relationships, or something else? Is the meaning of life something we make for ourselves or is it provided by some other source, such as God?

PHIL 027. Fundamentals of Ethics (4)
An inquiry into the question “How should we lead our lives?” Each student will be asked to reflect on her/his own moral commitments and how she/he makes morally difficult decisions, and then to consider whether there is any coherent, unifying system or procedure underlying this. The course then explores several of the most durable and influential philosophical approaches to moral decision making, including the strengths and weaknesses of each approach and how each might apply to various real-life situations. Additional issues might include: why we ought to take morality’s demands seriously; whether moral judgments are mere opinions; and whether it is legitimate to criticize morally the practices of other cultures.

PHIL 035. Environmental Ethics (4)
An investigation into various environmental problems and the ethical attitudes and principles required to address them. Questions might include: Do animals have rights? Do plants, or whole ecosystems, or future generations of people, have interests, and if so, are we obligated to respect these interests? Are humans part of nature, and is that which is natural always good? Are you required to perform environmentally-friendly actions even in cases where doing so involves some cost to you and you lack assurance that enough oth-
ERS WILL JOIN YOU TO MAKE A COLLECTIVE DIFFERENCE? CAN WE PUT A "PRICE" ON ENVIRONMENTAL GOODS LIKE CLEAN WATER, A SPECIES' EXISTENCE, A BEAUTIFUL VISTA, AND EVEN A HUMAN LIFE—as economists frequently try to do?

PHIL 037. Introduction to Logic (4)
An introduction to the basic concepts and methods employed in the analysis of arguments. The course begins with some of the basic concepts of logic, such as truth, probability, validity, soundness, proof, and consistency. Students will learn how to translate arguments into symbolic languages (categorical, sentential, and predicate logics) and evaluate them using various formal techniques. Time may also be spent examining the notion of probability and the character of inductive inference, as well as detecting and explaining common fallacies.

PHIL 047. Philosopher in Depth (4)
A sustained study of a single, highly important philosophical figure. Typically this will involve looking at this person’s views in various areas of philosophy—ethics, epistemology, and metaphysics—and exploring how these views cohere (or fail to cohere). The philosopher will differ from semester to semester, but candidates include such thinkers as: Plato, Aristotle, Descartes, Hobbes, Hume, Kant, Mill, or Nietzsche. (Course may be repeated with a different focus.)

PHIL 053. Ancient & Medieval Philosophy (4)
A survey of influential philosophers up to roughly 1500 A.D., such as Socrates, Plato, Aristotle, the Hellenistic philosophers (Epicureans, Stoics, Skeptics), Augustine, and Aquinas. Potential topics to be investigated are: What does happiness consist in? Which character traits count as virtues, and how do we become virtuous? What is the origin and nature of justice? Why be moral? What are the aims of government and law? What is the difference between knowledge and opinion? Does a divine being exist, and if so what are its attributes?

PHIL 055. History of Modern Philosophy (4)
A treatment of central philosophers and issues starting from roughly 1500 A.D. Authors read might include: Descartes, Leibniz, Spinoza, Locke, Berkeley, Hume, and Kant. Examples of questions addressed: Do we have assurance that the “real world” is as we perceive it to be? Is there actually a world that exists independent of our perceptions? When does what we believe count as knowledge? Does God exist? Do we have free will? Do we have souls? How can we best govern ourselves?

PHIL 061. Philosophy of Science (4)
An examination of the main philosophical issues regarding the nature and methods of science. Among the questions to be considered are: Can we clearly distinguish science from non-science? Is there such a thing as a scientific method? What counts as sufficient evidence for a scientific law? In what sense are new theories better than old ones? Is science converging on the ultimate truth about the natural world? What is it to say that electrons, black holes, or genes really exist? What are scientific explanations and how do they differ from descriptions and predictions? Examples will be 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)
(Also listed as POLS 136)
An analysis of the nature and function of law. More specific topics might include: the idea of law as an instrument of social control; whether democratically decided laws can ever be illegitimate; the extent to which we are obligated to obey the law; the justification for punishment, and its permissible forms; the relationship between law, morality, and justice; the appropriate role of legislators, lawyers, and judges; and the role of interpretation, coherence, and precedent in judicial reasoning. Readings are drawn from legal and political philosophy, social sciences, and judicial opinions. Not recommended for first-year students.

PHIL 121. Philosophy of Mind (4)
An exploration of some of the major issues and debates in recent philosophy of mind and cognitive science. Possible questions include: Are mental states just brain states? Are minds like computers? What are the prospects for artificial intelligence? Can non-human animals think? How essential are the body and external environment to the character of the mind? Can the subjective aspects of experience ever be explained in objective (e.g., physical) terms? Could one person's experience of the world be radically different from another? How do thoughts get their contents? What is the relationship between thought and action? What can pathological cases teach us about the mental? A previous course in philosophy is recommended.

PHIL 122. Philosophy of Language (4)
An investigation of the main philosophical issues concerning the nature of language and communication. Questions include: How do words come to have meaning? What exactly do we know when we understand a language? Which comes first, language or thought? What are the functions of language, if not merely to convey information? How do we sometimes manage to communicate so much more than what we literally say? How do metaphor, irony, and other figurative uses of language work? To what do fictional names like Sherlock Holmes refer? A previous course in philosophy is recommended.

PHIL 124. Philosophy of Religion (4)
A philosophical treatment of questions such as: Does God exist? Is it prudent to believe that God exists, even if one cannot be sure? Is belief without sufficient evidence morally irresponsible? If God is all-knowing, can we actually have free will? Does the existence of evil in the world show that God is either not all-powerful or not wholly good? Do we ever have reason to believe in miracles? Do science and religion make competing claims? Do we have souls that survive our bodily death? Does the very existence of morality depend on God? A previous course in philosophy is recommended.

PHIL 135. Political Philosophy (4)
(Also listed as POLS 130 and POLS 132)
An inquiry into issues such as: the justification for and limits on governmental power; the origin and extent of rights; the nature and proper extent of individual liberty; the nature and substantive demands of social, economic, and legal justice; the virtues and vices of various political systems; and tensions between political goods such as freedom, equality, fairness, security, and tradition. Not recommended for first-year students.

PHIL 145. Biomedical Ethics (Also listed as RELI 145)
An examination of the ethical theories, principles, and concepts that justify decisions in health care and medical science. Topics covered may include: physician-assisted suicide; termination or refusal of life-sustaining treatment; abortion; reproductive technologies such as cloning, in vitro fertilization, and surrogacy; the allocation of scarce medical resources (including transplant organs); genetic manipulation; and experimentation on humans and animals. Not recommended for first-year students.

PHIL 180. Metaphysics (4)
A philosophical exploration of the ultimate nature of reality. Metaphysical questions include: What is the nature of existence? Of necessity and possibility? What kinds of things are there? In virtue of what is something the very thing it is (rather than something else)? Does an object persist as the same object through time and change? What, if anything, makes you the same person over the course of your life? What is it to be a person at all? To what extent are we genuinely free to choose our actions? If one could not have done other than what one did, then how can one be held responsible for one's actions? What is the nature of time? A previous course in philosophy is strongly recommended.
PHIL 182. Theory of Knowledge (4)
A study of the nature, sources, and limits of human knowledge. Questions to be considered include: What is knowledge and how does it differ from belief or opinion? What justifies what I claim to know or believe? How do I acquire knowledge—via perception, testimony, memory, pure reason, etc.—and how reliable are these sources? Is all knowledge acquired through experience or are there truths that can be known by pure reason? Does knowledge require certainty? Can we know anything about the future (or the past)? Can I know that there is an external world or that there are other minds? What is the nature of self-knowledge? Do I know myself better than anyone else? Are humans really rational? A previous course in philosophy is strongly recommended.

Questions such as “Which actions are right?” and “Which character traits are virtues?” are first-order ethical questions. Meta-ethics, by contrast, involves second-order questions—that is, reflecting philosophically on the nature of our first-order moral judgments. Questions to be taken up in this course thus might include: What do terms like “good,” “bad,” “right,” and “wrong” mean? Can these attributes be reduced to natural properties, such as the property of being desired, or being conducive to the production of happiness or social harmony? Do moral claims (such as “Lying is wrong”) state objective facts, or merely express personal or social approval/disapproval, or what? If there are moral facts, how do we learn them? What is the relationship between judging an action to be right and having reasons or motives to perform that action? What is the relationship between morality and evolution? A previous course in philosophy is strongly recommended.

PHIL 191. Independent Study (2-4)
Permission of instructor required.

PHIL 193. Special Topics (1-4)

Physics
Phone: (209) 946-2220
Location: Olson Hall, South Campus
Website: 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
  Astrophysics
  Mathematical Physics
Engineering Physics (BS)

Minors Offered
Physics

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 BS 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 pursue a Bachelor of Science in Engineering Physics degree are subject to all of the requirements of an engineering degree student. Among these requirements is a work experience component called the Cooperative Education Program. Students must complete 32 units of full-time work experience in order to graduate. See the Engineering and Computer Science, Cooperative Education for Engineering Programs section of this catalog for more details.

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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACS 001</td>
<td>Pacific Seminar 1: What is a Good Society?</td>
<td>4</td>
</tr>
<tr>
<td>PACS 002</td>
<td>Pacific Seminar 2: Topical Seminar</td>
<td>4</td>
</tr>
<tr>
<td>PACS 003</td>
<td>Pacific Seminar 3: The Ethics of Family, Work, and Citizenship</td>
<td>3</td>
</tr>
</tbody>
</table>

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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement

Complete one diversity course

One course from each Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.
III. 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.

IV. 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.

V. 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.)

VI. Major Requirements
Minimum 42 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 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 Applied Differential Equations I: ODEs 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 prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog.

IIIA. Natural World and Formal Systems of Thought
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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

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 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 Applied Differential Equations I: ODEs 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 Introduction to Computer Science 4

Complete one of the following concentrations:
Standard Track

PHYS Electives (2 additional upper division courses) 8

Computational Physics Concentration

PHYS 127 Computational Physics 4
One of the following:
  MATH 110 Numerical Analysis 4
  MATH 145 Applied Linear Algebra 4
  MATH 157 Applied Differential Equations II 4

Astrophysics Concentration

PHYS 041 Astronomy 4
PHYS 141 Cosmology 4

Mathematical Physics Concentration

PHYS 137 Mathematical Physics 4
One of the following:
  MATH 145 Applied Linear Algebra 4
  MATH 157 Applied Differential Equations II 4
  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.

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:
I. Individual and Interpersonal Behavior
II. U.S. Studies
III. Global Studies

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 2 courses from a single department may be applied to meet the breadth program requirements.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 or more transfer units prior to fall 2011 are encouraged but not required to complete a designated diversity course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. Degree Requirements

Mathematics and Science (minimum of 30 units):
  MATH 051 Calculus I 4
  MATH 053 Calculus II 4
  MATH 055 Calculus III 4
  MATH 057 Applied Differential Equations I: ODEs 4
  MATH 039 Probability with Application to Statistics 4
  CHEM 025 or 027 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 – Properties and Measurements 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 Laboratory 1
  ECPE 194 Core Assessment Exam 0
  ECPE 195 Senior Project I 2
  ECPE 196 Senior Project II 2
  ENGR 025 Professional Practice Seminar 1

Physics Core:
  PHYS 027 Scientific Computing Tutorial 1
  PHYS 057 Modern Physics 4
  PHYS 101 Electricity and Magnetism 4
  PHYS 161 Thermal Physics 4

Technical Electives:
Electives: 5 courses from technical electives options 15-21
Physics Electives: At least 2
  PHYS 102 Electromagnetics 4
  PHYS 105 Optics 4
  PHYS 125 Molecular Nanotechnology 4
  PHYS 127 Computational Physics 4
  PHYS 137 Mathematical Physics 4
  PHYS 141 Astrophysics 4
  PHYS 151 Advanced Physics Laboratory 4
  PHYS 170 Solid State Physics 4
  PHYS 181 Classical Mechanics 4
  PHYS 183 Quantum Mechanics 4
  PHYS 191 Independent Study 3-4
  PHYS 197 Undergraduate Research 3-4

Engineering Electives: At least 2 in the same discipline
  ECPE 132 Advanced Electronics 4
  ECPE 135 Power Electronics 4
  ECPE 136 VLSI Design 4
  ECPE 151 Artificial Intelligence 3
  ECPE 153 Computer Graphics 3
  ECPE 162 Communications Systems 4
  ECPE 163 Energy Conversion 4
**Course Offerings**

**PHYS 017. Concepts of Physics**  
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 or 033 or 037 or 039 or 041 or 051, or 053.

**PHYS 023. General Physics I**  
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 or 041 or 045 or 051 or 053, or 055.

**PHYS 025. General Physics II**  
Acoustics and waves. Electricity and Magnetism. Quantum Mechanics and Relativity. The course includes laboratory work. Prerequisite: PHYS 023.

**PHYS 027. Scientific Computing Tutorial**  
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. Prerequisite: a passing score on the Intermediate Algebra placement test or one of the following math courses: MATH 005 or 033 or 037 or 039 or 041 or 045 or 051 or 053, or 055.

**PHYS 029. Physics of Music**  
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**  
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 or 033 or 037 or 039 or 041 or 045 or 051 or 053, or 055.

**PHYS 053. Principles of Physics I**  
Kinematics, dynamics, oscillations, wave motion and fluids. Laboratory. Prerequisite: MATH 053 (or concurrent enrollment) or 055 or 057. Recommended: PHYS 023 or high school physics.

**PHYS 055. Principles of Physics II**  
Thermodynamics, electricity, magnetism, light and optics, atomic and nuclear physics, particle physics and cosmology. Laboratory. Prerequisite: PHYS 053.

**PHYS 057. Modern Physics**  
Special relativity; quantization; wave/particle duality and the uncertainty principle; solution and interpretation of simple Schrödinger equations; atomic structure; introduction to nuclear and elementary particle physics. Laboratory. Prerequisites: PHYS 053 and MATH 055. Prerequisite may be taken concurrently: MATH 057.
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 and MATH 055. Prerequisite may be taken concurrently: MATH 057.

PHYS 102.  Electrodynamics  (4)  

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. Prerequisites: PHYS 055 and MATH 055.

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. Prerequisite: CHEM 025 or PHYS 055.

PHYS 127.  Computational Physics  (4)  
This course provides an 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, MATH 057, 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
IAA. Language and Literature
IIB. Worldviews and Ethics
IIC. Visual and Performing Arts

Natural Sciences and Mathematics
IIIA. Natural Sciences
IIB. Mathematics and Formal Logic
IICC. 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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.

V. 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.)

VI. 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:
- POLS 081 Career and Internship Preparation (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:
- POLS 187A Political Science Internship (4 units)
- POLS 187C Pre-Law Internship (4 units)
- POLS 197 Undergraduate Research (3-4 units)
- JCTR 187 Community Affairs Internship (3-4 units)
- JCTR 197A,B Community Independent Research (3-4 units)
- WASH 187 Washington Center Internship (4 units)

Electives 3 additional courses at the 100-level or from:
- 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
- Electives 3 additional courses at the 100-level or from:
  - PHIL 106 Philosophy of Law
  - PHIL 135 Political Philosophy
  - INTL 174 Global Environmental Policy 4

*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 21 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 Model United Nations (MUN II)
- SPTS 165 Sports Law
- BUSI 127 Legal Aspects of Real Estate
- BUSI 157 Commercial Law
- BUSI 159 Employment Law
- BUSI 167 International Business Law
- MGMT 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: Theory and Policy
- 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. Pacific Legal Scholar Student or permission of 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. Pacific Legal Scholar Student or permission of instructor.

**POLS 081. Career and Internship Preparation** (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. Prerequisite: POLS 041. 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. The course will emphasize the role of race, class, and ethnicity in the city and has been approved by Ethnic Studies.

**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 112. Congress and the Presidency** (4)
This course examines the relative influence of Congress and the presidency on politics and policy making in America. Topics examined include the development, organization, operation, interactions, and policy making role of the two branches. Prerequisite: POLS 041.

**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 116. Campaigns & Elections** (4)
This course is designed to introduce students to campaigns and elections in the American political system. Focus is placed on what political science has discovered about campaigns, their operation, and their relative influence on elections. Other determinants of election outcomes are also examined. Prerequisite: POLS 041.

**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. This is a core major requirement that develops political science learning objectives that are the basis for advanced coursework in the major. 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 125. Criminal Law** (4)
This course focuses on the concepts, principles and problems of substantive criminal law.

**POLS 128. Introduction to Public Administration** (4)
This course introduces students to the study of public administration. It examines the role of public agencies and their personnel in a democratic political system. Topics covered include what public agencies are, why they exist in democracies, the functions they carry out, the mutual influence public agencies have with elected officials and the public, and the interactions between public and not-for-profit spheres.

**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 how writers and practitioners conduct and study political theory. This course introduces students to 1) thinking about politics theoretically, 2) the variety of approaches to the study of political theory within political science, and 3) applications of these approaches to works of political theory and questions of politics. Analysis of the developing ideas of political theory that comprise contemporary politics, addressing ideas such as democracy, freedom, the responsibilities of political power, the role of the state, justice, and the place of political theory within the discipline of political science.

**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. This is a core major requirement that develops political science learning objectives that are the basis for advanced coursework in the major. Prerequisites: POLS 041 and 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. This is a core major requirement that develops political science learning objectives that are the basis for advanced coursework in the major. Prerequisites: POLS 041 and POLS 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 theories of international politics and behavior. The course covers major social scientific theories, critical approaches to theory, and international political theory. Prerequisite: POLS 051 or permission of 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 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: POLS 051.

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 instructor.

POLS 168. Comparative Foreign Policy (4)
An examination of foreign policy making around the world, across major powers, middle powers, and small states. Beginning with a study of the different theories that try to explain why nations make the choices they do in the international arena, we then consider the validity of those theories as we look at cases from the United States and China to New Zealand and a number of stops in between. Prior completion of a basic course in political science is recommended.

POLS 170. U.S. Foreign Policy (4)
An examination of the major developments and current issues in U.S. foreign policy and various analytical approaches to their study. Among the topics considered: U.S. diplomatic history, the processes and structures by which the U.S. government develops and implements foreign policy. Emphasis is placed on students developing the analytical capacity to pose and pursue significant puzzles about U.S. foreign policy. Prerequisite: POLS 051.

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. Prerequisites: POLS 060 and POLS 062. Pacific Legal Scholar Student with Junior or Senior standing and an overall GPA of 3.0, or permission of 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.) Junior standing. Overall GPA of 2.0. Prerequisite: POLS 041. Department permission.

POLS 187C. Pre-Law Internship (4)
Supervised experience in an approved legal or judicial setting to be contracted on an individual basis. Prerequisite: POLS 041. Junior standing. Overall GPA of 2.0. Department permission.
POLS 189. Capstone Seminar (4)
A seminar for political science majors about to graduate. Students demonstrate their mastery of political science program learning objectives and outcomes through analysis and discussion of recent significant work in the major political science subfields: American Politics, Political Theory, Comparative Politics, and International Politics and by the completion and presentation of a substantial political science research project. Political Science majors with senior standing or by permission of instructor.

POLS 191. Independent Study (2-4)
Political science majors with a “B” average in their work in political science.

POLS 193. Special Topics (4)

POLS 197. Undergraduate Research (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. Junior or senior standing as a political science major and permission from department.

Psychology
Phone: (209) 946-2133
Location: Psychology/Communications Building
Website: http://web.pacific.edu/x13811.xml
Carolynn Kohn, 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. Behavior is a complicated subject, whether it's a high school student trying to solve mathematics problems or a puppy learning to retrieve. 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, adolescents, adults who are depressed or anxious, 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 students 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, education, 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 students skills to work with a variety of populations, or b) applications in business which provides students, in cooperation with the School of Business, 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 education 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 students with research and hands-on experience as early as the freshman year, so that by the time of graduation students may have authored or co-authored conference presentations and 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, students 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 2 courses 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. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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.

V. 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.)

VI. Major Requirements

Minimum 45 units and 11 letter-graded courses, including:
- PSYC 031 Introduction to Psychology 4
- PSYC 053 Behavior Change 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 Behavioral Sciences
  - MATH 035 Elementary Statistical Inference
  - MATH 037 Introduction to Statistics and Probability
Three of the following courses (PSYC 105 is a prerequisite for all of these): 12
- PSYC 107 Psychology of Learning
- PSYC 109 Biological Psychology
- PSYC 115 Cognitive Psychology
- PSYC 129 Developmental Psychology
- PSYC 189 Social Psychology
- Electives (3 additional 100-level courses) 12

Note: 1) Elective courses counting toward the major are selected according to the interest of the student in consultation with an advisor in the department. 2) Psychology majors are strongly encouraged to take one course in PSYC 197 – Independent Research, PSYC 187/287 – Internship or PSYC 189/289 – Practicum. 3) PSYC 103 or MATH 35 or 37 must be taken prior to taking PSYC 105. 4) 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 4
- PSYC 103 Statistical Inference in Behavioral Sciences 4
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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 029</td>
<td>Child Development</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 053</td>
<td>Behavior Change</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 131</td>
<td>Adolescence and Young Adulthood</td>
<td>4</td>
</tr>
<tr>
<td>Two of the following courses:</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>PSYC 154</td>
<td>Child Mental Health</td>
<td></td>
</tr>
<tr>
<td>PSYC 155</td>
<td>Couples and Family Therapy</td>
<td></td>
</tr>
<tr>
<td>SPED 123</td>
<td>The Exceptional Child (note this course is 3 units)</td>
<td></td>
</tr>
<tr>
<td>PSYC 087D</td>
<td>Human Development and Family Intervention Internship</td>
<td></td>
</tr>
<tr>
<td>PSYC 187D</td>
<td>Human Development and Family Intervention Internship</td>
<td></td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 029</td>
<td>Child Development</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 131</td>
<td>Adolescence and Young Adulthood</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 133</td>
<td>Adulthood and Aging</td>
<td>4</td>
</tr>
<tr>
<td>Two of the following courses:</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>ANTH 053</td>
<td>Cultural Anthropology</td>
<td></td>
</tr>
<tr>
<td>PSYC 031</td>
<td>Introduction to Psychology</td>
<td></td>
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<tr>
<td>PSYC 066</td>
<td>Human Sexuality</td>
<td></td>
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<tr>
<td>PSYC 087D</td>
<td>Human Development and Family Intervention Internship</td>
<td></td>
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<tr>
<td>PSYC 187D</td>
<td>Human Development and Family Intervention Internship</td>
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</tr>
<tr>
<td>SOCI 127</td>
<td>Family and Marriage</td>
<td></td>
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</tbody>
</table>

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 advisor in the department. The liberal arts student may concentrate in such subfields of psychology as behavioral, biological, cognitive, developmental, 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 must 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 advisor. Relevant courses from which to select include the following (see course listings under Eberhardt School of Business for prerequisites required for each course):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 031</td>
<td>Principles of Financial Accounting</td>
</tr>
<tr>
<td>BUSI 107</td>
<td>Marketing Management</td>
</tr>
<tr>
<td>BUSI 109</td>
<td>Management and Organizational Behavior</td>
</tr>
<tr>
<td>BUSI 134</td>
<td>Conflict Management</td>
</tr>
<tr>
<td>BUSI 141</td>
<td>Marketing Research</td>
</tr>
<tr>
<td>BUSI 147</td>
<td>Consumer Behavior</td>
</tr>
<tr>
<td>BUSI 170</td>
<td>Human Resources Management</td>
</tr>
<tr>
<td>BUSI 175</td>
<td>Leadership and Change</td>
</tr>
</tbody>
</table>

Note, this is not equivalent to a minor in business. See the appropriate catalog section if you wish to obtain a minor in business or management.

Graduate and Professional School Preparation

Students planning to go on to 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 089/189D Research Assistantship Practicum, MATH 130-Topics in Applied Statistics and PSYC 183-Research Design (by instructor permission only). 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, and law.

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 major fields within psychology including: 1) experimental methods in psychology, 2) physiological psychology, 3) sensation and perception, 4) psychology of learning, 5) memory, 6) cognition and language, 7) cognitive abilities, 8) motivation and emotion, 9) human development, 10) personality, 11) abnormal psychology and treatment of mental illness, and 12) social psychology. Required for psychology majors; recommended in freshman year.
PSYC 053. Behavior Change (4)
An introduction to science and application of behavioral principles. 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. Supervision of undergraduate students will be provided by the instructor and graduate students. Psychology Major, Psychology Minor, Child Psychology Minor, Helping Professions Minor or permission of instructor. 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 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 leading of 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 spreadsheet 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 with a grade of C- or better 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 use word processing and statistical analysis computer programs. All students complete an individual experimental research project. Prerequisite: PSYC 103; MATH 035 or MATH 037 with a grade of C- or better. Required for psychology majors. Recommended PSYC 034 and/or PSYC 053 and taken in sophomore year; not open to freshmen.

PSYC 107/207. Psychology of Learning (4)
This course focuses on 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 with a grade of C- or better or permission of instructor.

PSYC 109. Biological Psychology (4)
This course investigates the relationship of the nervous system to mental processes and behavior. Lecture and laboratory exercises introduce current research and methodology, clinical application, and hands-on demonstration of this rapidly developing field. Topics include the evolution and development of the human brain, neuroanatomy and communication, biological rhythms, brain damage and disease, sensory and motor systems, sleep and emotional control. Prerequisite: PSYC 105 with a grade of C- or better or permission of 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. 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 cannot 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 pharmacy.
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 with a grade of C- or better or permission of instructor.

PSYC 125. History and Systems of Psychology (4)
This course will trace the development of “modern psychology” from its birth in early philosophy to its founding as an independent discipline in the late 1800s to its current status with an emphasis on modern behaviorism and cognitive psychology as the two dominant theoretical systems in psychology. In addition, other modern developments such as evolutionary psychology and cognitive neuroscience will be discussed. The course will focus on specific content areas and ideas in psychology and the individuals who are most credited with their development. This course is considered a senior capstone course. Prerequisite: PSYC 105. Junior standing or permission of instructor. Required for psychology majors; recommended in senior year.

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 with a grade of C- or better or permission of 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. Sophomore standing.

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. Sophomore standing.

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. Sophomore standing.

PSYC 144. Psychological Assessment (4)
An overview of the statistical underpinnings of psychological tests, including reliability, validity, and test creation as well as an overview of the most commonly administered psychological tests and their appropriate applications and use. The ethics of test creation and administration as well as practical application of various assessment techniques are discussed. This class is recommended for students planning to pursue graduate training in clinical psychology. Prerequisite: PSYC 105.

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 environmental issues associated with specific disorders, including behavioral learning histories, cognitive-behavioral patterns, and family/parenting issues. Socio-cultural contributions to mental health are also stressed. Evidence-Based Treatments for commonly diagnosed disorders and problems in childhood are also presented and discussed. Sophomore standing.

PSYC 155/255. Couples and Family Therapy (4)
An introduction to couples and family therapy, theory, and practice. Behavioral psychology is used as the foundation, and students also learn a broad systems perspective. Students are familiarized with the history of family therapy, as well as current family therapy strategies. Sophomore standing.

PSYC 156/256. Behavioral Medicine/Health Psychology (4)
A survey class on the overlapping fields of behavioral medicine and health 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. Topics include health promotion, and medical compliance. Of interest to any student who aspires to become a health care professional in health psychology, clinical psychology, medicine, pharmacy, physical therapy, or nursing. Prerequisite: PSYC 105. Junior or senior standing recommended.

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 functional analysis procedures. Prerequisite: PSYC 053 and permission of instructor for PSYC 158.

PSYC 166. Psychology of Personality (4)
Survey of contemporary personality theories and research. Focuses on the study of individual differences 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. Junior or senior 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 instructor.

PSYC 183/283. Research Design (4)
Design and analysis of research using single subject and group designs. Prerequisites: PSYC 105 and permission of 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 207. Psychology of Learning (4)
PSYC 220. Clinical Neuropsychology (4)
PSYC 251. Behavioral Treatments/Applications (4)
PSYC 253. Supervising and 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 (1-4)
PSYC 299. Thesis (2 or 4)

Religious & Classical Studies
Phone: (209) 946-2161
Location: WPC Annex
Website: 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
Ancient 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, Classical Studies, or Ancient 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. Although not required, the Department strongly encourages students to take advantage of education abroad opportunities.

 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

**II. Diversity Requirement**
Complete one diversity course 3-4

Note: 1) A complete list of the course that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

**III. 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.

**IV. 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.

**V. 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.)

**VI. Major Requirements**
Minimum 40 units, including:

One of the following courses:
- RELI 023 Hebrew Bible

Three required courses:
- RELI 034 Introduction to Religion
- CLAS 051 Classical Mythology
- RELI 196 Religious Studies Seminar

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. 2) Electives to be chosen in consultation with an advisor.

**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:
- RELI 023 Hebrew Bible

Two required courses:
- RELI 034 Introduction to Religion
- RELI 134 World Religions

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:
- 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:
- CLAS 051 Classical Mythology
- CLAS 115 Topics in Mythology and Religion

Three of the following courses:
- CLAS 100 History of Ancient Greece or,
- CLAS 102 History of Ancient Rome
- CLAS 110 Greek Literature and Society or,
- CLAS 112 Latin Literature and Roman Society
- 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
- GREEK 191 Independent Study
- LATN 191 Independent Study
- CLAS 193 Special Topics
- GREK/LATN 1 course in Greek or Latin
Minor in Ancient Studies
In order to earn a minor in ancient 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 classical mythology courses: 4
- CLAS 051 Classical Mythology
- CLAS 115 Topics in Mythology

One of the following ancient history courses: 4
- CLAS 100 History of Ancient Greece
- CLAS 102 History of Ancient Rome
- RELI 102 History of Ancient Egypt and the Near East
- RELI 126 Ancient Israel in its Historical Context

One of the following ancient literature courses: 4
- CLAS 110 Greek Literature and Society
- CLAS 112 Latin Literature and Roman Society
- RELI 023 Hebrew Bible
  or another course by permission of the department chair

Two electives from CLAS, GREK, HEBR, LATI, and/or RELI 8

Note: 1) Electives should be chosen in consultation with the advisor. 2) 16 of these units must be completed at Pacific.

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 prior to fall 2011 are encouraged to 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 General Education section of this catalog and the online course search. 2) No more than 2 courses 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. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 26 units or more transfer units prior to fall 2011 are encouraged to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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 of this catalog.

V. 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.)

VI. 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 in consultation with an advisor.*

### Course Offerings

#### Religious Studies

**RELI 023. Hebrew Bible**
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.

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**
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**
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**
This class is designed to introduce students to religion as an academic field of study. While we can easily locate groups who identify themselves as Buddhists, Christians, Hindus, Jews, Muslims, Sikhs, and so forth, we might actually have more difficulty figuring out what—if anything—unifies all of these groups, and therefore what it is that people mean when they use the term religion. In this class we will explore some of the basic concepts and categories used by scholars when they investigate the social phenomenon of religion. All students will discover that this course gives them experience in critical thinking, comparative analysis, and cultural diversity.

**RELI 035. Judaism**
A basic introduction to Judaism covering its history, beliefs and customs with an emphasis on understanding the Jews of today.

**RELI 036. Christianity**
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 043. Social Ethics**
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 pacifism and just war, civil disobedience, capital punishment, the distribution of scarce resources, and the environment. We will discuss what selected thinkers say about such issues, and how they reach their conclusions in light of their religious, philosophical, and anthropological convictions.

**RELI 044. Sex, Sin, and Salvation**
This course will explore and analyze sexuality and gender in terms of ethics and religion. It will focus primarily on historical and contemporary Christian perspectives, with some attention to other religious traditions and philosophical viewpoints. 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**
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**
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 104. Religion of the Pharaohs**
The past century has witnessed a fascination with all things ancient Egyptian. From the earliest version of the film, “The Mummy” in 1931 to the traveling art exhibit of the treasures of Tutankhamen’s tomb (twice!) to the millennium party at the pyramids, the previous hundred years was marked by an obsession with ancient Egyptian religion and culture. This course will examine the religious beliefs and practices of ancient Egyptians and the portrayal of ancient Egypt in popular culture. Topics to be studied include: Egyptian royal and social history; Egyptian language and literature; mythology and cosmology; death and the afterlife; temple rituals and architecture; pyramids, tombs and other burial architecture; the intersection of religion with ethnicity, gender, social class, and political power; colonialism and the modern “discovery” of ancient Egypt; and ancient Egypt in American popular culture.

**RELI 120. Wisdom in Biblical Literature**
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-regulation 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 ethical concepts and issues that arise in medicine and the health sciences. Topics covered may include the physician-patient relationship, termination of life-sustaining treatment, abortion, artificial reproductive technologies, genetic and technological manipulations, access to health care, and biomedical research.

RELI 146. Technology, Ethics, and Religion (4)
This course will critically examine some of the social, ethical, economic, 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 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. (This course is not recommended to freshmen.)

RELI 154. Buddhist Traditions (4)
This course covers philosophy, literature, and religious beliefs and practices of various Buddhist traditions as they developed over hundreds of years in India, Tibet, China, Japan, and finally, Western countries. For each tradition, we will examine its historical formation; the body of its sacred literature, with the focus on one or two most prominent scriptures; biographies of most influential practitioners; and evolution of philosophical, social and psychological ideas in that particular tradition.

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, illustrate, enrich and sometimes pervert 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 & Nature, Early Christianity, and Spirituality & Health).

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 and Society** (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 and Roman Society** (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)
An in depth study of particular aspects of ancient 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 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)
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.

**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 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 Homer or the Greek dramatists, or in the Greek New Testament. Prerequisite: GREK 011B or permission of instructor.

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 or permission of instructor.

**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 or permission of instructor.

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 or permission of instructor.
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.

LATN 151. Intensive Latin for Language Students (4)

Additional Courses

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>RELI 087</td>
<td>Internship</td>
<td>2-4</td>
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<tr>
<td>GREEK 093</td>
<td>Special Topics</td>
<td>4</td>
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<td>LATN 093</td>
<td>Special Topics</td>
<td>4</td>
</tr>
<tr>
<td>CLAS 191</td>
<td>Independent Study</td>
<td>2-4</td>
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<tr>
<td>GREEK 191</td>
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<td>CLAS 193</td>
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<td>RELI 193</td>
<td>Special Topics</td>
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<tr>
<td>RELI 197</td>
<td>Undergraduate Research</td>
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Sociology

Phone: (209) 946-2101
Location: Wendell Phillips Center
Website: www.pacific.edu/college/sociology
M. Hernandez, G. Lewis (Co-Chairs)

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:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>PACS 001</td>
<td>Pacific Seminar 1: What is a Good Society?</td>
<td>4</td>
</tr>
<tr>
<td>PACS 002</td>
<td>Pacific Seminar 2: Topical Seminar</td>
<td>4</td>
</tr>
<tr>
<td>PACS 003</td>
<td>Pacific Seminar 3: The Ethics of Family, Work, and Citizenship</td>
<td>3</td>
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</tbody>
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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

**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 advisor 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.

**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 041. Social Problems (4)
This course is an exploration of the process by which various social conditions become labeled as social problems worthy of policy responses. It examines the various roles played by the media, government actors, activists and everyday citizens in this process, and pays particular attention to the role of power in enabling some social groups to label the behaviors of others as problematic while deflecting attention from their own practices. This course focuses predominantly on the US, but also engages in comparative analysis with other countries.

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)
What effects has the historical emergence of cities had on human social interaction and public life? How do urban places structure social relations and create identities and cultural meanings? This course explores the development of the city and its effects on social life. Particular attention is paid to issues of poverty, interracial interaction and segregation, suburbanization, gentrification, urban development and urban cultural movements. Though this course takes US metropolitan areas as its primary focus, it will also draw on global examples.

SOCI 081. Introduction to Social Services (4)
This course will introduce students to social welfare by using various political perspectives and provide an overview of social services. Students will gain a comprehensive understanding of social work as a profession and better understand how social policies are applied to attempt to deal with various social problems. The course will also examine the types of social services provided, the client population targeted, the organization of agencies, funding mechanisms, and program design and evaluation. This course combines classroom work with minimal fieldwork with non-profit agencies.

Upper Division Courses

SOCI 108. Food, Culture and Society (4)
Are you what you eat, or do you eat what you are? This course focuses 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 111. Environment and Society (4)
This course examines the relationship between society and the natural world. It comparatively analyzes theories concerning how humans relate to the natural world as well as the causes of environmental degradation. It attends to the various roles of the biological and social sciences in understanding environmental issues, as well as the relationship between environment and inequality. The course analyzes how various social systems, institutions and behaviors contribute to environmental degradation, and highlights and compares political solutions.

SOCI 114. Social and Cultural Change (4)
Why do some social movements fail to produce social change, while others succeed? The goal of this course is to introduce students to sociological theories of social movements, analyzing the reasons they emerge at particular historical moments, and the types of political and cultural changes they can produce. Through a review of case studies including the women’s, gay rights, abortion, civil rights, environmental, and peace movements, the course will identify key analytical questions and research strategies for studying contemporary social movements in depth. This course will focus largely on US examples, though cross-cultural comparisons will add depth to our discussions. Prerequisite: A course in sociology or permission of instructor.

SOCI 123. Sex and Gender (4)
The course material explores how various social institutions in contemporary society shape our understanding of gender, sex and sexuality. Although grounded in sociological analysis, the class is interdisciplinary and intersectional in nature as many of the course texts are drawn from a range of social science disciplines. The lectures, assigned reading, and activities will address how sex and gender are intricately linked to other social statuses such as race, class and age. Prerequisite: A course in sociology or permission of instructor.

SOCI 125. Sociology of 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.

SOCI 127. Family and Marriage (4)
This course explores the social dynamics of human intimacy within families. Family life will be examined through a historical, cultural and political lens to place the social institution in a broad societal context. The evolution of the family is studied both historically and comparatively. Special attention is given to the sociological significant of sexuality, changing roles of men and women, intimacy, marriage and divorce, domestic violence, parenthood, childhood and aging, and alternative ways of living together. The course texts examine family life across race and ethnic groups, social class, religion and geographic location. Prerequisite: A course in sociology or permission of 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 instructor.

SOCI 141. Prejudice and Racism (4)
Historical and contemporary forms of prejudice and racism are the focus of this course. Social institutions such as the media, education, family and government will be examined for their role in fostering – as well as challenging - prejudice and racism. Racism, defined by sociologists as structural and institutionalized forms of discrimination, with an emphasis on prejudice against African Americans, is central to the course. Some of the texts will deal with the intersection of anti-Semitism, racism, sexism and classism, allowing students to consider how multiple forms of discrimination are intertwined. Although centered in Sociology, the course readings and film are interdisciplinary in nature. Prerequisite: A course in sociology or permission of 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 or-
organize 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 instructor.

Core Courses

These courses must be taken to fulfill major requirements in sociology:

**SOCI 071. Foundations of Sociology** (4)
What are the basics of a study of society? An exploration of fundamental concepts, theoretical approaches, empirical methods and fields of inquiry of concern to sociologists. Students will examine various social issues, develop an understanding of how our social world functions, and how our society is shaped by social institutions. Introduction of sociological concepts, theories, and methodologies to build on students’ understanding of the discipline. Required as the first course in the core sequence for students intending to major or minor in sociology.

**SOCI 079. Social Psychology** (4)
Who are we? How did we come to be the way we are? And how does the way we understand ourselves relate to our understandings of society? This course addresses these questions through the field of sociological social psychology. Sociological social psychology investigates how our understandings of our individual selves and the wider social world are shaped through social interaction. Topics covered include the nature and scope of social psychology; the structure of social interaction, the development and maintenance of the self, and the production and influence of culture. The course also explores the ways that hierarchies of race, class, gender and nation shape social identity. Prerequisite: SOCI 071 (or concurrent enrollment) or permission of instructor.

**SOCI 171. Social Research Methods** (4)
How do we study society? 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. Student designed research projects are a central part of this course. Prerequisite: SOCI 071 or permission of instructor.

**SOCI 172. Social Inequality** (4)
Are some more equal than others? 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. This course will focus on various group experiences of inequality due to race, class, gender, sexual orientation, immigration status, nativity, etc. Various sociological perspectives and empirical research will be applied to gain a better understanding on how social inequality is created, manifested, and maintained. Students will investigate the effects of social inequality on society, and possible frameworks to reduce the level of social inequality. Prerequisite: SOCI 071 or permission of instructor. SOCI 171 strongly recommended.

**SOCI 177. Theories of Society and Culture** (4)
How does theory help us to understand society? This course provides a broad overview of sociological theory at both the macro- and micro levels. The course texts explore classic and contemporary sociological theories. Students completing this course will learn how scholars define and use theory in the development of sociological knowledge. Throughout the semester we will examine basic theoretical assumptions and learn how different perspectives compare and contrast with each other. SOCI 071 and 172 strongly recommended.

**SOCI 179. Capstone Seminar** (4)
How good is your sociological imagination? The capstone seminar allows students to develop and put into practice links between their sociological education and their social worlds. Students will consider the major, reflecting on the sociological imagination they have developed, and explore the role that sociology can play in their wider personal, professional and civic goals. Students will present ideas and data to their peers, as well as to broader audiences. They will also participate in the assessment of the major program. Prerequisite: Sociology majors with senior standing or by permission of instructor.

Special Areas

**SOCI 187A, B. Fieldwork** (2 or 4, 2 or 4)
This course provides an intellectually rigorous experiential learning opportunity to majors. It is an advanced course designed for students who wish to further explore sociological concepts through direct experience, observation, reflection and analysis. Students choose a field site, generally an internship, regular voluntary activity or work place, where they spend approximately 8-10 hours per week. Class meetings help students to develop their ethnographic research and writing skills. This course results in the production of a publishable or presentation quality piece of original ethnographic research that draws upon thick description and analysis of the research site to extend and/or challenge sociological theory. (Note: 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 instructor.

**SOCI 191. Independent Study** (1-4)
Permission of instructor.

**SOCI 193. Special Topics** (1-4)

**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 under-taken 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/sportsciences
Peter Schroeder, 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.

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 a teaching credential, 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

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 gymnasia, 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 activity 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 a teaching credential, 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.
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. 2) No more than 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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.

V. 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.)

VI. 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 II: Topical Seminar 4
PACS 003 Pacific Seminar III: 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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.

V. 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.)

VI. 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:
- SPTS 139 Exercise Psychology 4
- 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 035 Probability and Statistics (or similar course)
- 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 advisor for any additional courses and also complete the following:
- COMM 027 Public Speaking
- ENGL Two writing courses or PACS 001 & 002
- MATH 035 Introduction to Statistics and Probability (or similar course)
- PSYC 031 Introduction to Psychology
- PSYC 111 Abnormal Psychology
- Two Social Science courses
- A Studio Art course (Ceramics or Drawing)
- Students are strongly advised to check with individual graduate programs for specific requirements.

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 sport or fitness enterprises.

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, sport retailing/merchandising, and international sport organizations.
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 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
   - **Arts and Humanities**
     - IIA. Language and Literature
     - IIB. Worldviews and Ethics
   - **Natural Sciences and Mathematics**
     - IIIA. Natural Sciences
     - IIIB. Mathematics and Formal Logic
   - **IA. Individual and Interpersonal Behavior**
   - **IIB. Worldviews and Ethics**
   - **III. 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.

IV. **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 of this catalog. 2) Transfer students with 28 or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements. 4) A complete list of the courses that satisfy the subdivisions above can be found in the front General Education section of this catalog.

V. **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.)

VI. **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:
   
   - SPTS 139 Exercise Psychology
   - SPTS 141 Sport in America
   
   One of the following courses:
   
   - 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, marketing, sales, management, hospitality, law, sponsorship, community relations, athlete representation, tourism, facility management and public relations. These specialized areas can be found in amateur and professional sport, corporations through sport, community recreation centers, resorts, health and fitness centers, collegiate sport, casinos, stadiums and arenas.

   The concentration also prepares students for graduate study in business, communications, sport management, and law.

**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 injuries to the active population. 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 clinical 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/x16883.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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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 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 Management and Professional Development 4

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:

SPTS 139 Exercise Psychology 4
SPTS 141 Sport in America 4

SPTS Electives (9 additional units excluding ACTY 002-099, SPTS 025 and 028) 9

Note: 1) Student should work closely with their advisor 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 001-049. General Activity Classes (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 061. Sports Terminology (4)
This course provides a foundation in medical terminology for students in allied health curriculums who need to know the language on health care. Students will be introduced to the major word parts used in the formation of medical terms including suffixes, prefixes, and combining forms. Common words associated with the systems of the body will also be studied. Instruction will take place online through the Blackboard Learning System. There are no prerequisites for this course.

SPTS 087. Fieldwork (2-4)
Laboratory work in school and community agencies. Open to non-majors by permission of instructor. Pass/No credit only.

SPTS 089/189A. 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. Athletic Training majors or permission of 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 is designed to develop research skills specific to the fields within sport sciences. You will learn to collect, review, synthesize and critically analyze scholarly research. You will also be able to create research questions and establish hypotheses. You will be exposed to a variety of ways to collect data and learn to apply the appropriate techniques to interpret data. Finally, this course will present the ways in which research can be applied to sport sciences. 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 teams will be presented and instruction time per sport will vary. Sport Sciences majors or permission of 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. Sport Sciences majors or permission of 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...
SPTS 131. Assessment and Evaluation
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
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 instructor. Lab fee required.

SPTS 135. Sports Nutrition
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
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
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
This course is designed to explore the relationship between sport, culture and society in both the USA and the broader global world. You will learn to critically examine a wide range of topics including, but not limited to sport & gender, sport & race, global sports worlds, drugs and violence in sport, sport & politics and the crime-sport nexus. The intention of this course is to develop your sociological imagination and encourage you to think critically about the role sports plays in the development of societies, ideologies and everyday life. This course is a registered GE IB (US studies class) and contributes towards the ethnic studies and gender studies minors.

SPTS 142. Sport and Globalization
This course will examine the interaction between sport and globalization. A basic understanding of globalization and its underlying forces will provide a foundation for the course. The main focus of the course will be the reciprocal nature of sport and globalization with special attention given to sport economic, cultural, and political issues. This course will explore sport tourism and the Olympics as the two main intersections of sport and globalization.

SPTS 143. Care and Prevention of Athletic Injuries
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 freshmen. Lab fee required.

SPTS 145. Therapeutic Modalities
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. Recommended: BIOL 081. Lab fee required.

SPTS 146. Health, Disease, and Pharmacology
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 these illnesses and diseases.

SPTS 147. Exercise Physiology I
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
This course presents an in-depth study of musculoskeletal assessment of the upper 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. Lab fee required.

SPTS 150. Clinical Evaluation and Diagnosis II
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. Students may take this course independent of SPTS 149. Lab fee required.

SPTS 151. Elementary Physical Education
This course is designed to prepare you for employment in an elementary school setting and provide you with the tools necessary to formulate and implement a comprehensive elementary PE experience for all students. You will learn a wide range of teaching skills that will facilitate your ability to create a quality active learning environment in elementary PE. We will explore effective teaching and assessment strategies, classroom management skills, the use of constructive feedback, the negotiation of diverse classrooms and the development of appropriate student learning outcomes. You will also be introduced to the subject matter of elementary PE and will undertake several teaching episodes. This course will encourage you to engage in reflexive teaching practices, develop physically educated young people, maximize student involvement and enjoyment in PE and integrate core curriculum subject matter into your PE lessons.
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. Sophomore standing. 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 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 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. Junior standing or permission of 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 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. 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 lifestyle 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 and Facility Management (4)
A comprehensive investigation into the principles needed to design, implement, and manage all types of sport events and facilities. Planning, logistics, risk management, human resource management, and marketing of events and facilities will be given special attention. Opportunities for the application of these principles will also be provided. Prerequisites: BUSI 107 and SPTS 174.

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 182. Exercise Testing/Prescription (4)
This course is primarily designed to provide students with the hands-on training and theoretical background to competently assess levels of wellness/fitness in an “apparently healthy” (i.e. low risk) adult population. The topics and skills addressed include health screening protocols/risk stratification, use of Informed Consent documents, as well as measurement protocols for the
health-related components of fitness (i.e. cardiorespiratory fitness, muscular fitness, flexibility, body composition). These skills will then be used to prescribe lifestyle and/or exercise modifications that result in individual progress toward a desired goal. The content of this course is highly focused toward the knowledge and skills required for taking the ACSM Fitness Specialist (HFS) certification exam.

**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 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. **Prerequisite:** SPTS 151 or SPTS 159 and permission of 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 SPTS 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. Graduate 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 and 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 Preparation 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 (1-4)
SPTS 293. Special Topics (3 or 4)
SPTS 297. Independent Research (1-4)
SPTS 299. Thesis (4)
**Theatre Arts**

Phone: (209) 946-2116  
Location: Theatre Arts Building  
Website: www.pacific.edu/college/theatre_arts  
Cathie McClellan, Chair

**Degrees Offered**  
Bachelor of Arts

**Majors Offered**  
Theatre Arts

**Minors 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 through the study of 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 to 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 Theatre Arts Building). All our facilities are located on the south campus in close proximity.

Our academic program features training in on stage and back stage 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, and tap.

**Academic Requirement**

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 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.
II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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.

V. 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.)

VI. 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:

THEA 037A Costume Construction and Technology
THEA 037C Scenery
THEA 137 Lighting Technology

Six units from the following courses:

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: Production

Electives THEA courses 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, 13 units:

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

Two of the following:

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 Theatrical Design Fundamentals 4

One of the following:

THEA 071 Beginning Acting or
THEA 005 Onstage

Two of the following:

THEA 031 Stage Make-up Fundamentals
THEA 037A Costume Construction and Technology
THEA 037C Scenery
THEA 137 Lighting Technology

Three to four units from the following:

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 037A Costume Construction and Technology 2
THEA 037C Scenery 2
THEA 071 Beginning Acting 3

One of the following:

THEA 112 Playwriting
THEA 137 Lighting Technology
THEA 172 Directing

Two of the following:

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:
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 experiential, immersive participation as a cast member in a Theatre Arts production that is judged by the faculty to be of suitable scope or difficulty. Requires satisfactory completion of the work assignment and a written report. Pass/No Credit only. May be repeated for each sub-section. Permission of instructor.

THEA 005 I,J,K,L,M,N,O,P. Theatre: Back Stage (1)
Open to all students, this course provides 1 unit for experiential, immersive participation on a technical crew for a Theatre Arts production. Requires satisfactory completion of the work assignment and a written report. Pass/No Credit only. May be repeated for each sub-section. Permission of instructor.

THEA 011. Introduction to the Theatre (3)
An examination of the different components of theatre making. Using a variety of dramatic texts from various time periods and critical commentaries, students investigate what theatre making means and how theatrical traditions emerge from and reflect the aesthetics and values of specific cultures and societies. Students will have a chance to experiment with different elements of theatre making (acting, directing, playwriting, design, and dramaturgy) in order to experience what these disciplines require and consist of. This course satisfies a G.E. II-C.

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 include 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 management from its initial stages to the conclusion of the run. This course meets during the first half of the Spring semester Prerequisite: THEA 033 or permission of instructor.

THEA 035B. Stage Management Practice (2)
This course builds upon the theoretical framework studied in THEA 035A. Students work as Stage Managers and Assistant Stage Managers on current Theatre Arts productions, gaining immersive experience in the real-world environment of the Performing Arts. Prerequisite: THEA 035A or permission of instructor.

THEA 037A. Costume Construction and Technology (2)
This course 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 instructor.

THEA 037C. Scenery (2)
Study and practice of stagecraft as it applies to the design and fabrication of scenery, properties and effects mechanisms for theatre. Course includes history of theatrical scenery technology through to current trends. Several practical projects will be created during the semester with an emphasis on creative problem solving. Students will also be involved in practical work on Departmental productions during the semester. This course is intended for Majors and Minors but is suitable for interested general students. Prerequisite: THEA 033 or permission of 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. Any combination of three THEA 051 courses satisfies a G.E. II-C requirement.

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. Any combination of three THEA 051 courses satisfies a G.E. II-C requirement.

THEA 051C. Modern Dance (1, repeatable to 4)
Any combination of three THEA 051 courses satisfies a G.E. II-C requirement. 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. Any combination of three THEA 051 courses satisfies a G.E. II-C requirement.

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. This course satisfies a G.E. II-C requirement.

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. This course satisfies a G.E. II-C requirement.

THEA 077. Voice for the Actor (2)
In this course students will learn a non-biased language to describe human movement, utilizing Laban-Movement Analysis. Students will apply their learning in class physical exercise, out-of-class observations, self observations and journal writing, making connections useful in interviewing, athletics, education, therapy, collaborative work and aesthetic expression. The class will create a Movement Choir or other artistic product in order to explore the expressiveness of the body and practice movement skills.

THEA 087. Theatre Internship (2)
An immersive work experience off-campus, under the supervision of non-Pacific managers or supervisors, in any theatrical field: stage; film/television; acting; administration; management; design, or construction. Internship may be for a specific production, a specified time length, or a summer season. Requires satisfactory completion of the work assignment and written reports. Pass/No Credit only. Permission of instructor.
THEA 089 A,B,C,D. Practicum: Performance (2)
This course recognizes further development in experiential learning for students who accept a performance task that is judged by the faculty to be of suitable scope or difficulty. Assignments may include a single role or multiple roles in one production, dance, combat, choreography, etc. Requires satisfactory completion of the work assignment and written reports. Pass/No Credit only. Prerequisites: THEA 005 A, B, C, D, E, F, G, or H and permission of instructor.

THEA 089 E,F,G,H. Practicum: Production (2)
This course recognizes further development in experiential learning for students who accept a production task that is judged by the faculty to be of suitable scope, responsibility, or difficulty. Students will have some prior experience in production and will assume positions with staff-like duties. Pass/No Credit Prerequisites: THEA 005 I, J, K, L, M, N, O, or P and permission of 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, onsite 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, and 071. Senior standing or permission of instructor.

THEA 109. Theatre Arts Capstone (2)
A student-developed and Faculty guided 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. Senior standing or permission of 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)
This course is designed to introduce students to the craft of playwriting. Students will read and analyze a diversity of contemporary plays in order to discover the structural techniques, dynamic language, and theatricality inherent to the discipline of playwriting. Students will then complete writing assignments designed to explore and develop a unique creative voice. Classroom activities will include analysis of master texts, the creation and sharing of short writing exercises, and the writing, staging, and presentation of one ten-minute play or segment from a larger work. 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 1800. 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. This course satisfies a G.E. II-A requirement.

THEA 114. Mask-Making (3)
This course covers a variety of design and fabrication techniques for theatrical mask making and includes the use of many different materials in creating decorative and functional masks. This is a hand-on course involving creative problem solving, research, sculpting and decorating of wearable masks. Discussion includes cultural anthropology and history behind ceremonial masks. Students will create and construct several different masks during the semester. This course satisfies a G.E. II-A requirement.

THEA 115. Theatre Heritage II (4)
This course studies theatre history and dramatic literature from 1800 to the present. 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. This course satisfies a G.E. II-A requirement. Prerequisites: THEA 113 or permission of instructor.

THEA 116. 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 117. Lighting Technology (2)
This course will include the controllable properties of lighting, including, color, texture and fixture choice, as well as experience with programming cues through the computer light board. Study will include basic understanding of electricity and electronics and will include practical 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 instructor.

THEA 118. 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: “B” or better in THEA 071 and permission of instructor.

THEA 120. 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 and 111. Junior standing. Permission of instructor.

THEA 122. Advanced Acting: Classical Styles (3)
An intensive course designed to help the student actor develop (through scene study, exercises, monologue work, etc.) the basic techniques necessary to perform classical texts, using the works of Shakespeare. There will be an emphasis on voice, diction, and text analysis with a focus on the linguistic structure of the text and how that structure reflects, reveals, and expresses the emotional life of the character. This class will help students to develop an understanding of the challenges of performing Shakespeare and the classics by building upon previously acquired acting skills and knowledge. Prerequisite: “B” or better in THEA 171. Permission of instructor.

THEA 123. 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. Prerequisite: “B” or better in THEA 171. Permission of instructor.
THEA 187. Theatre Internship (2)
An immersive work experience off-campus, under the supervision of non-Pacific managers or supervisors, in any theatrical field: stage; film/television; acting; administration; management; design; or construction. Internship may be for a specific production, a specified time length, or a summer season. Requires satisfactory completion of the work assignment and written reports. Pass/No Credit only. Junior and senior standing and permission of instructor.

THEA 189 A, B, C, D. Practicum: Performance (2)
This course recognizes further development in experiential learning for students who accept a performance task that is judged by faculty to be of suitable scope, or difficulty. Assignments may include a single role or multiple roles in one production, dance or combat choreography, music or vocal coaching, dance captain in musicals, etc. Requires satisfactory completion of the assignment and written reports. Pass/No Credit only. Permission of instructor. Junior or senior standing.

THEA 189 E, F, G, H. Practicum: Production (2)
This course recognizes further development in experiential learning for students who accept a production task that is judged by faculty to be of suitable scope, responsibility or difficulty. Students will have prior experience in production and will assume positions with staff-like duties. Pass/No Credit only. Permission of instructor. Junior or senior standing.

THEA 191. Independent Study (1-4)
Students desiring to study a particular aspect of theatrical practice or theory in depth may suggest a topic and a calendar to the appropriate Theatre Arts faculty. This option is designed for advanced study students. Prerequisite: Minimum 2.7 GPA. Permission of instructor.

THEA 193. Special Topics (2-4)
The material of a special topic course may reflect the current research of the instructor or the needs and interests of a group of students. Information regarding an offering under this number may be obtained from the instructor. Faculty members are open to suggestions from students for small group seminar topics in theatre practice, theory, or pedagogy.
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

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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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.

IV. 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.

V. 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.)

VI. Major Requirements

Minimum 58 units, including:

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ARTH 007</td>
<td>Survey of World Art to 1400</td>
<td>4</td>
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<tr>
<td>ARTH 009</td>
<td>Survey of World Art after 1400</td>
<td>4</td>
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<tr>
<td>ARTH 116</td>
<td>Contemporary World Art 1945 to Present</td>
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<tr>
<td>ARTS 005</td>
<td>Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 007</td>
<td>Principles of Two-Dimensional Design</td>
<td>3</td>
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<td>ARTS 009</td>
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<td>3</td>
</tr>
<tr>
<td>ARTS 023</td>
<td>Painting I</td>
<td>3</td>
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<td>ARTS 073</td>
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<td>ARTS 035</td>
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<td>ARTS 037</td>
<td>Sculpture</td>
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<tr>
<td>ARTS 045</td>
<td>Digital Photography</td>
<td>3</td>
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<tr>
<td>ARTS 059</td>
<td>Printmaking I</td>
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<td>ARTS 095</td>
<td>Time Based Media: Video</td>
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</tr>
<tr>
<td>ARTS 183</td>
<td>Studio Art Seminar II</td>
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Choose two of the following concentrations:
(Only one required if F) Visual Arts Teaching Credential is chosen)

A) Drawing:

<table>
<thead>
<tr>
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<td>ARTS 021</td>
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<tr>
<td>ARTS 127</td>
<td>Illustration</td>
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B) Painting:

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<td>ARTS 123</td>
<td>Painting II</td>
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<td>ARTS 057</td>
<td>Watercolor Painting</td>
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<td>ARTS 127</td>
<td>Illustration</td>
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C) Photography:

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<thead>
<tr>
<th>Course</th>
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<tr>
<td>ARTS 141</td>
<td>Photography II</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 143</td>
<td>Photography III</td>
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</table>

D) Printmaking:

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<thead>
<tr>
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<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ARTS 151</td>
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<td>3</td>
</tr>
<tr>
<td>ARTS 153</td>
<td>Printmaking III</td>
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</table>

E) Three Dimensional Media:

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<tr>
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<th>Units</th>
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<tbody>
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<td>ARTS 133</td>
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| One of the following courses (not selected above): 3

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<tbody>
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<td>ARTS 035</td>
<td>Ceramics</td>
<td></td>
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<tr>
<td>ARTS 037</td>
<td>Sculpture</td>
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</table>

F) Visual Arts Teaching Credential:

<table>
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<tr>
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<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ARTS 021</td>
<td>Life Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 142</td>
<td>Visual Arts in Education</td>
<td>4</td>
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</table>
| One of the following courses (not selected above): 3

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<tr>
<td>ARTS 037</td>
<td>Sculpture</td>
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</table>

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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACS 001</td>
<td>Pacific Seminar 1: What is a Good Society?</td>
<td>4</td>
</tr>
<tr>
<td>PACS 002</td>
<td>Pacific Seminar 2: Topical Seminar</td>
<td>4</td>
</tr>
<tr>
<td>PACS 003</td>
<td>Pacific Seminar 3: The Ethics of Family, Work, and Citizenship</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: 1) Pacific Seminars cannot be taken for Pass/No Credit. 2) Transfer students with 20 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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

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.)

V. Major Requirements

Minimum 83 units, including:

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<thead>
<tr>
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<tbody>
<tr>
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<td>Drawing</td>
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<td>ARTS 021</td>
<td>Life Drawing I</td>
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<td>ARTS 023</td>
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</tr>
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<td>Digital Photography</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 073</td>
<td>Freshman Seminar</td>
<td>1</td>
</tr>
<tr>
<td>ARTS 095</td>
<td>Time Based Media: Video</td>
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</tr>
<tr>
<td>ARTS 058</td>
<td>Printmaking I</td>
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<tr>
<td>ARTS 105</td>
<td>Time Based Media: Web Design</td>
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<td>ARTS 181</td>
<td>Studio Art Seminar I</td>
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</tr>
<tr>
<td>ARTS 183</td>
<td>Studio Art Seminar II</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 185</td>
<td>Studio Art Seminar III</td>
<td>4</td>
</tr>
</tbody>
</table>

Choose two of the following concentrations:
(Only one required if F Visual Arts Teaching Credential is chosen)

A) Photography:
- ARTS 141 Photography II                                | 3     |
- ARTS 143 Photography III                               | 3     |

Plus one of the following courses: 3-4

- ARTS 091 Print Media Graphics                          |
- ARTS 089 Practicum                                     |
- ARTS 189 Practicum                                     |
- ARTS 197 Undergraduate Research                        |

B) Printmaking:
- ARTS 151 Printmaking II                                | 3     |
- ARTS 153 Printmaking III                               | 3     |

Plus one of the following courses: 3-4

- ARTS 089 Practicum                                     |
- ARTS 189 Practicum                                     |
- ARTS 197 Undergraduate Research                        |

C) Drawing:
- ARTS 121 Life Drawing II                               | 3     |
- ARTS 127 Illustration                                  | 3     |

One of the following courses: 3-4

- ARTS 089 Practicum                                     |
- ARTS 189 Practicum                                     |
- ARTS 197 Undergraduate Research                        |

D) Painting:
- ARTS 123 Painting II                                   | 3     |
- ARTS 125 Painting III                                  | 3     |

Plus one of the following courses: 3-4

- ARTS 057 Watercolor Painting                           |
- ARTS 127 Illustration                                  |
- ARTS 191 Independent Study                             |
- ARTS 197 Undergraduate Research                        |

E) Three Dimensional Media:
- ARTS 133 Three Dimensional Studio I                    | 3     |
- ARTS 135 Three Dimensional Studio II                   | 3     |

Plus one of the following courses: 3-4

- ARTS 197 Undergraduate Research                        |
- ARTS 087/089 Internship/Practicum                      |
- ARTS 187/189 Internship/Practicum                      |
- ARTS 191 Independent Study                             |

F) Visual Arts Teaching Credential:
- ARTS 021 Life Drawing I                               | 3     |
- CURR 145 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                                  | 3     |

Plus one of the following courses: 3
V. Advanced Practice
Select four from the following courses: 12-13

- ARTS 075 Graphic Design I
- ARTS 087 Internship
- ARTS 187 Internship
- ARTS 089 Practicum
- ARTS 189 Practicum
- ARTS 091 Print Media Graphics
- ARTH 101 History of Graphic Design
- ARTS 123 Painting II
- ARTS 125 Painting III
- ARTS 127 Illustration
- 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
- EDUC 142 Visual Arts in Education
- 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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
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.)

V. Major Requirements
Minimum 83 units, including:

- ARTH 101 History of Graphic Design 4
- ARTH 114 20th Century Art & Film 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 045 Digital Photography 3
- ARTS 073 Freshman Seminar 1
- ARTS 075 Graphic Design I 3
- ARTS 077 Graphic Design II 3
- ARTS 079 Typography I 3
- ARTS 081 Typography II 3
- ARTS 087 Internship 3
- ARTS 095 Time-Based Media: Video 3
- ARTS 103 Graphic Production 3
- ARTS 105 Time Based Media: Web Design 3
- ARTS 115 Time Based Media: Motion Graphics 3
- ARTS 127 Illustration 3
- ARTS 141 Photography II 3
- ARTS 171 Graphic Design III 3
- ARTS 173 Graphic Design Seminar 3
- ARTS 175 Senior Graphic Design Seminar 4
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
- ARTH 009 Survey of World Art after 1400
- ARTH 114 20th Century Art and Film
- ARTH 116 Contemporary World Art
- One of the following courses:
  - 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 075 Graphic Design I
- ARTS 077 Graphic Design II
- ARTS 079 Typography I
- Plus one of the following courses:
  - ARTS 005 Drawing
  - ARTS 007 Principles of Two-Dimensional Design and Color

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 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 the onset of the Renaissance in the West during the 14th century. This is a lecture-based course using visual images to examine the characteristics and styles of each period. Works of art are placed in their aesthetic, social, and cultural contexts. The course provides an introduction to the discipline of art history.

- ARTH 009. Survey of World Art after 1400 (4)
  A continuation of ARTH 007, this course will survey the history of world art from the fifteenth century to the present, considering major works of painting, sculpture, architecture, and the applied arts, and paying particular attention to situating works of art in their aesthetic, social, and cultural contexts. It also provides an introduction to the discipline of art history.
ARTH 108. Renaissance Art and Architecture (4)
The examination of the art (painting, sculpture and architecture) of the 15th and 16th centuries in Italy and Northern Europe, focusing on the major artists of the period including Botticelli, Leonardo, Michelangelo, Raphael, Bramante and Titian. The works of art will be discussed in their artistic, historical and cultural contexts.

ARTH 110. 17th Century Art: Age of Rembrandt (4)
This course examines the masters of 17th century art. Major themes include the development of naturalism, a new interest in space, time and light, and relationship to artistic tradition.

ARTH 112. 19th Century European Art (4)
Major artists and artistic movements of the period will be explored including Neoclassicism, Romanticism, Realism and Impressionism. We will analyze the effects of gender upon representation and artistic practice, the effects of politics and class upon visual representation and the impact of urbanization. Painting, sculpture, photography, and architecture will be considered. Art historical methods including formalism, psychoanalysis, Marxism, and gender theory will be explored.

ARTH 114. 20th Century 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 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. 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 Rome 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. 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 and 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 to 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. Prerequisite: 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, con-
ceptual directions in art and personal imagery will be emphasized. Prereq-
uisites: ARTS 005 and 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 pot-
ter'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 poten-
tial 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)
This course provides an introduction to the theory, process, and aesthetics
digital photography. Through a series of practical and conceptual assign-
ments, students will learn to work with digital cameras and a selection of
software for image editing and printing. Students must provide their own dig-
tal cameras with fully manual exposure controls. Approximately $150 should
also be budgeted for personal photographic materials that are not supplied by
the University. Additional lab fees will also apply.

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 per-
sonal expression. Prerequisite: ARTS 005.

ARTS 059. Printmaking I (3)
An introductory survey, hands-on course designed to examine and the his-
torical 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. Prerequisite: ARTS 005 and ARTS 007.

ARTS 073. Freshman Seminar (1)
Freshman Seminar will introduce the student majoring in either Studio Art
or Graphic Design to issues related to professional practice, philosophical di-
rection, and the creative process in the visual arts

ARTS 121. Life Drawing II (3)
This course builds upon the experiences and skills achieved in Figure Draw-
ing 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 solv-
ing using traditional and contemporary solutions and media. The develop-
ment of personal style and expression is emphasized. Prerequisites: ARTS
005 and 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. Prerequisite: 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 inves-
tigate a variety of sub-themes routinely practiced by illustrators: advertising,
editorial, scientific and book illustration. Prerequisites: ARTS 021 and ARTS
023.

ARTS 133. 3-D Studio I (3)
This course emphasizes intermediate skill building and conceptual develop-
ment for three-dimensional art forms. Building upon foundational skills of
amics and sculpture, Students explore contemporary trends, methods and
materials applicable to 3-D studio practice. Prerequisite: ARTS 035 or ARTS
037.

ARTS 145. 3-D Studio II (3)
Open to the advanced studio art major, this course emphasizes advanced con-
ceptual, project and portfolio development for the 3-D artist. Studio man-
agement is an integral component of this course. Prerequisite: ARTS 133.

ARTS 141. Photography II (3)
An intermediate course that builds upon level one instruction in digital pho-
tography. This course introduces students to the photographic studio, with
practical instruction in studio lighting theory and techniques and advanced
camera and digital software applications for professional photographers cre-
ating photographs for editorial illustration, publication and exhibition. Lap-
top computer, preferably Mac, required. 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 exhibi-
tion. The course will emphasize a thematic project from pre-selected topics
in photography. Laptop computer, preferably Mac, required. 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 in-
vestigation and completed work. Prerequisite: ARTS 059.

ARTS 153. Printmaking III (3)
This course is designed to provide foundational work for students consider-
ing graduate studies in printmaking and related processes. Emphasis will be
placed upon working closely with faculty and studio management and port-
folio development. Prerequisites: ARTS 059 and ARTS 151.

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 read-
ing/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 Bachelors and Bachelors of Fine Arts de-
gree candidates for graduate study and/or entry level to a professional art ca-
reer. This course requires involves reading/discussions, fieltrips and practical
assignments that emphasize professional identify, self-promotion, in addi-
tion to 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 sen-
ior exhibition. Prerequisites: ARTS 181 and ARTS 183.

ARTS 087, 187. Internship (2-4)
Off-campus, non-classroom experience applying the studio arts in a profes-
sional context.

ARTS 089, 189. Practicum (2-4)
On-campus, non-classroom experiences/projects related to discipline-spe-
cific studio arts.
COURSE CATALOG 2011-2012

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, non-computer, studio course giving students a broad and thorough exposure to the practice and profession of Graphic Design. Prerequisites: ARTS 005 and ARTS 007 or permission of instructor.

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. Specific themes/topics for the course include visual grouping and hierarchy, visual identity development and application of Gestalt theory. Prerequisite: ARTS 075 or permission of instructor.

ARTS 079. Typography I (3)
This course provides an introduction to the study of the letterform as a cornerstone of graphic design. It focuses on how typography can be used as a communicative device as well as a graphic, compositional and expressive element. Areas explored include letterform anatomy, letterform analysis, measuring systems, typographic identification, and practical issues of setting and using type effectively. Prerequisite: ARTS 075 or permission of instructor.

ARTS 081. Typography II (3)
Students enrolled in ARTS 081 will have the opportunity to apply the principles and concepts introduced in ARTS 079 to more complex typographic problems. Directions involving experimental and theoretical as well as practical and functional applications of type will be explored. Macintosh laptop computer required. Lab fees apply. Prerequisite: ARTS 075 or permission of instructor.

ARTS 091. Print Media Graphics (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. Lab fees apply. Prerequisite: ARTS 079 or permission of instructor.

ARTS 095. Time Based Media: Video (3)
Time Based Media: Video is an introductory level course teaching the construction of time-based visual narratives. Students will develop projects using camera generated images and time-based software applications. Assignments will focus on sequential storytelling, animation, video editing, and thematic development. Students must provide their own digital still cameras for this course. Approximately $100 should also be budgeted for other materials and equipment that are not supplied by the University. Additional lab fees.

ARTS 101. History of Graphic Design (4)
A survey of the development of graphic communication introduced by formal analysis of major works of graphic design within the context of their time and influence on later works. This course highlights significant events in communication and graphic design from 1450 to the present. Prerequisite: ARTS 075 or permission of instructor.

ARTS 103. Graphic Production (3)
This course examines methods and procedures of efficient production practices including typographic issues, image adjustment, digital file format preparation and related technologies for the graphic design student. Lab fees apply. Prerequisites: ARTS 077 and ARTS 091 or permission of instructor.

ARTS 105. Time Based Media: Web Design (3)
An intermediate level course for studio art and graphic design majors teaching the development of web sites for commercial applications and artist’s portfolios. Emphasis is placed upon effective approaches to the organization and design of web sites for self-promotion, employment, and e-commerce. Lab fees apply. Prerequisites: ARTS 045 and ARTS 091 or permission of instructor.

ARTS 115. Time Based Media: Motion Graphics (3)
This course challenges the student to create interpretive design solutions for complex interactive problems, which rely primarily upon motion and time to communicate visual ideas. Students explore these highly conceptual problems through use of digital technology. Course emphasis is on dynamic, thoughtful, and appropriate visual communication solutions. Lab fees apply. Prerequisites: ARTS 045 and ARTS 091 or permission of instructor.

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. Macintosh laptop computer required. Lab fees apply. Prerequisites: ARTS 077 and ARTS 081 or permission of instructor.

ARTS 173. Graphic Design Seminar (3)
Open only to BFA majors in graphic design with junior standing. This is the first of two capstone courses emphasizing research in the field of graphic design. It is an advanced level course in project and portfolio development. Prerequisite: ARTS 171 or permission of instructor.

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 completion of a senior presentation and exhibition. Prerequisite: ARTS 173 or permission of instructor.

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 coursework or permission of Department Chair.

ARTS 087. Practicum (2-4)
On-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. Practicum (2-4)
On-campus, non-classroom experiences/projects related to graphic design. Prerequisites: Completion of foundations and upper division coursework or permission of Department Chair.

ARTS 193. Special Topics (1-4)
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.
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 multidisciplinary 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 21st 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
Larry Spreer, 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 interdiscipllinary 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 advisor 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

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, and Economics.

See the program director for degree and program requirements in Political Science.

Self-Designed Major (BA)

Cynthia Dobbs, 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

Cynthia Dobbs, 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 minor 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 leading to a baccalaureate degree, passage of state examinations: CBEST and CSET examinations for the teaching area; 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. CPR Certification is required for a preliminary credential. 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 undergraduate coursework, and the University of the Pacific 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); Science; Chemistry; Physics or...
cross-disciplinary majors and programs

Geoscience; Spanish; Physical Education (see Sport Sciences); Social Sciences (see History) and Music Education. CSET examinations in these fields will be required. The Department of Music Education provides a state-approved subject matter program.

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 is available at the CSET website.

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 and the Thomas J. Long School of Pharmacy and Health Sciences (Pre-physical therapy Advantage Program).

Pre-Medical Program*

Advisors: 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*

Advisors: 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

Administrative Officers

Thomas W. Krise, 2008, Dean and Professor: BS, History, U.S. Air Force Academy; MS, Management, Central Michigan University; MA, English, University of Minnesota; PhD, English, University of Chicago. Member, Phi Beta Kappa.

Edie Sparks, 2006, Senior Associate Dean and Associate Professor: BA, University of California, Berkeley, 1991; MA, University of California, Los Angeles, 1996; PhD, 1999. Member, Phi Beta Kappa.

Lou J. Matz, 2004, Associate Dean and Director of General Education, Associate Professor, BA, University of the Redlands, 1984; MA, University of California, San Diego, 1987; PhD, 1992. Member, Phi Beta Kappa.

Cynthia Dobbs, 2007, Associate Dean for Faculty Development and Associate Professor, BA, Pomona College, 1987; PhD, University of California, Berkeley, 1998. Member, Phi Beta Kappa.

Joanna Albala, 2008, Director of Research Initiatives & Strategic Partnerships and Adjunct Professor of Biology: BA, Bucknell University, PA, 1987; MS, Albert Einstein College of Medicine, NY, 1991; Doctor of Philosophy, Albert Einstein College of Medicine, NY, 1994.

Jon Schamber, 1980, Professor, BA, University of the Pacific, 1974; MA, University of the Pacific, 1975; PhD, University of Oregon, 1982.


Biological Sciences

Maria G. Pallavicini, 2010, Provost and Professor of Biology with tenure.

Gregg D. Jongeward, 1996, Associate Professor and Chair, BS, University of Minnesota, 1986; PhD, California Institute of Technology, 1993.

Craig A. Vieria, 1995, Professor and Co-Chair, BS, University of California, Davis, 1990; PhD, University of California, Riverside, 1994.

Mark S. Brunell, 2002, Associate Professor, BA, California State University, Fullerton, 1988; MA, 1991; PhD, University of California Riverside, 1997.

Kirkwood M. Land, 2004, Associate Professor, BS, University of California, Davis, 1992; MA, University of California, Riverside, 1995; PhD, University of California, Los Angeles, 2001.

Geoffrey Lin-Cereghino, 2000, Associate Professor, BS, University of California, Davis, 1989; PhD, University of California, San Diego, 1995.

Joan Lin-Cereghino, 2000, Associate Professor, AB, Princeton University, 1987; PhD, University of California, San Diego, 1992.

Stacy Luthy, 2007, Assistant Professor, BS, Louisiana State University, 1997; PhD University of Miami, 2004.

W. Desmond Maxwell, 1999, Associate Professor, BSc, The Queen’s University of Belfast, 1986; PhD, 1991.

Ajna Rivera, 2010, Assistant Professor, BS, Stanford University, 1999; PhD, University of California, Berkeley, 2006.

Richard Tenaza, 1975, Professor, BA, San Francisco State College, 1964; PhD, University of California, Davis, 1974.

Eric O. Thomas, 1993, Associate Professor, BS, University of California, Riverside, 1984; MA, 1987; PhD, University of California, Berkeley, 1991.

Lisa A. Wrischnik, 2002, Associate Professor, BA, University of California, Berkeley, 1986; PhD, University of California, San Francisco, 1995. Member, Phi Beta Kappa.

Marcos Gridi-Papp, 2009, Assistant Professor, BS, State University of Campinas, Sao Paulo, Brazil, 1994; MS, State University of Campinas, Sao Paulo, Brazil, 1997; PhD, University of Texas, Austin, 2003.

Douglas Weiser, 2009, Assistant Professor, BA, College of Wooster, 1999; PhD, Duke University, 2004.

Chemistry

Larry O. Spreer, 1970, Professor and Assistant Chair, BS, University of Kansas, 1965; PhD, University of Colorado, 1969.

Andreas Franz, 2002, Associate Professor, BS, Universitats-Gesamthochschule Siegen, 1994; MS, University of the Pacific, 1997; PhD, University of the Pacific, 2000.

Patrick R. Jones, 1974, Professor, BA, University of Texas, 1966; BS, 1966; PhD, Stanford University, 1971. Member, Phi Beta Kappa.

Michael McCallum, 1994, Professor, BS, Michigan State University, 1988; PhD, University of California, Berkeley, 1993.

Jianhua Ren, 2002, Professor, BS, Beijing Normal University, 1986; MS, Auburn University, 1994; PhD, Purdue University, 1999.

Silvio Rodriguez, 1978, Professor, MS, University of California, Santa Barbara, 1970; PhD, 1978.

Vyacheslav V. Samoshin, 1999, Professor, MS, Lomonosov Moscow State University, USSR, 1974; PhD, MSU 1982; DSc, MSU 1991.

Bálint Sziráy, 2008, Associate Professor, MS, Eötvös Loránd University, 1997; PhD, Eötvös Loránd University, 2001.

Jerry Tsai, 2008, Associate Professor, BS, University of California, Los Angeles, 1991; PhD, Stanford University, 1998.

Liang Xue, 2007, Assistant Professor, BS, Fudan University, Shanghai, China, 1996; PhD, Clemson University, 2004.

Communication

Qingwen Dong, 1996, Professor and Chair, BA, Beijing Second Foreign Language Institute, 1983; MA, University of Missouri-Columbia, 1990; PhD, Washington State University, 1995.

Marlin Bates, 2005, Assistant Professor, BA, University of the Pacific, 1996; MA, University of the Pacific, 1999; PhD, Pennsylvania State University, 2005.

Teresa G. Bergman, 2006, Professor, BA, University of California, Berkeley, 1978; MA, San Francisco State University, 1991; PhD University of California, Davis, 2001.


Heather J. Hether, 2011, Assistant Professor, BA, York University, 1992; MA, 2003; 2007; PhD University of Southern California, 2009.

Randall J. Koper, 1985, Professor, BA, Michigan State University, 1974; MA, 1984; PhD 1985.

R. Alan Ray, 1987, Assistant Professor, BS, Memphis State University, 1977; MA, 1980; PhD, University of Missouri, 1986.

Jon F. Schamber, 1980, Professor, BA, University of the Pacific, 1974; MA, 1975; PhD, University of Oregon, 1982.
Paul Turpin, 2007, Assistant Professor, BA, University of California, Berkeley, 1994; MA, University of Southern California, 1997; PhD, 2005.

Earth & Environmental Sciences

Lydia K. Fox, 1990, Associate Professor and Chair, BSE, Princeton University, 1981; PhD, University of California, Santa Barbara, 1989.

Kurtis Burmeister, 2005, Assistant Professor, BA, University of California at Santa Barbara, 1996; MA, 2000; PhD, University of Illinois, 2005.

Eugene Pearson, 1971, Professor, BA, Pomona College, 1967; PhD, University of Wyoming, 1972.

Laura Rademacher, 2005, Assistant Professor, BS, University of Wisconsin, Madison; PhD, University of California, Santa Barbara, 2002.

Economics

Peter J. Meyer, 1985, Associate Professor and Chair, AB, Harvard University, 1972; PhD, University of California, Berkeley, 1979.

Michelle M. Amaral, 2007, Assistant Professor, BS, University of the Pacific, 1998; MA, University of Virginia, 2001; PhD University of California, Davis, 2007.

Benjamin N. Dennis, 1996, Associate Professor, BA, Michigan State University, 1990; PhD, Harvard University, 1996.

Dennis O. Flynn, 1979, Professor, BS, University of Nevada, 1968; MS, 1972; PhD, University of Utah, 1977.


David E. Keeffe, 1978, Associate Professor, BS, Cornell University, 1965; PhD, University of California, Berkeley, 1980.

Sharmila K. King, 2001, Associate Professor, BA, University of York, England, 1992; MA, San Francisco State University, 1996; PhD, University of California, Davis, 2001.

J. Farley Staniec, 1993, Associate Professor, BS, University of Delaware, 1986; MA, Duke University, 1988; PhD, 1992.

English

Camille Norton, 1994, Professor, BA, University of Massachusetts, 1983; MA, Harvard University, 1987; PhD, 1992.

Andrea D. Boboc, 2006, Assistant Professor, BA, Ludwig-Maximilians University, 1997; MA, 1998; PhD, University of Michigan, Ann Arbor, 2006.

Diane M. Borden, 1971, Professor and Film Studies Program Director, BA, Lone Mountain College. 1964; MA, San Francisco State University, 1966; PhD, University of California, Santa Cruz, 1971.

Cynthia Dobbs, 1998, Associate Professor and Assistant Dean BA, Pomona College, 1987; PhD, University of California, Berkeley, 1998. Member, Phi Beta Kappa.

Thomas W. Krise, 2008, Dean and Professor: BS, History, U.S. Air Force Academy; MSA, Management, Central Michigan University; MA, English, University of Minnesota; PhD, English, University of Chicago. Member, Phi Beta Kappa.

Courtney Lehrmann, 1998, Professor, BA, University of North Carolina at Chapel Hill, 1991; MA, Indiana University, 1994; PhD, 1998. Member, Phi Beta Kappa.

John Lessard, 2006, Assistant Professor, BA, Rice University, 1997; MA, University of Pennsylvania 1999; PhD, 2006.

Amy Elizabeth Smith, 1999, Associate Professor, BA, West Virginia University, 1986; MA, The Pennsylvania State University, 1991; PhD, 1998.

Eric A. Sonstroem, 2001, Associate Professor and Chair, BA, Westayan University, 1988; MA, Indiana University, 1990; PhD, 1999.

Xiaojing Zhou, 2002, Professor, BA, College of Foreign Languages and Literature, Shandong University, China, 1974; MA, University of Regina, Saskatchewan, Canada, 1989; PhD, Memorial University of Newfoundland, St. John’s, Canada, 1995.

Jeffrey Hole, 2009, Assistant Professor, BA, Aquinas College, 1995; MA, University of Pittsburgh, 1999; PhD, University of Pittsburgh, 2007.

History

Caroline Cox, 1998, Professor BA, University of California, Berkeley, 1990; MA, 1993; PhD, 1997. Member, Phi Beta Kappa.

Kenneth Albala, 1994, Professor, BA, George Washington University, 1986; MA, Yale University, 1987; MPhil, Columbia University, 1990; PhD, 1993. Member, Phi Beta Kappa.

Gestine Gerhard, 1999, Associate Professor, BA, Free University of Berlin, 1991; MA, Technical University of Berlin, 1994; PhD, University of Iowa, 1999.

Tomomi Kinukawa, 2006, Assistant Professor, BA, University of Tokyo, 1989; MA, University of Wisconsin-Madison, 1993; PhD, 2001.


Greg Rohlf, 2001, Assistant Professor and Chair; BA Luther College, 1988; MA, University of Michigan, 1993; PhD, University of Iowa, 1999.

Edith Sparks, 1999, Associate Professor and Senior Associate Dean, BA, University of California, Berkeley, 1991; MA, University of California, Los Angeles, 1996; PhD, 1999. Member, Phi Beta Kappa.


Mathematics

Aleksei I. Beltukov, 2004, Associate Professor, BS, Mendeleiev University, 1994; MS, Mendeleiev University, 1996; MS, Tufts University, 1996; PhD, 2004.

Mouchumi Bhattacharyya, 2000, Associate Professor, BS, Cotton College, 1988; MS, Delhi University, 1990; MPhil, 1992; PhD, University of Wisconsin, Milwaukee, 1999.

Jialing Dai, 2006, Assistant Professor, BS, Southwestern Normal University (China), 1985; MS, Wuhan University of Technology (China), 1987; MS, University of Arizona, 1998; PhD, University of Arizona, 2000.

Christopher Goff, 2002, Associate Professor, BS, BA, University of Texas, Austin, 1993; MA, University of California, Santa Cruz, 1995; PhD, 1999. Member, Phi Beta Kappa.

Larry Langley, 2001, Associate Professor, BS, U.C. Santa Cruz, 1988; AM Dartmouth College, 1990; PhD, Dartmouth College, 1993.

Sebastian Marotta, 2008, Assistant Professor, BS, Hydraulic and Civil Engineering, Universidad Nacional de La Plata, 1999; PhD, Boston University, 2008.

John Mayberry, 2010, Assistant Professor, BA, California State University, Fullerton, 2003; MA, University of Southern California, 2004; PhD, University of Southern California, 2008.
Modern Language and Literature

Martín Camps, 2005, Associate Professor, BA, Instituto de Comunicacion y Filosofía, Mexico City, 1997; MFA, University of Texas, El Paso, 1999; PhD, University of California, Riverside, 2003.

Zeljko Cipris, 2000, Professor, MA, Columbia University, 1987; MPhil, 1987; PhD, 1994.

Arturo Giraldez, 1990, Professor, BA, Universidad Complutense de Madrid, 1976; MA, 1979; PhD, University of California, Santa Barbara, 1990; PhD, Amsterdam University, 1999.

Susan C. Giraldez, 1994, Associate Professor, BA, University of the Pacific, 1980; MA, Middlebury College, 1982; PhD, University of California, Santa Barbara, 1992.

Katherine Golsan, 1994, Professor, BA, Colgate University, 1976; MA, University of North Carolina, 1980; PhD University of Michigan, 1988. Member, Phi Beta Kappa.

Jie Lu, 1996, Professor of Chinese, Film Studies and Department Chair, BA, Beijing Second Foreign Language Institute, Beijing, 1982; MA, University of Massachusetts, Amherst, 1990; PhD, Stanford University, 1996.

Jeeyoung Peck, 2008, Assistant Professor, BA, Hankuk University of Foreign Studies, Korea (valedictorian) 2000; MA, Hankuk University of Foreign Studies, Korea 2002; PhD, Stanford University, 2008.

Kathy A. Richman, 2007, Assistant Professor, BA, Cornell University, 1980; AM, Harvard University, 1992; PhD, 2002.

Traci Roberts-Camps, 2005, Assistant Professor, BA, Willamette University, 1999; MA, University of California, Riverside, 2001; PhD, 2004.

Philosophy

James D. Hefner, 1972, Professor and Chair, BA, Fordham University, 1964; MA, 1967; PhD, University of Notre Dame, 1976.

Lou J. Matz, 1999, Associate Professor and Associate Dean and Director of General Education, BA, University of the Redlands, 1984; MA, University of California, San Diego, 1987; PhD, 1992. Member, Phi Beta Kappa.

Ty Raterman, 2006, Assistant Professor, BA, Northwestern University, 1999; MA, University of North Carolina at Chapel Hill, 2001; PhD, 2006.

Ray Rennard, 2005, Assistant Professor and Co-Chair, BA, University of Pittsburgh, 1992; PhD, Johns Hopkins University, 2003.

Eleanor E. Witrup, 1996, Assistant Professor, BA, Wellesley College, 1986; MTS, Harvard University Divinity School, 1989; PhD, University of California, San Diego, 1994.

Physics

James E. Hetrick, 1997, Professor and Chair, BS, Case Western Reserve University, 1982; PhD, University of Minnesota, 1990.

Joseph F. Alward, 1979, Assistant Professor, BA, California State University, Sacramento, 1968; MA, University of California, Davis, 1973; PhD, 1976.

Daniel Birmingham, 2005, Associate Professor, BA, Trinity College, Dublin, 1982; PhD, 1985.

Kieran Holland, 2006, Assistant Professor, BSc, University College Cork, 1994; M.Sc., 1995; PhD, Massachusetts Institute of Technology, 1999.

Keith J. Juge, 2007, Assistant Professor, BSc, University of Toronto, 1993; MS, University of California, San Diego, 1995; PhD, 1998.

Political Science

Jeffrey Becker, 2006, Assistant Professor, BA, University of California, Santa Cruz, 1991; MA Rutgers University, 1996; PhD, 2004. Member, Phi Beta Kappa.


Michael T. Hatch, 1985, Professor, BA, Utah State University, 1970; MA, Johns Hopkins University, 1973; PhD, University of California, Berkeley, 1983.

Brian E. Klunk, 1987, Associate Professor and Chair, BA, Pennsylvania State University, 1977; MA, University of Virginia, 1980; PhD, 1985.

Cynthia Oberg, 1994, Professor, BA, University of California, Berkeley, 1985; MA, Northern Illinois University, 1991; PhD, 1995.

Susan Sample, 1999, Associate Professor, BA, University of Missouri, 1991; PhD, Vanderbilt University, 1996. Member, Phi Beta Kappa.

Keith W. Smith, 2008, Assistant Professor, BA, Pepperdine University, 1997; MPM, University of Maryland, 1999; MA University of California, Berkeley, 2000; PhD, 2005.

Dari Sylvester, 2005, Assistant Professor, BA, Trinity College, 1997; MA, State University of New York, Stony Brook, 2002; PhD, 2006. Member, Phi Beta Kappa.

Psychology

Paul Bulakowski, 2011, Assistant Professor, BA, Fairfield University 2003; PhD, University of California, Davis, 2009

Gary N. Howells, 1971, Professor, BA, Oregon State University, 1964; MA, University of Utah, 1970; PhD, 1971.

Scott A. Jensen, 2006, Assistant Professor, BS, Brigham Young University, 1998; MS, Colorado State University, Fort Collins, 2003; PhD, 2004.

Carolynn S. Kohn, 2004, Associate Professor and Chair, BA, University of California at Santa Barbara, 1991; MA, Hahnemann University, 1996; PhD, MCP-Hahnemann University, 2000.

Matthew P. Normand, 2007, Associate Professor, BA, Western New England College, 1997; MA, Western Michigan University, 1999; MS, Florida State University, 2002; PhD, 2003.

Stacy L. Riley, 2006, Assistant Professor, BS, Fayetteville State University, 1996; MA, The University of Alabama, 1999; PhD, 2002.

Deborah Schooley, 2007, Assistant Professor, BA, Brown University, 1999; PhD, University of Michigan, 2004.

Religious and Classical Studies

Martha W. Bowsky, 1984, Professor, BA, University of North Carolina, 1972; MA, 1974; PhD, University of Michigan, 1983. Member, Phi Beta Kappa.

Alan Lenzi, 2006, Assistant Professor, BA, Central Bible College, 1993; MAR, Westminster Theological Seminary, 1997; MA, Brandeis University, 2002; PhD, 2006.

George D. Randels, Jr., 1996, Associate Professor and Chair, BA, University of Iowa, 1984; MAR, Yale University, 1987; PhD, University of Virginia, 1994. Member, Phi Beta Kappa.

Caroline T. Schroeder, 2007, Associate Professor, AB, Brown University, 1993; MA, Duke University, 1998; PhD, 2002. Member, Phi Beta Kappa.

Tanya Storch, 2000, Associate Professor, BA, MA, University of St. Petersburg, 1988; PhD, University of Pennsylvania, 1995.

**Sociology**

Alison H. Alkon, 2008, Assistant Professor, BA, Emory University, 1999; MA, U.C. Davis, 2003; PhD, University of California, Davis, 2008.

Marcia Hernandez, 2005, Assistant Professor, BA, University of California, Santa Barbara, 1994; PhD, State University of New York, Albany, 2007.

George H. Lewis, 1970, Professor and Chair, BA, Bowdoin College, 1965; MA, University of Oregon, 1968; PhD, 1970. Member of Phi Beta Kappa

Ethel G. Nicdao, 2007, Assistant Professor, BA, University of California, Davis, 1994; MA, California State University, Hayward, 2001; PhD, University of New Mexico, 2006.

**Sport Sciences**

Margaret E. (Peg) Ciccolella, 1985, Professor, BA, University of Colorado, 1970; MS, Brigham Young University, 1972; EdD, 1978; JD, Humphreys College of Law, 1993.

Jodi Baker, 2006, Clinical Assistant Professor and Program Director, Athletic Training Education Program, BS Whitworth University, 1997 MS San Diego State University, 2002


Virgil Darrin Kitchen, 2005, Assistant Professor, BA, California State University, Chico, 1996; MA, 1997; EdD, University of the Pacific, 2006.

Linda Koehler, 1989, Associate Professor, BA, Purdue University, 1971; MS, University of New Mexico, 1975; PhD, University of Illinois, 1982.

Brian D. Moore, 2011, Assistant Professor, BA, Loyola Marymount University, Los Angeles, 1998; M.Ed, University of Virginia, Charlottesville, VA, 2000.

Peter J. Schroeder, 2007, Associate Professor and Chair, BS, Truman State University, 1996; MA University of the Pacific, 1998; EdD University of Missouri, 2003.


J. Mark VanNess, 1999, Associate Professor, BS, Wheaton College, 1990; MS, California State University, Sacramento, 1993; PhD, Florida State University, 1997.

**Theatre Arts**

Gary Armagnac, 2001, Associate Professor, Producer, Artistic Director, BA, Speech and Theatre, Iona College, 1974; MFA, Acting and Directing, California State University, Long Beach, 1993.

Randall A. Enlow, 2003, Associate Professor, BA, University of Akron, 1987, MFA, Case Western Reserve University, 1993.

Macelle Mahala, 2007, Assistant Professor, BA, Macalester College, 2001; MA, University of Minnesota, 2004; PhD, 2007.

Cathie McClellan, 2002, Associate Professor, BA, Brigham Young University, 1975; MFA, University of Arizona, 1989.

Lisa Tromovitch, 2005, Assistant Professor and Chair, BA, Dartmouth College, 1983; MFA, Southern Methodist University. Member, Phi Beta Kappa.

**Visual Arts**

Trent Burkett, 2002, Associate Professor, BA, California State University, Sacramento 1993; MFA University of Minnesota, Twin Cities, MN, 2000.

Brett DeBoer, 1999, Associate Professor and Chair, BFA, University of Northern Colorado, 1977; MS, Parsons School of Design, 1985; MFA, Rochester Institute of Technology, 1989.

Daniel Kasser, 1984, Professor, BA, Humboldt State University, 1980; MFA, University of New Mexico, 1991.

Lucinda Kasser, 1995, Associate Professor, BA, Humboldt State University, 1979; MA, California State University, Sacramento, 1989.

Marie Ana Lee, 2000, Assistant Professor, BA, Michigan State University, 2000; BFA, Colorado State University, 2002; MFA, Colorado State University, 2005.

Jennifer Little, 2005, Assistant Professor, BFA, Washington University, 2001; MFA, University of Texas, Austin, 2005.

Merrill Schleier, 1982, Professor, BA, The City College of New York, 1973; MA, University of California, Berkeley, 1976; PhD, 1983. Member, Phi Beta Kappa.
A professional school educating and training musicians for the highest levels of artistic performance, creative endeavor, and intellectual inquiry.
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 leaven 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 extensive 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

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 NAMM 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, DVDs 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. Dowel 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 each semester of full-time residency according to major field specifications with the exception of the BA in Music Management degree. 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 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, he or she 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 (MEd) 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, MMGT 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**
  - Two courses from the following:
    - 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.*

**IV. Diversity Requirement**
Complete one diversity course 3-4

*Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.*

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**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
- **MPER 151** Principles of Conducting 2
- **Four units of one or a combination of the following courses:** 4
  - **MAPP 001D** Class Piano
  - **MAPP 005N** Applied Music: Piano
  - **MPER 070-073** Major Ensemble 8
  - **MPER 060** Chamber Ensemble 8

*Note: 1) MPER 060 is to be taken every semester.
2) MPER 082-084 2 semesters of Major Choral Ensemble 2
3) MPER 153 Instrumental Conducting 2
4) MHIS 140 Symphonic Literature 3
5) MHIS 142 Chamber Music Literature 3
6) MCOM 113 Advanced Analysis 3
7) One of the following courses:** 3
   - **MCOM 108** Counterpoint
   - **MCOM 109** Advanced Orchestration
   - Two courses MHIS 150 or above to be determined with consultation of advisor.

**MAPP 012** Advanced 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.
2) Half recital during the Junior year.
3) 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.

1. 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
MPER 020 Introduction to Lyric Diction 2
MPER 021 Introduction to Lyric Diction 2
MPER 120 Lyric Diction 2
MPER 121 Lyric Diction 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 Class Piano
- MAPP 005N Applied Music: Piano

Piano studies for Voice Performance majors are continued unless the piano skills examination is passed.

4 units from the following ensemble courses determined in consultation with an advisor, during the freshman and sophomore years: 4
- MPER 082 The Oriana Choir (Women’s Chorus)
- MPER 083 University Chorus
- MPER 084 Pacific Singers

4 units from the following ensemble courses determined in consultation with an advisor, during the junior and senior years: 4
- MPER 080 Opera Production (must be taken twice for ensemble credit)
- MPER 082 The Oriana Choir (Women’s Chorus)
- MPER 083 University Chorus
- MPER 084 Pacific Singers

Note: During the junior and senior years voice majors must have one year of Opera Production and one year of a major choral ensemble

Elective MHIS or MCOM elective (100 level) 3
Elective MHIS elective (150 or above) 3
MHIS 144 Vocal Literature 3
MPER 069 Opera Theatre Workshop 2
MPER 169 Advanced Opera Workshop 1

Note: 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 Major 12

Note: 1) MPER 112 is to be repeated to have a total of 12 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.
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.

1. 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
MPER 151 Principles of Conducting 2
Four units of one or a combination of the following courses: 4
- MAPP 001D Class Piano
- MAPP 005N 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

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
Electives MHIS elective (2 150 or above) 6
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

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.

1. 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
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
Elective MHIS course (150 or above) 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
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

Note: 1) MAPP 112N 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.

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 full-time semester of student teaching (generally during the fourth year).
2. A plan which requires one semester of part-time student teaching during the course of the fourth year plus a summer course of Video Microrehearsal and field teaching (six units).
3. 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 in the fifth year.

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.

1) 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. To enroll in the appropriate School of Education courses, music education majors must complete appropriate application and interview processes with the credential office as part of the advising process. 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 advisors. 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.

1. 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
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
Elective MHIS course (150 or above) 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
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

Note: 1) MAPP 112N 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.
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 008 Music of the World’s People 3
MHIS 011 Survey of Music History I 3
MHIS 012 Survey of Music History II 3
MPER 151 Principles of Conducting 2
MCOM/MPER/MEDU Elective (1 jazz course) 2
MAPP 001A Beginning Guitar Class 1
Elective MHIS course (150 or above) 3

Note: 1) Proficiency in guitar must be met.

Four to eight units from the following courses: 4-8
MAPP 001D Class Piano
MAPP 005N 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. Half a recital and a piano exam are also 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

MEDU 111 Choral Development 2

One of the following courses:
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 008 Music of the World’s People 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
EDUC 140 Transformational Teaching and Learning 4
EDUC 156 Content Area Literacy Development in Secondary Schools 3
EDUC 163 Teaching English Learners 3
EDUC 171 Professional Practice Music 4

The following are required for the credential, not for the degree:
SPED 125X Teaching Exceptional Learners 2
EDUC 171 Professional Practice Music 6
EDUC 172 Professional Practice Seminar 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
MAPP 001A Beginning Guitar Class 1
Elective MAPP course (150 or above) 3

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

One of the following courses:
MEDU 110 Band Development
MEDU 112 Orchestra Development
MEDU 113 Laboratory Ensemble 2

Note: 1) MAPP 011 is to be repeated to have a total of 8 units from this one course.

MAPP 011 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. Half a recital and a piano exam are also required.
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 Faculty.

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. 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 courses 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 006 Music of the World’s People 3
MHIS 011 Survey of Music History I 3
MHIS 012 Survey of Music History II 3
MPER 151 Principles of Conducting 2
MPER 080-084 2 semesters of Major Choral Ensemble 2
Elective MHIS course (150 or above) 3

Piano, Guitar, and Vocal Proficiencies:
MAPP 001D and/or 005N Applied Piano 4-8
MAPP 001B Functional Guitar Class 1
MAPP 001B Advanced Functional Guitar Class 1
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

Note: 1) Repeated for four semesters.

MTHR 187 Internship in Music Therapy 2

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
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
MPER 151 Principles of Conducting 2
Elective MHIS course (150 or above) 3

Four units of one or a combination of the following courses:

MAPP 001D Class Piano 4
MAPP 005N Applied Music: Piano 4

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 8
MCOM 026 New Resources in Pitch 1
MCOM 027 New Resources in Rhythm 1
MCOM 108 Counterpoint 3
MCOM 109 Advanced Orchestration 3
MCOM 111 Advanced Computer Music 3
MCOM 113 Advanced Analysis 3
MCOM 124 Composition: Upper Division 8
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

Bachelor of Music Major in Music History

The Bachelor of Music in Music History prepares students for the academic study of music, alone or in combination with practical studies or other academic disciplines. A breadth of upper-level electives, courses in other disciplines, and ensemble experiences should be chosen to support the degree. A list of suggested courses is available from the program director.

Independent Study in Music History is limited to those pursuing research projects, which must be proposed the semester before the student hopes to begin study. Projects are required of Music History majors but may be permitted of other students.

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
MPER 151 Principles of Conducting 2

Four of one or a combination of the following courses:

MAPP 001D Class Piano
MAPP 005N Applied Music: Piano

Eight units from the following courses:

MPER 070 University Symphony Orchestra
MPER 072 Symphonic Wind Ensemble
MPER 073 Concert Band

Note: 1) MAPP 010 is to be repeated to have a total of 8 units from this one course.

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 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
- Elective MHIS course (150 or above) 3
- MPER 151 Principles of Conducting 2
- One of the following courses:
  - MAPP 001D Class Piano
  - MAPP 005N 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 Music Management Internship 2-4
- MAPP 010 Applied Music 8
- 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

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 advisor 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:

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
- Elective MHIS course (150 or higher) 3

Note: 1) Student must qualify for an internship in order to enroll. 2) A Business elective may be taken in place of this internship.
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.

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.

II. Breadth Courses:
Complete 64 units outside the Conservatory of Music (Including general education courses, transfer courses, CPCE/EXTN units, internships, etc.)

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:

1. MCOM 009 Introduction to Music Technology 1
2. MCOM 010 Music Theory and Aural Perception I 4
3. MCOM 011 Music Theory and Aural Perception II 4
4. MHIS 011 Survey of Music History I 3
5. MHIS 012 Survey of Music History II 3
6. Elective MHIS course (150 or above) 3
7. MUJZ 008 Introduction to Jazz 3
8. MUJZ 010 Jazz Piano I 1
9. MUJZ 011 Jazz Piano II 1
10. MUJZ 020 Jazz Theory and Aural Training 3
11. MUJZ 021 Jazz Style and Analysis 3
12. MUJZ 030 Jazz Improvisation I 2
13. MUJZ 031 Jazz Improvisation II 2
14. MUJZ 110 Jazz Arranging and Composition 3
15. MUJZ 130 Advanced Improvisation 2
16. MUJZ 140 Jazz Pedagogy 2
17. MUJZ 158 History of Jazz 3
18. MUJZ 161 Jazz Seminar and Perspectives I 3
19. MUJZ 162 Jazz Seminar and Perspectives II 3
20. MUJZ 163 Jazz Seminar and Perspectives III 3
21. MUJZ 164 Jazz Seminar and Perspectives IV 3
22. MUJZ 171 Jazz Applied I 1
23. MUJZ 172 Jazz Applied II 1
24. MUJZ 173 Jazz Applied III 1
25. MUJZ 174 Jazz Applied IV 1
26. One of the following courses: 8
   - MPER 066 Jazz Ensemble
   - MPER 067 Jazz Combo

Note: Students must enroll in either MPER 066 or 067 each semester of residence.

In the fourth year, each student will complete a full jazz recital during the senior year.
Nine units from the following music history, or repertoire courses:

- MHIS 006 Music of the World's People
- MHIS 011 Survey of Music History I
- MHIS 012 Survey of Music History II
- MUJZ 008 Introduction to Jazz
- Elective MHIS course 150 or above (permission of instructor)

**Note:** 1) MHIS 005 does not count toward this requirement.

MMGT 010 Freshman Seminar – Music Management

MMGT 011 Music, Entertainment in U.S. Society

MMGT 096 Sound Recording Fundamentals

MMGT 111 Music Industry Analysis

MMGT 153 Entertainment Law

MMGT 187 Music Management Internship

MMGT 196 Senior Seminar in Music Management

MMGT 199 Exit Examination

Six elective units from the following courses:

- MGMT 081 How to Run an Independent Record Label
- MGMT 097 Performing Arts Administration
- MGMT 140 Music Products Management
- MGMT 141 Musical Products Practicum
- MGMT 160 Recording Studio Production
- MGMT 191 Independent Study
- MGMT 193 Special Topics
- MGMT 197 Undergraduate Research

**Note:** 1) Other MGMT courses in the student's interest can be substituted with approval.

Eight units from the following courses:

- MGMT 050 Solo Class

**Note:** 1) MGMT 050 is to be repeated to have a total of 6 units from this one course.

MMGT 070 University Symphony Orchestra

MMGT 072 Symphonic Wind Ensemble

MAPP 010 Applied Music

**Note:** 1) MAPP 010 is to be repeated to have a total of 6 units from this one course.

MCOM 002 Theory of Music

**Note:** 1) MCOM 002 is to be repeated to have a total of 6 units from this one course.

MCOM 002 Theory of Music

**Note:** 1) MCOM 002 is to be repeated to have a total of 6 units from this one course.

MCOM 010 Music Theory and Aural Perception I

MHIS 005 Music Appreciation

One of the following courses:

- MCOM 011 Music Theory and Aural Perception II
- MHIS 011 Survey of Music History I
- MHIS 012 Survey of Music History II
- MAPP 010 Applied Music

**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 or 12.

Music History Minor for Music Majors

Twelve units from the following courses:

- MHIS 150 Medieval Music
- MHIS 151 Music in the Renaissance
- MHIS 152 Music in the Baroque
- MHIS 153 Studies in the Classical Period
- MHIS 154 Studies in the Romantic Period

**Note:** 1) MHIS 150 Medieval Music

**Note:** 1) MHIS 151 Music in the Renaissance

**Note:** 1) MHIS 152 Music in the Baroque

**Note:** 1) MHIS 153 Studies in the Classical Period

**Note:** 1) MHIS 154 Studies in the Romantic Period

**Note:** 1) Special Topics courses with the consent of the advisor may be substituted.

LANG 2 semesters of any foreign language

**Note:** 1) Language courses are to be chosen in consultation with the music history advisor. 2) Both semesters must be in the same language.

MHIS 197 Research in Music History
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:

Note: 1) Only music majors are eligible for the minor in music theory.

MCOM 010. Music Theory and Aural Perception I (4)
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/plug-in editing; and web design and construction. Discussions will cover aspects of copyright, content ownership, and online resources for publishing and music distribution.

MCOM 011. Music Theory and Aural Perception II (4)
Diatonic and chromatic harmony covering non-harmonic tones, tonization, 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. Prerequisite: MCOM 011. Prerequisites can be taken concurrently: MCOM 013 and MCOM 014.

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 rhythm lines. Prerequisite: MCOM 011. Prerequisites can be taken concurrently: MCOM 012 and MCOM 014.

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. Prerequisite: MCOM 011. Prerequisites can be taken concurrently: MCOM 012 and MCOM 014.

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 indeterminancy of John Cage, modality and spectral music, minimalism, and computer music. Prerequisites: MCOM 012, 013, 014. Prerequisites can be taken concurrently: MCOM 016 and MCOM 017.

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 rhythm lines. Prerequisite: MCOM 012, 013, 014. Prerequisites can be taken concurrently: MCOM 015 and MCOM 017.

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. Prerequisites: MCOM 012, 013, 014. Prerequisites can be taken concurrently: MCOM 015 and MCOM 016.

MCOM 018. Counterpoint (3)
An in-depth study of the use of the digital audio workstation Logic Studio Pro as a tool for creative composition. Topics to be covered include: sequence and MIDI recording, the manipulation of MIDI using the Environment Window, use of digital audio in a MIDI environment, MIDI controller manipulation, sampling and digital synthesis, and plug-in effects and instruments. As a project oriented study students will complete several compositions during the process of the course. Prerequisite: MCOM 009.

MCOM 020. Composition (2)
Composition involves the writing of original works under the guidance of faculty composers. Non-music majors require permission of instructor.

MCOM 021. Music and Computer Technology (3)
The study of late 20th/early 21st Century pitch organization techniques: Poly-modality, Synthetic scales, Clusters, Mathematical manipulations, Spectral techniques. Prerequisite: MCOM 012.

MCOM 022. New Resources in Pitch (1)
The study of late 20th/early 21st Century pitch organization techniques: Poly-modality, 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, Polyrhythm, Metric Modulation, Complex ratio. Prerequisite: MCOM 011.

MCOM 019. 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 focusing on digital synthesis, sampling/sound design, digital audioediting/mixing as a composing environment, live performance with computers, video creation, and intermedia composition. Students develop creative projects with Pro Tools HD, Max/MSP/Jitter, Cecilia/Csound, Final Cut Studio, and other software packages. As a project-oriented study students complete several compositions during the process of the course. Prerequisites: MCOM 010-017.

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. Prerequisite: MCOM 010-017.

MCOM 124. Composition, Upper-Division (2)
Guided composition for experienced students leading to the creation of several compositions for instruments and voices. May be repeated for credit. For music composition majors, admission to this upper division course is based on review of student's work at the end of the second year. Prerequisite: MCOM 024 or permission of instructor.

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)
Principles of teaching and playing flute and clarinet.

MEDU 102. Woodwind Instruments II (1)
Principles of teaching and playing oboe, bassoon and saxophone.

MEDU 103. Brass Instruments I (1)
Principles of teaching and playing brass instruments.

MEDU 104. Brass Instruments II (1)
Advanced principles of brass instrument teaching.

MEDU 105. Percussion Instruments (1)
Principles of teaching and playing percussion instruments.

MEDU 107. String Instruments I (1)
Principles of teaching and playing violin and viola.

MEDU 108. String Instruments II (1)
Principles of teaching and playing string instruments, including cello and bass.

MEDU 110. Band Development (2)
Study of teacher's role in instrumental music education, including concert, marching, jazz band and orchestras in public schools.

MEDU 111. Choral Development (2)
Study of teacher's role in choral music education, including concepts and techniques for choral ensembles.

MEDU 112. Orchestra Development (2)
Study of teacher's role in orchestras in public schools.

MEDU 113. Laboratory Ensemble (.5)
Laboratory experience of music education fieldwork including developmentally appropriate class and rehearsal skills, secondary instrument performance, vocal ensemble techniques, planning, and assessment.

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 6-12. 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 MEDU 116.

MEDU 191. Independent Study (1-4)
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 People (3)
Survey of folk, primitive, popular, and classical traditions of Asia, Africa, Europe and North and South America. Open to all students.

MHIS 011. Survey of Music History I (3)
Survey of Western music history: composers, styles, genres, and institutions from antiquity to 1750.
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 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 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 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 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 instructor.

MHIS 143b.  Keyboard Literature II (3)
Keyboard music from 1825 to present. Prerequisites: MCOM 010-017; MHIS 011, 012, 013 or permission of 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 instructor.

MHIS 152.  Topics in Early Music (3)
Topics from before 1700 (medieval, Renaissance, or early baroque periods). Sample topics may include Renaissance madrigal, medieval chant, 17th-century opera, etc. See program director for specific topics in a given semester. Course meets once in four semesters. Prerequisites: MCOM 010-017; MHIS 011 and MHIS 012 or permission of instructor.

MHIS 153.  Topics in Eighteenth-Century Music (3)
Topics from the eighteenth century (high baroque, pre-classical, classical, and pre-romantic styles). Sample topics may include the Bach family, Haydn or Mozart, birth of the symphony, etc. See instructor for specific topics in a given semester. Course meets once in four semesters. Prerequisites: MCOM 010-017; MHIS 011 and MHIS 012 or permission of instructor.

MHIS 154.  Topics in Nineteenth-Century Music (3)
Topics from the nineteenth century, covering a broad spectrum of repertory. Examines common issues of the nineteenth century through the lens of particular repertories, composers, and/or genres, e.g. Lied and Song Cycle, Nationalism, or fin-de-siècle Vienna. See instructor for specific topics in a given semester. Course meets once in four semesters. Prerequisites: MCOM 010-017; MHIS 011 and MHIS 012 or permission of instructor.

MHIS 155.  Topics in 20th and 21st Century Music (3)
Topics in music of the 20th and 21st centuries. Sample topics may concentrate on specific sub-periods and repertories, such as Russian music, Music after 1945, etc. Course meets once in four semesters. Prerequisites: MCOM 010-017; MHIS 011 and MHIS 012 or permission of instructor.

MHIS 158.  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 analysis of jazz compositions, live performance critiques, album reviews, artist papers, and a research project involving the Brubeck Collection. This course is designed for music students with junior or senior standing. Prerequisite: MCOM 011.

MHIS 160.  American Music (3)
Survey of music in America from colonial times to the present. Primarily Western music tradition but interacting with African-American and Native American musical traditions. Covers development of popular music traditions with respect to their effects on American musical composition and reception. Prerequisites: MCOM 010-017; MHIS 011 and MHIS 012; or permission of instructor.

MHIS 191.  Independent Study (3)
MHIS 193.  Special Topics (3)

MHIS 197.  Research in Music History (1-4)
Prerequisite: Permission of 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.  How to Run 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. Musical 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 advisor and preparing journals and other written assignments. Prerequisite: MMGT 140 or permission of instructor.

MMGT 153. Entertainment Law (4)
A study of all aspects of the legal relationships and rights problems in films, television, music, and records. Prerequisite: BUSI 053 with a grade of "C" or better; Junior standing. Also offered as BUSI 153.

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 recordings. Prerequisite: MMGT 096.

MMGT 187. Music Management 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. Permission of faculty advisor. (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 197. Undergraduate Research (1-4)
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 medium. 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 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)

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 instructor.

MPER 060. Chamber Ensemble (0-2)
Permission of instructor.

MPER 065. Jazz Ensemble (0-1)
Permission of 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 (0-1)
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 068. Orchestral Repertoire & Audition Techniques (1)
The purpose of this course is to focus on the development of orchestral skills and prepares students for orchestra auditions. Students perform in weekly sections with the instrumental course instructors and attend periodic seminars in audition techniques and other topics related to orchestral performance.

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 (0-1)
Major ensemble. Open to all students by audition.

MPER 072. Symphonic Wind Ensemble (0-1)
Major ensemble. Open to all students by audition.

MPER 073. Concert Band (1)
Major ensemble. Open to all students by audition.
Music Performance Department: Supportive Courses

MPER 088. Opera Production (0-1)
Major ensemble. By audition only.

MPER 082. The Oriana Choir (Women's Chorus) (0-1)
Major ensemble. Average of two concerts per semester. Open to all students by audition.

MPER 083. University Chorus (01)
Major ensemble. Average of two concerts per semester. Open to all students by audition.

MPER 084. Pacific Singers (0-1)
Major ensemble. Average of three concerts per semester. Audition required for enrollment.

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. Prerequisite for MPER 021: MPER 020.

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 121: MPER 120.

MPER 130. Accompanying (1-2)
Practical training in vocal and instrumental piano accompaniments. (Two units by permission of instructor).

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. Permission of instructor.

MPER 141. Pedagogy of Voice (2)
Overview of the anatomy and physiology of the singing voice with an emphasis on respiration, phonation, resonation and articulation. Examination of various methods of the teaching of singing based on current scientific discoveries as well as important classical treatises. Permission of instructor.

MPER 151. Principles of Conducting (2)
Basic techniques of the baton, score reading and interpretation. Prerequisites: 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. Prerequisite: 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 MTHR 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; MTHR 018 or MCOM 002 or permission of instructor.

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 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 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, 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 and MTHR 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, competency evaluation and individualized internship training plan. Also requires enrollment in MTHR 150 within the period of one year prior to the start of internship.

MTHR 191. Independent Study (1-2)
MTHR 193. Special Topics (1-2)

Jazz Studies

MUJZ 008. History of Jazz (3)
Introduction to 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.

MUJZ 010. 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.

MUJZ 011. Jazz Piano II (1)
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: MUJZ 010 or permission of the instructor.

MUJZ 020. 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. Prerequisites: MCOM 010 and MCOM 011 or permission of instructor.

MUJZ 021. 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, MUJZ 030 or permission of instructor.

MUJZ 030. 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 MCOM 011 or permission of instructor.

MUJZ 031. 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, MUJZ 030 or permission of instructor.

MUJZ 110. Jazz Arranging and Composition (3)
This course will focus 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: MUJZ 011 and MUJZ 031 or permission of instructor.

MUJZ 130. Advanced Improvisation (2)
Advanced techniques and practices of jazz improvisation. Includes tune analysis and develops a more definitive concept of chord/line relationships. Examination of contemporary performance practices including the use of synthetic scales and free improvisation. Prerequisites: MCOM 010 and MCOM 011; MUJZ 030 and MUJZ 031 or permission of instructor.

MUJZ 140. 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 and MCOM 011; MUJZ 030 and MUJZ 031 or permission of instructor.

MUJZ 158. Advanced 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 analysis of jazz compositions, live performance critiques, album reviews, artist papers, and a research project involving the Brubeck Collection. This course is designed for music students with junior or senior standing. Prerequisite: MCOM 011.

MUJZ 161. Jazz Seminar and Perspectives I (3)
Jazz Seminar and Perspectives I comprises two major components involving Undergraduate Research and Performance Perspectives. The research topic involves the various cultural, economic, historical, and social aspects of jazz. Performance Perspectives Component involves jazz performance issues, stylistic comparisons of artists, works of major composers, and jazz historical perspectives. Topics are variable. Students will be involved with in-class performances, research papers, and music transcriptions. Assembly of a portfolio serves as a key component of this course. Prerequisites: MUJZ 020, 030, 031, 021, 008, 010 and 011 or permission of instructor.
MUJZ 162. Jazz Seminar and Perspectives II (3)
Jazz Seminar and Perspectives II comprises two major components involving Undergraduate Research and Performance Perspectives. The research topic involves the various cultural, economic, historical, and social aspects of jazz. Performance Perspectives Component involves jazz performance issues, stylistic comparisons of artists, works of major composers, and jazz historical perspectives. Topics are variable.
Students will be involved with in-class performances, research papers, and music transcriptions. Assembly of a portfolio serves as a key component of this course. Prerequisites: MUJZ 020, 030, 031, 021, 008, 010, 011, and 161 or permission of instructor.

MUJZ 163. Jazz Seminar and Perspectives III (3)
Jazz Seminar and Perspectives III comprises two major components involving Undergraduate Research and Performance Perspectives. The research topic involves the various cultural, economic, historical, and social aspects of jazz. Performance Perspectives Component involves jazz performance issues, stylistic comparisons of artists, works of major composers, and jazz historical perspectives. Topics are variable.
Students will be involved with in-class performances, research papers, and music transcriptions. Assembly of a portfolio serves as a key component of this course. Prerequisites: MUJZ 020, 030, 031, 021, 008, 010, 011, 161 and 162 or permission of instructor.

MUJZ 164. Jazz Seminar and Perspectives IV (3)
Jazz Seminar and Perspectives IV comprises two major components involving Undergraduate Research and Performance Perspectives. The research topic involves the various cultural, economic, historical, and social aspects of jazz. Performance Perspectives Component involves jazz performance issues, stylistic comparisons of artists, works of major composers, and jazz historical perspectives. Topics are variable.
Students will be involved with in-class performances, research papers, and music transcriptions. Assembly of a portfolio serves as a key component of this course. Prerequisites: MUJZ 020, 030, 031, 021, 008, 010, 011, 161, 162 and 163 or permission of instructor.

MUJZ 171. Jazz Applied I (1-2)
For upper division Jazz Studies majors who have passed the sophomore applied major examination in their principal instrument or voice. Required for Jazz Studies majors. Enrollment in applied music requires an applied music fee per unit. Prerequisites: MUJZ 021 or program director approval.

MUJZ 172. Jazz Applied II (1-2)
For upper division Jazz Studies majors who have passed the sophomore applied major examination in their principal instrument or voice. Required for Jazz Studies majors. Enrollment in applied music requires an applied music fee per unit. Prerequisites: MUJZ 021 and 171 or program director approval.

MUJZ 173. Jazz Applied III (1-2)
For upper division Jazz Studies majors who have passed the sophomore applied major examination in their principal instrument or voice. Required for Jazz Studies majors. Enrollment in applied music requires an applied music fee per unit. Prerequisites: MUJZ 021, 171, 172 or program director approval.

MUJZ 174. Jazz Applied IV (1-2)
For upper division Jazz Studies majors who have passed the sophomore applied major examination in their principal instrument or voice. Required for Jazz Studies majors. Enrollment in applied music requires an applied music fee per unit. Prerequisites: MUJZ 021, 171, 172, 173 or program director approval.

MUJZ 191. Independent Study (1-4)
MUJZ 193. Special Topics (1-4)

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 in the Classical Period (3)
MHIS 254. Studies in the 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 and 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)
Conservatory of Music Faculty

Giulio Maria Ongaro, Dean, 2009, BM, University of Iowa, 1978; MA, University of North Carolina, 1981; PhD, University of North Carolina, 1986.


Ruth Y. Brittin, Professor of Music Education, Chair, Department of Music Education, 1997, PhD, Florida State University, 1989; MME, Texas Tech University, 1985; BME, Texas Tech University, 1983. Editor. 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. Former Chair of Music Education at Syracuse University, 1989-1997.

K. Allen Brown,* Visiting Lecturer of Percussion, 1981, BM, University of Oregon, 1969; MM, 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.


Robert Coburn, Professor of Music Composition and Theory. Director, Conservatory Computer Studio for Music Composition; Artistic Director, SoundImageSound; Chair, Department of Music Studies, 1993, PhD, University of Victoria (Canada), 1995; MA, University of California, Berkeley, 1974; BM, 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; emptiness [reflection] (2010) for alto saxophone, computer and video.

Rex Cooper,* Professor of Piano, 1973, BM, Oberlin College Conservatory of Music, 1969; MS, Juilliard School of Music, 1970; MusD, Indiana University, 1987; Student of Adele Marcus, Konrad Wolff, Leon Fleisher, Howard Abeil (Accademia Chigiana, Siena), Gyorgy Sebok and Vlad Perlmuter (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, BM, MM, University of Southern California, diploma in piano performance and in chamber music from the Hochschule fur Musik in Vienna, Austria; DM 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 Ehert in Vienna. Member of Pi Kappa Lambda, Phi Mu Alpha, American Liszt Society, and the Franz Schmid 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 Electraoustic Music Studio.

Thomas Derthick, Lecturer in Double Bass, 2004, BM, California State University, Sacramento. Graduate study, California State University, Long Beach. Studied with Murray Grodner, Stuart Sankey and Abe Luboff. Principal Bass with the Sacremento Symphony and Chamber Orchestra.

Daniel Ebbers, Assistant Professor of Voice, 2004, BM, University of Wisconsin-Stevens Point; MM, 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.


James Haffner, Associate Professor of Opera, 1999, BA 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 Die Technische Universitat, Berlin, the University of Kentucky, Miami University of Ohio, Webster University and Cal State Fullerton.


Keith N. Hatschek, Associate Professor of Music Management; Program Director, Music Management Program, 2001, BA, University of California Berkeley, 1973; Certificate in Marketing, University of California Berkeley, 1993. Principal and founder of Keith Hatschek & Associates, consultant to

David Henderson, Lecturer in Saxophone, 2007, BM, University of Michigan; MM, The Juilliard School. Awarded first prize in saxophone from the Conservatoire de Bordeaux, where he studied on a Fulbright-ITT grant. Student of William Frey, 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, PhD, University of Iowa, 2006; MA, New York University, 1994; Certified Music Therapist, 1994; BA, 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.


Nicola Kuster, Assistant Professor of Bassoon, 2008, BM and BA, 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, Amerope 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 Moe, Lecturer in Music Education, 2005, BM, University of the Pacific; MM, University of Maryland; MBA, Herriot-Watt University in Scotland. Student of James Stern, Ronda Cole, Arnold Steinhardt, John Dulley, 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, BM, University of British Columbia, 1992; MM, Peabody Conservatory of Music, 1994; Concert Recital Diploma, Guildhall School of Music, 1995; DMus, 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.


Leonard Ott, Lecturer in Trumpet, 1998, BA 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.


Margaret Perry, Lecturer in Class Piano and Piano Pedagogy, 2004, BM, MM, Brigham Young University; DMA, 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 Cochrane Phillips, Assistant Professor of Voice, 2007, BM, University of North Texas 1982; MM, 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.


Igor Veligan, Lecturer of Violin/Viola and Chamber Music, 2006, MA, Odessa State Conservatory. Student of Zoya Istromina 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 Arfekin 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, BA in Music, Harvard, 1989; MA, in Music, Harvard, 1989; MM, in Conducting, Peabody Conservatory of Music, 1993; Graduate Performance Diploma in Conducting, Peabody Conservatory, 1994; PhD, in Music History, Yale University, 1992. Formerly with the Orchestre de la Suisse-Romande (Switzerland), and the State Philharmonic “Dinu Lipatti” (Romania).


Frank H. Wiens,* Professor of Piano, 1976, BM, University of Michigan, 1970; MM, 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 Yaroslav 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, BM, University of Nebraska, 1975 (Phi Beta Kappa); MM, with Distinction, Indiana University, 1978; MusD 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.)
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 Eberhardt School of Business is accredited in business by AACSB International - The Association to Advance Collegiate Schools of Business.

Mission

The Eberhardt School develops knowledgeable, innovative business leaders in a personalized, experience-based learning environment and produces scholarship that contributes to disciplinary knowledge, informs teaching, and advances the practice of business. We share a set of underlying principles that govern our behaviors and our ability to achieve our mission. These include:

- Maintaining a student-centered learning environment;
- Educating the whole person;
- Stimulating intellectual growth;
- Maintaining a mutually supportive community of faculty, staff and students;
- Engaging external stakeholders;
- Promoting excellence;
- Being socially responsible;
- Behaving ethically and with integrity;
- Providing service to the university, community and profession.

Degree programs offered by the Eberhardt School of Business are designed to fulfill this mission and to provide the educational breadth and depth tomorrow’s leaders will need.

The Eberhardt School of Business

offering graduate and undergraduate programs providing the educational breadth and depth for tomorrow’s leaders of business, government, and not-for-profit organizations.
**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.

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### 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):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACS 001</td>
<td>Pacific Seminar 1: What is a Good Society?</td>
<td>4</td>
</tr>
<tr>
<td>PACS 002</td>
<td>Pacific Seminar 2: What is a Good Society?</td>
<td>4</td>
</tr>
<tr>
<td>PACS 003</td>
<td>Pacific Seminar 3: The Ethics of Family, Work, and Citizenship</td>
<td>3</td>
</tr>
</tbody>
</table>

**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 IC and IIC.

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

##### Natural Sciences and Mathematics

- IIIA. Natural Sciences
- IIIB. Mathematics and Formal Logic (MATH 045 or 051)
- IIIIC. 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 2 courses from a single department or other school or college may be applied to meet the requirements of the general education program.

#### II. Diversity Requirement

Complete one diversity course 3-4

**Note:** 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) No more than 2 courses from a single department or other school or college may be applied to general education or major/minor requirements.

#### III. 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.

#### IV. Pre-professional Skills Requirements

**Advanced Writing:**

- BUSI 023 Business Communications or
- ENGL 025 or another approved writing course* 4

**Public Speaking:**

- COMM 027 Public Speaking* 3

**Mathematics:**

- MATH 045 Introduction to Finite Mathematics and Calculus* 4
- MATH 037 Probability and Statistics* 4

**Computer Literacy:**

- COMP 025 Computers and Information Processing* 4

**Economics:**

- ECON 053 Introductory Microeconomics* 4
- ECON 055 Introductory Macroeconomics: Theory and Policy* 4

**Note:** 1) *These courses are also part of the Pacific General Education Program, and can be counted toward the University General Education requirements.
V. 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 and Organizational Behavior 4
BUSI 110  Career Development 1
BUSI 181  Strategic Management and Policy 4

VI. 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 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 125  Intermediate Financial Management 4
BUSI 163  International Financial Management 4

**International Business**

BUSI 163  International Financial Management 4
BUSI 165  International Marketing 4
BUSI 169  Comparative Management 4
BUSI 178  International Commercial Law 4

**Marketing**

BUSI 141  Marketing Research 4
BUSI 165  International Marketing 4
Two additional courses from the following: 8
BUSI 143  Product Innovation
BUSI 147  Consumer Behavior
BUSI 148  Promotions Management
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 169  Comparative Management
BUSI 178  International Commercial Law

**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
**Note:** Excluding BUSI 183
One additional course from the following: 4
BUSI 163  International Financial Management
BUSI 165  International Marketing
BUSI 178  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 advisor 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:
- BUSI 163 International Financial Management
- BUSI 165 International Marketing
- BUSI 178 International Commercial Law
- BUSI 169 Comparative Management

Business Law
- BUSI 157 Commercial Law
- BUSI 178 International Commercial Law

Plus two courses from the following:
- BUSI 115 Tax Accounting
- BUSI 127 Legal Aspects of Real Estate
- BUSI 153 Entertainment Law
- BUSI 159 Employment Law

Arts and Entertainment Management
One additional course from the following:
- BUSI 163 International Financial Management
- BUSI 165 International Marketing
- BUSI 178 International Commercial Law
- BUSI 169 Comparative Management

Three Music Management courses:
- MGMT 011 Music Entertainment in U.S. Society
- MGMT 111 Music Industry Analysis
- MGMT 153 Entertainment Law
  (cross listed as BUSI 153)

One of the following:
- *MHIS 005 Music Appreciation
- MHIS 006 Music of World’s Peoples
- *MUJZ 008 Introduction to Jazz

Note: 1) *Can count toward general education requirements.

Minors
All courses in minor must be taken at Pacific.

Minor in Management
The minor in management provides 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
- BUSI 109 Management and Organizational Behavior
- BUSI Electives 3 courses offered by the School of Business (excluding BUSI 010, 110, and most BUSI 191 and 193)

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
- Four of the following five courses are required:
  - BUSI 033 Principles of Managerial Accounting
  - BUSI 053 Legal and Ethical Environment of Business
  - BUSI 105 Financial Management
  - BUSI 107 Marketing Management
  - BUSI 109 Management and Organizational Behavior
- BUSI Electives 1 course offered by the School of Business
  (excluding BUSI 010, 110 and most BUSI 191 and 193)

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
- BUSI 100 Management Information Systems
- BUSI 136 Business Programming
- BUSI 137 Database Management Systems
- BUSI 138 Networking and Telecommunications Management
- BUSI 139 Electronic Commerce Project
- BUSI 140 Business Systems Analysis
- COMP 025 Computers and Information Processing
- COMP 051 Introduction to Computer Science

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

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 023. Business Communications (4)
This course develops the written and oral communication skills necessary to succeed in a business environment. Using a suitable writing style, students will prepare the types of documents commonplace in business organizations, such as business letters, reports, interoffice memoranda, sales proposals, and business plans. Students will apply their understanding of word processing, spreadsheet, and presentation software to communicate business data and information. Prerequisite: COMP 025.
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 COMP 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. Prerequisite: 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. 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. 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. Prerequisite: 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, distributive securities, pensions, leases, income taxes, statement of cash flows and inflation accounting. Prerequisite: BUSI 113A. Junior standing.

BUSI 113C. Advanced Accounting (4)
A study of advanced accounting theory and practice which includes accounting for inter-corporate investments, partnerships, foreign currency transactions, government and nonprofit organizations and current topics. Prerequisite: BUSI 113B. 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 BUSI 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, 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. Prerequisite: BUSI 113A. Junior standing.

BUSI 121. Financial Markets (4)
An examination of the monetary transmission mechanism with emphasis on its implications for financial management of the individual firm. Topics include the institutions of money and credit creation, the flow-of-funds accounts and financial market subsection interconnection. Prerequisite: 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) Prerequisite: BUSI 105. Junior standing. Permission of instructor. Course may be taken twice for credit.

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. Junior standing.

BUSI 124. Entrepreneurial Finance (4)
Entrepreneurial Finance discusses the financial issues facing a business startup 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. Prerequisite: 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. Prerequisite: 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 BUSI 121. Junior standing.

BUSI 127. Legal Aspects of Real Estate (4)
A study of the legal aspects concerning real estate and real estate transactions including deeds, listing agreements, title insurance, real estate contracts, closing, property taxation, land use regulations and landlord-tenant relationships. Prerequisite: BUSI 053. 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. Prerequisite: 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. 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. Prerequisite: BUSI 100. 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. Prerequisite: 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. Prerequisite: 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. Prerequisite: BUSI 136. 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. 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. Prerequisite: 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. Prerequisite: BUSI 107. Junior standing.

BUSI 148. Promotions Management (4)
A study of the theory and practices used in the promotions component of the marketing mix. Students will be exposed to a number of techniques employed by marketing departments, advertising firms and public relations professionals to advertise and promote products and or services. 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 BUSI 107. Junior standing.

BUSI 153. Entertainment Law (4)
A study of all aspects of the legal relationships and rights problems in films, television, music and records. Prerequisite: BUSI 053 with a grade of "C" or better. Junior standing. Also offered as MMGT 153.

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. Prerequisite: BUSI 053. 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. Prerequisite: BUSI 053. 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. Prerequisite: BUSI 105. Junior standing.

BUSI 165. International Marketing (4)
Examination of the environment for marketing across borders. Consideration of marketing practice, policies and strategies in the multinational setting. Students complete a global screening of countries and draw up a marketing plan and strategy for a given product. Prerequisite: BUSI 107. 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). Prerequisite: BUSI 109. Junior standing.
BUSI 170. Human Resources Management (4)
This course introduces the P/HR management area with its core of activities which include job analysis, performance evaluation, employee acquisition, employee and management development, and compensation and benefits. The influences of the equal employment and civil rights laws, wage and hour laws, labor law and labor unions in organizational operations are studied. Prerequisite may be taken concurrently: BUSI 109. 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. 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. Prerequisite: BUSI 109. Junior standing.

BUSI 175. Leadership and Change (4)
The processes of deliberate organizational change as adaptations to both internal and external developments. Criteria for and of effective change programs, strategic variables affected in change (e.g., power, communication, conflict) and technologies for producing change (e.g., consulting, training, research). Prerequisite: BUSI 109 or junior standing in psychology or sociology.

BUSI 176. Managing Small Businesses (4)
The focus of the course is on the decisions owner-managers make in choosing opportunities, allocating resources, motivating employees and maintaining control while not stifling entrepreneurial activities that cause a business to grow. Topics included are managing under adversity, management of the family business, professionalizing the growing business, corporate entrepreneurship, financial planning, control, accountability and the changing role of the board of directors. A field study and a research paper involving the applications of the concepts in a specific firm are required. Prerequisites: BUSI 031 and BUSI 109. 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 emphasis 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. Prerequisite: BUSI 053. 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. Prerequisite: BUSI 053. 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 the 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 (2-4)
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: ECON 053 and ECON 055. Senior standing. 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: MATH 053 and MATH 045. Senior standing. 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 advisor, 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 (18)
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 226. Financial Statement 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 246. Marketing of Services (3)
BUSI 247. Customer Behavior (3)
BUSI 249. Strategic Marketing (3)
BUSI 250. Health Finance: Health Insurance (3)
BUSI 251. International Healthcare Systems (3)
BUSI 252. Healthcare Law (3)
BUSI 254. Health Economics (3)
BUSI 255. Applied Business Principles for Pharmacy (15)
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 (2)
BUSI 280. Strategy Implementation (2)
BUSI 281. Strategic Management (3)
BUSI 282. Entrepreneurial Rapid Growth Strategy (3)
BUSI 291. Independent Study (1-4)
BUSI 293. Special Topics (1-4)

Eberhardt School of Business Faculty


Thomas E. Brierton, 1989, Associate Professor, BBA, University of Wisconsin, 1978; JD, Northern Illinois University, College of Law, 1983.

Michael L. Canniff, 2003, Lecturer, BA, University of Minnesota, 1985; MS, Syracuse University, 1990.

Cynthia Eakin, 1996, Associate Dean for Graduate Programs, BS, Florida State University, 1986; MA, 1988; PhD, 1993.

Joel Herche, 1994, Associate Professor, BA, Central Washington University, 1979; MBA, Golden Gate University, 1986; PhD, University of Oregon, 1989.

Peter E. Hilsenrath, 2009, Professor, BA, University of California, Santa Cruz, 1978; PhD, University of Texas, Austin.

Ronald Hoverstad, 1990, Associate Professor, BA, Augustsburg College, 1974; MBA, St. Cloud State University, 1981; PhD, University of Minnesota, 1986.

Heinrich Huang, 1998, Associate Professor, BS, National Chiao-Tung University (Taiwan), 1986; MBA, Rochester Institute of Technology, 1990; PhD, University of North Texas, 1996.

Sacha M. Joseph, 2006, Assistant Professor, BA, University of the West Indies (Jamaica), 1998, MS, Florida State University, 2004; PhD, Florida State University, 2006.

John R. Knight, 1995, Professor, BA, Tulane University, 1969; MBA, Louisiana State University, 1978; PhD, 1990.

Unro Lee, 1990, Professor, BA, University of Southern California, 1977; MA, Indiana University, 1981; PhD, Purdue University, 1986.

Jeffrey A. Miles, 1996, Professor, BA, Ohio State University, 1984; M.P.S., Cornell University, 1986; MLHR, Ohio State University, 1992; PhD, 1993.

Stefanie E. Naumann, 1999, Associate Professor, BS, Tulane University, 1993; PhD, Louisiana State, 1998.

Gerald V. Post, 1999, Professor, BA, University of Wisconsin-Eau Claire, 1978; PhD, Iowa State University, 1983.


Chris Sablonski, 2009, Associate Professor, BS, University of Florida, 1986; MS, San Francisco State University, 1996; PhD, University of Washington, 2002.

Ray Sylvester, 1972, Associate Dean, Professor, BA, Gettysburg College, 1962; MBA, University of Michigan, 1963; PhD, 1972.

Dara M. Szyliowicz, 2006, Assistant Professor, BA, Columbia University, 1988; MA, University of California, Berkeley, 1990; PhD, University of Illinois, 1998.

Eric W. Typpo, 1998, Associate Professor, BS, University of Missouri, 1986; MA, 1990; PhD, Florida State University, 1994.


R. Daniel Wadhwani, 2006, Assistant Professor, BA, Yale University, 1991; PhD, University of Pennsylvania, 2003.

Cynthia K. Wagner Weick, 1990, Professor, BS, Ohio State University, 1979; MS, 1980; PhD, University of Pennsylvania, 1986.

Suzanne B. Walchli, 2000, Assistant Professor, BA, Columbia University, 1993; MBA, Wharton Graduate Division, University of Pennsylvania, 1978; PhD, Northwestern University, 1996.

Stephen W. Wheeler, 1994, Professor, BA, California State University, Sacramento, 1975; MS, 1982; PhD, Arizona State University, 1988.

PengCheng Zhu, 2009, Assistant Professor of Finance, BBA, Shanghai Institute of Foreign Trade, 2002; MBA, Carleton University, 2004; PhD, Carleton University, 2009.
Phone: (209)946-2556  
Location: Gladys L. Benerd School of Education  
Website: 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.  
For more information on graduate programs see Graduate Catalog.

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 conferred 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 (MEd), Master of Arts in Education (MA), Educational Specialist (EdS), Doctor of Education (EdD), and Doctor of Philosophy (PhD) 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
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 Testing Office is available for proctoring services for individuals seeking to take an exam of any subject. Proctoring services are open to Pacific students, students attending other institutions, and the general public, whether offered through another college, university, and/or private/public business. Individuals interested in proctoring services should call (209) 946-2559. The Testing Office is located at the Gladys L. Benerd School of Education, Room 101.

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.

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 earning a credential or satisfying selected requirements. A credential file should be opened, with the credential analyst 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) 946-2558 or 946-2685 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 the EdD and PhD degrees and advanced degrees in the Department of Educational and School Psychology.

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 MEd) 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 MEd) These are discussed in the Graduate Catalog. Information about all programs is available in the Curriculum and Instruction office.

Programs to Earn Credentials
Programs To Earn Single Subject Credential

Undergraduate 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 advisor in the appropriate academic department. They should also consult with a School of Education advisor for appropriate education courses.

The Department of Curriculum and Instruction offers a Preliminary Single Subject Credential Program consisting of the following:

I. Prerequisite courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 140</td>
<td>Transformational Teaching and Learning</td>
<td>4</td>
</tr>
<tr>
<td>EDUC 141</td>
<td>Transformational Teaching and Learning Practicum</td>
<td>2</td>
</tr>
<tr>
<td>EDUC 130</td>
<td>Technology Enhanced Learning Environments</td>
<td>2</td>
</tr>
</tbody>
</table>

* EDUC 141 is not taken by Music Education students.

II. Professional Teacher Education Courses for the Single Subject Credential

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 155</td>
<td>Teaching in the Content Areas I</td>
<td>2</td>
</tr>
<tr>
<td>EDUC 156</td>
<td>Content Area Literacy Development in Secondary Schools</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 160</td>
<td>Productive Learning Environments (2) or SPED 195E Positive Behavior Support (3)</td>
<td>2</td>
</tr>
<tr>
<td>EDUC 163</td>
<td>Teaching English Learners</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 165</td>
<td>Teaching in the Content Areas II</td>
<td>2</td>
</tr>
</tbody>
</table>

The Single Subject Program in Music Education and Physical Education take methods courses in their content fields.

III. Directed Teaching: 12 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 170</td>
<td>Professional Practice</td>
<td>2-10</td>
</tr>
<tr>
<td>EDUC 172</td>
<td>Professional Practice Seminar</td>
<td>2-10</td>
</tr>
</tbody>
</table>

Normally, EDUC 170 and 172 total to 12 units.

Completion of the following course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 125X</td>
<td>Teaching Exceptional Learners</td>
<td>2</td>
</tr>
</tbody>
</table>

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 advisor for information regarding the required exams and the timeline for completion of this exam.)
- Complete the United States Constitution requirement
- Pass all program requirements including maintaining a 2.5 GPA, Advancement to 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
- Complete CPR Certification Infant, Child and Adult level.

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 advisor 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.
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. Diversity Requirement
Complete one diversity course

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

II. Language, Literature, Communication
PACS 001 Pacific Seminar 1: What is a Good Society? 4
PACS 002 Pacific 2 Topical Seminar 4
ENGL 025 (Literature Analysis) 4
EDUC 100 Introduction to Language 3
EDUC 110 Introduction to Syntax and Semantics 3
EDUC 120 First and Second Language Acquisition 3
COMM 143 Intercultural Communication 4

III. 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

IV. Mathematics (Two Courses)
MATH 161 Elementary Concepts of Math I 4
One of the following:
MATH 035 Elementary Statistical Inference 4
MATH 037 Probability and Statistics 4

Note: 1) MATH 037 for students with advanced mathematics abilities

V. Sciences
BIOL 041 Introduction to Biology 4
GEOS 057 Earth Systems Science 4
PHYS 017 Concepts of Physics 4

VI. Visual and Performing Arts
EDUC 142 Visual Arts in Education 4
MEDU 100 Music for Children 3
THEA 011 Introduction to Theatre 3

VII. Physical Education and Child Development
PSYC 029 Child Development 4
SPTS 151 Elementary Physical Education 3

VIII. Senior Capstone Courses
PACS 003 Pacific Seminar 3: The Ethics of Family, Work, and Citizenship 3

IX. Concentration “Depth of Study” Courses
Three to four courses in one of the following recommended concentrations: 12
- Teaching English to Speakers of Other Languages
- Mathematics
- Sciences
- Human Development, with emphasis in Special Education
- Evening Program Concentration for EdPro2 students
Other areas: History and Social Sciences, Visual/Performing Arts, or Physical Education are available in consultation with an advisor in the Diversified Major.

Note: 1) These concentrations are described in advisement materials found in the Curriculul 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 designed for their cohort group.

X. Prerequisite Teacher Education Courses (Required for the Degree in the Traditional Degree Program)
EDUC 130 Technology Enhanced Learning Environments 2
EDUC 140 Transformational Teaching and Learning 4
EDUC 141 Transformational Teaching and Learning Practicum 2

XI. Professional Teacher Preparation Courses – Multiple Subject (Required for a Preliminary Multiple Subject Credential)
EDUC 150 Teaching and Assessment 3
EDUC 151 Teaching Science (MS) 2
EDUC 152 Teaching Mathematics (MS) 2
EDUC 160 Productive Learning Environments for Diverse Classrooms 2
OR
SPED 195E Positive Behavior Support 3
EDUC 161 Literacy Development (MS) 4
EDUC 162 Literacy Assessment (MS) 2
EDUC 163 Teaching English Learners 3

XII. Directed Teaching: 12 units
EDUC 170 Professional Practice 2-10
EDUC 172 Professional Practice Seminar 2-10
Normally, EDUC 170 and 172 total 12 units.
Completion of the Following Course:
SPED 125X  Teaching Exceptional Learners  2
In addition to meeting the above degree requirements, a student seeking a 
Multiple Subject Preliminary Requirement, must also:
- Pass CBEST examination
- Pass the California Subject Exam For Teachers (CSET-MS) prior to 
  Student Teaching or Internship
- Pass the Reading Instruction Competency Assessment (RICA) prior to 
  applying for the credential
- 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 and 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),
- Completion of the United States Constitution requirement.
- Completion of CPT Certification Infant, Child and Adult level.
- Complete an application for the SB 2042 Multiple Subject Preliminary 
  Credential at the Office of the Credential Analyst.
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 
advisor for registration each semester as they progress through the degree 
program.

**Course Requirements for the Pedagogy Major**
(for international students)

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 advisor 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 
  (these are listed later in this section),
- the following courses in the Education Specialist Level One program:

**I. Prerequisite Courses:**
EDUC 130  Technology Enhanced Learning Environments  2
EDUC 140  Transformational Teaching and Learning  4
EDUC 141  Transformational Teaching and Learning Practicum  2

**II. 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
SPED 124  Assessment of SPED Students  3
SPED 142 M or S  Curriculum & Instruction for SPED Students, 
  Mild/Moderate or Moderate/Severe Disabilities  3

**III. Professional Methods Courses:**
SPED 124  Assessment of Special Education Students*  (3) 
(already completed in the concentration)
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) 
(already completed in the concentration)
SPED 193  Autism Spectrum Disorders** 3
SPED 195E  Positive Behavioral Support in the Classroom 3
EDUC 150  Teaching and Assessment 3
EDUC 161  Literacy Development 4
* Note: Units taken in the concentration also fulfill credential course requirements. Units count only once.
** Note that course number and title will change.

IV. Directed Teaching

SPED 198M or S  Directed Teaching: M or S Mild/Moderate
Or Moderate/Severe 10
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 advisor for the timeline for completion of this exam.)
- Pass other mandated exams: CBEST and CSET (see advisor 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)
- Completion of CPT Certification Infant, Child and Adult level
- 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 advisor for registration each semester.

Education Specialist Program Courses

Prerequisite courses in Special Education:

SPED 123  The Exceptional Child 3
SPED 166  Building Family-Professional Partnerships 3

Teacher Education Prerequisite Courses:

EDUC 130  Technology Enhanced Learning Environments 2
EDUC 140  Transformational Teaching and Learning 4
EDUC 141  Transformational Teaching and Learning Practicum 2

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:

EDUC 150  Teaching and Assessment 3
EDUC 161  Literacy Development 4
EDUC 163  Teaching English Learners 3
SPED 124/224  Assessment of Special Education Students 3
SPED 128/228M or S  Advanced Programming, M or S Mild/ Moderate or Moderate/Severe 3
SPED 142/242M or S  Curriculum and Instruction/SPED Mild/ Moderate Or Curriculum and Instruction/SPED Moderate/Severe 3
SPED 193/293  Autism Spectrum Disorders 3
(sp course title & number will change)
SPED 195E/295E  Positive Behavioral Support in the Classroom 3

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, state, and school district 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. CPR for infant, child, and adult certification is required for a credential. Students will not be allowed to register for Directed Teaching if the CBEST and 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. CPR Certification for infant, child, and adult level is required.
Course Offerings
Department of Curriculum and Instruction

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, language in context, language planning, pidgins and Creoles, and societal attitudes toward language use.

EDUC 110. 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.

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 and 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 141. Transformational Teaching and Learning Practicum (2)
This supervised practicum is taken concurrently with EDUC 140: Transformational Teaching and Learning. Students examine the community, school, and classroom contexts and how they influence the teaching and learning process. Translation of current learning theories into practice are analyzed and applied. Students interact with K – 12 students and teachers in public school settings.

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 standing.

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. Prerequisite: EDUC 140. Fingerprint and TB test clearance required.

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. Admission to Teacher Education and fingerprint and TB test clearance required. 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 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. Admission to Teacher Education.

EDUC 155. Teaching in the Content Areas I (2)
This is the first of a three-part course for Single Subject credential candidates to develop professional, reflective practices and abilities for teaching in single subject classrooms, especially in secondary schools. Emphasis in the first course will be placed on acquiring and practicing general knowledge, skills, and ethical values associated with managing contemporary, culturally diverse secondary classroom environments. Candidates will begin to learn 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. Teaching in the Content Areas II and III will emphasize content-specific considerations of single subject teaching. Fieldwork is required in addition to class meetings.

EDUC 156. Content Area Literacy Development for Secondary Schools (3)
This course provides an introduction to research-based content literacy instruction. The course focuses on preparing candidates to teach content-based reading and writing skills to a full range of students including struggling readers, students with special needs, and English Learners. A variety of content-based literacy strategies (reading, writing, listening, and speaking) will be presented to facilitate learning in the content areas. The course meets credential requirements. Admission to credential candidacy.

EDUC 157. TESOL Theories and Practices (4)
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 content-based 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 160. Productive Learning Environments for Diverse Classrooms (2)
Core course concepts and activities include using culturally responsive techniques that contribute to productive learning environments and equitable student outcomes. Preservice teachers in this course will survey current discipline and management models and practice research-based strategies designed to promote positive classroom behavior. Establishing and maintaining relationships with families, students, and colleagues are explored as well as practices that contribute to teacher well-being and self-care. Senior standing or permission of instructor.

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. Admission to Teacher Education program with fingerprint and TB test clearance. Taken prior to Directed Teaching (Professional Practice).

EDUC 162. Literary 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. Admission to Teacher Education and fingerprint and TB test clearance. Prerequisite may be taken concurrently: EDUC 161. 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 (4)
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 165. Teaching in the Content Areas II (2)
This is the second of a three-part course for Single Subject credential candidates to develop professional, reflective practices and abilities for teaching in single subject classrooms, especially in secondary schools. It is taken concurrently with the professional practice practicum (student teaching). Emphasis in this course is placed on acquiring and practicing content-specific knowledge, skills, and ethical values associated with managing contemporary, culturally diverse secondary classroom environments. The course is co-taught by University faculty and K-12 Content Area Specialists. Candidates will continue to learn about specific subject matter content and pedagogy and a variety of instructional and assessment strategies to benefit all learners. Content-specific strategies to support reading and writing to learn and English Learners will also be a major focus. Candidates will apply acquired knowledge and skills in their professional practice (student teaching) placements.

EDUC 166. Understanding Adolescents in School (3)
This course is designed for secondary preservice teachers to consider the principles of adolescent development in the context. Biological, cognitive, psychological, social, and moral development will be examined to determine how these developmental pathways affect student achievement, motivation, and well being. The influence of family, peers, school, and the broader community on development will be explored as well. Implications of current understandings of adolescent development on teaching, learning, and assessment will be emphasized. In addition to class meetings, students will participate in a practicum in order to apply learning in school settings.

EDUC 170. Professional Practice (2-10)
Full-day Student Teaching in public schools. Candidates for a Single Subject and 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: EDUC 130, 140, 141, 150, 151, 152, 161, 162, 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 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 171. Professional Practice Music (2-10)
Full-day Student Teaching in public schools. Candidates for a Single Subject Music 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: EDUC 130, 140, 141, 150, 151, 152, 161, 162, 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 (2-10)
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.

EDUC 175. Teaching in the Content Areas III (2)
This is the culminating part of a three-part course for Single Subject credential candidates to develop professional, reflective practices and abilities for teaching in single subject classrooms. It is taken concurrently with the professional practice practicum (student teaching). Emphasis in the first two parts of the course is placed on acquiring and practicing general and content-specific knowledge, skills, and ethical values associated with managing contemporary, culturally diverse secondary classroom environments. The course is co-taught by University faculty and K-12 Content Area Specialists. In the third and final portion of the course, candidates integrate and synthesize prior learning and independently teach grades 7 – 12 students in their professional practice placements. University and Grades 7 – 12 Content Area Specialists supervise and support candidates and continue to lead seminar sessions. The capstone assessment leading to the Level 1 teaching credential, the Performance Assessment for California Teachers (PACT) Teaching Event (TE) is completed as part of this course.

EDUC 181. ECE: Social Justice/Diversity (3)
This course will be conducted as an undergraduate level seminar that is designed to clarify the cognitive, philosophical, historical, psychological, cultural, social and ethical foundations of early childhood education. The nature of theory and practice are important to teachers of young children and this course will provide a broad synthesis of knowledge of child development principles to better understand how children think, act, and how to be effective with them in the classroom.

EDUC 182. ECE: Curriculum and Inquiry (3)
This course is an upper division course that examines the theoretical understandings of curriculum and inquiry in the early childhood development classroom. Students will refine their knowledge, skills and dispositions related to early childhood methodology and application to young children in diverse populations.

EDUC 183. ECE: Social Contexts/Cognitive Development (3)
This course will be conducted as an undergraduate level seminar that is designed to clarify the cognitive, philosophical, historical, psychological, cultural, social and ethical foundations of early childhood education. The nature of theory and practice are important to teachers of young children and this course will provide a broad synthesis of knowledge of child development principles to better understand how children think, act, and how to be effective with them in the classroom.

EDUC 188. Practicum (2-4)

EDUC 189. Practicum (2-4)

EDUC 190. Workshop Learning: Issues Group Leadership (1)

EDUC 191. Independent Study (1-4)

EDUC 192. Preliminary Fieldwork (1-3)

EDUC 192A. Elementary Education Fieldwork

EDUC 192B. Secondary Education Fieldwork

EDUC 192C. Early Childhood Education Fieldwork

EDUC 192D. Early Childhood Education Fieldwork

EDUC 192E. Reading Fieldwork

EDUC 192F. Bilingual Education Fieldwork

EDUC 192G. Cross-cultural Education Fieldwork

EDUC 192H. Special Project

EDUC 193. Special Topics (1-4)

EDUC 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 standing or second semester junior standing.

EDUC 197. Research in Education (1-3)
Primarily field investigation. Permission of department chair.

Course Offerings

Graduate
See Graduate Catalog for course descriptions

EDUC 209. Curriculum Theory (3)

EDUC 212. Instructional Strategies and Classroom Processes (3)

EDUC 214. Supervision of Instruction (3)

EDUC 221. Research in Second Language Acquisition (3)
EDUC 225. Psychology of Reading (3)
EDUC 246. Teaching as Reflective Inquiry I (2)
EDUC 252. Teaching the Creative, Talented and Gifted Child (3)
EDUC 255. Teaching in Content Areas I (3)
EDUC 256. Content Area Literacy Development in Secondary Schools (3)
EDUC 257. TESOL Theories and Practices (4)
EDUC 260. Productive Learning Environments for Diverse Classroom (3)
EDUC 262. Advanced Methods in Bilingual Education (3)
EDUC 264. Introduction to Bilingual Education: Global Perspective (4)
EDUC 265. Teaching in Content Areas II (2)
EDUC 266. Teaching as Reflective Inquiry II (2)
EDUC 267. Understanding Adolescents in School (3)
EDUC 268. Microcomputers in Education (3)
EDUC 269. Microcomputers and Curriculum Design (3)
EDUC 270. Professional Practice (2-10)
EDUC 271. Professional Practice Music (2-10)
EDUC 275. Teaching in Content Areas III (2)
EDUC 276. Teaching as Reflective Inquiry III (3)
EDUC 281. Modern Trends in Early Childhood Education (3)
EDUC 282. Advanced Curriculum and Theory in Early Childhood Education (3)
EDUC 284. Directed Teaching Special Assignment (2-10)
EDUC 289. Practicum (2-4)
EDUC 291. Graduate Independent Study (1-3)
EDUC 292. Advanced Fieldwork (1-6)
EDUC 292A. Elementary Education Fieldwork
  EDUC 292B. Secondary Education Fieldwork
  EDUC 292D. Early Childhood Education Fieldwork
  EDUC 292F. Reading Fieldwork
  EDUC 292H. Special Projects Fieldwork
  EDUC 292L. Advanced Fieldwork in Bilingual Education
EDUC 293. Special Topics (2-4)
EDUC 295H. Seminar in Language Teaching (3)
EDUC 295G. Seminar: Elementary Curriculum (3)
EDUC 295E. Seminar: Teaching Reading and Writing (3)
EDUC 295F. Seminar: Language Learning (3)
EDUC 295X. Teaching Exceptional Learners (2)
EDUC 297. Graduate Research in Education (1-3)
EDUC 298. Practicum (1-3)
EDUC 299. Master's Thesis (2 or 4)
EDUC 302. Issues in Teacher Education (3)
EDUC 304. Program Evaluation (3)
EDUC 306. Curriculum Materials Development (3)
EDUC 308. Issues in Curriculum and Instruction (3)
EDUC 314. Contemporary Issues in Schooling and Education (3)
EDUC 316. Interdisciplinary Curriculum Inquiry (3)
EDUC 318. Research in the Classroom Context (3)
EDUC 320. Advanced Curriculum Studies (3)
EDUC 352. Applied Inquiry I (3)
EDUC 354. Applied Inquiry II (6)
EDUC 355. Applied Inquiry III (3)
EDUC 358. Applied Inquiry IV (3)
EDUC 389. Curriculum Practicum (2-4)
EDUC 390. Qualitative Research Design and Methods (3)
EDUC 391. Graduate Independent Study (1-3)
EDUC 393. Special Topics (2-4)
EDUC 397. Graduate Research in Education (1-3)
EDUC 398A. QSA Proposal Development (1)
EDUC 398B. Qualifying Scholarly Activities Projects (1)
EDUC 398C. Dissertation Proposal Development (1)
EDUC 399. Doctoral Dissertation (1-15)

**Curriculum and Instruction: Special Education Program**

**SPED 123. The Exceptional Child** (3)
Description of the characteristics and needs of children and youth with disabilities. Exploration of the etiology, treatment, educational strategies, social and vocational opportunities for individuals with disabilities. Ten hours of field experience will be required as part of the course content. This course satisfies the requirements for clearing a preliminary multiple and single subject credential as specified by the California Commission on Teacher Credentialing (CTCC).

**SPED 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 and SPED 166. 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. Admission to Teacher Education (Credential Candidacy). Fingerprint and TB test clearance. Corequisite: 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 and SPED 166. 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 and SPED 166. 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 and SPED 166. 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 and SPED 166. 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)
Permission of 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 and SPED 166. 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 (1-10)
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 (1-10)
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 (1-10)

SPED 298S. Directed Teaching: Moderate/Severe (1-10)

SPED 298IM. Internship: Mild/Moderate (5-10)

SPED 298IS. Internship: Moderate/Severe (5-10)

SPED 299. Master’s Thesis (4)

SPED 391. Independent Graduate Study - Special Education (1-3)

SPED 393. Special Topics (1-3)

SPED 395A. Seminar: Crucial Issues in Special Education (3)

Course Offerings
Graduate
See Graduate Catalog for course descriptions

EDUC 120. Seminar: Cultural Basis of Conflict in Education (3)
Analysis of cultural diversity in American classrooms. Not open to doctoral students.

EDUC 191. Independent Study (1-3)
Primarily library study. Permission of department chair.

EDUC 193. Special Projects (2-4)
Permission of instructor.

EDUC 197. Research in Education (1-3)
Primarily field study. Permission of department chair.
EDUC 242. College Student Environment (3)
EDUC 243. Legal Issues in Higher Education Student Affairs (3)
EDUC 244. Assessment in Student Affairs (3)
EDUC 245. Counseling Theories in College Student Affairs (3)
EDUC 248. Counseling Special Populations (3)
EDUC 277. Diversity and Constituency in Educational Administration (3)
EDUC 278. Educational Organizations and Diverse Constituencies (3)
EDUC 280. School Law and Legal Processes (3)
EDUC 283. School Finance and Business Administration (3)
EDUC 285. Educational Leadership (3)
EDUC 286. Administration of Human Resources (3)
EDUC 290. Seminar: Computers in Educational Administration (3)
EDUC 291. Graduate Independent Study (1-3)
EDUC 292C. Student Affairs Field Experiences (1-3)
EDUC 292E. Field Experience in Administration and Supervision (1-4)
EDUC 293. Special Topics (1-3)
EDUC 295C. Seminar: Educational Planning, Delivery, and Assessment (3)
EDUC 351. Seminar: Social Scientific Thinking (3)
EDUC 352. Applied Inquiry I (3)
EDUC 354. Applied Inquiry II (6)
EDUC 356. Applied Inquiry III (3)
EDUC 358. Applied Inquiry IV (3)
EDUC 360. Seminar: Trends, Issues, and the Dynamics of Change (3)
EDUC 361. Seminar: Ethics, Law, and Finance (3)
EDUC 362. Seminar: Administration of Instructional Programs (3)
EDUC 363. Seminar: Personnel Issues (3)
EDUC 364. Seminar: Educational Policy-Making and Politics (3)
EDUC 365. Seminar: Administration of Higher Education (3)
EDUC 366. Seminar: Communications and Public Relations in Education (3)
EDUC 367. Seminar: Cultural Diversity and Educational Administration (3)
EDUC 368. Seminar: Administering Complex Educational Organizations (3)
EDUC 369. Seminar: District Office Administration (3)
EDUC 370. Professional Induction Planning (2)
EDUC 371. Professional Assessment (2)
EDUC 372. Program Evaluation and Grant Writing (3)
EDUC 373. Economics of Education (3)
EDUC 381. Law in Higher Education (3)
EDUC 382. Leadership in Higher Education (3)
EDUC 383. Administering Curriculum, Pedagogy and Assessment in Higher Education (3)
EDUC 391. Graduate Independent Study (1-3)
EDUC 392. Internship and Advanced Field Experience in Administration (1-4)
EDUC 393. Special Topics (1-3)
EDUC 394. Seminar: Doctoral Research in Educational Administration (3)
EDUC 398D. Seminar: Qualifying Scholarly Activities (1)
EDUC 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)
Permission of department chair.

Course Offerings

Graduate
See Graduate Catalog for course descriptions
EPSY 201. Techniques of Research (3)
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 291. Independent Graduate Study (1-3)
EPSY 293. Special Project (1-3)
EPSY 294B. School Psychology Fieldwork (1-4)
EPSY 297. Graduate Research (1-3)
EPSY 299. Master’s Thesis (4)
EPSY 300. Seminar: Introduction to School Psychology (1)
EPSY 301. Data-Based Decision Making I (2)
EPSY 302. Data-Based Decision Making II (2)
EPSY 306. Psychotherapeutic Interventions in the Schools (3)
EPSY 307. Group Counseling (3)
EPSY 308. History, Systems, and Indirect Interventions for the School Psychologist (3)
EPSY 309. Consultation Methods (3)
EPSY 310. Crisis Intervention (3)
EPSY 311. California Law and Professional Ethics (1)
EPSY 312. Child Psychopathology and Wellness Promotion (3)
EPSY 315. Individual Assessment (3)
EPSY 316. Behavior and Personality Assessment in the Schools (3)
EPSY 317. Neuropsychology in the Schools (3)
EPSY 320A. Seminar: Advanced Human Development I (3)
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)
**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 ratios and proportions. The course is taught using a Personalized System of Instruction. Neither the course credit nor course grade applies towards graduation. **Prerequisite:** An appropriate test score or permission of 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 nor course grade applies towards graduation. **Prerequisite:** A passing grade (equivalent to C- or better) in MATH 001, an appropriate test score or permission of 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 Fundamental Skills requirement in quantitative analysis/math. Students who complete MATH 005 and 007 with a C- or better may enroll in MATH 051 (Calculus). **Prerequisite:** A passing grade (equivalent to C- or better) in MATH 003, an appropriate test score or permission of 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). **Prerequisite:** A grade of C- or better in MATH 005, an appropriate test score or permission of 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, rhythm, 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 010 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 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. **Prerequisite:** A grade of C- or better in WRIT 017, an appropriate test score or permission of 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 Fundamental Skills requirement in writing. **Prerequisite:** A passing grade (equivalent to C- or better) in WRIT 019, an appropriate test score or permission of 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 Fundamental Skills requirement in reading. **Prerequisite:** An appropriate test score or permission of 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 086. Tutoring Strategies Level I (1)
A College Reading Language Association (CRLA) online tutoring training course which will concentrate on multiple tutoring strategies and techniques, with emphasis on the following: peer tutoring, learning methods, personal learning and communication styles, modeling leadership and scholarship, and an understanding of sensitivity to diverse students and their unique learning needs. Three meetings in person are scheduled during the semester. Students will practice tutorial skills in individual and small group sessions under the supervision of the Instructor and the Education Resource Center’s Tutorial Coordinator. Collaborative/interactive approaches to learning in a variety of settings will be emphasized. Pass/No Credit grading option is not allowed for the course. A grade of B+ or better is required to satisfy the University’s Tutorial Program in tutoring. Second semester freshman standing.

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)
Permission of instructor.

Gladys L. Benerd School of Education Faculty

Lynn G. Beck, 2005, Dean and Professor of Education, BA, Belhaven College, 1974; MA, University of Mississippi, 1976; PhD, Vanderbilt University, 1991.

Harriett Arnold, 1994, Associate Professor of Education, BA, San Francisco State College, 1968; MA, San Jose State University, 1974; EdD, University of San Francisco, 1984.

Dennis Brennan, 1980, Assistant Dean and Associate Professor of Education, BS, Clarion State College, 1966; MEd, University of Pittsburgh, 1970; PhD, 1978.

Ruth V Brittin, 1998, Associate Professor of Education, PhD, Florida State University, 1989.

Kellie Cain, 2002, Assistant Director of Field Experiences, Assistant Professor, BA, University of California, Davis, 1987; MA, University of the Pacific, 1999; EdD, 2005.

Marilyn E. Draheim, 1986, Assistant Dean and Associate Professor of Education, BA, Luther College, 1972; MA, University of Iowa, 1974; EdS, 1974; PhD, University of California, Berkeley, 1986.

Michael Elium, 2004, Associate Professor of Education, BA, Appalachian State University, 1975; MA, 1975; EdD, University of Alabama, Tuscaloosa, 1983.

Scott Evans, 1999, Instructor of Education, BA, California State University, Sonoma, 1976; MA, University of California, Davis, 1980.

Rachelle Hackett, 1994, Associate Professor of Education, BA, California State University, Fresno, 1982; MS, Stanford University, 1986; PhD, 1994.

Ronald Hallett, 2009, Assistant Professor, BA, University of Nebraska, Lincoln, 1999; MA, The George Washington University, 2003; PhD, University of Southern California, 2009.

Dimpal Jain, 2010, Assistant Professor, BA, Western Washington University, Bellingham, 2001; MA, University of California, Los Angeles, 2004; PhD, 2010.


Justin Low, 2010, Assistant Professor, BA, Brigham Young University, Provo, UT, 2003; MA, The University of Texas at Austin, 2008; PhD, 2010.

Delores E. McNair, 2006, Assistant Professor, BA, Holy Names College, 1988; MPA, University of Southern California, 1988; EdD, Oregon State University, 2002.

Thomas G. Nelson, 1995, Assistant Professor of Education, BA, California State University, Northridge, 1975; MA, California State University, Sacramento, 1988; PhD, University of Arizona, 1993.


Jonathan Sandoval, 2006, Professor, AB, University of California, Santa Barbara, 1964; MA, University of California, Berkeley, 1966; PhD, 1969.


Amy Scott, 2007, Assistant Professor, BA, University of California, Berkeley, 2000; MA, Arizona State University, Tempe, 2002; PhD, 2006.

Craig Seal, 2009, Assistant Professor, BS, Santa Clara University, 1991; MA, Boston College, 1995; PhD, George Washington University, 2007.

Antonio Serna, 2006, Clinical Assistant Professor, BA, California State University, Fresno, 1974; MA, Stanford University, 1978; EdD University of the Pacific, 1990.

Heidi J. Stevenson, 2004, Assistant Professor of Education, BA, University of California, Davis, 1995; MA, Chapman University, 2001; EdD, University of California, Santa Barbara, 2004.

Tenisha Tevis, 2009, Director of the Educational Resource Center, Assistant Professor, BA, California State University, Sacramento, 1997; MA, 2002; PhD, The Pennsylvania State University, 2007.

Linda Webster, 1996, Associate Professor of Education, BA, California State University, Fresno, 1981; MA, University of California, Berkeley, 1984; PhD, 1988.
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
  Networking and Computer Security
  Games and Simulation
  Software Engineering
  Computational Modeling
  Information Systems
  Theoretical Foundations
  Computing and Applied Economics

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 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 a 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, and Theoretical Foundations.

The School of Engineering and Computer Science offers a Master of Science in Engineering Science (MSES) degree with concentrations in 1) Civil Engineering, 2) Computer Engineering, Electrical Engineering, Computer Science, and 3) Mechanical 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 Blended Program**

The accelerated Blended Program provides an excellent opportunity for students to begin their graduate work while completing their undergraduate degree requirements. Students can pursue the accelerated Blended Program which allows them to complete their bachelors and masters degree in as little as 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 ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – telephone: (410) 347-7700.

The Computer Science program leading to a BS degree with a major in Computer Science is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700.

**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.

**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 advisor, and the Dean of the School of Engineering and Computer Science. 3) Bioengineers following the Biomedical 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 core 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 (undergraduate or graduate) 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 Program

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 for 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)
University of California, Davis
Associated Engineering Students (AES)
Associated Students of Engineering Management (ASEM)
Biomedical Engineering Society (BMES)
Engineers Without Borders
Theta Tau (Professional Engineering Fraternity)

Pacific MESA Center

The Pacific Mathematics, Engineering and Science Achievement Center (MESA) is the home of two programs: the MESA Schools Program (MSP) and the MESA Engineering Program (MEP).

Both MSP and MEP programs serve educationally disadvantaged students who have traditionally not considered entering into math or science based professions. MSP goals are to create an academic community that will increase the number of students who graduate from high school and attend college, majoring in math-based fields. MSP provides hands-on math and science activities as well as academic enrichment to 1,100 students in the 6-12th grades. By providing a rigorous, all-sided learning environment that includes academic advising, peer group learning, career exploration, parent involvement, and other services, students’ confidence, expectations, and success have soared. 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 and Computer Science Programs

The general education requirements for engineering and computer science students are as follows: all entering freshmen must take Pacific Seminar 1-What is a Good Society?, and Pacific Seminar 2 - Topical Seminars on a Good Society. As seniors they must take Pacific Seminar 3 - Ethics of Family, Work, Citizenship. 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 advisor will assist in the selection of courses.

Pacific accepts a 4 or higher for Advance 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.

Transfer General Education

SOECS transfer students are normally required to have six General Education courses in Categories I and II, one course in each of the six category/area combinations. (i.e., IA, IB, IC, IA, IIB, IIC). All SOECS students are required to take ENGR 030, which satisfies the IIB area. The School will, under certain circumstances, allow one substitution of a course taken prior to transferring to Pacific to meet requirements in a different area within the same category. All transfer students MUST take courses in at least five different areas.

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.

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 advisor. 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 advisor 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, approval by the student’s advisor 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 advisor 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 advisor, 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.

Students entering an engineering or computer science program with 28 or more units are exempt from ENGR 010.

Maximum Summer Course Load and Credits

The maximum number of classes, excluding physical activity courses, that an engineering or computer science student may be registered 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.

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 advisor. 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 advisor and the Director of Cooperative Education.

In order to graduate, students must meet the following requirements:

1. Successful completion of at least 120 units.
2. 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 and computer science 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 engineering and computer science courses 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 advisor, 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

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 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.
3. Our graduates will develop practical skills and experience through the senior project and a variety of opportunities including lab work and/or co-op in industry, government or academia.
4. Our graduates will be qualified to practice as an engineer and/or pursue advanced study in bioengineering and related fields (e.g. MS, PhD, DDS).

Bioengineering program outcomes
Upon graduation, graduates will have:
1. An ability to apply math, science and engineering
2. An ability to design, conduct experiments and analyze, interpret data
3. An ability to design to meet desired needs
4. An ability to function on multidisciplinary teams
5. An ability to identify, formulate and solve engineering problems
6. An ability to understand professional and ethical responsibility
7. An ability to communicate effectively
8. An ability to understand the impact of engineering in a global, economic, environmental and societal context
9. An ability to engage in life-long learning
10. A knowledge of contemporary issues
11. An ability to use techniques, skills, and modern engineering tools necessary for engineering practice
12. An ability to apply engineering principles to life sciences

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 FamilyWork, and Citizenship 3

II. Diversity Requirement
Complete one diversity course 3-4

III. Degree Requirements
Mathematics:
MATH 051 Calculus I 4
MATH 053 Calculus II 4
MATH 055 Calculus III 4
MATH 057 Applied Differential Equations I: ODE 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
MECH 015 Mechanical 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 110 Instrumentation and Experimental Methods 3
ENGR 121 Mechanics of Materials 4
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

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 2 courses from a single department may be applied to meet the breadth program requirements.

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated diversity course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.
Department of Civil Engineering

Phone: (209) 946-2153
Location: John T. Chambers Technology Center
Website: www.pacific.edu/eng/Programs/civil-engineering.html

Degrees Offered
Bachelor of Science in Civil Engineering

Educational Objectives
The Civil Engineering program at the University of the Pacific subscribes to the following program 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 geotechnical, 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, postgraduate studies, or leadership in the civil engineering profession.

Civil Engineering Program (BSCE) Outcomes
Students who complete the BS degree in CE will be able to:

a. apply fundamental knowledge of mathematics, science, and engineering to solve problems related to civil engineering
b. design and conduct experiments, as well as analyze and interpret data in the interdisciplinary arena of civil engineering
c. design the fundamental components of a system or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, constructability, and sustainability
d. function on multi-disciplinary teams
e. identify, formulate, and solve civil engineering problems
f. understand the importance of professional and ethical responsibilities of engineers
g. effectively communicate using written, oral, and graphical means*
h. understand the impact of civil engineering solutions in a global, economic, environmental, and societal context
i. recognize the need for, and engage in, lifelong learning
j. a knowledge of contemporary issues in the civil engineering industry
k. use the techniques, skills, and modern engineering tools necessary in civil engineering practice
l. explain basic concepts in management, business, public policy, and leadership

Recommended Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ENGL 105</td>
<td>Technical Writing</td>
<td>4</td>
</tr>
<tr>
<td>ECPE 041</td>
<td>Circuits</td>
<td>3</td>
</tr>
<tr>
<td>ECPE 041L</td>
<td>Circuits Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>Career Path Electives: 2-3 additional courses</td>
<td>6-10</td>
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Bioelectrical Career Path:

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ECPE 071</td>
<td>Digital Design</td>
<td>3</td>
</tr>
<tr>
<td>ECPE 071L</td>
<td>Digital Design Lab</td>
<td>1</td>
</tr>
<tr>
<td>ECPE 121</td>
<td>Systems Analysis</td>
<td>4</td>
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</tbody>
</table>

Biomedical Career Path:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 120</td>
<td>Engineering Mechanics II (Dynamics)</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 122</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
</tbody>
</table>

Cooperative Education:

Minimum 32 units, including:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>ENGR 181</td>
<td>Professional Practice</td>
<td>14-18</td>
</tr>
<tr>
<td>ENGR 182</td>
<td>Professional Practice</td>
<td>14-18</td>
</tr>
<tr>
<td>ENGR 183</td>
<td>Professional Practice</td>
<td>14-18</td>
</tr>
</tbody>
</table>

Note: Cooperative Education is optional for biomedical career path.
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 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 2 courses from a single department may be applied to meet the breadth program requirements.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated diversity course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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 Applied Differential Equations I: ODEs 4
PHYS 063 Principles of Physics I 5
CHEM 025 General Chemistry 5
Math and Science Electives 6

Engineering Science:
ENGR 010 Dean’s Seminar 1
CIVL 015 Civil 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 – Properties and Measurements 4
ENGR 120 Engineering Mechanics II: Dynamics 3
ENGR 121 Mechanics of Materials 4

One of the following:
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 Administration 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 Structural Analysis
CIVL 161 Matrix Analysis of Engineering Systems
CIVL 171 Water and Environmental Policy
CIVL 173 Sustainable Engineering
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 138 Solid Waste Systems Design and Management
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

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.

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 2 courses from a single department may be applied to meet the breadth program requirements.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 or more transfer units prior to fall 2011 are encouraged but not required to complete a designated diversity course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. Degree Requirements
Mathematics and Science (minimum of 30 units):
MATH 051 Calculus I 4
MATH 053 Calculus II 4
MATH 055 Calculus III 4
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>MATH 057</td>
<td>Applied Differential Equations I: ODE</td>
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<tr>
<td>PHYS 053</td>
<td>Principles of Physics I</td>
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<td>PHYS 055</td>
<td>Principles of Physics II</td>
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<tr>
<td>COMP 047</td>
<td>Discrete Math for Computer Science</td>
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<td></td>
<td>One Science elective from the following courses:</td>
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<tr>
<td>CHEM 025</td>
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<td>CHEM 027</td>
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<td>BENG 053</td>
<td>General Biology with Applications for Engineers I</td>
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<tr>
<td>BENG 063</td>
<td>General Biology with Applications for Engineers II</td>
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<td>BIOL 051</td>
<td>Principles of Biology</td>
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<tr>
<td>BIOL 061</td>
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<td>Engineering Science:</td>
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<td>ENGR 010</td>
<td>Dean’s Seminar</td>
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<td>ECPE 041</td>
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<td>ECPE 041L</td>
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<td>ECPE 071</td>
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<td>ECPE 121</td>
<td>Systems Analysis</td>
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<td>ECPE 131</td>
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<td>ECPE 131L</td>
<td>Electronics Laboratory</td>
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<td>ECPE 127</td>
<td>Random Signals</td>
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<tr>
<td>ECPE 170</td>
<td>Computer Systems and Networks</td>
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<tr>
<td>ECPE 172</td>
<td>Microcontrollers</td>
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<tr>
<td>ECPE 173</td>
<td>Computer Organization and Arch</td>
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<tr>
<td>ECPE 174</td>
<td>Advanced Digital Design</td>
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<td>COMP 051</td>
<td>Introduction to Computer Science</td>
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<tr>
<td>COMP 053</td>
<td>Data Structures</td>
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<td>COMP 101</td>
<td>Application Programming</td>
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<td>ECPE 194</td>
<td>The Core Assessment Exam</td>
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<td>ECPE 195</td>
<td>Senior Project I</td>
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<td>ECPE 196</td>
<td>Senior Project II</td>
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<td>Technical Electives:</td>
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<td>Electives</td>
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<td>COMP 127</td>
<td>Client-Server Systems</td>
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<td>COMP 129</td>
<td>Software Engineering</td>
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<td>COMP 135</td>
<td>Human-Computer Interface</td>
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<tr>
<td>COMP 141</td>
<td>Programming Languages</td>
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<td>COMP 147</td>
<td>Computing Theory</td>
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<tr>
<td>COMP 155</td>
<td>Computer Simulation</td>
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<tr>
<td>COMP 157</td>
<td>Design/Analysis of Algorithms</td>
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<tr>
<td>COMP 159</td>
<td>Computer Game Technologies</td>
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<td>COMP 163</td>
<td>Database Management Systems</td>
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<td>COMP 173</td>
<td>Operating Systems</td>
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<td>COMP 175</td>
<td>System Administration and Security</td>
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<tr>
<td>COMP 191</td>
<td>Independent Study</td>
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<td>COMP 197</td>
<td>Undergraduate Research</td>
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<td>ECPE Elective: 1 course from the following list</td>
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<td>ECPE 136</td>
<td>VLSI Design</td>
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<td>ECPE 151</td>
<td>Artificial Intelligence</td>
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<td>ECPE 153</td>
<td>Computer Graphics</td>
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<td>ECPE 162</td>
<td>Communication Systems</td>
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<td>ECPE 163</td>
<td>Energy Conversion</td>
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<td>ECPE 165</td>
<td>Power Systems</td>
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<td>ECPE 177</td>
<td>Computer Networking</td>
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<td>ECPE 178</td>
<td>Computer Network Security</td>
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<td>ECPE 191</td>
<td>Independent Study</td>
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<tr>
<td>ECPE 197</td>
<td>Undergraduate Research</td>
<td>3-4</td>
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<tr>
<td>ECPE or COMP elective: 1 course from ECPE or COMP electives listed above</td>
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<td>Other elective: 1 course from the following list</td>
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<td>BIOL 035</td>
<td>Environment: Concepts and Issues</td>
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<td>Introduction to Biology</td>
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<td>Principles of Biology</td>
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<td>BIOL 061</td>
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<td>BUSI 107</td>
<td>Marketing Management</td>
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<td>BUSI 143</td>
<td>Product Innovation</td>
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<td>CIVIL 015</td>
<td>Civil Engineering Graphics</td>
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<td>CHEM 027</td>
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<td>EMGT 170</td>
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<td>EMGT 172</td>
<td>Engineering Economy</td>
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<td>ENGR 020</td>
<td>Engineering Mechanics I (Statics)</td>
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<td>ENGR 110</td>
<td>Instrumentation and Experimental Methods</td>
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<td>ENGR 122</td>
<td>Thermodynamics</td>
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<td>GEOS 051</td>
<td>Dynamic Planet</td>
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<tr>
<td>GEOS 053</td>
<td>Earth and Life Through Time</td>
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<td>GEOS 057</td>
<td>Earth System Science</td>
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<td>MECH 015</td>
<td>Mechanical Engineering Graphics</td>
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<td>PHYS 057</td>
<td>Modern Physics</td>
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<td>PHYS 101</td>
<td>Electricity and Magnetism</td>
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<td>PHYS 105</td>
<td>Optics</td>
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<td>PHYS 125</td>
<td>Molecular Nanotechnology</td>
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<td>PHYS 127</td>
<td>Computational Physics</td>
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<td>PHYS 141</td>
<td>Astrophysics</td>
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<td>PHYS 151</td>
<td>Advanced Physics Lab.</td>
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<tr>
<td>PHYS 161</td>
<td>Thermal Physics</td>
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<td>PHYS 170</td>
<td>Solid State Physics</td>
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<tr>
<td>PHYS 181</td>
<td>Classical Mechanics</td>
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<td>PHYS 191</td>
<td>Independent Study</td>
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<td>PHYS 197</td>
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<td>Cooperative Education:</td>
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<td>Minimum 32 units, including:</td>
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<td>ENGR 181</td>
<td>Professional Practice</td>
<td>14-18</td>
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<tr>
<td>ENGR 182</td>
<td>Professional Practice</td>
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<tr>
<td>ENGR 183</td>
<td>Professional Practice</td>
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</tbody>
</table>
Electrical Engineering

Phone: (209) 946-2575
Location: Anderson Hall
Website: 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.

1. 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.

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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 2 courses from a single department may be applied to meet the breadth program requirements.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated diversity course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. Degree Requirements

Mathematics and Science (minimum of 30 units):

MATH 051 Calculus I 4
MATH 053 Calculus II 4
MATH 055 Calculus III 4
MATH 057 Applied Differential Equations I: ODEs 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 053 General Biology with Applications for Engineers I
BENG 063 General Biology with Applications for Engineers II
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:

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<th>Course</th>
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<td>ECPE 127</td>
<td>Random Signals</td>
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<td>ECPE 131</td>
<td>Electronics</td>
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<td>ECPE 131L</td>
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<td>ECPE 172</td>
<td>Microcontrollers</td>
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<td>ECPE 174</td>
<td>Advanced Digital Design</td>
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<td>PHYS 101</td>
<td>Electricity and Magnetism</td>
<td>4</td>
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<td>COMP 051</td>
<td>Introduction to Computer Science</td>
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<tr>
<td>COMP 053</td>
<td>Data Structures</td>
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<td>ECPE 194</td>
<td>The Core Assessment Exam</td>
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<td>ECPE 195</td>
<td>Senior Project I</td>
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<td>ENGR 025</td>
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## Technical Electives:

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<td><strong>Electives</strong> (Energy/Power)</td>
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<td>Power Electronics</td>
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<td>ECPE 163</td>
<td>Energy Conversion</td>
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<td>ECPE 165</td>
<td>Power Systems Analysis</td>
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<td>ECPE 263</td>
<td>Renewable Energy</td>
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<td>ECPE 135</td>
<td>Power Electronics</td>
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<td>ECPE 136</td>
<td>VLSI Design</td>
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<td>ECPE 233</td>
<td>Quantum and Nano Devices</td>
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<td><strong>Electives</strong> (Systems)</td>
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<td>ECPE 162</td>
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<td>MECH 175</td>
<td>Systems Analysis and Control</td>
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<td>ECPE 225</td>
<td>Digital Signal Processing with Applications</td>
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<tr>
<td><strong>Electives</strong> (Computers)</td>
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<tr>
<td>ECPE 151</td>
<td>Artificial Intelligence</td>
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<td>ECPE 153</td>
<td>Computer Graphics</td>
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<tr>
<td>ECPE 170</td>
<td>Comp Systems and Networks</td>
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<td>ECPE 173</td>
<td>Computer Organization and Arch</td>
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<tr>
<td>ECPE 177</td>
<td>Computer Networking</td>
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<tr>
<td>ECPE 178</td>
<td>Computer Network Security</td>
<td>3</td>
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</table>

Other EE electives: A minimum of 3 and a maximum of 4 units can count towards EE elective requirement:

<table>
<thead>
<tr>
<th>Course</th>
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<th>Units</th>
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<tbody>
<tr>
<td>ECPE 191</td>
<td>Independent Study</td>
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<tr>
<td>ECPE 197</td>
<td>Undergraduate Research</td>
<td>1-4</td>
</tr>
<tr>
<td>ENGR 020</td>
<td>Engineering Mechanics I (Statics)</td>
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<tr>
<td>ENGR 045</td>
<td>Materials Science</td>
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<tr>
<td>ENGR 110</td>
<td>Instrumentation and Experimental Methods</td>
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<tr>
<td>ENGR 122</td>
<td>Thermodynamics</td>
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<td>BENG 171</td>
<td>Bioelectricity</td>
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<tr>
<td>CIVL 015</td>
<td>Civil Engineering Graphics</td>
<td>3</td>
</tr>
<tr>
<td>COMP 101</td>
<td>Application Programming</td>
<td>4</td>
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<tr>
<td>COMP 155</td>
<td>Computer Simulation</td>
<td>4</td>
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<tr>
<td>COMP 157</td>
<td>Design and Analysis Algorithms</td>
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</tr>
<tr>
<td>COMP 175</td>
<td>System Administration and Security</td>
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</table>
Engineering Physics

Phone: (209) 946-2575
Location: Anderson Hall
Website: 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 advisor 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.

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 2 courses from a single department may be applied to meet the breadth program requirements.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated diversity course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. Degree Requirements

Mathematics and Science (minimum of 30 units):
MATH 051 Calculus I 4
MATH 053 Calculus II 4
MATH 055 Calculus III 4
MATH 057 Applied Differential Equations I: ODEs 4
MATH 039 Probability with Application to Statistics 4
CHEM 025 or 027 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 – Properties and Measurements 4
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<td>MECH 110</td>
<td>Instrumentation and Experimental Methods</td>
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<td>MECH 150</td>
<td>Heat Transfer</td>
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<td>MECH 157</td>
<td>Thermodynamics II</td>
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<td>MECH 160</td>
<td>Fluid Dynamics</td>
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<td>MECH 178</td>
<td>Finite Element Methods</td>
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<td>BIOL 035</td>
<td>Environmental Concepts and Issues</td>
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<td>BIOL 041</td>
<td>Introduction to Biology</td>
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<td>BIOL 051</td>
<td>Principles of Biology</td>
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<td>BIOL 061</td>
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<td>CHEM 027</td>
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<td>COMP 053</td>
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<td>GEOS 051</td>
<td>Dynamic Planet</td>
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<td>GEOS 053</td>
<td>Earth and Life Through Time</td>
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<td>GEOS 057</td>
<td>Earth System Science</td>
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<td>MATH 110</td>
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<td>MATH 148</td>
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<td>MATH 152</td>
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<td>MATH 157</td>
<td>Applied Differential Equations II</td>
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<td>MATH 174</td>
<td>Graph Theory</td>
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<td>ENGR 181</td>
<td>Professional Practice</td>
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<td>ENGR 182</td>
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<td>ENGR 183</td>
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<td>ECPE 121</td>
<td>Systems Analysis</td>
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<td>ECPE 131</td>
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<td>ECPE 131L</td>
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<td>ENGR 120</td>
<td>Engineering Mechanics II: Dynamics</td>
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<td>CIVL 130</td>
<td>Fluid Mechanics I</td>
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<td>CIVL 130L</td>
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<td>ECPE 194</td>
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<td>Senior Project I</td>
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<td>ECPE 196</td>
<td>Senior Project II</td>
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<td>PHYS 027</td>
<td>Scientific Computing Tutorial</td>
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<td>PHYS 057</td>
<td>Modern Physics</td>
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<td>PHYS 101</td>
<td>Electricity and Magnetism</td>
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<td>PHYS 161</td>
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<td>PHYS 102</td>
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<td>PHYS 105</td>
<td>Optics</td>
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<td>PHYS 125</td>
<td>Molecular Nanotechnology</td>
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<td>PHYS 127</td>
<td>Computational Physics</td>
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<td>PHYS 137</td>
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<td>PHYS 141</td>
<td>Astrophysics</td>
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<td>PHYS 151</td>
<td>Advanced Physics Laboratory</td>
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<td>PHYS 170</td>
<td>Solid State Physics</td>
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<td>PHYS 181</td>
<td>Classical Mechanics</td>
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<td>PHYS 183</td>
<td>Quantum Mechanics</td>
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<td>PHYS 191</td>
<td>Independent Study</td>
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<td>PHYS 197</td>
<td>Undergraduate Research</td>
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<td>ECPE 132</td>
<td>Advanced Electronics</td>
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<td>ECPE 135</td>
<td>Power Electronics</td>
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<td>ECPE 136</td>
<td>VLSI Design</td>
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<td>ECPE 151</td>
<td>Artificial Intelligence</td>
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<td>ECPE 153</td>
<td>Computer Graphics</td>
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<td>ECPE 162</td>
<td>Communications Systems</td>
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<td>Energy Conversion</td>
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<td>ECPE 165</td>
<td>Power Systems</td>
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<td>ECPE 170</td>
<td>Computer Systems and Networks</td>
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<td>ECPE 172</td>
<td>Microcontrollers</td>
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<td>Computer Organization</td>
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<td>ECPE 174</td>
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<td>ECPE 177</td>
<td>Computer Networking</td>
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<td>ECPE 178</td>
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<td>ECPE 191</td>
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<td>ECPE 193</td>
<td>Special Topics</td>
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<td>Undergraduate Research</td>
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<tr>
<td>EMTG 170</td>
<td>Engineering Admin</td>
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<tr>
<td>EMTG 172</td>
<td>Engineering Economy</td>
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<td>EMTG 174</td>
<td>Engineering Project Management</td>
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<tr>
<td>MECH 100</td>
<td>Manufacturing Processes</td>
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</table>
Mechanical Engineering

Phone: (209) 946-2377
Location: Khoury Hall
Website: 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 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:
IA. Individual and Interpersonal Behavior
IB. U.S. Studies
IC. Global Studies

Arts and Humanities
IB. ENGR 030
One course from the following categories:
IIB. 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 2 courses from a single department may be applied to meet the breadth program requirements.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated diversity course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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: ODEs 4
PHYS 053 Principles of Physics I 5
PHYS 055 Principles of Physics II 5
CHEM 025 or 027 General Chemistry 5
Elective 1 Math or Science Elective 3-4

Engineering Science:
ENGR 010 Dean’s Seminar 1
MECH 015 Mechanical 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
ENGR 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

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 fields such as manufacturing plant engineering, applications engineering, technical sales, construction management, project engineering and cost engineering.

The Engineering Management core consists of courses covering key topics within engineering management and business administration. In addition, the curriculum includes a large number of engineering electives providing students with the flexibility to custom design a curriculum to fit their career objectives.

Educational Objectives

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.

Engineering management program outcomes

Students graduating with a BS in Engineering Management will have:

- An ability to apply knowledge of mathematics, science and engineering in the solution of Engineering Management problems.
- 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 Management 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 related to Engineering Management.
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

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 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

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 2 courses from a single department may be applied to meet the breadth program requirements.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated diversity course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

III. 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: ODEs 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 Disciplines 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

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Computer Science

Phone: (209) 946-2355
Location: John T. Chambers Technology Center
Website: www.pacific.edu/eng/Programs/computer-science.html

Degrees Offered
Bachelor of Science

Majors Offered
Computer Science
Computing and Applied Economics

Concentrations Offered
(for computer science majors)
Networking and Computer Security
Games and Simulation
Software Engineering
Computational Modeling
Information Systems
Theoretical Foundations

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. Function 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

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<td>PACS 002</td>
<td>Pacific Seminar 2: Topical Seminar</td>
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<tr>
<td>PACS 003</td>
<td>Pacific Seminar 3: The Ethics of Family, Work, and Citizenship</td>
<td>3</td>
</tr>
</tbody>
</table>

**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:

I. Individual and Interpersonal Behavior

II. U.S. Studies

III. 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 2 courses from a single department may be applied to meet the breadth program requirements.

### II. Diversity Requirement

Complete one diversity course 3-4

**Note:** 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated diversity course prior to graduation. 3) Courses may be used also to meet general education and/or major/program requirements.

### III. Major Requirements

**Mathematics and Science**

Minimum 30 units and must include a minimum of 15 units in mathematics:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 047</td>
<td>Discrete Mathematics for Computer Science</td>
<td>4</td>
</tr>
<tr>
<td>One of the following courses:</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td>MATH 037</td>
<td>Introduction to Statistics and Probability</td>
<td></td>
</tr>
<tr>
<td>MATH 039</td>
<td>Probability with Applications to Statistics</td>
<td></td>
</tr>
<tr>
<td>ECPE 127</td>
<td>Random Signals</td>
<td></td>
</tr>
</tbody>
</table>

One of the following courses: 4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 045</td>
<td>Introduction to Finite Mathematics and Calculus</td>
<td></td>
</tr>
<tr>
<td>MATH 051</td>
<td>Calculus I</td>
<td></td>
</tr>
</tbody>
</table>

Electives 2 laboratory science courses from General Education Category IIIA 8

Electives Mathematics and science courses that may include COMP 147 10

**Computer Science Core**

Minimum 25 units including:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 051</td>
<td>Introduction to Computer Science</td>
<td>4</td>
</tr>
<tr>
<td>COMP 053</td>
<td>Data Structures</td>
<td>4</td>
</tr>
<tr>
<td>COMP 101</td>
<td>Application Programming</td>
<td>4</td>
</tr>
<tr>
<td>COMP 188</td>
<td>Senior Project I</td>
<td>2</td>
</tr>
<tr>
<td>COMP 189</td>
<td>Senior Project II</td>
<td>2</td>
</tr>
<tr>
<td>ECPE 071</td>
<td>Digital Design</td>
<td>3</td>
</tr>
<tr>
<td>ECPE 170</td>
<td>Computer Systems and Networks</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 025</td>
<td>Professional Practice Seminar</td>
<td>1</td>
</tr>
<tr>
<td>ENGR 010</td>
<td>Dean’s Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

**Note:** It is recommended that a student also take ECPE 071L.

**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 advisor. 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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 175</td>
<td>System Administration and Security</td>
<td>3</td>
</tr>
<tr>
<td>COMP 173</td>
<td>Operating Systems</td>
<td>4</td>
</tr>
<tr>
<td>COMP 177</td>
<td>Computer Networking</td>
<td>4</td>
</tr>
<tr>
<td>COMP 178</td>
<td>Computer Network Security</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives Selected with advisor 6

**Career Options**

Systems administrator, security specialist, network administrator, network appliance developer

**Software Engineering**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 127</td>
<td>Client-Server Systems</td>
<td>4</td>
</tr>
<tr>
<td>COMP 129</td>
<td>Software Engineering</td>
<td>4</td>
</tr>
<tr>
<td>COMP 141</td>
<td>Programming Languages</td>
<td>4</td>
</tr>
<tr>
<td>COMP 157</td>
<td>Design and Analysis of Algorithms</td>
<td>4</td>
</tr>
</tbody>
</table>

Electives Selected with advisor 4

**Career Options**

Application developer, software engineer, software architect, quality assurance

**Games and Simulation**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 135</td>
<td>Human-Computer Interface Design</td>
<td>3</td>
</tr>
<tr>
<td>COMP 153</td>
<td>Computer Graphics</td>
<td>3</td>
</tr>
<tr>
<td>COMP 155</td>
<td>Computer Simulation</td>
<td>4</td>
</tr>
<tr>
<td>COMP 159</td>
<td>Computer Game Technologies</td>
<td>4</td>
</tr>
<tr>
<td>COMP 157</td>
<td>Design and Analysis of Algorithms</td>
<td>4</td>
</tr>
</tbody>
</table>

Elective Selected with advisor 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 4
COMP 157 Design and Analysis of Algorithms 4
COMP 173 Operating Systems 4
Electives Selected with advisor 8
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 4
COMP 135 Human-Computer Interface Design 3
COMP 163 Database Management Systems 4
COMP 177 Computer Networking 4
Elective Selected with advisor 3

Career Options
Systems analyst, database developer/administrator, business application developer, Web developer, network/telecommunication specialist

Information Systems
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 advisor 5

Career Options
Computational physics, economics, scientific computing

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.

Bachelor of Science
Major in Computing and Applied Economics
In order to earn the bachelor of science degree with a major in computing and applied 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
IAA. Language and Literature
IIB. Worldviews and Ethics
IIC. Visual and Performing Arts
Natural Sciences and Mathematics
IIBA. Natural Sciences
IIBB. Mathematics and Formal Logic
IIBC. 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated diversity course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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
ECON 161 Computer Applications in Economics 4
ECON 190 Econometrics 4
MATH 037 Introduction to Statistics and Probability 4
MATH 039 Probability with Applications to Statistics 4
MATH 051 Calculus I 4
MATH 053 Calculus II 4
MATH 055 Calculus III 4
COMP 047 Discrete Math for Computer Science 4
COMP 051 Introduction to Computer Science 4
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 an 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
One of the following:
   CIVL 015 Civil Engineering Graphics
   MECH 015 Mechanical 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 sustainability, 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*:

   ECON 157 Environmental and Natural Resource Economics 4
   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:

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 advisor consisting of a minimum of twenty units with a minimum of five courses from the list of approved courses. A minimum of twelve units at Pacific. 3) Courses towards a minor cannot be taken on a “pass/no credit” basis. 4) Students must maintain a minimum GPA of 2.0 in a minor program.

**Course requirements include:**

A minimum of three courses from the School of Engineering & Computer Science (i.e., CIVL, ECPE, EMGT, ENGR, or MECH department prefixes), adding up to a minimum of eight units. (It is strongly recommended that students take ENGR 10 as one of these three classes. This course is intended for the freshman year.)

At least one, and no more than two of the “Computing Classes” (COMP).

**Technology Minor Application:** To complete a minor, a student should submit a minor worksheet proposal to the advisor. The Registrar must receive an approved copy of the worksheet before a notation of completion of a minor can be placed on the student’s transcript.
Approved Courses for the Technology Minor

Engineering Classes

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 041</td>
<td>Great Ideas in Computing</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 010</td>
<td>Dean’s Seminar</td>
<td>1</td>
</tr>
<tr>
<td>CIVL 015</td>
<td>Civil Engineering Graphics</td>
<td>3</td>
</tr>
<tr>
<td>MECH 015</td>
<td>Mechanical Engineering Graphics</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 020</td>
<td>Engineering Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>CIVL 022</td>
<td>Surveying</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 025</td>
<td>Professional Practice Seminar</td>
<td>1</td>
</tr>
<tr>
<td>ECPE 041/041L</td>
<td>Circuits</td>
<td>3/1</td>
</tr>
<tr>
<td>MECH 100</td>
<td>Manufacturing Processes</td>
<td>4</td>
</tr>
<tr>
<td>CIVL 132</td>
<td>Introduction to Environmental Engineering</td>
<td>4</td>
</tr>
<tr>
<td>EMGT 170</td>
<td>Engineering Administration</td>
<td>4</td>
</tr>
<tr>
<td>CIVL 171</td>
<td>Water and Environmental Policy</td>
<td>3</td>
</tr>
<tr>
<td>ECPE 071/071L</td>
<td>Digital Systems Design/Laboratory</td>
<td>3/1</td>
</tr>
<tr>
<td>EMGT 172</td>
<td>Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>EMGT 174</td>
<td>Engineering Project Management</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 181-184</td>
<td>Professional Practice (Co-op)</td>
<td>1-18</td>
</tr>
</tbody>
</table>

General Technology Classes

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 035</td>
<td>Environmental Ethics</td>
<td>4</td>
</tr>
<tr>
<td>RELI 146</td>
<td>Technology, Ethics, and Religion</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 035</td>
<td>Environment: Concepts and Issues</td>
<td>4</td>
</tr>
<tr>
<td>COMP 041</td>
<td>Great Ideas in Computing</td>
<td>4</td>
</tr>
</tbody>
</table>

Computing Classes

At least one and no more than two of the following may be included:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 019</td>
<td>Computer Applications in Engineering</td>
<td>3</td>
</tr>
<tr>
<td>COMP 025</td>
<td>Computers and Information Processing</td>
<td>4</td>
</tr>
<tr>
<td>COMP 051</td>
<td>Introduction to Computer Science</td>
<td>4</td>
</tr>
<tr>
<td>BUSI 100</td>
<td>Management Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>MCOM 019</td>
<td>Music and Computer Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

Basic Math and Science Classes

No more than two of the following. (Note that these courses serve as prerequisites for some of the above courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 041 or 045</td>
<td>Elementary Functions</td>
<td>4</td>
</tr>
<tr>
<td>MATH 051</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 053</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 055</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 025</td>
<td>General Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 053</td>
<td>Principles of Physics I</td>
<td>5</td>
</tr>
</tbody>
</table>

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.

* Fundamental skills are a prerequisite to all upper-division engineering and computer science courses.

* 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 053. General Biology with Applications for Engineers I (4)
This is the first of a two semester general biology course for engineering students. This course will focus primarily on evolution, plant and animal diversity and ecology. Laboratory activities are integrated into the lecture and will be used to reinforce course content with experiential activities and the application of biological principles to an engineering context. Prerequisite: Fundamental Skill Reading requirement (Fall).

BENG 063. General Biology with Applications for Engineers II (4)
This is the second of a two semester general biology course for engineering students. This course will focus primarily on metabolism, genetics, and organ systems physiology. A separate laboratory section will be used to reinforce course content with experiential activities and the application of engineering techniques used for analysis or control of biological systems. Prerequisite: Fundamental Skill Reading requirement (Spring).

BENG 103. Biomechanics (4)
This course will discuss biomaterials and lay the groundwork 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. Prerequisites: ENGR 045 and BIOL 061 or BENG 063 (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 or BENG 053; BIOL 061 or BENG 063; 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. (Spring).

BENG 161. Introduction to Bioinformatics (4)
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, 061. Prerequisite may be taken concurrently: BIOL 101 or permission of 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 simulation of tissues such as the heart and brain. Prerequisites: BIOL 061 or BENG 063; ECPE 041/041L, MATH 055 or permission of 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 of department chairperson and 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 instructor. (Spring)

BENG 197. Undergraduate Research (1-4)
Applied or basic research in bioengineering under faculty supervision. Permission of faculty supervisor and department chair. Students must be in good academic standing.

Civil Engineering

CIVL 015. Civil Engineering Graphics (3)
Coverage of the 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 using AutoCAD software. Laboratory included. Prerequisite: ENGR 010.

CIVL 022. Surveying (3)
An introduction to plane and topographic surveying including laboratory work. Additional coverage includes the principles of geometric design. Prerequisite: MATH 041 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 and MATH 051.

CIVL 100. Introduction to Structural Engineering (4)
Introduction to the theory and applications of structural analysis and design. Topics include: determination of loads, analysis of beams, trusses and frames, influence lines and indeterminate structures. Prerequisites: CIVL 015, 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 130 (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. Laboratory included. Prerequisites: CHEM 025, CIVL 015, ENGR 019. Highly recommended CIVL 130 (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. Laboratory included. Prerequisite: CIVL 015 and CIVL 130. (Spring)

CIVL 134. Groundwater (4)

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 and CIVL 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)
Introduction to the fundamentals of geotechnical engineering, including the characterization of soils and their behavior as an engineering material, including classification of soils, compaction, permeability, and consolidation. Design applications include settlement predictions, strength characterization, soil exploration programs, and an overview of shallow and deep foundations. Includes laboratory work. Prerequisite: CIVL 015 and ENGR 121 (Fall).

CIVL 141. Foundation Design (4)
Analysis and design of foundations for bearing capacity and settlement. Analysis and design of retaining walls, sheet piles, anchored bulkheads, slopes, cofferdams and trench bracing. Prerequisite: CIVL 140.

CIVL 145. Engineering Geology (Also listed as GEOS 145) (4)
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 GEOS 061 or CIVL 140.

CIVL 150. Transportation Engineering (4)
Considerations and procedures in the planning, design, and operation of various transportation systems with primary emphasis on highways. Prerequisites: CIVL 022 and CIVL 140.
CIVL 151. Heavy Construction Methods (4)
Introduction to the areas of construction engineering and construction management. Construction engineering topics include construction processes and construction cost estimation. Construction management topics include contracting, estimating, planning, bidding, and scheduling. Permission of instructor.

CIVL 160. Structural Analysis (3)
Analysis of behavior of trusses and framed structures under gravity and lateral loads; Other topics include: analysis of shear walls; use of structural analysis software; and buckling of frames. Prerequisites: CIVL 100 and MATH 057. (Fall)

CIVL 161. Matrix Analysis of Engineering Systems (4)
Analysis of structures by matrix methods, including the direct stiffness method for trusses and frames. Introduction to the finite element method for plane stress and plane strain. Prerequisite: CIVL 160. Recommended: MATH 110.

CIVL 162. Dielectric

CIVL 163. Structural Steel Design (4)
Design of steel structural members, specifically tension, compression, flexural, and beam-column elements and connections to satisfy design code requirements. Prerequisite: CIVL 100.

CIVL 164. Reinforced Concrete Design (4)
Design and proportioning of structural members, specifically beams, columns, one-way slabs, footings, and walls to satisfy design criteria for reinforced concrete systems. Prerequisite: CIVL 100.

CIVL 165. Earthquake Engineering (4)

CIVL 166. Construction Economics (3)
Construction economics; methods of estimating; cost analysis; cost control; construction management methods; analysis and design documentation and the use of libraries. Prerequisite: CIVL 100.

CIVL 167. 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 168. Sustainable Engineering (3)
An introductory 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. Senior standing.

CIVL 169. 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. Prerequisites: EMTG 170 and 2 of the following: CIVL 100, 132, 133 140. Senior standing (Spring).

CIVL 170. Independent Study (1-4)
Special individual projects are undertaken under the direction of one or more faculty members. Permission of department chairperson and faculty member involved.

CIVL 171. Special Topics (1-4)
Upper-division elective subject area intended to augment the existing curriculum. See Class Schedule for topics. Permission of instructor.

CIVL 172. Undergraduate Research (1-4)
Applied or basic research in civil engineering under faculty supervision. Permission of faculty supervisor and department chair. 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: Fundamental math skills requirement.

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: Fundamental math skills requirement (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: Fundamental 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. Prerequisite: Fundamental 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. Prerequisite: Fundamental 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. Prerequisite: COMP 051 (Fall, every year).

COMP 093. Special Topics (3-4)

COMP 101. Application Development (4)
This course will develop the skills and techniques required for the creation of contemporary software applications. Contemporary software applications are complex systems involving the interaction of multiple subsystems that require teams of developers working together for extended periods of time. Topics include teamwork and communication skills, current development methodologies, analysis and design documentation and the use of libraries. This course is intended to prepare students to transition to upper division courses. Prerequisite: COMP 053 (Fall, every year).
COMP 127. Web Applications (4)
The World-Wide Web consists of client-server applications operating over the Internet. This course introduces the skills and techniques for designing and developing web applications. Topics include: client-server architectures, web servers and web browsers, server-side programming, client-side programming, form processing, state management and multimedia. Prerequisite: COMP 101 (Spring, odd years).

COMP 129. Software Engineering (4)
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. Prerequisite: 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. Junior standing (Spring, even years).

COMP 137. Parallel Computing (3)
Parallel 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 parallel computation. Students will be expected to design and implement an original parallel application as a term project. Prerequisite: COMP 101 (Spring, even years).

COMP 141. Programming Languages (4)
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 (Fall, even years).

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. Prerequisite: COMP 047 or ECPE 071 (Fall, odd years).

COMP 151. Artificial Intelligence (Also listed as ECPE 151) (3)
Basic concepts, techniques and tools used in Artificial Intelligence. Knowledge representation, search techniques, and problem solving strategies. Prerequisite: COMP 051 (Spring, odd years).

COMP 153. Computer Graphics (Also listed as ECPE 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. Prerequisite: COMP 053 (Spring, odd years).

COMP 155. Computer Simulation (Also listed as EMGT 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 programming languages. Prerequisite: MATH 037 or MATH 039; 045 or MATH 051; COMP 051 or ENGR 019. (Fall, even years)

COMP 157. Design and Analysis of Algorithms (4)
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 053 and COMP 047 or ECPE 071 or permission of instructor (Fall, even years).

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. (Fall, odd years)

COMP 163. Database Management Systems (4)
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. Prerequisite: COMP 101. (Spring, even years)

COMP 173. Operating Systems (4)
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 170 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. Junior standing (Fall, odd years).

COMP 177. Computer Networking (Also listed as ECPE 177) (4)
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. 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. Prerequisite: COMP 188.

COMP 191. Independent Study (1-4)
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 (1-4)
Special courses will be offered from time to time to meet the interests of a group of students and/or faculty. Permission of instructor.

COMP 197. Undergraduate Research (1-4)
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. Permission of 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 IV characteristics. Kirchhoff’s laws. Circuit analysis using nodal and mesh 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. Prerequisite: PHYS 053. Prerequisite may be taken concurrently: MATH 055, COMP 051 or ENGR 019. Corequisite: ECPE 041L. (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. Prerequisite: PHYS 053. Prerequisite may be taken concurrently: MATH 055, COMP 051 or ENGR 019. Corequisite: ECPE 041. (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: Fundamental math skills requirement, COMP 051 or ENGR 019. Corequisite: ECPE 071L recommended but not required (Fall/Spring).

ECPE 071L. Digital Design Lab (1)
Laboratory treatment of the concepts discussed in ECPE 071. Prerequisites: Fundamental math skills requirement, COMP 051 or ENGR 019. Corequisite: ECPE 071L (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. Differential equations. Zero-input and zero-state components. Prerequisites: ECPE 041L. Prerequisite may 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. Prerequisite may 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. Prerequisites: ECPE 041, 041L; MATH 055, PHYS 055, Fundamental Chemistry Skills requirement or completion of CHEM 023. Corequisite: ECPE 131L. (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. Prerequisites: ECPE 041, 041L; MATH 055, PHYS 055, Fundamental Chemistry Skills requirement or completion of CHEM 023. Corequisite: ECPE 131L. (Fall, Spring)

ECPE 132. Advanced Electronics (4)

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 and 131L.

ECPE 136. VLSI Design (4)
Issues in VLSI design including; logic families, sizing, timing models, fabrication, layout, high and low power design tradeoffs, circuit simulation and device modeling. Prerequisites: ECPE 071, 071L, 131, 131L.

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. 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. Prerequisite: 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 and ECPE 071 or permission of 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. Prerequisite: ECPE 121.

ECPE 162. Communication Systems (4)

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. Prerequisites: ECPE 041 and 041L; PHYS 055.

ECPE 165. Power System Analysis (3)

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. Prerequisite: 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 and 071L. (Fall).

ECPE 173. Computer Organization and Architecture (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, 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 and 071L. (Fall)

ECPE 177. Computer Networking (Also listed as COMP 177) (4)

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, malware, and social engineering. Emphasis is on network and computer attack methods and tools, and how to defend against those attacks. Includes lab. Prerequisite: ECPE 071. Junior or Senior standing. (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 of department chairperson and 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 194. Core Assessment Exam (CAE) (0)
Each student in the ECPE department is required to take the Core Assessment Exam (CAE). The CAE tests student knowledge of the material covered in the core courses ECPE 041, ECPE 071, ECPE 121, ECPE 131, and in basic math. Prerequisites: ECPE 071/071L, 121, 131/131L.

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. Prerequisites: ECPE 071/071L, 121, ECPE 131/131L. Prerequisite may be taken concurrently: ECPE 194 (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. Prerequisites: ECPE 194 and ECPE 195 (Fall, Spring).

ECPE 197. Undergraduate Research (1-4)
Applied or basic research in electrical and/or computer engineering under faculty supervision. Permission of faculty supervisor and department chair. 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 tools and general purpose. Prerequisite: MATH 037 or MATH 039; MATH 045 or MATH 051; COMP 051 or ENGR 019. (Fall, even years)

EMGT 170. Engineering Administration
(4)
Decision-making based upon engineering studies. This area covers techniques for economic evaluation of alternatives including time value of money, risk analysis, and compound interest calculation, minimum attractive rate of return, capital budgeting, present and future worth, break-even analysis, sensitivity analysis and risk analysis. (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 inflation, compound interest calculation, minimum attractive rate of return, capital budgeting, break-even analysis, sensitivity analysis and risk analysis. (Spring, Fall)

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. (Summer, Fall)

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 thinking approach. The course stresses an understanding of the interdisciplinary aspects of systems development, operations and support. Prerequisites: MATH 039 and MATH 055 or permission of 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 of faculty member involved. Student must be in good academic standing. (Summer, Fall)

EMGT 193. Special Topics
(1-4)
Special courses will be organized and offered from time to time to meet the needs of a group of students. Permission of 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
(1-4)
Applied or basic research in focused topics within Engineering Management under faculty supervision. Permission of faculty supervisor and department chairperson.

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 019. Computer Applications in Engineering
(3)
Introduction to binary arithmetic; numerical methods applicable to engineering problems and their solution using a programming language and computer 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 and 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. Permission of instructor (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 or 027; MATH 053 (Fall and Spring).

ENGR 110. Instrumentation and Experimental Methods
(3)
Experimental techniques in the measurement of quantities such as biopotentials, force, pressure, sound, flow, temperature, strain and motion. Statistical analysis and errors in measurement; data analysis and transmission. Use of instruments in the laboratory; a measurement project. Prerequisites: MATH 057 and ENGR 121 or permission of instructor (Fall and 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. Prerequisite: 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 or CHEM 027; PHYS 053 (Fall, Spring).

ENGR 181-185. Professional Practice (1-18)
Cooperative employment in a professional engineering environment. Students 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 015. Mechanical Engineering Graphics (3)
Coverage of the 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 with SolidWorks and AutoCAD software. Laboratory included. Prerequisite may be taken concurrently: ENGR 010.

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 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, ENGR 110 or permission of instructor (Spring).

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 and 121.

MECH 125. Machine Design and Analysis II (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. Prerequisite: ENGR 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. Prerequisite: MATH 057, ENGR 120, ENGR 019 or permission of 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. Prerequisites: ENGR 121 and ENGR 122. Prerequisite may be taken concurrently: MECH 120 or MECH 150 (Fall).

MECH 141. Engineering Design/Senior Project II (3)
The student will complete the design phase of their project. Parametric design techniques such as guided iteration, optimization, and Taguchi’s methods will be used to complete the detailed design of a product or process involving mechanical engineering. Manufacturing necessary to complete the product or process is a requirement. Weekly oral and written progress reports are required along with final comprehensive oral and written reports. Prerequisites: MECH 100 and 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. Prerequisites: 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. Prerequisite: 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. Prerequisite: ENGR 122. Permission of 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 and 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; ENGR 110 and ENGR 129 or permission of instructor (Spring).

MECH 176. 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. Prerequisites: ENGR 121 and ENGR 122. Prerequisite may be taken concurrently: CIVL 130 (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 of department chairperson and 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. Permission of faculty supervisor and department chairperson. Student must be in good academic standing.

School of Engineering and Computer Science Faculty

Ravi K. Jain, 2000, Dean and Professor, BS, California State University, Sacramento, 1961; MS, 1968; PhD, 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, BA, University of California, Davis, 1981; MS, California State University, Hayward, 1982; EdD, University of the Pacific, 1987. Educational counseling and psychology, Pupil Personnel Services Credential.

Louise Stark, 1992, Associate Dean and Professor of Computer Engineering, BScpE, University of South Florida, 1986; MScpE, 1987; PhD, 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, BS, Mechanical Engineering, 1988, University of Delaware; PhD 1995, Duke University, Biomedical Engineering.

James C. Eason, 2008, Assistant Professor of Bioengineering, BS, Electrical Engineering, 1988, North Carolina State University; PhD 1995, Duke University, Biomedical Engineering. Cardiovascular electrophysiology, computational modeling, system dynamics.


Civil Engineering Department

Mary Kay Camarillo, 2009, Assistant Professor of Civil Engineering, BS, University of Washington, 1996; MS, University of California, Davis, 2004; PhD, 2009; Registered Professional Engineer. Environmental engineering, physical and chemical treatment of water and wastewater.

Hector Estrada, 2006, Professor of Civil Engineering, BS, University of Illinois, 1993; MS, 1994; PhD, 1997. Registered Professional Engineer. Structural engineering and engineering mechanics.


Luke Lee, 2008, Assistant Professor of Civil Engineering, BS, University of California, Los Angeles, 1997; MS, University of California, Berkeley, 1998; PhD, University of California, San Diego, 2005; Registered Professional Engineer. Structural engineering and rehabilitation and monitoring of infrastructure systems.


Camilla M. Saviz, 1999, Associate Professor of Civil Engineering, BSME, Clarkson University, 1987; MSME, 1989; MBA, New York Institute of Technology, 1991; PhD, Civil and Environmental Engineering, University of California, Davis, 2003. Registered Professional Engineer. Environmental engineering, water resources, hydrodynamic and water quality modeling, fluid mechanics.

Dr. Henghu (Henry) Sun, 2008 Professor and Director, Pacific Resources Research Center, School of Engineering and Computer Science, University of the Pacific, 2008 Professor, PCSP Program, TJL Pharmacy School, University of the Pacific, 2002-2008, Professor, Tsinghua University; 1988, PhD China University of Mining and Technology.

Computer Science Department


Emma Bowring, 2007, Assistant Professor of Computer Science, BS, University of Southern California, 2003; PhD, University of Southern California, 2007. Artificial Intelligence, multi-agent systems, computer science education.

Daniel Cliburn, 2006, Associate Professor of Computer Science, BS, Illinois College, 1997; MS, University of Kansas, 1999; PhD, University of Kansas, 2001. Computer graphics, visualization, virtual reality, computer science education.


Jinzhu Gao, 2008, Assistant Professor of Computer Science, BS Computer Science and Engineering, Huazhong University of Science and Technology, 1995; MS Mechanical Engineering, Huazhong University of Science and Technology, 1998; PhD Computer and Information Science, Ohio State
University, 2004. Scientific visualization, computer graphics, large scale
data management, data analysis and visualization, data-intensive comput-
ing, remote visualization, Web-based applications.

David A. Lundy, 1983, Senior Lecturer in Computer Science, BS, University

Cath Schuler-Sawyer, 1993, Assistant Visiting Professor in Computer Sci-
ence, BA, University of California, Santa Barbara, 1974; MSW, California
State University, Sacramento, 1976. Business software consulting and train-
ing, technical writing, Web development.

Doug Smith, 1970, Emeritus Professor of Computer Science, BS, University
of Washington, 1964; MAT, Harvard University, 1965; PhD, University of
Washington, 1970. GUI programming, computing theory, discrete mathe-
matics, cooperative education.

William R. Topp, 1970, Emeritus Professor of Computer Science, BA, St.
Louis University, 1963; MA, 1964, MS University of Washington, 1967; PhD,
1968. Data structures, numerical methods, applied scientific programming.

Electrical and Computer Engineering Department

- Computer Engineering Program
- Electrical Engineering Program
- Engineering Physics Program

Cherian Mathews, 2005, Professor and Chair of Electrical and Computer Engi-
neering, BE in Electrical Engineering, Anna University, Chennai, India,
1987; MS in Electrical Engineering, Purdue University, 1989; PhD in Elec-
trical Engineering, Purdue University, 1993; Statistical signal process-
ing, Array signal processing, Real-time digital signal processing using DSP
processors, power systems.

Elizabeth Basha, 2010, Assistant Professor of Electrical and Computer Engi-
neering; BS in Computer Engineering, University of the Pacific, 2003; SM in
Electrical Engineering and Computer Science, Massachusetts Institute of
Technology, 2005; PhD in Electrical Engineering and Computer Science,
Massachusetts Institute of Technology, 2010. Sensor networks, autonomous
robotics, international development.

James C. Eason, 2008, Assistant Professor of Bioengineering, BS, Electrical
Engineering, 1988, North Carolina State University; PhD 1995, Duke Uni-
versity, Biomedical Engineering. Cardiovascular electrophysiology, comput-
tational modeling, system dynamics.

Kenneth F. Hughes, 1993, Associate Professor of Computer Engineering, BS, In-
formation and Computer Science, Georgia Institute of Technology; 1985;
MS, Computer Science, University of South Florida, 1989; PhD, Computer
Science and Engineering, University of South Florida, 1994. Robotics, sen-
sors 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; MS, 1980, Uni-
versity of Pittsburgh.; PhD, 1986, University of Pittsburgh. High speed elec-
dron devices, Quantum effect devices, Solid state physics, Renewable energy,
Analogue and digital electronics, and Embedded Systems.

W. Joseph King, 1983, Emeritus Professor of Electrical and Computer Engi-
Registered Professional Engineer; Computer languages, digital design, mi-
croprocessors, neural networks, computer graphics.

Jennifer Ross, 1993, Associate Professor of Electrical and Computer Engi-
neering, BS in Electrical Engineering University of Illinois, 1988; MS in
Electrical Engineering, University of California Berkeley, 1990, PhD in
Electrical Engineering University of California Berkeley, 1993; Solid state,
short wavelength lasers, analog circuits and devices.

Jeffrey Shafer, Assistant Professor of Computer Engineering, BS, Computer
Engineering, University of Dayton, 2002; MS, Electrical Engineering, Uni-
versity of Dayton, 2004; PhD, Electrical and Computer Engineering, Rice
University, 2010; Computer architecture, Network systems architecture,
Data-intensive computing, Cloud computing, Virtualization.

Louise Stark, 1992, Associate Dean and Professor of Computer Engineering,
BScEng, University of South Florida, 1986; MSCpE, 1987; PhD, Computer
Science and Engineering, 1990. Computer vision, artificial intelligence,
digital design, computer graphics, virtual reality.

Anahita Zarei, 2007, Assistant Professor of Electrical and Computer Engi-
neering, BS, Electrical Engineering, 2001, University of Washington; MS,
Electrical Engineering, 2002, University of Washington; MS Applied Mathe-
ematics, 2007, University of Washington; PhD, Electrical Engineering, 2007,
University of Washington. Computational Intelligence, Signal Processing,
Probability and Statistics.

Engineering Management Program

Abel A. Fernandez, 2000, Professor of Civil Engineering and Director of En-
gineering Management, BS, Electric Power Engineering, Rensselaer Poly-
technic Institute, 1974; ME, Electric Power Engineering, 1976; MBA, 1976;
PhD, Industrial Engineering, University of Central Florida, 1995. Regis-
tered Professional Engineer. Project Management, systems engineering, re-
source management, risk analysis and management, modeling and sim-
ulation, optimization.

Mechanical Engineering Department

Brian L. Weick, 1995, Chair and Professor of Mechanical Engineering,
BSME, Union College, 1986; MSME, Virginia Polytechnic Institute and
State University, 1990; PhD, Materials Engineering Science, 1993. Manu-
facturing Processes, Materials Science, Design, Tribology and Viscoelastic-
ity.

Ashland O. Brown, 1991, Professor of Mechanical Engineering, BSME, Pur-
due University, 1966; MSME, University of Connecticut, 1968; PhD, 1974.
Licensed Professional Engineer; fluid mechanics, thermal sciences and fi-
nite element analysis.

Jeffrey S. Burmeister, 2002, Associate Professor of Bioengineering, BS, Me-
chanical Engineering, 1988, University of Delaware; PhD 1995, Duke Uni-
versity, Biomedical Engineering.

Scott Larwood, 2009, Assistant Professor of Mechanical Engineering, BS,
Aeronautical Engineering, California Polytechnic State University; San Luis
Obispo, 1988; MS, Aeronautics and Astronautics, Stanford University, 1993;
PhD, Mechanical and Aeronautical Engineering, University of California at
Davis, 2009. Licensed Professional Engineer; wind energy, fluid mechanics,
vibrations, dynamics.

Chi-Wook Lee, 1998, Professor of Mechanical Engineering, BSME, Hanyang
University (Korea), 1981; MSME, University of Wisconsin-Madi-
son, 1984; PhD, Mechanical Engineering, University of Florida, 1991.
Mechatronics, systems dynamics, and bio-mechanics.

Jian Cheng Liu, 2006, Associate Professor of Mechanical Engineering, BS,
Taiyuan University of Technology (China), 1984; MS, 1987; PhD, Himeji
Institute of Technology, now named University of Hyogo (Japan), 1996.
Manufacturing, machine design.

Kylie A. Watson, 2003, Associate Professor of Mechanical Engineering,
BSME, Villanova University, 1995; MS, North Carolina State University,
1997; PhD, 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, BA, University of California, Davis, 1981; MS, California State University, Hayward, 1982; EdD, University of the Pacific, 1987. Educational counseling and psychology, Pupil Personnel Services Credential.

Calvin P Chen, 2006, Assistant Professor and Coordinator of Cooperative Education, BSCE, Rice University, 2000; MBA, Rice University, 2005.

MESA

Phone: (209) 946-2650
Location: George Wilson Hall
Website: www.pacific.edu/sis
Cynthia Wagner Weick, Interim Dean
Mary-Lou Tyler, Assistant to the Dean/Director of Student Affairs
e-mail: mtyler@pacific.edu
Katrina Alison Jaggers, Associate Director, Graduate Program in Intercultural Relations
e-mail: kjaggers@pacific.edu

Undergraduate Degree Programs Offered
International Relations (BA)
Global Studies (BA)
Development and Cultural Change (BA)
International Affairs and Commerce (BA)

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

Graduate Degree Program Offered
(see Graduate Catalog for information on Intercultural Relations (MA))

A professional school devoted to the interdisciplinary study of international affairs, offering students five undergraduate majors including one or two semesters of study abroad, and graduate studies in a master’s of intercultural relations.

Mission
The School of International Studies is Pacific’s window to the world. Through international and interdisciplinary immersion, we prepare students to succeed in a variety of global professions in industry, government, not-for-profit organizations and educational institutions.

The School of International Studies (SIS) grew out of the innovative programs in two of University of the Pacific’s three former “cluster colleges” (Callison and Elbert Covell) and the international majors offered in College of the Pacific. Established in 1987, SIS offers a unique and challenging environment that immerses students in an interdisciplinary approach to international affairs, and provides a community of students and faculty who share a deep intellectual curiosity for global issues.

The undergraduate program combines the study of political science, economics, history, anthropology and geography. Students develop strong research, critical thinking and analytical skills. Study abroad and competency in at least one second language are central to the curriculum. They can take advantage of any number of experiential learning opportunities through local and global internships, and may choose to design their own experiential program.

The careers SIS graduates pursue range widely, and include positions in non-governmental organizations, business, the government, and academia.

Since 2001 SIS has also offered a master’s degree in Intercultural Relations (MAIR), in partnership with the Intercultural Communications Institute (ICI), based in Portland, Oregon. MAIR is a limited residency program targeted towards adult professionals who wish to earn an advanced credential related to intercultural competence while maintaining employment or other commitments. 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. Courses and advising are provided by a highly qualified and experienced faculty drawn from the world of intercultural consulting as well as universities across the U.S. and abroad.
Degree Program Requirements

In order to earn the bachelor of arts degree in International Relations, Global Studies, Development and Cultural Change, International Affairs and Commerce, or Global Anthropology, 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 1, 2 and 3 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 1, and 2. They are required to take Pacific Seminar 3 and complete general education courses in the following categories: IA, IB, IIA, IIC, IIIA, IIIB and either a IIC, IIIA, IIIB course and either an additional IIIA or IIIB course. 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 055*)
IB. U.S. Studies (ECON 055* is required for three of the five majors)
IC. Global Studies (ANTH 053 or 054*)

Arts and Humanities
IIA. Language and Literature
IIB. Worldviews and Ethics (INTL 081*)
IIC. Visual and Performing Arts

Natural Sciences and Mathematics
IIIA. Natural Sciences
IIIB. Mathematics and Formal Logic (MATH 037 or 051* for three of the five majors)
IIC. 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.

II. Diversity Requirement

Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/program requirements.

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 General Education section in the front of this catalog.

IV. 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:
- 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

One course from the following two:
- ANTH 053 Cultural Anthropology
- ANTH 054 Antropologia cultural
- ECON 053 Introductory Microeconomics

One course from the following two:
- POLS 011 Introduction to Political Science
- POLS 151 Principles of Comparative Politics

SABD 000 At least one semester of study abroad

Note: 1) The semester abroad must be in a program approved by the advisor as appropriate to the major. 2) Students from abroad and Global Nomad students may be exempt from SABD 000

Note: 1) Seniors with a 3.0 GPA or above may choose to complete a four unit senior thesis/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.

V. 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 graduate school.

POLS 051 International Politics 4
ECON 055 Introductory Macroeconomics: Theory and Policy 4
ECON 071 Global Economic Issues 4

One course from the following:
- MATH 037 Introduction to Statistics and Probability
- MATH 051 Calculus I
- ECON 190 Econometrics
Four courses from the following: 16

POLS 141 Western 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 Organization
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 his or her advisor.

INTL 105 Globalization, the US and the World 4
SABD 000 A second semester of study abroad
Electives Four 100 level international affairs courses 12-16 to be approved by the advisor, may include one or more of the following:

ANTH 132 Modern Middle East
ANTH 134 Anthropology of Africa
ANTH 153 Language and Culture
ANTH 164 Anthropology of Food
ANTH 170 Culture and Economy
ANTH 172 Culture and Power
ANTH 188 Anthropological Theory
ARTH 112 19th Century European Art
ARTH 114 20th Century European Art and Film
ARTH 116 Contemporary World Art 1945-present
ARTH 120 Chinese Art History
ARTH 122 Japanese Art History
ASIA 120 Asian Cinemas
ASIA 124 Society, Gender, and Culture in East Asia
ASIA 130 East Asian Literature
BUSI 163 International Financial Management
BUSI 165 International Marketing
BUSI 169 Comparative Management
BUSI 177 International Trade Law
BUSI 178 International Commercial Law
ECON 118 Globalization History
ECON 121 International Trade
ECON 123 International Finance
ECON 125 International Development
ENGL 043 British Literature after 1800
ENGL 063 Masterpieces of World Literature
ENGL 163 Topics in Transnational Literatures
FREN 118 Littérature Francaise B
FREN 120 Le Cinema Francais
FREN 122 La Francophonie
FREN 124 Individu et Societe
HIST 011 Western Civilization II
HIST 031 East Asian Civilization II
HIST 041 The Problem with Latin America
HIST 111 Europe in Turmoil 1900-1945
HIST 112 History of the Holocaust
HIST 113 Europe since 1945
HIST 114 Modern Germany
HIST 139 Borderlands
HIST 140 Southeast Asia and the West
HIST 142 Modern Chinese History
HIST 143 Modernization of Japan
HIST 151 People’s History of Mexico
INTL 123 Literature Across Cultures
INTL 174 Global Environmental Policy
JAPN 180 Modern Japanese Fiction
MHIS 006 Music of the World’s People
POLS 141 Western 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 Organization
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
RELI 135 Asian Religious Traditions
RUSS 073 Russian Culture and Civilization
RUSS 120 Contemporary Russian Film
SPAN 114 Cine Hispano
SPAN 120 Narrativa Hispanica
SPAN 122 Literatura Mexicana
SPAN 126 Poesia Hispanica
SPAN 128 Teatro Hispanico
SPAN 135 Literatura hispanoamericana del siglo XX

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: Theory and Policy 4
ECON 071 Global Economic Issues 4
One course from the following:  
MATH 037 Introduction to Statistics and Probability  
MATH 051 Calculus I  

Three courses from the following:  
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 a study 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: Theory and Policy  
ECON 121 International Trade  
ECON 123 International Finance  
BUSI 031 Principles of Financial Accounting

One course from the following:  
MATH 037 Introduction to Statistics and Probability  
MATH 051 Calculus I  
ECON 190 Econometrics

One of the following two-course sequences:  

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 108 Management and Organizational Behavior  
  BUSI 169 Comparative Management

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 study abroad program 2) At least three courses taken in the School of International Studies at Pacific as specified below:

One of the following:  
ANTH 053 Cultural Anthropology  
ANTH 054 Antropoligia cultural

One of the following:  
ANTH 112 Physical Anthropology  
ANTH Approved course

Two of the following advanced anthropology electives:  
ANTH 132 Modern Middle East  
ANTH 134 Anthropology of Africa  
ANTH 153 Language and Culture  
ANTH 164 Anthropology of Food  
ANTH 170 Culture and Economy  
ANTH 172 Culture and Power  
ANTH 188 Anthropological Theory  
ANTH Approved Course

One of the following groups:  

a) ANTH Anthropology 4 unit elective  
b) SABD 000 One semester of an approved study 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 study abroad program.

Diverse Academic Track (Minimum 22 units)

INTL 077 Contemporary World Issues  
INTL 081 Perspectives on World History  
Electives, choose from the following:  

100 level courses selected from SIS Core,  
Modern Language & Literature courses (8 units maximum) and/or  
Additional International Electives from two different disciplines

Foreign Language Track (Minimum 20 units)

INTL 077 Contemporary World Issues  
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 upper division Modern Language and Literature course taught in a foreign language. The course may be taken at the University of the Pacific or on an approved study abroad program.)
Electives, choose from the following:

100 level courses selected from SIS Core and/or
Additional International Electives from two different disciplines

**Study Abroad Track (Minimum 20 units)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTL 077</td>
<td>Contemporary World Issues</td>
<td>4</td>
</tr>
<tr>
<td>INTL 151</td>
<td>Cross-cultural Training I</td>
<td>2</td>
</tr>
<tr>
<td>INTL 161</td>
<td>Cross-cultural Training II</td>
<td>2</td>
</tr>
<tr>
<td>SABD 000</td>
<td>One semester of an approved study abroad program</td>
<td>10</td>
</tr>
</tbody>
</table>

Electives, choose from the following:

100 level courses selected from SIS Core and/or
Additional International Electives from two different disciplines

**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 coursework 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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ANTH 054</td>
<td>Antropología cultural</td>
<td>4</td>
</tr>
<tr>
<td>INTL 152</td>
<td>Inter-American Cross-cultural Training</td>
<td>2</td>
</tr>
<tr>
<td>One of the following:</td>
<td></td>
<td>4</td>
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<tr>
<td>HIST 041</td>
<td>The Problem with Latin America</td>
<td>2</td>
</tr>
<tr>
<td>SPAN 110</td>
<td>Civilización hispanoamericana</td>
<td>2</td>
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One of the following:

<table>
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<tr>
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<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 103</td>
<td>Introducción a la literatura hispánica</td>
<td>4</td>
</tr>
<tr>
<td>SPAN 135</td>
<td>Literatura hispanoamericana del siglo XX</td>
<td>4</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ANTH 054</td>
<td>Antropología cultural</td>
<td>4</td>
</tr>
<tr>
<td>INTL 152</td>
<td>Inter-American Cross-cultural Training</td>
<td>2</td>
</tr>
<tr>
<td>One of the following:</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>HIST 137</td>
<td>His-panic USA</td>
<td>2</td>
</tr>
<tr>
<td>HIST 139</td>
<td>Borderlands</td>
<td>4</td>
</tr>
</tbody>
</table>

**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

**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 programs in nearly 60 countries. Students should consult the most recent edition of the Education Abroad Programs list, which is available online at go.pacific.edu/educationabroad. The Education Abroad website provides brief descriptions of programs, admissions requirements, university policies pertaining to education abroad, videos of Pacific students abroad, and a checklist to walk students through the process of applying to study abroad through Pacific. International Programs and Services also maintains a library of travel abroad information for the campus, as well as materials on education abroad scholarship aid, 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, completion of all university fundamental skills requirements, good academic standing and successful completion of a 2-unit Cross-cultural training course with a grade of “C” or better. Many programs require a higher GPA.

**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. Antropología 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 biocultural evolution, the significance of human diversity, and the role of humans in ongoing planetary processes of change and interaction. General Education IIIC.
international studies

ANTH 132. Modern Middle East (4)
How do Palestinians and Israelis conceptualize the ideal polity? How do Muslims understand the roles of women and men? How are historical experiences related to the collective memory of a community, and how does memory shape contemporary social life in the Middle East? How are local histories, societies, and cultures related to global processes of politics, economics, and culture? How do modern Middle Eastern peoples see their own identities and how and why do these conceptions differ from Western discourses about the region? This course is an introduction to thinking critically about these and related questions. Readings are drawn from various areas, including history, anthropology, and literature, and Middle Eastern experiences are also surveyed through other media, such as film. Students are encouraged to think critically about and beyond both popular Western images of the Middle East and supposed boundaries between nations and civilizations. Particularly emphasized are the interconnections — political, cultural, etc. — between East and West, South and North. Sophomore Standing.

ANTH 134. Anthropology of Africa (4)
Africa is a large and diverse continent, characterized by a multiplicity of cultures, histories, identities and experiences. This course is designed to encourage an appreciation of the complexity of contemporary Africa and to consider how African realities may differ from common stereotypes of the continent. This is primarily a course on contemporary Africa but it will also include a historical overview of key events that continue to shape current realities such as trade and migration, colonialism, and nationalist struggles for independence. While contemporary issues such as poverty and political violence will be addressed, the focus will be on the richness and diversity of African lives and experiences from rural to urban settings across the continent. Course material will address the interconnections between politics, kinship, gender, ethnicity, economics and history. Sophomore Standing.

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 study of language within anthropology, methods of linguistic anthropological research, linguistic relativity, conversational styles, and links between language and power.

ANTH 164. Anthropology of Food (4)
The anthropological study of food examines human foodways within a biocultural and cross-cultural context. Anthropologists study humans and human culture across space and evolutionary time; this includes the examination of cultural patterns and social institutions. Food requires hunting, gathering, growing, storage, distribution, preparation, display, serving, and disposal, all of which are social and cultural activities. This course explores the important role of food production, preparation, and eating in different cultures, as well as the symbolism and economic importance of food. We will focus on the current transformations of the world food system, through processes of globalization, the growth of new technologies, human migration and fast food. The counter-movement for localization and ‘slow food’ will also be explored. Students can expect to take part in some cooking and eating as well. Prerequisite: ANTH 053 or ANTH 054.

ANTH 170. Culture and Economy (4)
This course will provide an anthropological approach to the study of economic behavior in a cross-cultural context. Are there places in the world where people don’t care about the latest cell phones or clothing fashions? Do people always seek to buy the most goods that they can with their money? Do different cultures define rational, maximizing behavior differently? In this class we will explore the variety of different ways in which people produce, exchange and consume goods and how these processes are embedded in social and cultural institutions. Throughout the semester, we will be reading ethnographic articles and case studies that discuss other peoples’ economic lives and touch on important issues of global poverty and development. Top-
INTL 069. Introduction to International Law  (4)
An in-depth examination of the intersection between international relations, economic globalization and national security – an intersection 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, environmental and cultural changes around the world that have led to today’s current 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 instructor.

INTL 081. Perspectives on World History  (4)
A study of the shape of human history from its beginnings to the present day. The course will be built around the work of several modern historians whose interpretations differ, but whose insights help us to understand humanity’s attempt to cope with life on Earth. General education IB.

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 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: Fundamental quantitative skills.

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 and ECON 053.

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 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 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. Prerequisite: ECON 051 or ECON 053 or ECON 055. Sophomore standing.

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 study and life abroad. Topics include American values and assumptions, cross-cultural communication, cross-cultural adjustment and problems, and research on the host country. Prerequisites: Fundamental skills requirements. Pacific GPA of 2.50.

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. Prerequisites: 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 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. Prerequisite: 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 and a semester of study abroad, or a bi-cultural background (with permission of instructor).

INTL 185. SIS Capstone (2) Integrates the interdisciplinary and multidisciplinary SIS core curriculum with the experiential learning of study 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: A semester of study abroad or permission of instructor. Senior standing.

INTL 187. Internship (4) An internship, approved and supervised by a faculty advisor, 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: Completion of at least two SIS core courses. Minimum GPA 2.5.

INTL 191. Independent Study (1-4) Ordinarily limited to SIS juniors and seniors. Prerequisite: 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 (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 course work. GPA of 3.0. Permission of instructor.

**Additional International Electives of Particular Interest to SIS Majors & Minors**

**National Courses**

- ANTH 132. Modern Middle East
- ANTH 134. Anthropology of Africa
- 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. People’s 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 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. Contemporary Russian Film
- 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**

- ANTH 132. Modern Middle East
- ANTH 134. Anthropology of Africa
- ARTH 009. Survey of World 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. The Problem with Latin America 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
ANTH 164. Anthropology of Food
ARTH 116. Contemporary World Art 1945-Present
BIOL 035. Environment: Concepts & Issues
BUSI 189. 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 People
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

Courses on Global and International Interaction
ANTH 164. Anthropology of Food
ANTH 170. Culture and Economy
ANTH 172. Culture and Power
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
ANTH 172. Culture and Power
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
ANTH 170. Culture and Economy
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

Graduate Level Course Offerings
INTL 200. Intro to Social Entrepreneurship
INTL 201. Business Plans for Social Entrepreneurial Organizations
INTL 202. Monitoring and Evaluation of Social Programs: A Focus on Entrepreneurship and Microfinance
MAIR 200. Concepts of Intercultural Communications
MAIR 201. Ethnicity and Intergroup Relations
MAIR 202. Research I
MAIR 220. Advanced Intercultural Communication Theory
MAIR 221. Research II
MAIR 222. Process of Change
MAIR 223. Personal Leadership
MAIR 240. Leadership and Adult Learning
MAIR 241. Change Agentry
MAIR 242. Culture in the Organizational Context
MAIR 260. The Intercultural Context of Training
MAIR 291. Graduate Independent Study
MAIR 297. Graduate Research
MAIR 299. Thesis

School of International Studies Faculty
Laura Babhurst, 2005, Assistant Professor of Anthropology, BA, Kansas State University, 1997; MA, University of California, Berkeley, 1999; PhD, 2005.
Ahmed Kanna, 2009, Assistant Professor of Anthropology, BS, James Madison University, 1997; AM, Harvard University, 2000; PhD, Harvard University, 2006.
Yong Kyun Kim, 2009, Assistant Professor of Political Science, BS, Seoul National University, 1998; MA, Seoul National University, 2001; PhD, University of North Carolina at Chapel Hill, 2009.
Sarah M. Mathis, 2008, Assistant Professor of Anthropology, BA, Principia College, 1997; MA, University of Notre Dame, 1999; PhD, Emory University, 2008.
Daniel O’Neill, 2010, Assistant Professor of Political Science, BA, University of Texas at Austin, 1987; MA, Washington University in St. Louis, 2005; PhD, Washington University in St. Louis, 2010.
Analiese M. Richard, 2006, Assistant Professor of Anthropology, BA, Southwestern University, 1999; MA, University of California, Berkeley, 2001; PhD, University of California, Berkeley, 2005.

Susan G. Sample, 1999, Associate Professor of Political Science, BA, University of Missouri, 1991; PhD, Vanderbilt University, 1996.

Joint and Affiliated Faculty

Arturo Giraldez, 1990, Professor, BA, Universidad Com-plutense de Madrid, 1976; MA, 1979; PhD, Spanish and Portuguese, University of California, Santa Barbara, 1990; PhD, History, University of Amsterdam, 1999.


Adjunct Faculty

Gene E. Bigler, 2005, Visiting University Professor/Practioner, BA, University of the Pacific, 1967; MA, Johns Hopkins University 1972; PhD, 1979.

Howard Moseley, 2005, Instructor, BA, University of the Pacific, 1989; JD, University of the Pacific, McGeorge School of Law, 1996.

Emeriti Faculty


Leonard A. Humphreys, 1970, Professor Emeritus, BS, United States Military Academy, 1945; MA, Stanford University, 1960; PhD, 1975.

David Keefe, 1978, Associate Professor Emeritus, BS, Cornell University, 1965; PhD, University of California, Berkeley, 1980.

Bruce W. LaBrack, 1975, Professor Emeritus, BA, University of Arizona, 1967; MA, 1969; MPhil, Syracuse University, 1975; PhD, 1979.


Interim Dean

Cynthia K. Wagner Weick, 1990, Interim Dean, BS, Ohio State University, 1979; MS, 1980; PhD, University of Pennsylvania, 1986.
A professional school dedicated to the training of pharmacists, physical therapists and speech-language pathologists in modern healthcare delivery.
professional pharmacy program. Interested students should request information about the Pacific Pre-Pharmacy Advantage Program from the Admissions Office or visit http://web.pacific.edu/x9454.xml.

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.

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 95814. 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 fundamental 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.
- **Economics:** Three semester/four quarter units, minimum.
- **Psychology:** One semester, 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.

Applicants are also strongly encouraged to take coursework in human physiology. Although not yet a requirement, physiology will eventually become a requirement for entrance into the Doctor of Pharmacy program.

These pre-professional 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 are also required.

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.
Problem solve and continue to learn.
Demonstrate professionalism, communication & interaction abilities; and
Promote public health;
Practice in pharmacy and health care environments;
Promote public health;
Demonstrate professionalism, communication & interaction abilities; and
Problem solve and continue to learn.

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 course 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 and prior to progression into the Advanced Pharmacy Practice Experiences. 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 requirements 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
The professional curriculum for the Doctor of Pharmacy program has been designed to prepare graduates to meet the following major performance objectives (student learning outcomes):
- Possess and apply pharmaceutical sciences knowledge;
- Perform pharmacist directed patient care;
- Practice in pharmacy and health care environments;
- Promote public health;
- Demonstrate professionalism, communication & interaction abilities; and
- Problem solve and continue to learn.

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 Practicum II to IV courses in semesters 3 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 Dispenising, 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/Musculoskeletal (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 generally 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 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 appropriate experiential sites. The selection of the sites for introductory and advanced pharmacy practice 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, Jasti, Li
Associate Professor: Guo, Uchizono
Associate Clinical Professor: Wagner
Assistant Professor: Alhamadsheh, Park, Russu
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. 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. Second year PharmD student.

PMED 122. Teaching Assistant for Professional Communications and Interviewing (2)
This course will enable students to participate at a coordinator level in the process of professional communications and interviewing. Students will be assigned specific coordinator roles and work in cooperation with the Office of Student and Professional Affairs, other students, and faculty in fulfilling those roles. Second year PharmD student. PMED 121 Professional Communications and Interviewing.

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. Professional PharmD standing.

PMED 131. Introduction to Dermatology (2)
An integrated study of dermatological disorders with emphases on triage, medication options, and pharmaceutical care. Professional School standing and PHRM 112 and PHRM 115.

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 (BS-I). 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: PHAR 114, 123, 125. Professional school standing.

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 and 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: Aboud, Boyce, Carr-Lopez, Gundersen, Kehoe, Lee, Norton, Oppenheimer, Williams

Clinical Professor: Jankowski

Associate Professors: Kang-Birken, Kim, Lee, Moon, O’Dell, Palmieri, M. Raven, Shek

Associate Clinical Professors: Hoffman, Kaye, Nguyen

Assistant Professors: Crockell, Galal, Halilovic, Mantong, Morris, Patel, Shah, Walberg, Woelfel

Assistant Clinical Professors: Bearce, DeGuire, Fusco, Stan-Ugbene, Tovar-Bandy, Wataoka, Young

Lecturer: S. Raven

Regional Coordinators, Adjunct: Cloud, George-Thompson, Rosenblatt, Thomassian

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 124. Developing Consumer Fact Sheets (2)

Students will develop written communication skills geared towards consumers by writing consumer friendly fact sheets about relevant health topics. All fact sheets will be submitted to the California State Board of Pharmacy for use at their discretion. Students will receive acknowledgement for their contributions. Second year Doctor of Pharmacy student or permission of the instructor.

PRAC 127A-F. RxTract Writer (2)

Students write and publish pharmacotherapy reports in a newsletter format.

PRAC 131. Managed Care – Formulary Management (2)

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. 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. Second year PharmD student.

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. Professional school standing.

PRAC 140. Health Care Finance with Pharmacy Applications (2)

Healthcare Finance offers an introduction to accounting, financial theory and practice in health care settings. It is designed to familiarize students with financial concepts and issues confronting managers in the health and pharmaceutical sectors. Second year standing the Doctor of Pharmacy program of instructor permission.

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.

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, 112, 121 or permission of 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. 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 (1-2)
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 pharmacoeconomics that will apply the principles of outcome research situations in managed care (real-life situations). Second year Pharm.D student.

PRAC 165. Business Law for the Pharmacist (2)
An introduction to the business laws affecting the pharmacist.

PRAC 184. Advanced Elective Rotation (6)
A grade of C is required to pass this course.

PRAC 185. Advanced Elective Rotation (6)
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. Permission of 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. Permission of instructor.

Department of Physiology and Pharmacology
Timothy J. Smith, Chairman
Professors: Halliwell, T. Smith
Associate Professors: Livesey, Meerdink, Rahimian, Thomas
Assistant Professors: Faridi, Venderova

PHYP 111. Veterinary Pharmacology (2)
The application of pharmacology to the problems of animal health. One two-hour lecture per week.

PHYP 113. Teaching Anatomy and Physiology Laboratory (1)
Preparation necessary to act as a teaching assistant in PHAR 123. Permission of instructor. Grade of C or better in the course. Course may be repeated twice for credit.

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. Permission of instructor. Grade of “C” or better in the course in which teaching assistance will be provided.

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. Second year Pharm.D student in good standing.

PHYP 149. Special Topics (1-4)

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.

PHYP 193. Undergraduate Independent Study (1-5)
Independent study involving library and laboratory work and the writing of a report. Permission of the instructor.

Course Offerings - Interdepartmental Pharmacy

PHAR 149. Prof. Comm. and Interviewing (1)

PHRM 180. Continuous Registration (0)

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. Prerequisite: may be taken concurrently: PHRM 123.

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. Prerequisite: may be taken concurrently: PHRM 123.

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 biopharmaceutic, biometabolic 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. Prerequisite, may be taken concurrently: PHRM 156-157.

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. 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/Musculoskeletal (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 Semester 1 of the Doctor of Pharmacy program. Prerequisite, may be taken concurrently: PHRM 165-167.

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 these 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 checks and screenings, HIPAA training, etc. Valid pharmacy intern license.

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.

PHRM 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. 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 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 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 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.

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 PharmD/PhD and PharmD/MS degree programs. The PharmD/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 PharmD requirements and certain other standards. A baccalaureate degree with a minimum GPA
of 3.0 is required for entry into the PharmD/PhD and PharmD/MS programs.

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 PhD and MS programs and in the Eberhardt School of Business section of this Catalog for the PharmD/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 PharmD/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 BS 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 Language Center strengthens the clinical aspect of the program and serves to abet the development of strong clinical skills.

Career Options
Speech-language pathologists are members of health care teams. Depending upon the nature of the problem, they may work with physicians, surgeons, orthodontists, psychologists, educators, counselors or social workers. Employment settings of the speech-language pathologist include public schools, clinics, hospitals and private practice.

Recommended High School Preparation
A strong college preparatory program will serve the student very well in this major. Although not required, experience in a foreign language, good writing skills, behavioral and biological sciences and mathematics will enhance the student's skills for performance in the major.

Typical First-Year Program
No courses within the major are required during the first year. However, students interested in the major are encouraged to take SLPA 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 BS 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/or Intermediate Clinical Practicum (SLP 189a/b) and Diagnostic Lab (SLPA 185), the student must have a 3.2 GPA in all required courses for the degree. These include the following required courses taught outside the department: Biology, Physics/Chemistry, Statistics, Child Development and Sociology or Psychology.

In addition, students who have declared the major prior to their junior year (less than 56 units) must complete all three of the following courses before the beginning of the senior year: Biology, Physics/Chemistry, and Statistics. Transfer students who have declared the major during the junior year (more than 56 units) must complete two of the three following courses before the beginning of the senior year: Biology, Physics/Chemistry, and Statistics.

If a student is ineligible to participate in SLPA 189 a/b and 185, SLPA 110 and SLPA 181 must be taken in place of these 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 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.
II. Diversity Requirement
Complete one diversity course 3-4

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Transfer students with 28 units or more transfer units prior to fall 2011 are encouraged but not required to complete a designated course prior to graduation. 3) Courses may be used also to meet general education and/or major/minor requirements.

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. 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:
  SLPA 183 Diagnostic Lab 1
  SLPA 181 Diagnostic Observation 1
One of the following courses:
  SLPA 189A Beginning Clinic 1
  SLPA 110A Clinical Observation 1
One of the following courses:
  SLPA 189B Intermediate Clinic 1
  SLPA 110B Clinical Observation 1
PSYC 029 Child Development 4
One of the following courses:
  MATH 035 Elementary Statistical Inference 4
  MATH 037 Introduction to Statistics and Probability 4
  PSYC 103 Statistical Inference in Behavioral Sciences 4
One of the following introduction to psychology/sociology courses:
  PSYC 031 Introduction to Psychology 4
  SOCI 051 Introduction to Sociology 4
One of the following biology courses:
  BIOL 011 Human Anatomy and Physiology 4
  BIOL 041 Introduction to Biology 4
One of the following physical science courses:
  CHEM 023 Elements of Chemistry 4
  PHYS 017 Concepts of Physics 4
  PHYS 039 Physics of Music 4

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:
  SLPA 053 Sign Language I 5
  SLPA 123 Language Disorders I 5
  SLPA 125 Articulation and Phonology 5
  SLPA 137 Speech and Hearing Science 5
  SLPA 143 Multicultural Populations 5
  SLPA 145 Disorders of Fluency 5

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 advisor.

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.

SLPA 051. Introduction to Communicative Disorders (3)

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. Neuronanatomy and Physiology (2)
A study of the structure and function of the human nervous system as it relates to speech, language and hearing. Prequisite: 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 (1-4)

Course Offerings

Graduate
See Graduate Catalog for course descriptions

SLPA 201. Professional Issues (1)

SLPA 205. Neurological Disorders: Assessment (3)

SLPA 209. Language Disorders II (3)

SLPA 211. Language Disorders III (3)

SLPA 213. Advanced Audiology (3)

SLPA 215. Aural Rehabilitation (3)

SLPA 217. Voice Disorders (3)

SLPA 219. Phonological Disorders (3)

SLPA 221. Motor Speech Disorders (2)

SLPA 222. Neurological Disorders: Treatment (3)

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 241. Research Methods (3)

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

Phillip R. Oppenheimer, 1997, Dean, Thomas J. Long School of Pharmacy & Health Sciences, Professor of Pharmacy Practice, PharmD, University of California, San Francisco, 1972.

Eric G. Boyce, 2006, Associate Dean, Academic Affairs, Professor of Pharmacy Practice, BS Pharm, 1975, PharmD, University of Utah, 1984.

Sian M. Carr-Lopez, 1990, Vice Chair of Pharmacy Practice, Curriculum and Assessment, Professor of Pharmacy Practice, PharmD, University of the Pacific, 1985.

Nancy L. DeGuire, 1997, Assistant Dean, External Relations, Assistant Clinical Professor of Pharmacy Practice, PharmD, University of the Pacific, 1989.

Donald G. Floriddia, 1968, Associate Dean, Student Affairs & Professionalism, Professor of Pharmaceutics, BS Pharm, Massachusetts College of Pharmacy, 1966; MS, 1968; PhD, University of the Pacific, 1971; MS University of Southern California, 1971.

Robert E. Hanvak, 1985, Chair, Speech-Language Pathology, Associate Professor of Audiology, BA, University of the Pacific, 1979; MS, University of the Pacific, 1981; AudD, University of Florida, 2005.

Bhaskara R. Jasti, 2001, Chair, Department of Pharmaceutics & Medical Chemistry, Professor of Pharmaceutics, BS, Kakatiya University, India, 1987; MS, Jadavpur University, India, 1990; PhD, University of the Pacific, 1995.

William A. Kehoe, Jr., 1985, Chair, Department of Pharmacy Practice, Professor of Pharmacy Practice, Professor of Psychology, BA, University of California, Los Angeles, 1975; PharmD, University of California, San Francisco, 1981; MA, Psychology, University of the Pacific, 1996.

Xiaoling Li, 1993, Associate Dean, Graduate Education & Research, Professor of Pharmaceutics, BS, 1982; MS, Shanghai First Medical College, P.R. China, 1985; PhD, University of Utah, 1991.


James Palmieri, 2000, Vice Chair of Pharmacy Practice, Director of the Advanced Pharmacy Practice Experience Program, Associate Professor of Pharmacy Practice, BA, University of California, Santa Barbara, 1983; PharmD, University of California, San Francisco, 1990.

Cathy Peterson, 2002, Chair, Department of Physical Therapy, Associate Professor of Physical Therapy, MSPT, Des Moines University, 1991, EdD, University of San Francisco, 2002.

Timothy J. Smith, Chair, Department of Physiology & Pharmacology, Professor of Physiology & Pharmacology, BS Pharm, Purdue University, 1978; PhD, University of Minnesota, 1983.

James A. Uchizono, 2000, Assistant Dean and Director, Pre-Health Programs, Associate Professor of Pharmaceutics, BS, 1985, BS, University of California, Irvine, 1985; PharmD, 1990, PhD, University of California, San Francisco, 2001.

Pharmaceutics and Medicinal Chemistry Faculty

Mamoun M. Alhamadsheh, 2011, Assistant Professor of Pharmaceutics, B.S. Pharm, Jordan University of Science & Technology, Irbid, Jordan; 1999; PhD, University of Toledo, 2004.


Donald G. Floriddia, 1968, Associate Dean, Student Affairs & Professionalism, Professor of Pharmaceutics, BS Pharm, Massachusetts College of Pharmacy, 1966; MS, 1968; PhD, University of the Pacific, 1971; MS University of Southern California, 1971.

Xin Guo, 2003, Associate Professor of Pharmaceutical Chemistry, BS, Shanghai Medical University, 1993; MS, Duquesne University, 1995; PhD, University of California, San Francisco, 2001.

Bhaskara R. Jasti, 2001, Chair, Department of Pharmaceutics & Medical Chemistry, Professor of Pharmaceutics, BS, Kakatiya University, India, 1987; BS, Jadavpur University, India, 1990; PhD, University of the Pacific, 1995.

Xiaoling Li, 1993, Associate Dean, Graduate Education & Research, Professor of Pharmaceutics, BS, 1982; MS, Shanghai First Medical College, P.R. China, 1985; PhD, University of Utah, 1991.

Miki S. Park, 2004, Assistant Professor of Pharmaceutics, BS, University of Texas, Austin, 1997; PhD, University of California, San Francisco, 2002.

Wade A. Russu, 2005, Assistant Professor of Medicinal Chemistry, BS, California Polytechnic State University, San Luis Obispo, 1992; MA, University of California, Santa Barbara, 1995; PhD, University of California, Santa Barbara, 2000.

James A. Uchizono, 2000, Assistant Dean and Director, Pre-Health Programs, Associate Professor of Pharmaceutics, BS, 1985, BS, University of California, Irvine, 1985; PharmD, 1990, PhD, University of California, San Francisco, 2001.

Joel A. Wagner, 1988, Associate Clinical Professor of Pharmaceutics, PharmD, University of Southern California, 1969.

Pharmacy Practice Faculty

Richard R. Aboot, 1991, Professor of Pharmacy Practice, BS Pharm, University of Nebraska, 1972; JD, University of Nebraska, 1976.

William C. Bearce, 2002, Regional Coordinator, Rowland Heights, CA, Assistant Clinical Professor of Pharmacy Practice, BA, California State University, Northridge, 1974; PharmD, University of the Pacific, 1978.

Eric G. Boyce, 2006, Associate Dean, Academic Affairs, Professor of Pharmacy Practice, BS Pharm, 1975, PharmD, University of Utah, 1984.

Sian M. Carr-Lopez, 1990, Vice Chair of Pharmacy Practice, Curriculum and Assessment, Professor of Pharmacy Practice, PharmD, University of the Pacific, 1985.

Ron Cloud, 2002, Regional Coordinator, Adjunct Professor of Pharmacy Practice, PharmD, University of the Pacific, 1984.

Yvette Crockett, 2007, Regional Coordinator, Sacramento, CA, Assistant Professor of Pharmacy Practice, BS Pharm, University of Minnesota, 1988; MS Health Administration, University of Southern California, 1993.

Nancy L. DeGuire, 1997, Assistant Dean, External Relations, Assistant Clinical Professor of Pharmacy Practice, PharmD, University of the Pacific, 1989.

Anthony Farrar, 2000, Regional Coordinator, Merced, CA, Adjunct Professor of Pharmacy Practice, PharmD, University of California, San Francisco, 2000.

Bryan Fusco, 2010, Regional Coordinator, Modesto, CA, Assistant Clinical Professor of Pharmacy Practice, PharmD, University of the Pacific, 1997.

Suzanne Galal, 2009, Assistant Professor of Pharmacy Practice, PharmD, Northeastern University, Bouve College of Health Sciences, Boston, MA, 2008.
Berit P. Gunderson, 1986, Assistant Provost for Curriculum, Administration, and Special Programs, Professor of Pharmacy Practice, PharmD, University of the Pacific, 1984.

Kimberly A. Hoffmann, 2002, Regional Coordinator, Bakersfield, CA, Associate Clinical Professor of Pharmacy Practice, PharmD, University of the Pacific, 1989.

RoseAnn T. Jankowski, 1998, Regional Coordinator, Los Angeles, CA, Clinical Professor of Pharmacy Practice, BS, University of California, San Diego, 1978; PharmD, University of Southern California, 1982.

S. Lena Kang, 1994, Regional Coordinator, Santa Barbara, CA, Associate Professor of Pharmacy Practice, BA, California State University, Northridge, 1987; PharmD, University of California, San Francisco, 1991.

Adam M. Kaye, 1999, Associate Clinical Professor of Pharmacy Practice, AS, Puna College, 1992, PharmD, University of the Pacific, 1995.

William A. Kehoe, Jr., 1985, Chair, Department of Pharmacy Practice, Professor of Pharmacy Practice, Professor of Psychology, BA, University of California, Los Angeles, 1975; PharmD, University of California, San Francisco, 1981; MA, Psychology, University of the Pacific, 1996.

Myo K. Kim, 2005, Associate Professor of Pharmacy Practice, BS, Chung-Ahn University, Korea, 1994, PharmD, University of Minnesota, 1998.

Audrey J. Lee, 1994, Professor of Pharmacy Practice, PharmD, University of California, San Francisco, 1992.

Jenana Maker, 2008, Assistant Professor of Pharmacy Practice, PharmD, University of Rhode Island, 2006.

Melissa Mantong, 2009, Assistant Professor of Pharmacy Practice, PharmD, University of California, San Francisco, 1996.

Yong S. Moon, 1998, Regional Coordinator, Long Beach, CA, Associate Professor of Pharmacy Practice; BA, BS, University of California, Irvine, 1992, PharmD, University of Southern California, 1996.

Providence D. Morris, 2008, Regional Coordinator, San Diego, Assistant Professor of Pharmacy Practice, PharmD, University of New York at Buffalo, 1988; BS Pharmacy, Massachusetts College of Pharmacy, 1984.

Nancy N. Nguyen, 2004, Regional Coordinator, Palo Alto, CA, Associate Clinical Professor of Pharmacy Practice, BS, University of California, Davis, 1997, PharmD, Western University of Health Sciences, 2002.


Kate M. O’Dell, 2004, Regional Coordinator, Travis, CA, Associate Professor Pharmacy Practice, PharmD, University of Michigan, 1999.

Phillip R. Oppenheimer, 1997, Dean, School of Pharmacy & Health Sciences, Professor of Pharmacy Practice, PharmD, University of California, San Francisco, 1972.

James Palmieri, 2000, Vice Chair, Pharmacy Practice, Director of the Advanced Pharmacy Practice Experience Program, Associate Professor of Pharmacy Practice, BA, University of California, Santa Barbara, 1983; PharmD, University of California, San Francisco, 1990.

Rajul Patel, 2005, Assistant Professor of Pharmacy Practice, PharmD, 2001, PhD, University of the Pacific, 2005.

Marcus C. Ravnan, 2000, Associate Professor of Pharmacy Practice, PharmD, University of the Pacific, 1994.

Susan L. Ravnan, 1998, Lecturer, Stockton, CA, Associate Professor of Pharmacy Practice, PharmD, University of the Pacific, 1994.

Sachin A. Shah, 2007, Regional Coordinator, Fairfield, CA, Assistant Professor of Pharmacy Practice, PharmD, Massachusetts College of Pharmacy and Health Sciences, 2005.

Allen Shek, 2000, Regional Coordinator, Stockton, CA, Associate Professor of Pharmacy Practice, BS, State University of New York, Buffalo, 1991; PharmD, University of Illinois, 1998.

Oby Stan-Ugbene, 2006, Assistant Clinical Professor of Pharmacy Practice, PharmD, University of the Pacific, 2005.

Kristapor Thomassian, 2009, Regional Coordinator, Chico, CA, Assistant Clinical Professor of Pharmacy Practice, BS Biochemistry, University of California, Davis, 1991; PharmD, University of the Pacific, 1996.

Veronica Tovar-Bandy, 2002, Director of the Introductory Pharmacy Practice Experience; Assistant Clinical Professor of Pharmacy Practice, BS, University of California, Riverside, 1995; MS Pharm Sciences, PharmD, University of the Pacific, 2000.

Mark Walberg, 2009, Assistant Professor of Pharmacy Practice, MA Biology, University of California, Los Angeles, 2003, PharmD, University of the Pacific, 2006, PhD, University of the Pacific, 2009.

Todd S. Watsaoka, 1992, Regional Coordinator, Hawaii, Assistant Clinical Professor of Pharmacy Practice, BEd, University of Hawaii, 1987; PharmD, University of the Pacific, 1992.

Paul J. Williams, 1982, Professor of Pharmacy Practice, PharmD, University of the Pacific, 1974; MS, University of North Carolina, 1980.

Joseph A. Woelfel, 2006, Assistant Professor of Pharmacy Practice, BS Pharm, 1970, MS, 1972, PhD, University of the Pacific, 1978.

Clifford A. Young, 2009, Assistant Clinical Professor of Pharmacy Practice, BS Pharmacy, University of Washington, 1987; BS Nutrition Science, University of California, Davis, 1984.

Physical Therapy Faculty

Sandra Bellamy, 2002, Associate Professor of Physical Therapy, BA, 1997; MSPT, 1999; DPT, University of the Pacific, 2003.

Todd E. Davenport, 2007, Assistant Professor of Physical Therapy, BS, Willamette University, 1998; DPT, University of Southern California, 2002.

Kathleen M. Graves, 2004, Director of Clinical Education, Assistant Professor of Physical Therapy, BS, University of California, Davis, 1996; MSPT, 2003; DPT, University of the Pacific, 2003.

Tamara L. Little, 2001, Associate Professor of Physical Therapy, BS, Tennessee State University, 1993; MS, Ola Grimsby Institute, 1997; DMT, Ola Grimsby Institute, Inc., Sand Diego, CA, 2000; EdD, University of the Pacific, 2008.

Jim K. Mansoor, 1993, Professor of Physical Therapy, BA, California State University, Sacramento, 1980; MS, 1989; PhD, University of California, Davis, 1996.


Cathy Peterson, 2002, Chair, Department of Physical Therapy, Associate Professor of Physical Therapy, BS, University of Iowa, 1989; MSPT, Des Moines University, 1991, EdD, University of San Francisco, 2002.

Christine R. Wilson, 2003, Associate Professor of Physical Therapy, BSPT, State University of New York-Downstate Medical Center, 1978; MA, Columbia University, 1983; PhD, McGill University, 1995.
Physiology and Pharmacology Faculty

Jesika S. Faridi, 2004, Assistant Professor of Physiology & Pharmacology, BS, University of California, Davis, 1995, PhD, Loma Linda University, 2000.

Robert F. Hallwell, 2002, Professor of Physiology & Pharmacology, BS, University of Stirling, 1983; MS, University College London, 1985; PhD, University of Dundee, 1992.

John C. Livesey, 1994, Associate Professor of Physiology & Pharmacology, BS, Stanford University, 1977; PhD, University of Minnesota, 1982.

Denis J. Meerdink, 1990, Associate Professor of Physiology & Pharmacology, BS, Arizona State University, 1974; MS, 1978, PhD, Iowa State University, 1981.

Roshanak Rahimian, 2001, Associate Professor of Physiology & Pharmacology, Pharm. D, Tehran University of Medical Sciences, 1988; MS, University of Ottawa, 1995; PhD, University of British Columbia, 1998.

Timothy J. Smith, 1993, Chair, Physiology & Pharmacology, Professor of Physiology & Pharmacology, BS Pharm, Purdue University, 1978; PhD, University of California, Davis, 1996.

David Thomas, 2000, Associate Professor of Physiology & Pharmacology, BS, 1985; MS, California State University, Sacramento, 1989; PhD, University of California, Davis, 1996.

Katerina Venderova, 2011, Assistant Professor of Physiology & Pharmacology, Pharm.D., Charles University, Czech Republic, 2003, PhD, Charles University, Czech Republic, 2003.

Speech-Language Pathology Faculty


Jill K. Duthie, 2006, Assistant Professor of Speech-Language Pathology, BA, University of California, Santa Barbara, 1972; MA, California State University, Northridge, 1976; PhD, University of Oregon, Eugene, 2005.

Heidi Germino, 2007, Assistant Clinical Professor of Speech-Language Pathology, Director, Scottish Rite Center, BA, University of the Pacific, 1990; MA, 1992.

Robert E. Hanyak, 1985, Chair, Speech-Language Pathology, Associate Professor of Audiology, BA, University of the Pacific, 1979; MS, University of Utah, 1981; AuD, University of Florida, 2005.

Simalee Smith-Stubblefield, 1983, Associate Professor of Speech-Language Pathology, BS, University of Wyoming, 1976; MA, University of the Pacific, 1982.

Michael Susca, 2001, Associate Professor of Speech-Language Pathology, BS, University of California, Santa Barbara, 1975; MS, University of New Mexico, 1977; PhD, University of Nebraska, Lincoln, 2001.


Amy Wusstig, 2010, Assistant Clinical Professor of Audiology, Clinical Director, B.S. Speech Pathology and Audiology, California State University, Sacramento, 2004; AuD, Utah State University, 2008.

Adjunct Faculty – Physical Therapy


Lauri Grove, 2007, Lecturer, BS University of California, Davis, 2000; DPT, University of the Pacific, 2006.

Darren M. Johnson, 2004, Lecturer, BS, Biola University, 1993; MSPT, University of the Pacific, 1998.

May Mardini, 2004, Lecturer, BS, San Francisco State University, 1988; BSPT, Northwestern University, 1990.

Monty Merrill, 1989, Lecturer, BA, University of California, Davis, 1982; MSPT, University of Southern California, 1984.


Carlos Sanders, 2011, Lecturer, BS Stanford University, 1986; MSPT, University of the Pacific, 1988; DPT, Northeastern University, 2009.

Karen Scott, 2010, Lecturer, BS University of California, Davis, 1987; MSPT, Washington University, 1993; DPT, Washington University, In progress.


Adjunct Faculty: Department of Physiology and Pharmacology

Leigh Charles Anderson, 2005, Adjunct Professor, DDS, University of Minnesota, 1977; PhD, University of Minnesota, Oral Biology, 1979.

Cornelis Van Breemen, 2005, Adjunct Professor, DVM, University of Toronto, Ontario Veterinary College, 1960; MS, University of Alberta, 1962; PhD, University of Alberta, 1965.

Adjunct Faculty Pharmaceutics and Medicinal Chemistry Faculty

John Barr, 1999, Adjunct Professor, BS, University of Glasgow, 1981; PhD, 1985.

Bret Berner, 1995, Adjunct Professor, BS, University of Rochester, 1973, PhD, University of California, Los Angeles.


Ramesh Rao, Boinpally, 2009, Adjunct Professor, PhD.

Jeffrey L. Cleland, 2002, Adjunct Professor, BS, University of California, Davis, 1982, PhD, Massachusetts Institute of Technology, 1991.

Marie A. Cottman, 2000, Adjunct Professor, BS, University of California, Santa Barbara, 1993; PharmD, University of California, San Francisco, 1997.

Krishna Devanakonda, 2008, Adjunct Professor, MPharm, Andhra University, Visakhapatnam, India, 1978; PhD, Kakatiya University, Warangal, India, 1984.

Ene Bte, 2007, Adjunct Professor, BSPharm, Northeastern University, Boston, 1983; PhD, University of Glasgow, U.K., 1991.

Ramakrishna Raju Gadigaru, 2007, Adjunct Professor, MPharm, Jadavpur University, India, 1990; PhD, University of Iowa, 1997.

Pia Gao, 2006, Adjunct Professor, BS, Nanjing Normal University, China, 1982; PhD, Purdue University, 1988.

Sanjay R. Goswami, 2001, Adjunct Professor, BS Pharm, Kakatiya University, India; PhD, University of Missouri, Kansas City, 1992.

Jayne Hastedt, 2009, Adjunct Professor, PhD, University of Wisconsin, Madison, 1990.

Samuel C. Hodges, 2001, Adjunct Professor, PharmD, University of the Pacific, 1999.


Venkateswar R. Jarugula, 2003, Adjunct Professor, B Pharm, Kakatiya University, 1987; PhD University of Athens, 2005.

Saraswati Kenkare-Mitra, 2006, Adjunct Professor, BS Pharm, Bombay College of Pharmacy, 1998; PhD, University of California, San Francisco, 1994.

S. Cyrus Khojasteh-Bakht, 2009, Adjunct Professor, PhD, University of Washington, 1998.

Jian-Xin Li, 2007, Adjunct Professor, MS, Beijing University, 1986; PhD, University of Toronto, 1997.

Puchun Liu, 2004, Adjunct Professor, BS, Shanghai First Medical College, 1982; PhD, University of Utah, 1989.

Jingwen "Jenny" Ma, 2006, Adjunct Professor, BS, University of Sciences & Technology, 1992; PhD, University of Wisconsin, Madison, 1998.

Ravichandran Mahalingam, 2007, Adjunct Professor, MS, Dr MGR Medical University, Chennai, India; PhD, Dr MGR Medical University, Chennai, India, 2002.

Douglas Modi, 2008, Adjunct Professor, BPharm, University of Iowa, 1987; PhD, University of Iowa, 1991.

Douglas N. Modlin, 2006 Adjunct Professor, BS, California State Polytechnic University, 1975; MS, Stanford University, 1978; PhD, Stanford University, 1983.

Sri Mudumba, 2006, Adjunct Professor, BS Pharm, Kakatiya University, 1989; MS Pharm, Jadavpur University, 1991; PhD, University of the Pacific, 1996.

Chee M. Ng, 2004, Adjunct Professor, BS, State University of New York, Buffalo, 1991; PharmD, University of Illinois, 1992; PhD, University of North Carolina, Chapel Hill.

Janakiram Nysadham, Adjunct Professor, 2003, BPharm, Birla Institute of Technology, 1985; MS St. Johns University, 1991.

Babatunde A. Oluwana, 2002, Adjunct Professor, MD, University of Ibadan, Nigeria, 1981.

Jagdish Parasmpuria, 1999, Adjunct Professor, BS Pharm, University of Myso, Inaipal, India, 1981; MS Pharm, Nagpur University, Nagpur, India, 1983; DBM, RP Institute of Management, Bombay, India, 1984; PhD, University of Houston, 1989.

Indiran Pather, 2006, Adjunct Professor, BPharm, University of Durban-Westville, 1976; MPharm, University of the Western Cape, 1990; PharmD, University of the Western Cape, 1996.

Chunsheng Qiao, 2009, Adjunct Professor, PhD, University of Louis Pasteur, France, 1989.

Danyi Quan, 2004, Adjunct Professor, BS, China Pharmaceutical University, 1982, PhD, Hoshi University Tokyo, 1991.


Carlos Rodriguez, 2009, Adjunct Professor, PhD, University of Michigan, 1991.


Dandapantula Sarma, 2003, Adjunct Professor, BPharm, Kakatiya University, 1986; PhD, University of Louisiana at Monroe, 1997.

Srikonda V. Sastry, 2003, Adjunct Professor, B Pharm, Kakatiya University, 1986; MS, Kakatiya University, 1990; PhD, University of Louisiana, 1997.

Narmada Shenoy, 2001, Adjunct Professor, BS, 1981; MS, 1983; PhD, University of Bombay, 1990.

Parminder "Bobby" Singh, 2006, Adjunct Professor, BS Pharm, Punjab University, 1985; MS Pharm, Punjab University, 1987; PhD, University of Queensland, 1992.

Robert Strickley, 2001, Adjunct Professor, BS, University of California, Berkeley, PhD, University of Utah, 1995.

Vijay K. Tammana, 2002, Adjunct Professor, BS, Kakatiya University, India, 1982; MS, Nagpur University, India, 1985; PhD, Northeast Louisiana University, 1993.

Camille Bodley Troup, 2009, Adjunct Professor, PhD, University of Minnesota, 1996.

Satyam Upadrashta, 2006, Adjunct Professor, BSc, Osmania University, India, 1969; MS, Osmania University, India, 1973; PhD, University of Iowa, 1988.

Sriram Venuri, 2003, Adjunct Professor, BS Pharm, Andhra University, 1972; MS, Purdue University, 1975; PhD, University of Rhode Island, 1995.

Jayesh Vora, 2007, Adjunct Professor, MS, University of Cincinnati, OH, 1991; PhD, Northeastern University, Boston, 1994.

Wei Wang, 2003, Adjunct Professor, PharmD, Shandong Medical University, 1982; PhD, University of Southern California, 1992.

Yu-Chang John Wang, 2003, Adjunct Professor, BS, National Taiwan University, 1998; PhD, University of Michigan, 1996.

Jay J.Q. Wu, 2004, Adjunct Professor, PhD, University of Konstanz, 1993.

Noyemi Yam, 2006, Adjunct Professor, PhD, University of the Pacific, 2009.

Dongxiao Zhang, 2006, Adjunct Professor, BS, Nanai University, 1990; PhD, Case Western Reserve University, 1996.

Thomas F. Zioncheck, 2002, Adjunct Professor, BS, State University College, Oceonta, 1984; PhD, Purdue University, 1988.
Adjunct Faculty – Pharmacy

Lisa Adams, 1998, Adjunct Professor, BS, California State University, Fresno, 1984; BS Pharm, University of Wyoming, 1988; PharmD, Purdue University, 1989.

Kwabena Adubofour, 2008, Adjunct Professor, MD, FACP, University of Ghana Medical School, 1983.

Sue Agent, 1996, Adjunct Professor, BS, University of Utah, 1969.

Aiman Abdab, 2007, Adjunct Professor, PharmD, Damascus University, 1980; MBA, Devry Institute, 1998.

Gary Airola, 2009, Adjunct Faculty, PharmD, University of the Pacific 1972.

Cecily Allmon, 2007, Adjunct Professor, BS, San Jose State University, 1994; PharmD, University of the Pacific, 1998.

Judith Alsup, 2003, Adjunct Professor, PharmD, University of California, San Francisco 1974.

Brian Amador, 2007, Adjunct Professor, PharmD, Western University, Pomona, 2003.

Eleonora (Lina) Arneschalsky, 2009, Adjunct Faculty PharmD, University of the Pacific 2001.

Ed Anamizu, 2009, Adjunct Faculty, PharmD, University of the Pacific 1981.

Staci Anderson, 2007, Adjunct Professor, PharmD, University of the Pacific, 2002.


Christine Antczak, 2001, Adjunct Professor, PharmD, University of Nebraska, 1992.

Nomie Apostol, 2003, Adjunct Professor, PharmD, University of Santo Tomas, 1983.

Mary-Joy Q Arcellana, 2009, Adjunct Faculty, PharmD, University California, San Francisco, School of Pharmacy.

Elizabeth J. Arietta, 2000, Adjunct Professor, BS, University of California, Los Angeles, 1981; PharmD, University of California, San Francisco, 1988.

Michael Ascari, 2001, Adjunct Professor, BS, University of Rhode Island, 1991; PharmD, University of Rhode Island, 1999.

Veda Asmatay, 2010, Adjunct Faculty, PharmD, University of the Pacific 2000.

Karen Azama-Kihara, 2003, Adjunct Professor, PharmD, University of California, San Francisco, 1986.

Jason Bandy, 2006, Adjunct Professor, California State University 1996; PharmD, University of the Pacific, 2000.

Tony G. Bastian, 2009, Adjunct Faculty, PharmD, University of California at San Francisco, 1982.

Robert L. Batman, 1993, Adjunct Professor, PharmD, University of Southern California, 1984.

Jennigrace Bautista, 2006, Adjunct Professor, PharmD, University of the Pacific, 2004.


Sandra Beck-Atwater, 2009, Adjunct Faculty RPh, University of the Pacific, 1983.

Lisa Bell, 2007, Adjunct Professor, University of California at San Francisco, 1986.

Steve Berk, 2000, Adjunct Professor, BS Pharm, Idaho State University, 1980.

Ross Biondo, 2000, Adjunct Professor, BS Pharm, Wayne State University, 1979.

Deborah E. Boatwright, 1995, Adjunct Professor, BS, University of South Carolina, 1973; JD, Golden Gate University, 1994.

Burke Bonilla, 2007, Adjunct Professor, BS, California Polytechnic University, 1995; MD, University of California, San Francisco, 1996.

Maureen S. Boro, 1995, Adjunct Professor, PharmD, University of California, San Francisco, 1986.

Rosemary A. Boss, 2000, Adjunct Professor, BS, University of Houston, 1981.

Mark Bounhavong, 2008, Adjunct Professor, PharmD, Western University, 2004.

Sharya Vaughan Bourdet, 2006, Adjunct Professor, BS, Duke University, 1996; PharmD, University of California, San Francisco, 2000.

Margaret E. Boyden, 2006, Adjunct Professor, PharmD, Western University, 2001.

BeckyLynn Brause-Catalli, 1998, Adjunct Professor, BS, California Polytechnic State University, San Luis Obispo, 1994; PharmD, University of the Pacific, 1997.

J. Grant Breshears, 1997, Adjunct Professor, PharmD, University of the Pacific, 1984; MBA, University of Phoenix, 1990.

Robert Brindley, 1999, Adjunct Professor, BA, University of California, Chico, 1968; PharmD, University of the Pacific, 1974.

Elena Brodetsky, 2001, Adjunct Professor, BS, Kiev State University, 1986; PharmD, University of Southern California, 1999.

James L. Buck, 2005, Adjunct Professor, BS Southern Oregon University, 1984; BS, Oregon State University, 1987.

Lee Bufalini, 1994, Adjunct Professor, BS, San Francisco State University, 1979; PharmD, University of California, San Francisco, 1980.

Jessica Bugay, 2010, Adjunct Professor, PharmD, University of the Pacific, 2001.

Lindsey Bui, 2007, Adjunct Professor, BS, University of California, Riverside, 2000; PharmD, University of the Pacific, 2006.

David Burgess, 2006 Adjunct Professor, AA, Bakersfield Junior College, 1993; BS, California State University, Bakersfield, 1995; PharmD, University of Southern California, 1999.

David Burris, 2002, Adjunct Professor, PharmD, University of California, San Francisco, 1974.

Julianna Burton, 2003, Adjunct Professor, PharmD, University of the Pacific, 1999.


John W. Caldwell, 2003, Adjunct Professor, PharmD, University of the Pacific, 1974, BCPS, 1993.

Richard Caldwell, 1996, Adjunct Professor, BS, University of North Carolina, 1979; MS, University of Kansas, 1984.
Wayne N. Campbell, 2007, Adjunct Professor, PharmD, University of the Pacific, 1981.

Neil Cardosa, 1991, Adjunct Professor, BS, University of the Pacific, 1979; PharmD, 1981.

Dan Cariddi, 1995, Adjunct Professor, PharmD, University of the Pacific, 1990.

Terry Carlson, 2007, Adjunct Professor, BS, University of California, Davis, 1980; PharmD, University of the Pacific, 1983.

Steve Carter, 1996, Adjunct Professor, BS, University of California, Irvine, 1989; PharmD, University of California, San Francisco, 1993.

Jennifer Michele Cashman, 2009, Adjunct Faculty, PharmD, University of the Pacific 2007.


Harriet F. Catania, 1974, Adjunct Professor, BS, University of the Pacific, 1970; PharmD, 1976.

Richard Cavallaro, 1987, Adjunct Professor, PharmD, University of Southern California, 1985.

Cathy Chan, 2007, Adjunct Professor, BS, University of Wisconsin, 1993; Henry M. Chan, 2009, Adjunct Faculty, PharmD, Midwestern University, 2002.

Sandra G. Chan, 2009, Adjunct Professor, PharmD, San Francisco State University and Western University of Health.

Julius Chang, 2009, Adjunct Faculty, PharmD, University of the Pacific, 2006.

Lisa Chang, 2009, Adjunct Faculty, PharmD, University of the Pacific, 1990.


Michelle Chang, 2006, Adjunct Professor, BS, California State University, Fresno, 2000; PharmD, University of California, San Francisco, 2005.

Robert M. Chang, 2006, Adjunct Professor, BS University of California, Los Angeles.

Ruby Y. Chang, 2002, Adjunct Professor, BS, University of Southern California, 1994; PharmD University of California, San Francisco, 1999.

Jennifer S. Chen, 2007, Adjunct Professor, BA, University of California, Berkeley, 2001; PharmD, University of California, San Francisco, 2005.

Jen-Yun Wind Chen, 2006, Adjunct Professor, MS, National Taiwan University, 1987; PharmD, University of the Pacific, 1993.

Michael Jen Tung Chen, 2006, Adjunct Professor, PharmD, University of the Pacific, 1992.

Michele S. Chen, 2000, Adjunct Professor, BS, University of California, Davis, 1991; PharmD, University of California, San Francisco, 1995.

Timothy C. Chen, 2008, Adjunct Professor, PharmD, Western University 2004.

Barrie Cheung, 2005, Adjunct Professor, PharmD, University of the Pacific, 1996.

Jaime Chew, 2009, Adjunct Faculty, PharmD, University of the Pacific, 2005.

Phillip Chiao, 2003, Adjunct Professor, PharmD, University of the Pacific, 1996.

Teresa S. Chiao, 2001, Adjunct Professor, PharmD, University of California San Francisco, 1997.

Karen Y. Chin, 2000, Adjunct Professor, BS, University of California, Davis, 1993; PharmD, University of the Pacific, 1996.


Collette Ching, 2007, Adjunct Professor, BS, University of California, Berkeley, 1999; PharmD, University of the Pacific, 2003.

Steven R. Chinn, 1992, Adjunct Professor, BA, University of California, Berkeley, 1977; PharmD, University of California, San Francisco, 1981.

Steven D. Chretien, 1982, Adjunct Professor, PharmD, University of California, San Francisco, 1973.

Melissa L. D. Christopher, 2008 Adjunct Professor, PharmD, Duquesne University of Pharmacy.

Jenny Chu, 2003, Adjunct Professor, PharmD, University of the Pacific, 1995.

Rebecca M. Chumbley, 2009, Adjunct Faculty, PharmD, University of the Pacific, 2005.

Carlton F. Chun, 1996, Adjunct Professor, BS, Oregon State University, 1982.

Patricia J. Chun, 2002, Adjunct Professor, BS, University of California, Los Angeles, 1995; PharmD, University of the Pacific, 1999.

Suna Y Chung, 2009, Adjunct, Faculty PharmD, University of the Pacific, 2001.

Courtney S. Clark, 2009, Adjunct Faculty, PharmD, Ferris State University, Big Rapids, MI, 2006.

Erik Clausen, 2009, Adjunct Faculty, PharmD, University of the Pacific, 2008.

Diane Sugiyama Cogburn, 1991, Adjunct Professor, BS, University of California, Los Angeles, 1985; PharmD, University of California, San Francisco, 1989.

Brian Cole, 2003, Adjunct Professor, PharmD, University of the Pacific, 1993.


Zachary C. Contreras, 1999, Adjunct Professor, PharmD, University of the Pacific, 1988.

Felicia Coo, 2010, Adjunct Faculty, PharmD., University of the Pacific, 1988.

Thomas L. Cookson, 1996, Adjunct Professor, PharmD, University of Southern California, 1986.


Joseph L. Corbitt, 1995, Adjunct Professor, BS, Auburn University, 1975.

Michael Coronado, 2007, Adjunct Professor, BA University of Arizona, 1974, PharmD, University of the Pacific, 1975.

Scott F. Cote, 2005, Adjunct Professor, BS, California Polytechnic State University, 1982; PharmD, University of the Pacific, 1991.

Marie A. Cottman, 2000, Adjunct Professor, BS, University of California, Santa Barbara, 1993; PharmD, University of California, San Francisco, 1997.

Jeanette Cox, 2002, Adjunct Professor, PharmD, University of California, San Francisco, 1989.
Richard T. Cranston, 1988, Adjunct Professor, BS, University of Connecticut, 1972; MS, Ohio State University, 1974.

Marisella Cuevas, 2008 Adjunct Professor, PharmD, University of Pacific, 1998.

Zee Currie, 2003, Adjunct Professor, PharmD, University of Southern California, 1980.


Richard Damato, 2003, Adjunct Professor, BS University of California, Riverside, 1973; PharmD, University of California, San Francisco, 1978

Denise Damstra, 2001, Adjunct Professor, PharmD, University of Southern California, 1998.

Lien Dang, 2010, PharmD, Adjunct Faculty Stockton Region, Western University of Pacific, CA, 2009.

Raymond Q. Dao, 2005, Adjunct Professor, PharmD, University of California, San Francisco, 1993.

Donna C. Dare, 1995, Adjunct Professor, AA, City College of San Francisco, 1979; PharmD, University of California, San Francisco, 1984.


Mabel Dea, 2009, Adjunct Faculty, PharmD, University of Florida, FL.

Tiffany Dea, 2009, Adjunct Faculty, PharmD, University of Florida, FL.

Robert L. Deamer, 2000, Adjunct Professor, BS, California State University, Los Angeles, 1977; PharmD, University of California, San Francisco, 1982.

Judith N. Delameter, 1997, Adjunct Professor, PharmD, University of the Pacific, 1984.

Phillip J. Dell, 2008, Adjunct Professor, PharmD, University of Southern California, 1983.

Tina Denetclaw, 2009, Adjunct Professor, Pharm.D., University of San Francisco, CA.

Duane Dennis, 1992, Adjunct Professor, BS, University of Michigan, 1978; MHA, Chapman College, 1990.

Maria Deiisi, 2001, Adjunct Professor, BS, University of California, Davis, 1994; PharmD, University of California, San Francisco, 1998.

Cherie Dillon, 1994, Adjunct Professor, PharmD, University of the Pacific, 1993.

Ben Duhman, 1988, Adjunct Professor, PharmD, University of Southern California, 1982.

Charles Dominguez, 2001, Adjunct Professor, PharmD, University of the Pacific, 2001.

Melissa A.Dragoo, 2006, Adjunct Professor, PharmD, Purdue University, 2002.

Nikki Du, 2009, Adjunct Professor, University of the Pacific, CA, 2005.

Bernadette M. Dugoni, 1987, Adjunct Professor, BS, University of California, Davis, 1982; PharmD, University of California, San Francisco, 1986.

Tina La D’Ulisse, 2008 Adjunct Professor, PharmD, University of Southern California, 2000.

Michael B. Dunn, 2008 Adjunct Professor, PharmD, Western University of Health Sciences, 2006.

Tanya Duong, 1996, Adjunct Professor, BS, San Jose State University, 1989; PharmD, University of the Pacific, 1994.

Candace A. Eacker, 2001, Adjunct Professor, PharmD, University of the Pacific, 1994.

Susan Edae-Parson, 2009, Adjunct Professor, Creighton University.

Melissa K. Egan, 2001, Adjunct Professor, PharmD, University of Southern California, 1998.

Derrick Egi, 2009, Adjunct Professor, PharmD, University of the Pacific, CA, 2001.

Greg Elig, 2007, Adjunct Professor, PharmD, University of Southern California, 2005.

Evelyn K. Elliott, 2003, Adjunct Professor, BS Pharm, Oregon State University, 1972; MSHA, University of Colorado, Denver, Co.

Jason, Ellison, 2009, Adjunct Professor, PharmD, UCSF School of Pharmacy, 2007.


Anita Y. Enomoto, 1995, Adjunct Professor, BS, University of Southern California, 1981; PharmD, 1985.


Ken Eto, 1998, Adjunct Professor, PharmD, University of Southern California, 1983.

Gary Everson, 2007, Adjunct Professor, PharmD, University of Southern California, 1981.

Yun Fang, 2009, Adjunct Professor, PharmD, Pharmaceutical University of China, 2001.

Paul Fleming, 2009, Adjunct Professor, PharmD, University of the Pacific, CA, 1993.

Nancy T. Fong, 1992, Adjunct Professor, BA, University of California, Berkeley, 1982; PharmD, University of Southern California, 1986.

Shirley Ford, 1995, Adjunct Professor, BA, University of Illinois, 1968; MAT, 1970; PharmD, University of the Pacific, 1978

Norman Fox, 2010, Adjunct Professor, PharmD, University of the Pacific, CA, 1979.

John Frank, 2009, Adjunct Professor, PharmD, B.S., University of Rhode Island, 1978; Pharm.D., Idaho State University, 1994.

Christopher J. Freed, 2001, Adjunct Professor, BS, University of Rhode Island, 1978; PharmD, Idaho State University, 1994.

Christine Frey, 2007, Adjunct Professor, BS Pharm, University of the Pacific, 1968; PharmD, University of the Pacific, 1985.

Lynn E. Friday, 2000, Adjunct Professor, BS, Purdue University, 1980.

Susan Fuji, 1995, Adjunct Professor, Pharm., University of the Pacific, CA, 1991.

Robert Fujimura, 2001, Adjunct Professor, BA, University of California, Los Angeles, 1976; PharmD, University of Southern California, 1980.

Joan Furlano, 2001, Adjunct Professor, BS, University of Connecticut, 1979.

Jeanne Furnier, 2001, Adjunct Professor, BS Pharmacy, University of Pittsburgh School of Pharmacy, 1973.
Yvonne Furr, 1995, Adjunct Professor, BSc Biology, Clark-Atlanta University, 1967; BSPharm, University of Cincinnati, 1969; MS, California State University, Los Angeles, 1985.

Elizabeth C. Garcia, 1999, Adjunct Professor, BS, University of California, Los Angeles, 1979; PharmD, University of California, San Francisco, 1983.


James Gee, 2003, Adjunct Professor, PharmD, University of British Columbia, 1984.

Michael T. Gee, 2005, Adjunct Professor, PharmD, University of the Pacific, 2000.

Joseph L. Geierman, Jr., 1988, Adjunct Professor, BS Pharm, Washington State University, 1972; PharmD, University of the Pacific, 1979.

Catherine Ghaffari, 2007, Adjunct Professor, PharmD, South Dakota State University, 2001.

Muoi Gi, 2008, Adjunct Professor, PharmD, Western University, 2005.

Mark William Glaudemam, 2005, Adjunct Professor, BS, Loyola Marymount University, 1983; PharmD, Creighton University, 1988.

Alan Goldberg, 2006, Adjunct Professor, Pharm.D., University of the Pacific, 2002.

Elwin D. Goo, 1990, Adjunct Professor, BA, University of Southern California, 1968; Pharmd, 1972.

Nicole Gordon, 2009, Adjunct Professor, PharmD, University of Florida, 1999.

Lien Governanti, 2007, Adjunct Professor, PharmD, University at Buffalo, 2003.


Vernon J. Granier, 1997, Adjunct Professor, Northeast Louisiana University, 1984.

David R. Gray, 1982, Adjunct Professor, BS, California State University, Long Beach, 1970; MT, Johnson Laboratories, 1971; PharmD, University of Southern California, 1977.

Charles R. Green, 1982, Adjunct Professor, BS, University of the Pacific, 1968.

Jane M. Gregerson, 1999, Adjunct Professor, BS, University of Minnesota, 1965.

Aileen Gregorio, 2001, Adjunct Professor, PharmD, University of the Pacific, 1999.

Minnie Grewal, 2007, Adjunct Professor, PharmD, University of the Pacific, 2002.

Javier Guerrero, 2000, Adjunct Professor, PharmD, University of the Pacific, 1998.

Douglas Ha, 2002, Adjunct Professor, PharmD, University of the Pacific, 1992.

Kelli Haase, 2003, Adjunct Professor, PharmD, University of the Pacific, 1988.

Terri Hahn, 2002, Adjunct Professor, BS, Auburn University, 1994.

Melissa C. Hair, 2003, Adjunct Professor, PharmD, University of the Pacific, 1997.

Lawrence R. Hall, 1982, Adjunct Professor, PharmD, University of the Pacific, 1982.

Teresa Halperin, 2006, Adjunct Professor, PharmD, University of the Pacific, 2002.

Dennis Ham, 2003, Adjunct Professor, PharmD, University of the Pacific, 1985.

Norman M. Hamada, 1989, Adjunct Professor, BS, University of California, Irvine, 1977; BA, 1977; PharmD, University of the Pacific, 1980.

John S. Hambright, 2008, Adjunct Professor, PharmD, University of the Pacific, 1971.

Sora Han, 2006 Adjunct Professor, PharmD, University of the Pacific, 2002.

Jeffrey R. Hansen, 1995, Adjunct Professor, BS, Oregon State University, 1976.

Jonathan Hashimoto, 2010, Adjunct Faculty, PharmD, University of the Pacific, 2008.


Janie K. Hatai, 1986, Adjunct Professor, AA, College of the Sequoias, 1975; BA, University of California, Berkeley, 1977; PharmD, University of the Pacific, 1982.

Inaya Hazime, 2003, Adjunct Professor, PharmD, University of the Pacific, 1990.

Bridget Hernandez, 2008, Adjunct Professor, PharmD, University of the Pacific, CA, 2007.


Andree Hest, 1995, Adjunct Professor, B.S., McGill University, Montreal, 1972; BPharm, University of Montreal, 1979.

Andrew Hildebrand, 2010, Adjunct Faculty, University of California San Francisco, 2001.

Catherine Hill, 2010, Adjunct Professor, Pharm.D., University of the Pacific, 2008.

Andrea B. Hinton, 2000, Adjunct Professor, BS, California State University, Long Beach, 1995; PharmD, University of California, San Francisco, 1999.

Jennifer T. Hirai, 1999, Adjunct Professor, PharmD, University of the Pacific, 1999.

Florence Ho, 2010, Adjunct Professor, PharmD, University of the Pacific, 2009.

Ivan Ho, 1997, Adjunct Professor, BA, University of California, San Diego, 1978; PharmD, University of California, San Francisco, 1983.

Jennifer Ho, 2001, Adjunct Professor, PharmD, University of Arizona, 2000.

Macy I. Ho, 1987, Adjunct Professor, PharmD, University of Southern California, 1985.

Mylinh Ho, 2002, Adjunct Professor, PharmD, University of the Pacific, 1999.

Uyen Hoang, 2006, Adjunct Professor, PharmD, University of Southern California, 2003.

Brian D. Hodskins, 1991, Adjunct Professor, BS, University of San Francisco, 1982; PharmD, University of Southern California, 1998.

Thomas A. Hoffmann, 2003, Adjunct Professor, BS Pharm, University of the Pacific, 1984.
Mark Holdych, 1998, Adjunct Professor, PharmD, University of Southern California, 1985.

Sandra W. Holloway, 2000, Adjunct Professor, PharmD, University of California, San Francisco, 1978.

Fred Blake Horn, 1995, Adjunct Professor, AA, City College, San Francisco, 1975; AB, University of California, Berkeley, 1977; MS, University of Southern California, 1979; MD, Loyola University, Chicago, 1982.

Jenny M. Hong, 1998, Adjunct Professor, PharmD, University of the Pacific, 1994.

Jennifer Howard, 2008, Adjunct Professor, PharmD, University of the Pacific, 1994.

Raymond S. Hoyt, 2006, Adjunct Professor, BA, San Jose State University, 1979; BS, Idaho State University, 1983.

Cynthia Huang, 2009, Adjunct Professor, PharmD, MBA, University of Utah MBA Program, Western University of Health Sciences College of Pharmacy, Pomona, California, 1994.

Samuel C. Hui, 1994, Adjunct Professor, BA, California State University, Chico, 1973; PharmD, University of California, San Francisco, 1987.

Harlan Husted, 2007, Adjunct Professor, PharmD, University of the Pacific, 1990.

Nga N. Huynh, 2000, Adjunct Professor, PharmD, University of Washington, 1997.

John S. Hyun, 1995, Adjunct Professor, BS, University of California, Irvine, 1984; PharmD, University of Southern California, 1988.

Cheryl D. Imoto, 1995, Adjunct Professor, PharmD, University of California, San Francisco, 1974.


Susan Jacob, 2007, Adjunct Professor, PharmD, Philadelphia College of Pharmacy, 2005.

Mustafa Jamal, 2010, Adjunct Professor, PharmD, University of the Pacific, 1999.

Benjamin Joe, 1997, Adjunct Professor, BS, University of San Francisco, 1984; PharmD, University of the Pacific, 1989.

Doris Joe, 1988, Adjunct Professor, BS, Massachusetts College of Pharmacy, 1982.

Jugraj S. Johl, 1991, Adjunct Professor, BA, California State University, Chico, 1980; PharmD, University of the Pacific, 1988.

Scott T. Johns, 1988, Adjunct Professor, BA, California State University, Fresno, 1982; PharmD, University of California, San Francisco, 1986.

Arthur C. Johnson, III, 1993, Adjunct Professor, BA, University of California, Santa Barbara, 1971; MD, Yale University, 1979.

Kimberly S. Jones, 1995, Adjunct Professor, PharmD, University of California, San Francisco, 1993.

Raj L. Joshi, 1989, Adjunct Professor, BS, Bangalore University, India, 1973; BS, Creighton University, 1984.

Tom Jurewitz, 1999, Adjunct Professor, BS Pharm, Idaho State University, 1980.

Jon Kent Kamada, 2001, Adjunct Professor, PharmD, University of Southern California, 1980.


Claudia A. Kaneshiro, 1982, Adjunct Professor, PharmD, University of Southern California, 1979.

Kyong Kang, 2002, Adjunct Professor, BS, Massachusetts College of Pharmacy, 1989.

Wonhee Kang, 2005, Adjunct Professor, BS Pharm, KyungHee University, Seoul, 1997; PharmD, University of Florida, 2002.

Tamra Kaplan, 2002, Adjunct Professor, BS, University of California, Irvine, 1986; PharmD, University of the Pacific, 1989.

Barbara M. Kashiwabara, 1997, Adjunct Professor, BA, University of Hawaii, Manoa, 1977; PharmD, University of Southern California, 1982.

Sonja Kaubisch, 2000, Adjunct Professor, BA, University of California, Davis, 1974; PharmD, University of California, San Francisco, 1987.

Brian I. Kawahara, 2002, Adjunct Professor, BA, University of Southern California 1978; PharmD, University of Southern California, 1982.

Chad K. Kawakami, 2008, Adjunct Professor, PharmD, The Queen’s Medical Center 2004; Residency, Oregon State University, 2003.

Maria Kazulauskas, 1990, Adjunct Professor, BS, Philadelphia College of Pharmacy & Science, 1990.

Beth Keeney, 1995, Adjunct Professor, BS, University of Michigan, 1982; PharmD, 1983.

Shital Kelshikar, 2006, Adjunct Professor, BS, Texas A&M University, 1997; PharmD, University of Texas, 2001.

Rosita Kheibari, 2001, Adjunct Professor, PharmD, University of Michigan, 2000.


Karla Killgore Smith, 2007, Adjunct Professor, BA, University of San Diego, 1999; PharmD, University of California, San Francisco, 2003.

Janet C. Kim, 2005 Adjunct Professor, AA, Citrus College, 1982; PharmD, University of Southern California, 1986.

Song Soon Kim, 1991, Adjunct Professor, BS, Ewha Woman’s University, Seoul, 1970; PharmD, University of Southern California, 1984.

Geri Kimura, 2007, Adjunct Professor, BA, University of Hawaii, 1986; PharmD, University of the Pacific, 1991.

Charles King, 1994, Adjunct Professor, BA, University of California, Berkeley, 1988; PharmD, University of California, San Francisco, 1993.

Ella Kleyman, 1999, Adjunct Professor, BS Pharm, North Eastern University, 1997.


Clyde Kobashi, 2007, Adjunct Professor, BS, Long Beach State University, 1975; PharmD, University of the Pacific, 1978.

William A. Koole, Jr, 1990, Adjunct Professor, AS, Fresno City College, 1975; BS, California State University, Fresno, 1978; PharmD, University of California, San Francisco, 1984.
Jim Korb, 2003, Adjunct Professor, BS, Purdue University, 1984.

Nancy E. Korman, 1988, Adjunct Professor, PharmD, University of California, San Francisco, 1969.

Viral S. Kothary, 2006, Adjunct Professor, BS, University of Southern California, 1999; PharmD, University of the Pacific, 2002.

Charles G. Kraus, 1997, Adjunct Professor, BA, University of Michigan, 1978; MD, New York University, 1982.

David R. Kraus, 2002, Adjunct Professor, BS, Pharm, Idaho State University, 1984.

Brian L. Kubel, 2006, Adjunct Professor, PharmD, University of California, San Francisco, 1998.

Ivie H. Kumura, 1998, Adjunct Professor, BS University of Hawaii, 1978; PharmD, University of the Pacific 1981.

Rouxann Kuwata, 1995, Adjunct Professor, PharmD, University of the Southern California, 1991.

Cynthia Y. Kwan, 2008, Adjunct Professor, PharmD, University of the Pacific, 2005.

Teresa Kwong, 2009, Adjunct Professor, PharmD, University of the Pacific, 1995.

Amanda La, 2003, Adjunct Professor, PharmD, University of the Pacific, 1995.

Grant Lackey, 2003, Adjunct Professor, PharmD, University of California, San Francisco, 1990.

Jonathan Lacro, 1992, Adjunct Professor, PharmD, University of the Pacific, 1990.

Candace A. Lagasse, 2005, Adjunct Professor, PharmD, University of California, San Francisco, 2000.

Parshid Laghawi, 2005, Adjunct Professor, BS, 1993; MS, 1994; PharmD, California State University, Los Angeles, 1998.

Andrew Lai, 2003, Adjunct Professor, PharmD, University of California, San Francisco, 1997.


Chi Lai, 2005, Adjunct Professor, PharmD, University of California, San Francisco, 1986.


Luyen Lai, 2007, Adjunct Professor, BS, University of California, Davis, 1998; PharmD, University of the Pacific, 2001.

Jutendra Lal, 2009 Adjunct Faculty, PharmD University of the Pacific, 2006.

John Lamb, 2003, Adjunct Professor, PharmD, University of California, San Francisco, 1975.

Theresa Lane, 2003, Adjunct Professor, PharmD, University of Southern California, 1988.

Edward Larimer, 2009, Adjunct Faculty, PharmD, University of the Pacific, 1969.

Sherman Lau, 2007, Adjunct Professor, BS, University of California, Davis, 2000; PharmD, University of the Pacific, 2005.

Donald L. Lazzaretto, 1996, Adjunct Professor, PharmD, University of California, San Francisco, 1972.

Amy C. Le, 2000, Adjunct Professor, BS, University of California, Los Angeles, 1987; PharmD, University of California, San Francisco, 1991.

Chieu-Uyen Le, 2004, Adjunct Professor, BS, University of the Pacific, PharmD, 2000.

Philip Le, 2006, Adjunct Professor, BS, University of California, Davis, 1999; PharmD, Western University, 2003.

Tuan Le, 2003, Adjunct Professor, PharmD, University of the Pacific, 1991.

Tung N. Le, 2001, Adjunct Professor, BS Pharm, University of Wisconsin-Madison, 1996; PharmD, University of Wisconsin-Madison, 1997.


Adam S. Lee, 2000, Adjunct Professor, BS, San Francisco State University, 1988; PharmD, University of California, San Francisco, 1992.

Annie Lee, 2003, Adjunct Professor, PharmD, University of the Pacific, 1996.


Dennis Lee, 2006 Adjunct Professor, BS, University of North Carolina, 1995; PharmD, 2004.

Harvey Lee, 2009, Adjunct Faculty, PharmD, University of the Pacific.

Jennifer P Lee, 2008, Adjunct Professor, PharmD, University of Southern California, 2001.

Katherine Lee, 2003, Adjunct Professor, PharmD, University of San Francisco, 2001.


Lisa Beth Lee, 2006 Adjunct Professor, PharmD, University of North Carolina, 2004.


Robert T. Lee, 1988, Adjunct Professor, BS, Idaho State University, 1982.

Samuel Lee, 1995, Adjunct Professor, PharmD, University of the Pacific, 1988.

Susan C. Lee, 1981, Adjunct Professor, BA, University of California, Santa Barbara, 1971; PharmD, University of the Pacific, 1974.

Tuan Le, 2005, Adjunct Professor, PharmD, University of the Pacific, 1991.

Virginia Lee, 1995, Adjunct Professor, PharmD, University of California, San Francisco 1982.

Marc Lefief, 2009. Adjunct Faculty, PharmD, University of the Pacific, 1984.

Elaine Lei, 1999, Adjunct Professor, BS, University of California, Los Angeles, 1993; PharmD, University of California, San Francisco, 1997.

Blair Lenhoff, 1991, Adjunct Professor, BA, University of California, Los Angeles, 1973; PharmD, University of Southern California, 1977.

David Lennon, 1996, Adjunct Professor, AA, Blinn College, 1985; BS, University of Houston, 1988.


Henry Leung, 1995, Adjunct Professor, PharmD, University of the Pacific, 1982.

Phoebe Y. Li, 1999, Adjunct Professor, BA, University of California, Berkeley, 1983; PharmD, University of California, San Francisco, 1987.

Zhi Mei Judy Liang, 2005, Adjunct Professor, BS, University of California, Los Angeles, 1995; PharmD, University of California, San Francisco, 1999.

George Liao, 2005, Adjunct Professor, BS, Long Island University, 1985; BS, Stanford University, 1989; MBA, Claremont Graduate University, 1997.

Robert A. Likens, 1998, Adjunct Professor, BS, University of Wisconsin, 1967; BS, University of Wisconsin, 1980.

Lesley Lim, 2009 Adjunct Faculty, PharmD, University of Southern California School of Pharmacy, 2006.

Terri Lim, 2010 Adjunct Faculty, PharmD, University of Southern California, 1998.

Lana Limon, 2009 Adjunct Faculty, University of the Pacific, 2002.

Lana Lin, 2007, Adjunct Professor, BS, University of California, Davis, 1996; PharmD, University of the Pacific, 2002.

Tristan A Lindfelt, 2008, Adjunct Professor, PharmD, University of California at San Francisco, 2007.

Janice Lindsey, 2006, Adjunct Professor, BSPharm., University of the Pacific, 1972.

Jason Liu, 2010 Adjunct Faculty, PharmD, BCPS, University of California, San Francisco, 2005

Joseph Liu, 1999, Adjunct Professor, PharmD, University of the Pacific, 1996.

Christy W. Locke, 2001, Adjunct Professor, BA, University of California, Santa Cruz, 1980; PharmD, University of California San Francisco, 1985.

Paul W. Lofholm, 1982, Adjunct Professor, PharmD, University of California, San Francisco, 1964.

Maureen Long, 1996, Adjunct Professor, BS, California State University, Los Angeles, 1975; PharmD, University of California, San Francisco, 1994.

Gregg A. Loo, 2005, Adjunct Professor, BS, University of Oregon, 1995; PharmD, University of Washington, 2002.

Julió R. Lopez, 1986, Adjunct Professor, BA, University of California, Los Angeles, 1975; PharmD, University of California, San Francisco, 1984.

Gary Louie, 1995, Adjunct Professor, BS, University of California, Los Angeles, 1980; PharmD, University of California, San Francisco, 1984.

Sarah S. Louie, 2008, Adjunct Professor, PharmD, University of the Pacific, 2004.

Chai Lowe, 2009, Adjunct Faculty, PharmD, Albany College of Pharmacy, 1996.


Ronda Lowe, 1995, Adjunct Professor, BS Pharm, St. Louis College of Pharmacy, 1987.

Sonya S. Lowe, 1999, Adjunct Professor, BS, University of California, Davis, 1990; PharmD, University of California, San Francisco, 1994.

David J. Lozano, 2003, Adjunct Professor, BS Pharm University of the Pacific, 1978.

Kenneth A. Luck, 2005, Adjunct Professor, PharmD, University of California, San Francisco, 1990.


Bert L. Lum, 2000, Adjunct Professor, PharmD, University of the Pacific, 1976.

Becky G. Luna, 1998, Adjunct Professor, PharmD, University of California, San Francisco, 1986.

Joanne Luong, 2006, Adjunct Professor, BS, University of California, Berkeley, 1990; PharmD, University of Missouri, Kansas City, 1996.

Xuan Grace L. Ly, 2007, Adjunct Professor, BS, University of California, Riverside, 1998; PharmD, University of California, San Francisco, 2002.

Edward Christopher Ma, 1998, Adjunct Professor, BA, University of California, Berkeley, 1972; PharmD, University of the Pacific, 1975.

SangSang Ma, 2005, Adjunct Professor, BS, San Francisco State University, 1995; PharmD, University of the Pacific, 2000.


Anne Mayyee Mac, 2005, Adjunct Professor, BS, University of California, Davis, 1986; PharmD, 1996.

Aline Mack, 2004, Adjunct Professor, BS University of California, Irvine, 1995; PharmD, University of Southern California, 1999.

Mary Macmillan, 1983, Adjunct Professor, BS, University of South Carolina, 1969.


Van T. Mai, 2006, Adjunct Professor, BS, University of California, Davis, 2000; PharmD, University of Southern California, 2004.

Nasiba Abuhamdan Makarem, 2002, Adjunct Professor, BA, University of Southern California, 1997; PharmD, University of the Pacific, 2001.

Robert A. Malmstrom, 2005, Adjunct Professor, PharmD, University of California San Francisco, 1993.

William M. Manley, 2008 Adjunct Professor, PharmD, Temple University, 1984.


Clifford S. Mar, 2000, Adjunct Professor, PharmD, University of the Pacific, 1979; PharmD, Oxford College of Pharmacy, 1997.

Katy M. Marconi, 1999, Adjunct Professor, BS, University of California, Davis, 1983; PharmD, University of the Pacific, 1986.

David B. Marcus, 1996, Adjunct Professor, BS, St. Louis College of Pharmacy, 1975.

Kevin Mark, 1996, Adjunct Professor, BA and BS, University of California, Berkeley, 1988; PharmD, University of California, San Francisco, 1994.

Kathy Marquardt, 2003, Adjunct Professor, PharmD, University of California, San Francisco 1976.

Belinda J. Martinez, 2008, Adjunct Professor, PharmD, University of New Mexico, 2005.

Bonnie S. Marty, 1987, Adjunct Professor, BS, University of Wisconsin, 1980.
Annie Mathew, 2009 Adjunct Faculty, PharmD, University of the Pacific, 1989.

Kelly Y. Matsuda, 1996, Adjunct Professor, PharmD, University of the Pacific, 1984.

Valerie M.K. Matsunaga, 1997, Adjunct Professor, BS, University of Oregon, 1978; PharmD, University of the Pacific, 1981.

Karol K. Matsune, 2000, Adjunct Professor, BS, University of California, Davis, 1985; PharmD, University of California, San Francisco, 1989.

Bonnie Y. Matsueda, 2009 Adjunct Faculty, PharmD, University of California, San Francisco, 1987.

Kathlyn E. McDonough, 1995, Adjunct Professor, BS, University of Washington, 1980; PharmD, 1993.

Karen L. McLemore, 2009, Adjunct Professor, PharmD, Lewis and Clark College and University of the Pacific.

Michael McQuiddy, 2010 Adjunct Faculty, PharmD, University of the Pacific, 2010


Pierre J. Menard, 2001, Adjunct Professor, BA, PharmD, University of Southern California.


Nathaniel Meridor, 2008, Adjunct Professor, PharmD, University of Iowa, 2003.

Gary P. Metelak, 1995, Adjunct Professor, BS, University of Iowa, 1971; MS, University of La Verne, 1983.

Margaret A. Meute, 1992, Adjunct Professor, BA, University of Pittsburgh, 1967; MEd, 1969; BS Pharm, 1979; PharmD, University of the Pacific, 1981.

Cate Brown Meyerson, 1992, Adjunct Professor, BA, Mills College, Oakland, 1982; PharmD, University of California, San Francisco, 1988.

Giovanni (John) S. Miano, 2008, Adjunct Professor, University of the Pacific, 1980.

Jeffrey Mierczynski, 2007, Adjunct Professor, PharmD, University of the Pacific, 1982.

Donnie Minor, 2001, Adjunct Professor, PharmD, Butler University, 2000.


Catherine V. Misquitta, 2009, Adjunct Faculty, PharmD, University of the Pacific, 1996.

Randell Miyahara, 2000, Adjunct Professor, PharmD, University of California, San Francisco, 1985.

Larry Alan Mole, 1995, Adjunct Professor, BA, University of California, Riverside, 1982; PharmD, University of California, San Francisco, 1988.


Patricia A. Montgomery, 2000, Adjunct Professor, BA, University of California, San Diego, 1982; PharmD, University of California, San Francisco, 1986.

Daniel Montoya, 1993, Adjunct Professor, PharmD, University of the Pacific, 1991.

Emily Rose Moore, 2006, Adjunct Professor, BS, Westminster College, 2000; PharmD, University of California, San Francisco, 2004.

Michael B. Moore, 2000, Adjunct Professor, BS, University of Florida, 1982.


Laura Morodomi, 2007, Adjunct Professor, BS, University of California, San Francisco, 1983; PharmD, University of California San Francisco, 1992.

Anthony P. Morreale, 1986, Adjunct Professor, PharmD, University of the Pacific, 1983.


Diana Morton, 2006, Adjunct Professor, PharmD, University of California, San Francisco, 1992.

Halal D Mouwakeh, 2009, Adjunct Faculty, PharmD, College of Pharmacy, 1976

Reed H. Muraoka, 1998, Adjunct Professor, PharmD, University of the Pacific, 1988.

William E. Murray, 2009 Adjunct Faculty, PharmD, University of the Pacific, 1984.

Ronald E. Nagata, Jr., 2004, Adjunct Professor, PharmD, University of California, San Francisco, 1968.

Calvin Nakamoto, 1991, Adjunct Professor, PharmD, University of California, San Francisco, 1989.


Lama Nazer-Nabulsi, 2003, Adjunct Professor, BS, University of Jorden, 1996; PharmD, Campbell University, 1998.


Harold Newton, 2007, Adjunct Professor, BS, Idaho State University, 1985.

Alfred Ngaw, 2009, Adjunct Faculty, PharmD, BCPS, University of California San Francisco, 2005.

Ednna O. Ng-Che, 2008, Adjunct Professor, PharmD, University of Southern California, 2001.


Anne C. Nguyen, 2008, Adjunct Professor, PharmD, University of California Los Angeles, 2003.

Annette T Nguyen, 2008, Adjunct Professor, PharmD University of California at San Francisco, 2006.

Diep T. Nguyen, 2001, Adjunct Professor, PharmD, University of the Pacific, 1999.

Giang C. Nguyen, 2002 Adjunct Professor, PharmD, Western University of Health Sciences, 2001.


Khanh L. Nguyen, 2008, Adjunct Professor, PharmD, University of Southern California, 2004.
Ngoc M. Nguyen, 2008, Adjunct Professor, PharmD, University of Southern California, 2002.

Phuong Nguyen, 2003, Adjunct Professor, PharmD, University of California, San Francisco, 1992.

Quang Minh Nguyen, 2004, Adjunct Professor, University of the Pacific, 1994.


Tan Dinh Nguyen, 1995, Adjunct Professor, BA, San Francisco State University, 1980; BS, 1980; PharmD, University of California, San Francisco, 1985.

Thanh (Nina) H., Nguyen, 2008, Adjunct Professor, PharmD, San Diego, University of Southern California 1998.

Thi T. Nguyen, 2008, Adjunct Professor, PharmD, University of California, San Francisco, School of Pharmacy, 2004.


Paul N. Nickel, 1997, Adjunct Professor, AA, Santa Monica City College, 1972; PharmD, University of Southern California, 1979.


Joelle M. Nitta, 2000, Adjunct Professor, PharmD, University of Southern California, 1994.

Jin-Hee Nomura, 2001, Adjunct Professor, PharmD, University of Southern California, 1984.

Michael Nunes, 2002, Adjunct Professor, BS, University of California, Santa Barbara, 1999; PharmD, University of the Pacific, 2002.


Alice Okamoto, 1999, Adjunct Professor, PharmD, University of the Pacific, 1986.

Stephen M. O’Meara, 1998, Adjunct Professor, BS, University of San Francisco, 1970; PharmD, University of California San Francisco, 1975.

Denise A. Omen, 1999, Adjunct Professor, BS, University of Wisconsin, 1984.

Joann O. Ong, 2008, Adjunct Professor, PharmD University of the Pacific, 2002.

Gregory Ono, 2003, Adjunct Professor, PharmD, University of the Pacific, 1994.

Manuel A. Orellana, 2002, Adjunct Professor, BS, Colegio La Salle, 1974; MD, Universidad de Guayaquil, 1981.

Doug Ota, 2001, Adjunct Professor, PharmD, University of the Pacific, 1995.

Wendell Y. Oumaye, 1997, Adjunct Professor, BS, University of the Pacific, 1979; PharmD, University of California, 1983.

Robert E. Pachorek, 1996, Adjunct Professor, PharmD, University of Southern California, 1977.

Helen K. Park, 2008, Adjunct Professor, PharmD, University of the Pacific, 1999.


Anjana Patel, 2001, Adjunct Professor, PharmD, University of the Pacific.

Pratima V Patel, 2009, Adjunct Faculty, PharmD, University of the Pacific, 2002.


Priya Patel, 2000, Adjunct Professor, PharmD, University of the Pacific, 1999.


Tejinder Patel, 2007, Adjunct Professor, PharmD, University of the Pacific, 1995.

Mitchell Alan Pelter, 1997, Adjunct Professor, PharmD, University of Southern California, 1982.

Yi-Chih Peng, 1999, Adjunct Professor, BA, Taipei Medical College, 1990; PharmD, University of the Pacific, 1996.


Teresa A. Petrilla, 2005, Adjunct Professor, BA, University of San Diego, 1989; PharmD, University of California, San Francisco, 1993.

Edward M. Petrillo, 1992, Adjunct Professor, BS, University of Arizona, 1966.

Binh Pharm, 2001, Adjunct Professor, BS Pharm, University of Saigon, Vietnam, 1970.

Hanh H. Pham, 2010, Adjunct Faculty, PharmD., University of Houston, 1996.


Mark A. Pinski. 2009, Adjunct Faculty, PharmD, University of the Pacific, 1991.


Brian K. Plowman, 1996, Adjunct Professor, PharmD, University of the Pacific, 1991.

Yvonne Plowman, 2001, Adjunct Professor, PharmD, University of the Pacific, 1991.

Patricia L. Poole, 2009, Adjunct Faculty, PharmD, University of the Pacific, 1988.

Robert L. Poole, 2010, Adjunct Faculty, PharmD, University of California San Francisco School of Pharmacy, 1977.

Alaina Poon, 2000, Adjunct Professor, BA University of California, Berkeley, 1987; PharmD, University of California, San Francisco, 1992.


Lisa Proffitt, 2000, Adjunct Professor, BA, University of California, Davis, 1980; PharmD, University of California, San Francisco, 1985.

Douglas A. Prosser, 2003, Adjunct Professor, PharmD, University of Southern California, 1979.
Steven Prozkel, 2009, Adjunct Faculty, PharmD, University of California San Francisco, 1976.

Stacey L. Raff, 1998, Adjunct Professor, PharmD, University of the Pacific, 1996.

Bruce Read, 2003, Adjunct Professor, PharmD, University of Southern California, 1980.

Praveen Reehal, 2003, Adjunct Professor, PharmD, University of the Pacific, 1998.

Lynette Rey, 1999, Adjunct Professor, BA, University of California, Berkeley, 1981; PharmD, University of California, San Francisco, 1986.

Yasir Riaz, 2008, Adjunct Professor, PharmD, University of the Pacific, 2000.


Robyn L. Richard, 2009, Adjunct Faculty, PharmD, University of the Pacific, 2005.

Trish A. Rick, 2009, Adjunct Faculty, PharmD, University of the Pacific, 1987

Dan Ringhofer, 2001, Adjunct Professor, BS, St. Johns University, 1982; BS Pharm, University of Minnesota, 1985.

Kelly Robertson, 1995, Adjunct Professor, PharmD, University of the Pacific, 1992.

Ed Rogan, 2007, Adjunct Professor, BS, PharmD, University of Illinois, 1992.

Gale L Romanowski, 2009, AdjunctFaculty, PharmD, University of Michigan, 1986.

Gina M Rosti, 2009, Adjunct Faculty, PharmD, University of Washington.

John R. Rusillo, 2006, Adjunct Professor, BS, University of Rhode Island, 1974.

Russell A. Ryono, 1987, Adjunct Professor, PharmD, University of the Pacific, 1983.

Toheedda Sadig, 2008, Adjunct Professor, PharmD, University of the Pacific, 2004.

James K. Saffier, 1997, Adjunct Professor, BA, University of the Pacific, 1977; MD, Northwestern University, 1983.

Tom Saito, 2001, Adjunct Professor, PharmD, University of California, San Francisco, 1970.

J. Lance Salazar, 1999, Adjunct Professor, BS, California State University, Fresno, 1995; PharmD, University of the Pacific, 1998.

Christopher J. Sande, 2001, Adjunct Professor, BA, University of California, San Diego, 1987; PharmD, University of California San Francisco, 1992.

Tom Sands, 2003, Adjunct Professor, PharmD, University of California, San Francisco, 1985.

Aneeta Jaur Sanghera, 2009, Adjunct Faculty, PharmD., University of the Pacific, 2004. Pharm.D.,

Liane Schaffer, 2006, Adjunct Professor, BA, University of California, Berkeley, 1980; PharmD, University of California, San Francisco, 1984.


Irene Scott, 2007, Adjunct Professor, PharmD, University of the Pacific, 1979.

Renwick Serna, 2007, Adjunct Professor, PharmD, University of Southern California, 1993.


Robert J Shapiro, 2009, Adjunct Faculty, PharmD, BCPS, University of Connecticut, 2002.

Edward Sherman, 2010, Adjunct Professor, PharmD, University of Southern California, 1965.


Susan Emiko Shinkai, 2010, Adjunct Faculty, PharmD., University of the Pacific, 1981.

Harminder Sikand, 1998, Adjunct Professor BS, University of California, Davis, 1985; PharmD, University of California, San Francisco, 1990.

Andrew Simental, Jr., 1990, Adjunct Professor, BS, California State University, San Bernardino, 1980; PharmD, University of the Pacific, 1983.

Shahnaz Singh, 2006, Adjunct Professor, BS, University of California, Riverside, 1974; PharmD, University of the Pacific, 1978.

Douglas Smith, 2007, Adjunct Professor, PharmD, University of California, San Francisco, 1964.

Sarah (Sally) K Smith, 2009, Adjunct Faculty, PharmD., Massachusetts College of Pharmacy, 1979.

Jeannie M. Sohn, 2004, Adjunct Professor, BS, Sook Myung Women’s University, 1974; PharmD, Creighton University, 2001.

Kali S. Sommer, 2010, Adjunct Faculty PharmD, University of Texas College of Pharmacy, Austin, TX 2001.


Cynthia Spann, 1997, Adjunct Professor, BA, University of California, San Diego, 1989; PharmD, University of California, San Francisco, 1995.

Steve Spinetti, 2001, Adjunct Professor, BS, University of California, Davis, 1977; PharmD, University of Southern California, 1982.


Richard R. Stack, 2001, Adjunct Professor, BA, State University of New York, Buffalo, 1975; MD, University of Southern California, 1979.

Irwin D. Staller, 2005, Adjunct Professor, BS, University of Illinois, Urbana, 1958; MPH, University of California, Berkeley, 1961.

Martha G. Stassinos, 2002, Adjunct Professor, BA, California State University, Los Angeles, 1969; PharmD, University of California, San Francisco, 1979.

Janet Stein Larsen, 2007, Adjunct Professor, PharmD, 1981.

Jeff Strickland, 2002, Adjunct Professor, PharmD, University of the Pacific, 1994.

Jennifer Lynn Strickland, 2009, Adjunct Professor, PharmD, Creighton University and University of Nebraska-Lincoln, 1998.

Maria K. Stubbs, 2008, Adjunct Professor, PharmD, Philadelphia College of Pharmacy, 1990.

Margaret A. Stull, 2008, Adjunct Professor, PharmD, Virginia Commonwealth University, 2002.

Vince Sue, 2003, Adjunct Professor, PharmD, University of California, San Francisco, 1965.


James Sullivan, 2001, Adjunct Professor, BS Pharm, Massachusetts College of Pharmacy, 1992.

Yu-Bik Kitty Sun, 2009, Adjunct Faculty, PharmD, University of the Pacific, 2001.


Victoria Y. Sun, 1992, Adjunct Professor, BS, Taipei Medical College, 1980; MS, St. John’s University, Jamaica, NY, 1980.

Susan Sung, 1999, Adjunct Professor, PharmD, University of California, San Francisco, 1997.

Stephanie M. Sweezea, 2006, Adjunct Professor, PharmD, University of the Pacific, 2003.

Jackie Tafaya-Espinoza, 1998, Adjunct Professor, PharmD, University of the Pacific, 1997.

Susan Takeda, 2003, Adjunct Professor, PharmD, University of the Pacific, 1996.

Cary A. Takeshita, 1991, Adjunct Professor, PharmD, University of Southern California, 1990.

Mary Talaga, 2007, Adjunct Professor, BS, University of Wyoming, 1976; MA, Professional School of Psychology, San Francisco, 1993; PhD, 2002.

Majid Talebi, 2010, Adjunct Faculty, PharmD, University of San Francisco at San Francisco, 1986.

Darryl Tam, 2003, Adjunct Professor, PharmD, University of the Pacific, 1999.

Bonnie Tam, 2002, Adjunct Professor, PharmD, University of California San Francisco, 2001.

Christopher Tan, 2007, Adjunct Professor, BA, University of California, Berkeley, 1989; PharmD, University of California, San Francisco, 1993.

Doris Tan, 2007, Adjunct Professor, MS, Iowa State University, 1980; DO, Ohio University, 1987.

Ronald T. Taniguchi, 1997, Adjunct Professor, BS, Oregon State University, 1969; PharmD, University of Southern California, Los Angeles, 1976; MBA, Chaminade University of Hawaii, 1986.

David Teng, 2009, Adjunct Faculty, PharmD, University of California at San Francisco, 1992.

Linda Thal, 1995, Adjunct Professor, PharmD, University of California, San Francisco, 1993.

Ivana Thompson, 2003, Adjunct Professor, PharmD, University of the Pacific, 2000.

Kim Thorn, 1994, Adjunct Professor, BS, University of California, Los Angeles, 1979; PharmD, University of California, San Francisco, 1983.


Kristin To, 2002, Adjunct Professor, PharmD, University of California, San Francisco, 1994.

Roy Toledo, 1990, Adjunct Professor, PharmD, University of Southern California, 1984.

Mary Tomasco, 1994, Adjunct Professor, BS, University of Southern California, 1976; PharmD, University of California, San Francisco, 1990.

Lisa M Tong, 2010, Adjunct Faculty, PharmD, University of California San Francisco, 1997.

Mary Tong, 2000, Adjunct Professor, BS, San Francisco State University, 1990; PharmD, University of California San Francisco, 1994.

Ivy Q. Tonni-Mihara, 2008, Adjunct Professor, PharmD, University of Southern California, 2001.

Shunsuke Toyoda, 2010, Adjunct Faculty, PharmD, University of California San Francisco, 2008.

Hung T. Tran, 1998, Adjunct Professor, PharmD, University of the Pacific, 1994.

Thanh (Tanya) K. Tran, 2008, Adjunct Professor, PharmD, USC School of Pharmacy, 2001.

Lawrence S. Troxell, 2008, Adjunct Professor, University of California San Diego, 1971.

Rod True, 1995, Adjunct Professor, PharmD, University of Southern California, 1975.

Henry H. Troung, 2010, Adjunct Faculty, PharmD, MHA, Massachusetts College of Pharmacy & Health Sciences, 2005.

Jennifer Trytten, 2007, Adjunct Professor, BA, California State University, Fresno, 1994; BS, Midwestern University, 1997; PharmD, 1998.

Mildred Tsang, 2003, Adjunct Professor, PharmD, University of California, San Francisco, 1975.

Te-Yun Tsao, 1998, Adjunct Professor, BS, San Francisco State University, 1986; PharmD, University of California, San Francisco, 1994.

Lori A. Tsukiji, 1992, Adjunct Professor, BS, University of California, Davis, 1978; PharmD, University of California, San Francisco, 1989.

Benjamin Toshimatsu Tsutaoka, 1995, Adjunct Professor, PharmD, University of the Pacific, 1992.

Jaisheng Tu, 2009, Adjunct Faculty, PhD in Pharmaceutical Sciences, China Pharmaceutical University, 1992.

Charles Tuyet, 2006, Adjunct Professor, BS, University of California, San Diego, 1995; PharmD, University of Illinois, 2003.

Gregory M. Umeda, 1999, Adjunct Professor, PharmD, University of the Pacific, 1996.

Jennie Ung, 2001, Adjunct Professor, PharmD, University of Southern California, 1997.

Alice H. Ung-Robbins, 2006, Adjunct Professor, BS, Rutgers University, 1993; PharmD, 2001.

Michael S. Ureda, 1999, Adjunct Professor, BS, University of California, Riverside, 1973; PharmD, University of the Pacific, 1977.
David D. Valenzuela, 1994, Adjunct Professor, BS Pharm, University of Arizona, 1976.

Linh Buu Van, 2009, Adjunct Faculty, PharmD, University of California San Francisco School of Pharmacy, 2003.

Nicole S. Varnell, 2004, Adjunct Professor, BA, University of California, Berkeley, 1995; PharmD, University of the Pacific, 1999.

Teresa M Veira, 2009, Adjunct Faculty, PharmD, University of the Pacific, 1992.

Matangi Venkateswaran, 2009, Adjunct Faculty, PharmD, University of California San Francisco School of Pharmacy, 2007.

Sujeet Vhan, 2009, Adjunct Faculty, PharmD, University of the Pacific, 2006.


Mai P. Vu, 2000, Adjunct Professor, BS, University of California, Davis, 1988; PharmD, University of California, San Francisco, 1997.

Helga B. Wachholz, 2000, Adjunct Professor, PharmD, University of Arizona, 1986.

Steven L. Waite, 1992, Adjunct Professor, PharmD, University of California, San Francisco, 1987.

Henry C. Walker, 2006, Adjunct Professor, BS, University of California, Davis, 1981; BS, Creighton University, 1990.


Jim Walsh, 2003, Adjunct Professor, BS, Oregon State University, 1983.

Mike Walsh, 2003, Adjunct Professor, PharmD, University of the Pacific, 1982.

Julie Walton, 2003, Adjunct Professor, PharmD, University of Southern California, 1993.

LiJen Wang, 2007, Adjunct Professor, MS, Wayne State University, 1978; PharmD, Auburn University, 1994.

Lynn M. Wardwell, 1997, Adjunct Professor, BS, University of California, Los Angeles, 1986; PharmD, University of California, San Francisco, 1990.


Scott R. Weber, 1990, Adjunct Professor, PharmD, University of the Pacific, 1983.

Sabrina Y. Wei, 2000, Adjunct Professor, BS, San Francisco State University, 1992; PharmD, University of the Pacific, 1995.

Alice A. Wen, 2004, Adjunct Professor, PharmD, University of Southern California, 1998.


Tom E. Whitaker, 2000, Adjunct Professor, BA, University of Texas, Austin, 1974; PharmD, University of California, San Francisco, 1985.

Brian M. White, 2003, Adjunct Professor, BS, University of California, San Diego, 1993; PharmD, University of California, San Francisco, 1997.


Linda F. Winstead, 2005, Adjunct Professor, BS, University of Tennessee, 1970; PharmD, 1971.

Lydia Winter, 1999, Adjunct Professor, BS, California State University, Sacramento, 1994; PharmD, University of the Pacific, 1998.


Betty P. Wong, 1997, Adjunct Professor, BS, University of California, Davis, 1992; PharmD, University of the Pacific, 1995.

Bonnie X. Wong, 1993, Adjunct Professor, BS, 1988; PharmD, University of Southern California 1992.

Cynthia Wong, 2007, Adjunct Professor, BS, University of California, Berkeley, 1997; MS, San Francisco State University, 1999; PharmD, University of the Pacific, 2002.

Dariene Wong, 2003, Adjunct Professor, PharmD, University of the Pacific, 1995.

Kenneth H. Wong, 1996, Adjunct Professor, PharmD, University of the Pacific, 1995.

Lisa Kam-Fong Wong, 2004, Adjunct Professor, BS University of California, Davis, 1996; PharmD, University of California, San Francisco, 2000.

Priscilla Wong, 2000, Adjunct Professor, PharmD, University of California, San Francisco, 1995.

Sincere Wong, 2005, Adjunct Professor, PharmD, University of the Pacific, 2002.

Susan Wong, 2000, Adjunct Professor, BS, University of California, Irvine, 1982; PharmD, University of California, San Francisco, 1986.

Tracy Wong, 2008, Adjunct Professor, PharmD, University of California San Francisco, 1988.

William Wong, 2008, Adjunct Professor, PharmD, University of Illinois at Chicago, 1999.

Christopher A. Woo, 1991, Adjunct Professor, PharmD, University of the Pacific, 1988.

Kenneth Woo, 2007, Adjunct Professor, PharmD, University of Mississippi, 2000.

Margie M. Woo, 1988, Adjunct Professor, PharmD, University of the Pacific, 1987.


Frank C. Wood, 2005, Adjunct Professor, PharmD, University of the Pacific, 1985.


Wayne V Woods, 2009, Adjunct Faculty, PharmD, University of Wyoming

James W. Wright, 1983, Adjunct Professor, BS, University of California, Davis, 1976; PharmD, University of California San Francisco, 1980.

Peggy Yang, 1997, Adjunct Professor, PharmD, University of Southern California, 1994.

Lovelle M. Yano, 2000, Adjunct Professor, BA, San Francisco State University, 1985; MA, 1994; PharmD, University of California, San Francisco, 1998.

Martha E. Yasavolian, 1995, Adjunct Professor, BS, University of Wisconsin, 1984.
Alan S. Yayesaki, 2005, Adjunct Professor, BS, University of California, Davis, 1977; PharmD, University of the Pacific, 1980.


Chester Yee, 2005, Adjunct Professor, BS, Idaho State University, 1961; BS Pharm, 1962.

Christy J. Yee, 2005, Adjunct Professor, BS, University of California, San Diego, 1996; PharmD, University of California, San Francisco, 2001.


Fred Yee, 1987, Adjunct Professor, BS, California State University, Sacramento, 1978; BS University of the Pacific, 1981.

Helen S. Yee, 1995, Adjunct Professor, PharmD, University of California, San Francisco, 1993.

William P. Yee, 1986, Adjunct Professor, PharmD, University of the Pacific, 1983.

Johnathan Yeh, 2009, Adjunct Faculty, PharmD, University of Southern California, 2007.

Katherine A. Yep, 2009, Adjunct Faculty, PharmD, University of the Pacific, 2005.

Franklin Yip, 1995, Adjunct Professor, BA, University of California, Berkeley, 1988; PharmD, University of the Pacific, 1991.

Goldie Yip, 1999, Adjunct Professor, PharmD, University of the Pacific, 1990.

Ok Hee Yoon, 2009, Adjunct Faculty, PharmD, Hyo-sung Women’s University, 1973.

Alison Yoshida, 2000, Adjunct Professor, PharmD, University of the Pacific, 1997.

Terrence Young, 2007, Adjunct Professor, BS, University of Southern California, 1973; PharmD, University of the Pacific, 1976.

Feng Yu, 2009, Adjunct Faculty, PharmD, Janssen Pharmaceutica Research Foundation, Belgium, 1996.

John R. Yuen, 2001, Adjunct Professor, BA, University of Southern California, 1984; PharmD, University of Southern California, 1988.

Robert C. Zehnder, 2000, Adjunct Professor, BS, California Polytechnic University, San Luis Obispo, 1983; PharmD, University of California, San Francisco, 1989.

Larry A. Zelman, 1985, Adjunct Professor, PharmD, University of Southern California, 1983.

Winnie Zing, 2005, Adjunct Professor, PharmD, University of California, San Francisco, 1988.
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 through the office of Graduate Studies. 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 their professional competence.

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.

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, pharmaceutics, 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 PhD 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 PharmD/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 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 schools (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 offers master’s, educational specialist, and/or doctoral degree programs, including relevant state credentials 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 Eberhardt 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 EberhardtMBA 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 MBA Program has a curriculum that includes leadership, innovation, communications and teamwork as learning objectives. The Eberhardt 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 or doctoral preparation in behavior analysis, behavioral psychology, or related fields. 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 practice is 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 life-long 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 (D.P.T.) 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.
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 who 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, and 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, preclinical, 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 degree of 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:

- Prepare oral healthcare providers for scientifically based practice
- Define new standards for education
- Provide patient-centered care
- Discover and disseminate knowledge
- Actualize individual potential
- Develop and promote policies addressing the needs of society

These core values characterize the School of Dentistry and define its distinctive identity:

- Humanism: dignity, integrity, and responsibility
- Innovation: willingness to take calculated risks
- Leadership: modeling, inspiring, and mobilizing
- Reflection: using facts and outcomes for continuous improvement
- Stewardship: responsible use and management of resources
- Collaboration: partnering for the common good
- Philanthropy: investing time, talent and assets

**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 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. Integrated 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 clinical problems in 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, endododontics, 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 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 advisor. Pre-dental advisors 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

<table>
<thead>
<tr>
<th>Semesters</th>
<th>Biological Sciences with laboratory*</th>
<th>General Physics with laboratory</th>
<th>Inorganic Chemistry with laboratory</th>
<th>Organic Chemistry</th>
<th>English Composition, Communication or Speech**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
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</tr>
</tbody>
</table>

* 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 advisor, 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 24 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.

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. 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 2005. 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.

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**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 DDS 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 650.
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 BA or BS Degree and a DDS 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 650.
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 BA or BS Degree and a DDS 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 advisor. 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 ADSAS 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 advisor.

**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 which include treatment for children, adolescents, and multidisciplinary (integrated with periodontal and restorative procedures) patients. Adult patients constitute about one fourth of a student’s caseload. Each resident starts approximately 45 to 55 new patients and 90 transfer patients during their training. Residents are also rotated through facial pain clinic and the Kaiser Craniofacial Panel. All residents participate in a 10 to 14 day mission out of the USA 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 several 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’s admission process 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) program 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 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 noratized 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 Part I of the National Dental Board Examination 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 three 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 noratized copy received by the Dental School must bear the original notary stamp. Copies of a noratized 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 Part I 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 and dental hygiene students. In Union City, residents are directly involved in the clinical education of dental and dental hygiene students. In Union City, residents are directly involved in the clinical education of dental and dental hygiene students, which gives 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 AEGD program offers the opportunity to gain more in-depth training in an optional accredited second 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 the school’s New Year’s break and 10 days discretionary 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**

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 (eight semesters including summer sessions) 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 oral 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

**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.

**Admission Requirements**

Admission to the Dental Hygiene Program is competitive and 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.

**The Study of Dental Hygiene**

Dental hygiene is a professional program where students learn to provide preventive 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 students build the educational, communication, 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.
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 advisor. Additional letters of evaluation from health care professionals are recommended.

Dental Experience: Job shadowing, employment or dental office observation are expected so that the applicant is familiar with the role of the practicing dental hygienist.

Extracurricular activities: Other factors considered (but not required) in selecting the class include: 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 (2 semesters or 3 quarters) must articulate to Pacific BIOL 051/061
- General Chemistry and lab (2 semesters 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 035 or 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 053
- 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 or another II–B

**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 which occurs in the first month of the program. 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.

In the first half of the program, prerequisite general education courses are presented to provide a strong science background, and a broad base in the humanities designed to strengthen 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 Dental Hygiene Program on the Stockton campus.

Dental Hygiene Licensure

Completion of the program enables graduates to take national and regional or state licensure examinations. For California examination information contact: Dental Hygiene Committee of California 2005 Evergreen Street., Suite 1050 Sacramento, CA 95815, http://www.dhcc.ca.gov/ (916) 263-1978.

Degree Requirements

General Education Curriculum

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<th>First Semester</th>
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<td>English 025 (Intro)</td>
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<td>Psychology 031 - Intro</td>
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<td>Pacific Seminar 1</td>
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<th>Second Semester</th>
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<tr>
<td>Chemistry 025</td>
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<td>Sociology 051 (Intro)</td>
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<td>Pacific Seminar 2</td>
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<th>Third Semester Summer Session</th>
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<td>Chemistry 027</td>
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<td>Elective</td>
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<td>Mathematics 037 - Statistics</td>
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<td>Organic Chemistry Chem 033 - without lab</td>
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<th>Fourth Semester</th>
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<td>General Education:</td>
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<td>Communications 027 (Public Speaking)</td>
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<td>Biology 145 - Microbiology</td>
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<tr>
<td>Biology 111 - Anatomy and Physiology</td>
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Total Units: 63 units

Dental Hygiene Curriculum

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<thead>
<tr>
<th>Fifth Semester</th>
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<tr>
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<tr>
<td>Dental Anatomy</td>
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<tr>
<td>Oral Radiology</td>
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<td>Pre-Clinical Dental Hygiene</td>
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<td>Oral Health Education</td>
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<th>Sixth Semester</th>
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<td>Pharmacology</td>
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<td>Dental Hygiene Clinic I</td>
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<td>General &amp; Oral Pathology</td>
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<td>Biochemistry and Nutrition</td>
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<td>Community Oral Health and Research</td>
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<td>Periodontics II</td>
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<tr>
<td>Dental Materials</td>
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<tr>
<td>Dental Hygiene Clinic III</td>
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<td>Ethics &amp; Jurisprudence</td>
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<tr>
<td>Senior Project</td>
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</tbody>
</table>

Total: 65 units
Major Total: 128 units

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 the information presented concurrently in DHYG 115. Students practice infection control, vital signs, oral cancer examination, instrumentation and other clinical skills using manikins and student partners.

DHYG 118. Oral Radiology Lab (1)
Clinical applications of the concepts delivered in DHYG 113 take place during the laboratory experience and include: radiographic exposure technique, film processing, preparing and interpreting film and digital radiographs, and correcting of technical errors.

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 effects, methods of administration, dosage, contraindications and side effects of these agents.

DHYG 122. Oral Pathology (2)
Study of etiology, pathogenesis, clinical and histogenic features of oral diseases. Recognition of basic tissue reaction and lesions that occur in the mouth, jaws, and neck and 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.

DHYG 124. Local Anesthesia/Pain Management (2)
Comprehensive information and skills for providing comfortable dental treatment. Local anesthesia and nitrous oxide-oxygen administration are explained and practiced.

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, rationale 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 application, 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 patient assessment, treatment planning, patient communication, full mouth scaling, 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 and professionalism. 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 dental hygiene practice to explore in depth.
DHYG 145/146. Dental Hygiene Clinic III

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.

Andrea Dickey
Clinical Instructor, Department of Periodontology, AS, Sacramento City College, BS, Loma Linda University, 2007.

Vicki Dodge
Assistant Professor Department of Periodontology AS, Fresno City College, BS, Northern Arizona University, 1976.

Cathleen Dornbush
Clinical Instructor, Department of Periodontology, BS, University of Southern California, 1979 RDHAP, University of the Pacific, 2004.

Elena Francisco
Clinical Instructor, Department of Periodontology, BS, Loma Linda University, 1976, RDHAP, University of the Pacific, 2005.

June Harelson
Clinical Instructor, Department of Periodontology, AA, Diablo Valley College, BS, Northern Arizona University, 2006, MS, University of Tennessee, 2009, RDHAP, University of the Pacific, 2005.

Lisa A. Harpenau

Cezanne Hogan
Clinical Instructor, Department of Periodontology, BS University of Southern California, 2000.

Deborah Horlak
Associate 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 Periodontology, BS, University of the Pacific 2006.

William P. Lundergan

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 Periodontology, BS, University of the Pacific 2006.

Paula Watson
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 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 students for computerized legal research, Internet search, word processing and e-mail.

The law school’s Center for Advocacy & 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 through your account at www.lsac.org;
2. Law School Admission Test results;
3. JD Credential Assembly Service (CAS) 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 March 15 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 View book with application forms, write to:
Admissions Office
University of the Pacific
McGeorge School of Law
3200 Fifth Avenue
Sacramento, CA 95817
admissionsmcgeorge@pacific.edu
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./MBA (Master of Business Administration) through the University's Eberhardt School of Business or through CSU Sacramento's School of Business. A J.D./MPA (Master of Public Policy and Administration) is also available in cooperation with CSUS. Students interested in a joint degree program not available, such as history, international relations or social work may consult with an academic dean to determine if any credit for law school coursework would be accepted by the Master's program. Upon approval of a written proposal, up to 6 units of credit may be accepted toward the J.D. 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 helps 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 50th percentile range. Further information is available from the Dean of Admissions or the Pre-Law Advisor on the Stockton campus and the Office of Admissions at 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,” also known as “Greensheets” 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 and moot court teams compete with other law schools in regional, national and international competitions. In 2010, Pacific McGeorge held its 5th Annual National Ethics Mock Trial Competition, which featured some of the finest mock trial teams from across the country.

Special Curricular Programs

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.

Capital Certificate In Public Law & Policy

A unique curriculum leads to a Capital Certificate in Public Law & Policy 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.

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.

Business Law Concentration

The new Business Law Concentration is for students who want to pursue a general business law practice, or for those who want to pursue a specialized law practice in entertainment law, employment law, banking law, real estate law, or myriad other kinds of business law.

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.

Environmental Law

Environmental law lies at the intersection of environmental responsibility and society’s use of and impact on the natural world. Local, national and international laws govern myriad aspects of environmental law and vary from an
Field Placement Program

The mission of the Pacific McGeorge Field Placement Program is to prepare future members of the legal profession for responsible service in the many roles that lawyers perform. Field placements provide eligible students with academic credit for real-world experience performing supervised legal work at more than 100 approved government agencies, courts, or non-profit entities in practice areas including administrative law, business and tax law, criminal justice, environmental law, general civil law, government practice, health law, legislative process and public interest. Additionally, qualified students may gain practical experience through Field Placement Full-Time Semester opportunities such as Judicial Externships with Federal Judges, the California Supreme Court and Court of Appeal Justices, or at approved courts or government agencies in Washington D.C. or overseas.

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, Guatemala 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 also 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 2011–2012 Course Catalogue or online at www.mcgeorge.edu.
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. Adult students completing this program earn a bachelor of science degree with a major in organizational behavior. The major is offered in an intensified lock-step, cohort format designed for students who have already earned between 60 and 70 college semester units. The evening class schedule 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 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.

This program is not open to current Pacific students and requires an interview of each applicant. There is a special reduced tuition for this program. 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.

Degree Requirements
The bachelor of science degree requires 124 units of credit, including completion of the academic major, the University General Education Program and elective units, as well as writing, reading, quantitative skills proficiency requirements and the University diversity requirement. 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 maximum of 20 units may be earned through a combination of concurrent enrollment in classes at other colleges and universities while enrolled at Pacific (maximum transfer unit policy applies), including transferable online and extension courses from other regionally accredited colleges and universities, and military courses evaluated by the American Council on Education. 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.
Bachelor Of Science
Major In Organizational Behavior

In order to earn the bachelor of science degree with a major in organizational behavior, 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

Pacific Seminar 3 required of all transfer students is met by ORGB 178, Introduction to Ethical Theories within the major.

Minimum 30 units and 9 courses, including 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
IAA. Language and Literature
IAB. Worldviews and Ethics
IAC. Visual and Performing Arts

Natural Sciences and Mathematics
IIA. Natural Sciences
IIB. 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 2 courses from a single discipline may be applied to meet the requirements of the general education program.

II. Diversity Requirement

Complete one diversity course

Note: 1) A complete list of the courses that satisfy the requirement above can be found in the front Diversity Requirement section of this catalog and the online course search. 2) Courses may be used also to meet general education and/or major/minor requirements.

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. Major Requirements: 54 units

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tr>
<td>ORGB 100</td>
<td>Introduction to Organizational Behavior</td>
<td>3</td>
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<tr>
<td>COMP 023</td>
<td>Computer Concepts and Applications</td>
<td>3</td>
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<tr>
<td>ECON 051</td>
<td>Economic Principles and Problems</td>
<td>3</td>
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<td>ORGB 105</td>
<td>Organizational Social Psychology</td>
<td>3</td>
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<td>ORGB 109</td>
<td>Organizational and Managerial Development</td>
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<td>ORGB 110</td>
<td>Accounting and Financial Statement Analysis</td>
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<tr>
<td>ORGB 120</td>
<td>Semantics and Critical Thinking for Adults</td>
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<td>ORGB 130</td>
<td>Professional Communication</td>
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<tr>
<td>ORGB 135</td>
<td>Public Relations: Principles and Marketing</td>
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<td>ORGB 145</td>
<td>Issues in Human Resource Management</td>
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<td>ORGB 149</td>
<td>Introduction to Organizational Communication</td>
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<td>ORGB 150</td>
<td>Advanced Professional Writing</td>
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<td>ORGB 155</td>
<td>Issues in Decision Making</td>
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<td>ORGB 175</td>
<td>Research Methods Quantitative and Qualitative</td>
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<td>ORGB 176</td>
<td>Applied Research</td>
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<td>ORGB 177</td>
<td>Organizational Structure, Design and Analysis</td>
<td>6</td>
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<tr>
<td>ORGB 178</td>
<td>Introduction to Ethical Theories (Pacific Seminar 3 requirement)</td>
<td>3</td>
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</table>

Course Offerings

ORGB 100. Introduction to Organizational Behavior (3)
This course is an introduction to the Organizational Behavior major taught in the intensified eight-week format. It is a team-taught course with faculty from Sociology, the Library and the Center for Professional and Continuing Education. The aim of the course is to acquaint students with topics, research and issues typical of the field and to acquaint them with the skills and learning resources needed to complete the program. It includes an introduction to the contemporary library and the concepts of the research process including the use of databases essential for social science research.

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 communication. Students explore graphical design concepts with Web pages and PowerPoint presentations.

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. The ultimate goal of the course is to provide students with the knowledge and analytical capability to form independent and intelligent opinions on any economic issues, questions, or problems making them more effective citizen leaders.

ORGB 105. Organizational Social Psychology (3)
A sociological study of the way in which the structure of organizations impinge upon the lives of individuals. Special attention will be given to the structural determinants of motivation, opportunity, power and participation within organizations. Organizational culture (roles and images), the processes of organizational change and the recent efforts to improve the quality of work life and productivity in organizations will be examined.

ORGB 109. Organizational and Managerial Development (3)
This course in organizational behavior encompasses the study of individual and group behavior in organizational settings. Managing organizational behavior challenges individuals to understand and embrace workforce diversity, elements of change, effective communication, and performance systems. A comprehensive review of these processes, as well as others, will allow students to examine their role in organizations.

ORGB 110. Accounting and Financial Statement Analysis (3)
This course addresses the accounting process of recording, summarizing, analyzing and interpreting financial information. Students will learn how financial statements are prepared and how they assist in the financial decision making process. Emphasis will be placed on financial statement analysis.

ORGB 120. Semantics and Critical Thinking for Adults (3)
This course is intended to help students become more expert at making solid arguments and identifying weaknesses in one’s own as well as arguments of others. Students will learn to formulate a claim clearly and precisely, identify assumptions, evaluate the breadth of a claim, explain the logic of an argument and identify logical assumptions and evaluate the significance of a claim for others.
ORGB 130. Professional Communication (3)
This course is designed to help students become more effective communicators in professional and business settings. It covers the skills necessary for communication in the work environment and modern society.

ORGB 135. Public Relations: Principles and Marketing (3)
The objective of this course is to increase understanding of the Public Relations field emphasizing marketing theory and practice, functions in organizations and PR’s role in society.

ORGB 145. Issues in Human Resource Management (3)
This course explores the issues and challenges facing the human resource area in any organization emphasizing the challenge of attracting and retaining qualified, competent employees. Organizational change and its impact on employee motivation and performance will be addressed.

ORGB 149. Introduction to Organizational Communication (3)
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.

ORGB 150. Advanced Professional Writing (3)
Would you like to be able to produce clear, concise and persuasive documents? This course will help you do that. Success with any professional writing task depends on your ability to identify your audience, understand their needs and plan how to meet those needs effectively. This course will also cover proofreading and revising while covering the most commonly used forms in professional writing such as letters, memos and proposals.

ORGB 155. Issues in Decision Making (3)
This course provides a study of decision-making theory applied to individuals and organizations. The course provides a comprehensive theory of how people cope with decisional conflicts concerning management of organizations, career choice, marriage and a variety of other significant choices.

ORGB 175. Research Methods: Quantitative and Qualitative (3)
The objective of this course is to introduce students to fundamentals of communication research, with special emphasis on understanding the “logic” of the research process. Students will develop skills in research design, data collection and analysis, and in applying quantitative and qualitative research methods to solving problems. This course will also emphasize student understanding of the role of ethics in communication research.

ORGB 176. Applied Research (3)
The purpose of this course is to help the student synthesize and integrate the learning experiences acquired in organizational behavior studies and evaluate the research and current topics relative to major emphasis areas. Students are expected to do a literature review, analyze data, write empirical reports, conduct training and workshops, and present research results.

ORGB 177. Organizational Structure, Design and Analysis (6)
This course will explore the organizational structure of human societies and the influence of organizations on individuals and groups. Analysis of the form and structure of formal organizations and the relationship between organizations, social class and social institutions in contemporary society will be emphasized. Case studies of private, public and non-profit organizations will be included.

ORGB 178. Introduction to Ethical Theories (Pacific Seminar 3) (3)
This course will provide students the opportunity to become familiar with how they and others think about moral issues and make moral choices. There will be a dual emphasis on the analysis of personal moral development and the role of ethics in organizations.

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. The Center assists interested persons in determining if they qualify for admission 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. 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.

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 Sessions at Pacific offers special opportunities for adult learners with early morning, daytime and early evening classes at a reduced tuition as well as online courses. Because the summer contains three separate sessions, students may complete the equivalent of 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 the academic department.) Courses are offered both on campus and online.

Summer Sessions

The University offers varied summer programs that allow 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 University courses without being admitted as regular students. Summer Sessions courses are divided among three five-week sessions immediately following the end of spring semester. Special programs of varying lengths of time and online courses are available. Students may register 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 to download the Summer Sessions’ catalog.

Commencement Office

The Center for Professional and Continuing Education houses the official commencement office for the university. For additional information, please call (209) 946-2666 or visit www.pacific.edu/commencement.

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 (in-seat or online), Social Entrepreneurship (online) and Supervision. 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

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Assistant Dean .......................................................David M. Chase
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Associate Dean, Graduate Programs ........................Cynthia Eakin
Dean, Gladys L. Benerd School of Education ..................Lynn G. Beck
Assistant Dean .......................................................Dennis Brennan
Dean, School of Engineering and Computer Science ..........Ravi K. Jain
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Dean, Thomas J. Long School of Pharmacy and Health Sciences .........................................Phillip Oppenheimer
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Assistant Dean, Administration and Resource Management: Robert D. Murta
Assistant Dean, Advancement, External Relations and Career Development: Charlene Mattison
Assistant Dean, Career and Professional Development: David Mattison
Assistant Dean, Library and Research Services: Matthew Downs
Assistant Dean, Student Affairs: Mary McGuire

Dean, Arthur A. Dugoni School of Dentistry: Patrick J. Ferrillo, Jr.
Dean Emeritus: Arthur A. Dugoni
Executive Associate Dean: Craig S. Yarborough
Executive Associate Dean, Academic Affairs: Nader Nadershahi
Associate Dean, Administration: Eddie K. Hayashida
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Associate Dean, Fiscal Services: Audrey Goodell
Associate Dean, Student Services and Director of Admission: Kathy Candito
Assistant Dean, International Programs and Alumni Affairs: David B. Nielsen

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Assistant Vice President, Budget and Risk Management: Marcus Perrot
Assistant Vice President, Human Resources: Jane Lewis
Director, Internal Audit: Winnie Ravinlus
Director, Support Services: Scott Heaton
Bursar: Suzanne Calderone
University Payroll Manager: Tara Juan
Bookstore Manager: Nicole Castillo
Purchasing Manager: Ronda Marr
PacificCard Manager (Interim): Matt Camino

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Executive Director, Pacific Alumni Association: Bill Coen
Director of Intercollegiate Athletics: Lynn King
Director of Special Events: Steve Whyte
Director of Economic Development and Community Relations: Mark Plovnick
Special Assistant to the Vice President: Judith Chambers

Office of Vice President for University Development

Vice President for University Development: Christopher Johnston
Associate Vice President for Development: Janet Dial
Assistant Vice President of Advancement Services, Budget and Strategic Talent Management: Cathy Dodson
Associate Vice President of Leadership Initiatives and Campaign Planning: Jean Purnell
Assistant Vice President of Principal Gifts, Donor Relations and Stewardship: Kathy Ruvolo

Office of Vice President for Student Life

Vice President for Student Life: Elizabeth Griego
Dean of Students: Joanna Royce-Davis
Associate VP for Residential Living and Dean of Students: Joanna Royce-Davis
Vice President for University Development: Christopher Johnston
Assistant Dean of Students: Peggy Rosson
University Multifaith Chaplain: Vacant
Executive Director, Educational Equity Programs: Anita Bautista
Executive Director, University Center and Student Activities: Jason Velo
Director, Assessment and Student Development Services: Sandy Mahoney
Director, Career Resource Center: Diane Farrell
Director, Center for Community Involvement: Erin Rausch
Director, Center for Social & Emotional Competence: Craig Seal
Director, Community Involvement Program: Pov Chin
Director, Counseling Services: Stacie Turks
Director, Health Services: Vacant
Director, Judicial Affairs and Outreach Services: Beth McManis
Director, Multicultural Affairs: Heather Dunn-Carlton
Director, New Student and Family Programs: Serbia Acevedo
Director, Residential and Greek Life: Vacant
Director, Pacific Recreation & MOVE Program: Wendy Stratton
Intercollegiate Athletics Coaches and Administrators


Ray Batalon, 2009, Associate Head Women’s Volleyball Coach, B.G.S, University of Nevada.


Keith Coleman, 1994, Head Women’s Soccer Coach, B.S., California Polytechnic State University, San Luis Obispo, 1991.


Christine Hammerberg, 2006, Athletic Business Manager.


Davin Johnson, 2010, Assistant Women’s Basketball Coach, Grand Canyon University.


Christopher Ludwig, 2007, Lecturer/Athletic Training Education Program Clinical Coordinator, B.S., California State University Fresno, 2002; M.S., California State University Fullerton, 2007.


Dan McCabe, 2008, Ticket Operations Manager.


Christopher Pond, 1990, Director of Athletic Training, B.S., Utah State University, 1988; M.S., University of Arizona, 1990.


Julie Wendland, 1989, PTIA Accounts Manager.


Library Faculty

C. Brigid Welch, 2008, Dean of the University Library, Professor, BA, Arizona State University, 1977; MLS, University of Texas at Austin, 1979.

Emily Chan, 2008, Assistant Professor, Sciences Librarian, BA, Grinnell College, 2000; MLS, San Jose State University, 2007.

Mary Carmen Chimato, 2010, Assistant Dean of the University Library, BA, Stony Brook University, 1999; MLS, MSIS, Drexel University, 2002.

A. Craig Hawbaker, 1991, Professor, Reference Librarian, BS, Drake University, 1973; MLS, Western Michigan University, 1975.
Emeritus Faculty/Staff

Glen A. Albaugh, 1971, Professor of Sport Sciences, Emeritus, 1999.


David F. Besch, 1985, Assistant Professor of Electrical and Computer Engineering, Emeritus, 2002.


Kishori Chauhal, 1972, Associate Professor of Biological Sciences, Emerita, 1999.


Donald DaGrade, 1970, Professor of Bassoon and Saxophone, Emeritus, 2007.

Marnie Darlington, 1992, Associate Professor of Sociology, Emerita, 2005.


Alberto Eraso, 1964, Associate Professor of Modern Language and Literature, Emeritus, 1990.


Lee C. Fennell, 1966, Professor of Political Science, Associate Provost and University Registrar, Emeritus, 1999.


Dale Fjestad, 1974, Associate Professor of Trumpet, Emeritus, 1986.

Barbara Flaherty, 1988, Associate Professor of Art, Emerita, 2010.


Alex T. Granik, 1982, Associate Professor of Physics, Emeritus, 2005.


Halvor P. Hanson, 1959, Professor of Communication, Emeritus, 1990.


Bruce LaBrack, 1975, Professor of Anthropology, Emeritus, 2008.


Dale W. McNeal, 1969, Professor of Biological Sciences, Emeritus, 2002.


Richard L. Perry, 1961, Professor of Physics, Emeritus, 1997.

Sandra L. Persels, 1976, Professor of Drama, Emerita, 1996.


Larry L. Pippin, 1965, Professor of Political Science and Geography, Emeritus, 1994.


Claude D. Rohwer, 1964, Professor of Law, Emeritus, 2005.


Barbara Sayles, 1962, Associate Professor of Modern Language and Literature, Emerita, 2002.


Glendale Scully, 1976, Professor of Law, Emerita, 2008.


Clark Shimeall, Assistant Professor of Geology, Emeritus, 1986.


Donald L. Sorby, 1984, Dean of the School of Pharmacy, Emeritus, 1995.

S. Thomas Stubbs, 1963, Associate Professor of Sport Sciences, Emeritus, 1999.


Ted T. Takaya, 1979, Professor of Modern Language and Literature, Emeritus, 1996.
Paul A. Tatsch, 1980, Associate Professor of Business, Emeritus, 2005.


B. Jan Timmons, 1971, Assistant Dean of the College of the Pacific and Professor of Communication, Emerita, 2000.


Patricia Wagner, 1962, Professor of Sociology, Emerita, 1981.


Harvey R. Williams, 1977, Professor of Sociology, Emeritus, 2005.


Donald H. Wollett, 1979, Professor of Law, Emeritus, 1991.

Carl E. Wulfman, 1961, Professor of Physics, Emeritus, 1996.

University of the Pacific

Campus Map
2011 Fall Semester
(All Schools and Colleges except Pharmacy)

Orientation and Registration
Session 1 (Freshmen) ................................................. June 21 – 22
Session 2 (Freshmen) ................................................. June 24 – 25
Payment Deadline for Fall 2011 ............................................. August 1
Transfer Student Orientation .............................................. August 21 – 22
International Student Orientation ....................................... August 22
Session 3 (Freshmen) ....................................................... August 23 – 24
New Graduate Teaching/Research Assistants Orientation ........ August 24
Graduate Student Orientation ............................................. August 25
Classes Begin ............................................................... August 29
Registration re-opens ...................................................... August 29
Labor Day Holiday ......................................................... September 5
Last Day to Add Classes .................................................. September 8
Last Day for Pass/No Credit or Letter Grade Option .......... September 9
Last day to drop classes without record of enrollment .......... September 9
Spring ’12 Schedule of Classes available Online ....................... October 3
Fall Student Break ......................................................... October 7
Advising for Spring ’12 Registration for continuing students ...... October 10 – 28
Fall Festival (Parent and Family Weekend) ......................... October 14 – 16
Last Day for Pro-Rated Refund ............................................. October 19
Early Registration Appointment begin date for continuing students Spring ’12 .................. October 24
Early Registration/continuing undergraduate students Spring ’12 .................................. October 24 – December 23
Early Registration/continuing graduate students Spring ’12 .................................. October 24 – January 20
Last day to Withdraw ....................................................... October 28
Thanksgiving Break ......................................................... November 23 – 25
Classes Resume ............................................................. November 28
Classes End ................................................................. December 9
Final Examination Period ................................................. December 12 – 16

2012 Spring Semester
(All Schools and Colleges except Pharmacy)

Payment Deadline for Spring 2012 ............................................. January 1
International Student Orientation ............................................. January 4
Graduate Student Orientation ................................................. January 5
New Student/Transfer Orientation and Registration .......... January 5 – 6
Classes Begin ............................................................... January 9
Registration re-opens ...................................................... January 9
Martin Luther King Jr. Holiday ............................................. January 16
Last Day to Add Classes** .............................................. January 20
Last Day for Pass/No Credit or Letter Grade Option** .......... January 20
Last day to drop classes without record of enrollment ........ January 20
President’s Day ............................................................. February 20
Spring Break ................................................................. March 2
Classes resume ............................................................. March 12
Advising for Fall ’12 for continuing students* ......................... March 12 – 30
Early Registration Appointment begin date for continuing students Fall ’12 .................. March 26
Early Registration/continuing undergraduate students for Fall ’12 .................................. March 26 – May 18
Early Registration/continuing graduate students Fall ’12 .................................. March 26 – September 7
Last day to withdraw ..................................................... March 30
Deadline for Application for Fall ’12, Spring ’13, Summer ’13 graduation .......... April 5
Pacific Day ................................................................. April 13
Classes End ................................................................. April 25
Study Day ................................................................. April 26
Final Examination Period ................................................. April 27 – May 3
Commencement ............................................................ May 5

*Limited to currently enrolled students.
**Advisers should arrange to be available on this day.

School of Pharmacy and Health Sciences

2011 Fall Term
Early Registration Fall ’11 – Incoming 1st year students .................... July 5 – 11
Early Registration Fall ’11 – Incoming graduate students .................... July 5 – September 9
Payment deadline for Fall 2011 ................................................. August 1
Advanced Pharmacy Practice Experiences .................................. August 15 – December 16
Orientation ................................................................. August 25 & 26
Classes Begin ............................................................... August 29
Registration, re-opens ...................................................... August 29
Labor Day Holiday ......................................................... September 5
Last Day to Add Classes .................................................... September 9
Last Day to Drop Classes without record of enrollment ........ September 9
Last Day for Pro-rated refund ................................................. October 4
Midterm Exams ............................................................. October 10 – 14
Fall Festival (Parent and Family Weekend) ................................... October 14 – 16
Advising for Winter 2012 ..................................................... October 17 – 21
Early Registration for Winter 2012 .......................................... October 24 – 26
Last Day to Withdraw ....................................................... October 28
Thanksgiving Break ......................................................... November 23 – 25
Classes End ................................................................. December 2
Final Examination Period ................................................. December 5 – 9

2012 Winter Term
Payment deadline for Winter 2012 ................................................. December 1
Classes Begin ............................................................... January 3
Registration re-opens ...................................................... January 3
Advanced Pharmacy Practice Experiences .................................. January 9 – May 11
Last Day to Add Classes ..................................................... January 13
Last Day to Drop Classes without record of enrollment ........ January 13
Martin Luther King Jr. Holiday ............................................. January 16
Midterm Exams ............................................................. February 13 – 17
President’s Day holiday ..................................................... February 20
Last Day for Pro-Rated Refund ................................................. February 21
Advising for Spring ’12 ...................................................... February 27 – March 2
Early Registration for Spring ’12 ............................................. March 3 – 7
Last day to withdraw ....................................................... March 9
Classes End ................................................................. April 4
Deadline for Application for Fall 2012/Spring 2013/ Summer 2013 graduation ............... April 5
Final Examination Period ................................................. April 6 – 12
Spring Break Semester ..................................................... April 13 – 20

2012 Spring Term
Payment deadline for Spring 2012 ................................................. April 1
Classes Begin ............................................................... April 23
Registration re-opens ...................................................... April 23
Last Day to Add Classes ..................................................... May 4
Last Day to Drop Classes without record of enrollment ........ May 4
Advising for Fall ’12 ......................................................... May 4 – 16
Commencement ............................................................. May 18 – 20
Early Registration for Fall ’12 .................................................. May 22 – 23
Memorial Day Holiday ..................................................... May 28
Midterm Exams ............................................................. June 4 – 8
Last Day for Pro-Rated Refund ................................................. June 12
Last day to withdraw ....................................................... June 29
Fourth of July holiday observed ............................................ July 4
Early registration Fall ’12 – Incoming 1st year students .................... July 9 – 13
Early registration Fall ’12 – Incoming graduate students July 9 – September 7
Classes End ................................................................. July 24
Final Examination Period ................................................. July 26 – 27, 30 – 31, August 1

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