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
The Thomas J. Long School of Pharmacy and Health Sciences
Arthur A. Dugoni School of Dentistry
Pacific McGeorge School of Law
Office of Research and Graduate Studies
Center for Professional and Continuing Education
The goals of graduate education at Pacific are threefold: to excite and discipline the intellectual curiosity of its students; to record the products of scholarship through publication; to advance knowledge in the fields of the School’s focus.

Members of the Graduate faculty are proud to be a part of a community of teacher-scholars who provide a superior, personalized educational experience. Pacific’s tradition is to mentor students to become exemplary citizens, leaders, professionals, teachers and researchers.
Accreditation
The University of the Pacific is accredited by the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges (WASC), located at 985 Atlantic Ave., Suite 100, Alameda, CA 94501; 510-748-9001.

Financial Liability
The University is not responsible for additional expenses incurred by a student if the student must discontinue academic progress and wait for the next time a course is offered.

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/ssd

Statement of Non-discrimination
The University does not discriminate on the basis of race, gender, sexual orientation, national origin, ancestry, color, religion, religious creed, age, marital status, cancer-related or genetic-related medical conditions, disability, citizenship status, military service status, and any other status protected by law.

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

This notice is given pursuant to the requirements of Title IX of the Educational Amendments of 1972, Title VII of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973 and amendments and other laws, orders and regulations governing discrimination. The University of the Pacific has designated the Director of Human Resources to coordinate the University's efforts to comply with laws, orders and regulations governing discrimination. Any person having a complaint should contact in writing: The Director of Human Resources, University of the Pacific, 3601 Pacific Avenue, Stockton, CA 95211.

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

All catalog information is subject to change without notice or obligation.
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. Elbeck 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 Cowell 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 Vereschagin 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’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.
Unique and Distinctive Programs

A division of the University of the Pacific offering graduate programs emphasizing distinctive forms of creative scholarship, while training students in the principles and methods of research and developing their professional competence.

The goal of graduate education at the University is threefold: to excite and discipline the intellectual capacities of its students, to record and publish the products of intellectual inquiry, and to advance knowledge. To achieve this goal, the Graduate School encourages faculty to work closely with advanced students to create an environment congenial to advanced academic and professional study and to further scholarship and research.

Available through the School of Dentistry is a graduate program in orthodontics leading to a certificate and the Master of Science in Dentistry; a graduate program in oral and maxillofacial surgery leading to a certificate; an International Dental Studies program, and through McGeorge School of Law a Juris Doctor degree in a full-time or part-time program, and Master of Laws (LL.M. and J.S.D.) degrees in Government and Public Policy, Transnational Business Practice, Advocacy Practice and Teaching and International Water Resources.

Students interested in these programs should apply directly 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 professional competence, by limiting the number of students enrolled in order to allow them to work more directly with faculty members. Many degree programs are small, and in place of seminar experience students work relatively independently under close supervision of the faculty.

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 and 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 Educational/School Psychology.
Credential Programs
The graduate program in education prepares candidates for credentials for public schools. Preparation programs exist in the following areas: elementary and secondary teaching, pupil personnel services for school psychology, administrative services (school administration), and specialist programs in Special Education.

Pharmaceutical & Chemical Sciences
Interdisciplinary programs in the Thomas J. Long School of Pharmacy and Health Sciences and the College of the Pacific 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.

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 in teaching. Graduate study in molecular and cellular biology, physiology, microbiology, ecology, paleontology and plant and animal systematics provides a good background for advanced study at the PhD level, for entry into professional school (dentistry, pharmacy, medicine), education, or industry. Some biology graduate students also participate in research at the Thomas J. Long School of Pharmacy and Health Sciences.

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 Eberhardt MBA provides significant opportunities to gain experience through internships and experiential course work in a variety of settings. For the more experienced working professional, it provides a broadening of functional knowledge into all areas of management, and the development of skills necessary for senior management and executive positions.

The Eberhardt MBA Program has a curriculum that includes leadership, innovation, communication 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 Eberhardt 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.

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.

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 Gladys L. Benerd School of Education. Some full- and part-time scholarship assistance is available for students who wish to study at the master’s level.

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 practica are performed in the on-campus Speech, Hearing and Language Center as well as at off-campus sites. Options for employment include schools, hospitals and rehabilitative centers. Close student-faculty interaction encourages students to realize their potential in rehabilitative skills.

Music Therapy and Music Education
In the Conservatory of Music, some students are being prepared to enter college teaching or music education in public or private schools and others study music therapy. Music education students have the opportunity to become involved in a carefully developed micro-rehearsal program.

In music education, students already credentialed as music teachers have a wide variety of electives available, in addition to the core courses in research, current topics, music history, and music theory/composition. Electives include advanced conducting, pedagogy, advanced study on instruments or voice, and specialized ensembles such as jazz, wind ensemble, orchestra, choir, opera, or chamber music. There is a thesis option. Students may pursue advanced pedagogical and conducting skills through micro-rehearsal 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 Gladys L. Benedict 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 (DPT) 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 (DPT) degree requires a high level of competency in all practice parameters within the scope of physical therapy. The specific criteria for graduation and permission to sit for professional licensure are developed 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, and athletic training.

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 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.

Admissions

Applicants holding a baccalaureate or equivalent degree and interested in working toward a graduate degree or credential must complete a University of the Pacific Graduate Admission application. All applications must be complete, which includes: the application form, an essay, official transcripts from each college or university attended, three letters of recommendation, and test scores appropriate to the program. The essay must be 300 to 500 words in which applicants discuss their academic interests, objectives and plans for graduate study.

Physical Therapy applicants must visit [link] for instructions to apply online using the Physical Therapy Centralized Application Service (PTCAS). The PTCAS application, University of the Pacific Supplemental Application for course information, and all required materials must be received by November 1. Most personal interviews are conducted in January and early February. Speech Language Pathology applicants must also visit [link] for instructions to apply online using the Speech Language Pathology’s Centralized Application Service (CSDCAS). The CSDCAS application, University of the Pacific Supplemental Application, and all required materials must be received by January 15.

Intercultural Relations applicants must complete a form that has questions specific to that program in place of an essay. Master of Business Administration requires a MBA-specific application. The Psychology Department requires an additional application specific to the Psychology program.

For transcripts to be considered official, they must be in an envelope that has been sealed by the school. The three letters of recommendation must be on the Graduate recommendation form and written within the last year. College instructors who know the applicant’s capacity for graduate work should complete at least a recommendation form and a letter. For information on required tests, see the “Test Information” in this section. See the application for further details.

Applications received complete (including submission of test scores) will be given priority. Incomplete applications and applications received after the deadline will be on a space available basis. Students are not permitted to register as classified students until they have confirmed their acceptance of admission with the Office of Graduate Studies and provide Graduate Studies with final official transcripts showing that a Bachelor’s degree has been awarded.

Applications of graduates from nonaccredited colleges or universities may be considered individually by the Committee on Graduate Studies. Qualified students who hold a bachelor’s degree and who are interested in taking a graduate course or courses, without the objective of a graduate degree, may take a course with unclassified status. This status excludes courses in professional programs.

The ability of an applicant to meet or exceed the minimum standards for admission does not guarantee admission to the program.

Returning to Pacific After Cancellation

New students:
If you cancelled your registration, have been gone from the university for one semester frp, acceptance into the graduate program and wish to attend the following semester contact the Office of Graduate Studies. If you have been out for more than one year from acceptance into the graduate program, you must submit a new Graduate 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 one or more semesters (excluding summer) and wish to attend Pacific in a future term, you must fill out a Request for Re-admission Form available in the Office of Graduate Studies. Turn in the completed form to the Office of Graduate Studies for Dean’s approval. The deadline for filing dates are August 1 for the Fall and December 1 for the Spring.

After withdrawal:
If you withdrew from the University and wish to return in a future semester, you must submit a Request for Re-admission Form available in the Office of Graduate Studies. The deadline for filing dates are August 1 for the Fall and December 1 for the Spring.

Application Fee
Each applicant must submit the appropriate application fee in U.S. dollars along with the Graduate Application for Admission. Students enrolled as undergraduate or graduate students at the University of the Pacific at the time of filing the application are exempt from paying the application fee; this does not include unclassified students. The check or money order should be made payable to “University of the Pacific,” for paper applications.

Online Applications = $50
Paper Applications = $75

Graduate Record Examination (GRE)
The GRE is required for Graduate degree program admission except for the MBA, the MA and MEd programs in Curriculum and Instruction and in Educational Administration and Leadership, Intercultural Relations programs, and Music Education or Music Therapy students with a GPA greater than 3.5. Applicants who are applying to a credential program only are not required to take the GRE. The GRE subject test in psychology is required for the PhD program in the Department of Educational and School Psychology. All GRE scores must be less than five years old. Applicants must take the GRE General Test at their own expense. The GRE General examination is conducted by the Educational Testing Service (ETS) year round and the subject examinations are given several times each year. Contact ETS at 1.800.GRE.CALL for examination dates or www.ets.org for information.

Graduate Management Examination (GMAT)
Applicants applying to the MBA program must take the GMAT examination. This examination is conducted by the Educational Testing Service (ETS) year round. For GMAT information, call the Eberhardt School of Business at 209.946.2629, or contact GMAT, ETS at PO. Box 6103, Princeton, New Jersey 08541-6103, or www.mba.com. These scores must be less than five years old.

Intercultural Development Inventory (IDI)
Applicants to the MAIR program are required to take the Intercultural Development Inventory (IDI), a questionnaire that measures intercultural sensitivity. Once the admission application is received, MAIR applicants will be sent the IDI with instructions to complete and return it to Kent Warren, Director of Graduate Programs at the Intercultural Communication Institute. For further information regarding the IDI, applicants may contact Dr. Warren via e-mail at mair@intercultural.org or by calling 503.297.4622.

International Applicants
International students who attended schools outside of the United States must submit an evaluation of academic records. Transcripts
must be reviewed by an outside evaluation agency. We recommend WES, ASCRIS or ECE services for credential evaluation. Please request a course-by-course evaluation including a grade point average (GPA) and have an official copy sent directly to the Graduate School. Your transcripts will need to be translated into English before an evaluation can be processed, please check with the evaluation service of your choice.

Each applicant whose native language is not English must submit a report of the Test of English as a Foreign Language (TOEFL) administered by the Educational Testing Service (ETS). The MAIR program requires the TOEFL only for those students who did not graduate from English-speaking institutions. Some international applicants may be required to take the Test of Spoken English (TSE). If the applicant is in this category they will be notified. Information about testing dates and places and application forms, may be obtained by writing to TOEFL, ETS, P.O. Box 6159, Princeton, New Jersey 08541-6151 or for general information, www.toefl.org.

International applicants will not be granted admission unless they can show evidence that they are able to meet education, living and travel expenses to and from the United States. Financial certification must be submitted with the application to fulfill U.S. immigration requirements.

Financial Assistance
Graduate financial assistance is available each year in many of the departments and schools where advanced degree work is offered. These awards are granted on the basis of superior qualifications in scholarship and prospective success in advanced studies. Financial assistance may be in the form of scholarship aid toward tuition, cash stipends for services performed, or a combination of both depending upon each student's need. Financial assistance is available each fall from the Office of Graduate Studies. The deadline for application is February 1, but earlier applications are encouraged. Since it is necessary for all applicants to be admitted to graduate standing before appointments are made, the admission application to enter a Graduate program must also have been completed by that date.

The Project Teach Scholarship Program, which reduces tuition by approximately one-third, is a unique Tuition Reduction Program that is available on a continuing basis only for graduate students admitted to and enrolled in credential or graduate degree programs in the Bernard School of Education. Interested candidates should contact the Dean's Office in the School. Research awards are available for departmental or contract research in some fields. From time to time, fellowships are offered in certain federally supported programs in which University of the Pacific participates.

Graduate students who are U.S. citizens or eligible noncitizens may apply for federal student loans. For information, visit www.pacific.edu/financialaid or contact the Financial Aid Office, University of the Pacific, Stockton, CA 95211, at 209.946.2421 or financialaid@pacific.edu.

Academic Regulations
All graduates 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. The University and Office of Research and Graduate Studies reserves the right to modify or change the curriculum, admission standards, course content, degree requirements, regulations, tuition or fees at any time without prior notice. The information in this catalog is not to be regarded as creating a binding contract between the student and the school.

Academic Standing
All advanced-degree students (master's or doctoral programs) are expected to make satisfactory progress toward the specific academic degree to which they were admitted. Advanced-degree students are required to maintain a cumulative minimum grade point average (GPA) of 3.0 or higher in all courses listed in their graduate program plan of study and in all courses taken as a graduate student.

Students in a credential-only program must maintain a GPA of 2.5 and have a cumulative average of 2.5 or higher to clear their credential. Students in a basic teacher education credential only program who wish to do directed teaching in an internship must maintain a 3.0 GPA.

At the end of each semester a graduate student’s academic standing will be determined to be one of the following: good standing, good standing with warning, probation, subject to disqualification (temporary status) or disqualification. The criteria for these academic standings are based upon a combination of cumulative Pacific GPA and the term GPA. Criteria for the different academic standings are outlined below:

Good Standing:
- Term GPA of 3.0 or higher and a cumulative Pacific GPA of 3.0 or higher

Good Standing with Warning:
- Term GPA below 3.0 and a cumulative Pacific GPA of 3.0 or higher

Probation:
- Term GPA below 3.0 and cumulative Pacific GPA is 3.0 or below

Subject to Disqualification (Temporary Status):
- Term GPA below 3.0 and cumulative Pacific GPA is 3.0 or below

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.

A student who has been disqualified may appeal immediately for reconsideration and possible reinstatement on probation, within the same school. A disqualified student who has been out of the university for one semester or more may apply for re-admission to the university through the Office of Graduate Studies. 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.

Any advanced-degree student who has completed six (6) or more course units of study and has a Pacific cumulative grade point average below 3.0 will be placed on academic probation. Students on academic probation who fail to raise their Pacific cumulative grade point average to 3.0 at the end of the probationary semester will be subject to disqualification from the Graduate program. 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.

Any advanced-degree student receiving more than one grade of C- or lower will have his or
her progress reviewed by the department and the Office of Research and Graduate Studies and may result in dismissal from the Graduate program.

In addition to maintaining a 3.0 average, advanced degree students must make satisfactory progress in their degree programs. Students are expected to complete coursework toward completing required research, qualifying examinations, thesis or dissertation writing, and all other University or Departmental requirements. Failure to make satisfactory progress can result in dismissal from the Graduate program. Students wishing to appeal a disqualification must submit a written petition to the Dean of Research and Graduate Studies.

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 undergraduate advisor for the student to take graduate-level coursework.)
- Be accepted into a graduate or credential program. Usually they are in the process of applying!
- Receive approval of the Application to Receive Graduate Credit as an Undergraduate Student by the Dean of Research and Graduate Studies before the last day to add classes of the last semester as an undergraduate.

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

Graduate credit will only be granted for upper division (100 level) courses.

The total number of credits for the semester cannot exceed the maximum graduate course load for the department providing the graduate coursework; this includes coursework taken at other schools.

The tuition rate for the entire semester is at the undergraduate rate.

Units cannot be retroactively transferred from an undergraduate to a graduate program. The approval must be obtained prior to the last day to add classes of the last semester.

Coursework will not count for graduate credit if the student fails to complete the bachelor’s degree during the semester.

Graduate courses completed under this agreement will be recorded by the Registrar as a new “Unclassified” graduate credit; grades from these courses will not be accounted in the undergraduate grade point average (unless the bachelor’s degree is not completed).

No more than 12 units (16 units for student teachers), no matter when they are earned, can be transferred from an “Unclassified” transcript into a graduate program.

Students who do not complete the bachelor’s degree in the semester when graduate courses are taken will not be admitted into a Graduate program and cannot take additional graduate coursework until the bachelor’s degree has been awarded.

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

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

Classification of Graduate Students

Full: All students admitted with full graduate standing. Students are advanced from this classification to candidacy for advanced degrees upon formal notification from department.

Provisional: Students seeking advanced degrees whose academic records are deficient but who show promise of development or potential for graduate study. Students in this classification must be advanced to full standing before being eligible for degree candidacy. Admission to the educational doctorate is on a provisional basis until a full admission review is satisfactorily completed.

Credentialed: Students admitted to do post-baccalaureate work leading toward an initial teaching credential, specialist instruction credential or services credential.

Clinical Competency

Many of the graduate programs offered at the University include experiential coursework. Prior to taking a course that includes an experiential component, students are required to demonstrate that they have the necessary skills, aptitude and competencies to successfully complete the course. Faculty of departments offering experiential courses have the discretion of denying enrollment in these courses to students evaluated as not possessing the necessary clinical competencies. Procedures used to assess clinical competency vary across programs. Students may obtain additional information from their Program Director. Students who do not demonstrate adequate clinical and experiential competency can be dismissed from a degree program, regardless of academic standing.

Commencement

Master's degree students who are near completion of degree requirements can participate in the May commencement exercises under specific conditions. All of the following four conditions must be met before the Dean of Research and Graduate Studies can approve the petition.

- A completed Petition to Participate in Graduation Ceremonies (where applicable), will be successfully completed by the Spring semester deadline for Written/Oral Exam — Thesis/Dissertation Defense.

- The student is in good academic standing. On a case-by-case basis, special consideration will be given for international students who complete degree requirements after the Fall semester of the same calendar year. Approved CAPP Evaluations must be on file by the Spring semester deadline* and the student must state they will be unable to return to campus to participate in ceremonies in the Spring following degree completion.

Doctoral degree students are ineligible to participate in graduation ceremonies until all degree requirements are met, including all coursework, the final dissertation has been approved by the Office of Research and Graduate Studies and all final paperwork has been submitted.

* This deadline is customarily December 1, but the Office of Research and Graduate Studies or current Graduate Academic Calendar should be consulted to confirm the specific date.

† This deadline is customarily in early April, but the Office of Research and Graduate Studies or current Graduate Academic Calendar should be consulted to confirm the specific date.
Course Loads

Full Time: 8 or more units a semester  
Half Time: 7 to 4 units a semester  
Less than Half Time: 3 to 1 units a semester  

Standard registration loads:  
Master’s degree program: 16 units per year  
Doctoral degree program: 12 units per year  

Students with teaching assistantships or other assistantships should check with their department for specific guidelines concerning unit requirements. Students admitted with a provisional standing are not eligible for assistantships except for EdD. students.

Credit Limitations

All courses countable for graduate degree credit must be either specifically graduate degree courses (200 or 300 level) or, where allowable, advanced undergraduate courses (100 level). In those departments where courses are shown double-listed (e.g., COMM 124/224), graduate students ordinarily will register for graduate credit (e.g., COMM 224). If attending the undergraduate section, graduate students will be required to perform extra work at the graduate level beyond that required for undergraduates.

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.

Courses not applicable in graduate degrees:  
Lower division undergraduate courses (001-099)  
Extension courses  
English courses for the improvement of English language skills of foreign students  
Directed teaching or prerequisite courses for directed teaching except for the Master of Education degree or the Master of Arts in Special Education degree.

Physical education activity courses.

Double-Listed Courses

In order to differentiate graduate and undergraduate responsibilities in double-listed courses (100/200 levels), there must be specifically contracted additional work for the graduate courses.

Grade Point Average/Grading Policy

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.

Students must maintain a minimum GPA of 3.0 or above in all work taken as a graduate student at the University of the Pacific. Grades below a C are unacceptable for courses in a graduate program. Courses that receive a C- or lower must be repeated. (See Academic Standing in section above).

Letter grades are ordinarily assigned in graduate courses. Requests for pass/fail grading must be made through the department chair to the Dean of Research and Graduate Studies.

Graduate students must receive a letter grade in any undergraduate course which is part of a course plan for a graduate degree. Petition for exception to this regulation must be approved by the Graduate Dean upon recommendation by the student's advisor.

Grading Policies

Symbols and Definitions:

Graduate students will be assigned grades in keeping with the following provisions.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>Exemplary</td>
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<tr>
<td>A-</td>
<td>3.7</td>
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<tr>
<td>B+</td>
<td>3.3</td>
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<tr>
<td>B</td>
<td>Satisfactory</td>
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<tr>
<td>B-</td>
<td>2.7</td>
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<td>C+</td>
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<td>D+</td>
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<tr>
<td>D</td>
<td>Unsatisfactory</td>
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<tr>
<td>D-</td>
<td>1.0</td>
</tr>
<tr>
<td>F</td>
<td>Failing</td>
</tr>
</tbody>
</table>

I Incomplete work due to extenuating and hardship circumstances which prevent the completion of the work assigned within the regular time of the term. Each incomplete grade assigned must be accompanied with a contract statement agreed to by both instructor and student as to:

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

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

N Deferred grading for thesis, dissertation or research work.

NC No credit recognition. Represents unsatisfactory work under pass/no credit option.

NG No Grade Received from the Instructor. Please contact the instructor.

P Passing work on the pass/no credit system. Approved only for certain courses and program of a college or school. Note: Research for thesis or dissertation the department may determine whether letter grades or pass/no credit grades are to be given. In seminar or comparable courses, letter grades or pass/no credit may be used.

W Authorized withdrawal from courses after the prescribed period.

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. 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 Calendar.

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

Requests to add or drop courses after the term must be made to the Academic Regulations Committee (ARC). In either case, petitions are normally approved only if it can be shown that the request is warranted due to some special situation or hardship. Courses which a student is allowed to drop after the deadline will appear on the student’s transcript with the notation “W” but will not count in the units earned or in the calculation of the grade point average.

Any petitions approved after the deadline dates will be subject to a clerical service fee. Tuition and fee refunds are based on the date a withdraw form is initiated in the Office of the Registrar.
Registration - Continuous
All graduate students in graduate degree programs must meet a minimum of 12 graduate units before they can satisfy the requirements to register for Continuous Registration. The Continuous Registration Policy for each of the school terms is defined for the student's program on the Graduate Studies website and applies to a Graduate program until all degree requirements are met or their status as a degree student is terminated. This includes students who are completing preliminary or final examinations, or presenting terminal projects; and applies to students regardless of location. Continuous Registration can be met in one of three ways:
1. Registration for at least one credit in a course that appears on an approved graduate Program of Study.
2. Registration for at least one thesis or dissertation credit.
3. If students are not registering for a regularly scheduled course they must register for the appropriate section of a Continuous Registration course (see Office of Research and Graduate Studies website) during the add period stated in the university calendar. A $50 fee will be applied to your student account and must be paid by the published deadline.

Registration - Individualized Study
To register for an Individualized Study (Independent Study course, Internships, or Practicum) obtain and submit an approved Individualized Study Request form to the Office of the Registrar. Students and faculty will complete a written contract specifying the nature of the work to be undertaken and the method of evaluation. The individualized study form must have proper approval within the unit and be filed with the Office of the Registrar. Independent study courses may not be taken in the same term that a regular course is offered in that subject.

Repeating of Courses and Grade Replacement Policy
Courses in which the grade earned is C- or lower, the units shall not be counted in a student's degree program, and, if required for the degree, must be repeated. Some departments or programs have established higher grading standards which must be met by students in those programs. All grades earned in courses taken as a graduate student at the University will be counted in the cumulative GPA. Only courses with grades of “C-” or lower can be repeated. Once a course is completed with a grade of C or higher, the graduate student cannot repeat that course or any prerequisites for the course. When a course is repeated, grades from both the original and repeated attempts appear in the official records and transcripts. A course can only be repeated once. Grades will be averaged when courses are repeated. The Pacific grade point average will reflect the two grades averaged.

Requirements for the Master’s degree
1) The requirements of a candidate for these degrees in any semester or summer session must be approved by the chair of the major department as to courses and amount of load.
2) The candidate must maintain a minimum GPA of 3.0 or above in all work taken as a graduate student, either at the University of the Pacific or any other institution. See the Grading Policy section and or Academic Standing.
3) Satisfactory completion of a minimum of 30 or 32 units of (graduate) work, depending on requirements of program.
4) The completion of a minimum of one academic year of “residence work”: i.e., the candidate must be registered for at least 4 units per semester for two semesters. Two summer sessions of at least 4 units each will be considered the equivalent of one-half year of residence.
5) The passing of a department examination covering the major field (date to be fixed by department chair) where applicable.
(See department section for more information).

Requirements for the Doctor of Education Degree
1) There must be the equivalent of at least three years of successful graduate study in accredited colleges and universities, including at least two full years of work at the University.
2) Students must fulfill the doctoral residency requirement. Advancement to Doctoral Candidacy, for students admitted after Spring, 2008, is dependent upon full admission to the EdD program, satisfactory completion of a specific program of study, and successful completion of Applied Inquiry III.
3) Approval of the dissertation, which includes a final oral examination to determine to the satisfaction of the candidate’s committee whether the stage of scholarly advancement and research ability demanded for final recommendation for the doctorate has been reached.
4) All requirements for the Doctor of Education degree must be completed within five years from the date of advancement to Doctoral Candidacy and within nine years after the first day of the semester of enrollment in EdD coursework at Pacific following Provisional Admission to the EdD program.

Advanced students interested in applying for the Doctor of Education program should consult the department chair of the proposed major.
(See department section for more information).

Requirements for the Doctor of Philosophy Degree
Course of Study: The course of study to be pursued for the PhD degree will be arranged with students by their advisor. Work in other departments will be planned according to the needs of the individual student. See department section for further information.

Grade Point Average: Expected to complete work with at least a 3.0 GPA in all courses. Students judged by their major department to have unsatisfactory records will be reviewed by the Dean of Research and Graduate Studies who may take action to terminate their continuation.

Mastery of the field of study: Students must show competence in their discipline by means of qualifying examinations or scholarly papers before advancement to candidacy for the degree (requirements vary by degree program at least one year prior to the date on which degree candidates expect to present themselves for the degree).

Compliance with language research skill requirements: Students must demonstrate their ability to read at least one foreign language and/or to use at least one research skill such as an advanced computer language or advanced statistical analysis. The language and/or skill(s) are to be chosen with the approval of the student’s advisory committee. For the specific language requirements in chemistry and pharmaceutical sciences see the appropriate sections of this catalog.

Admission to Candidacy: Students when they have completed satisfactorily the following requirements: at least 45 credit hours or course equivalents beyond the bachelor's degree, satisfied the language/research skills requirement; completed the qualifying examinations or scholarly papers; and received formal approval for admission to candidacy by the student’s advisory committee and major department.

Presentation of an acceptable Dissertation: In order to be acceptable, the doctoral dissertation must be (1) a significant contribution to the advancement of knowledge or (2) a work of original and primary research.
Passing of a final oral examination: When the dissertation is completed, candidates present themselves for the final examination to an examining committee appointed by the Dean of Research and Graduate Studies and consisting of the candidate’s advisor (who shall act as chair) and such other examiners as the Dean shall designate, after consulting with the candidate’s advisor. The committee shall include at least one person who is not a member of the department directly concerned.

The examination shall be oral and shall deal intensively with the field of specialization in which the candidate’s dissertation falls, though it need not be confined to the subject matter of the dissertation. In order to be considered satisfactory, the report of the examining committee must be unanimously favorable.

(See department section for more information).

**Residence and Time Limits**

The period of residence shall involve students in a total commitment to their graduate program. Completion of a minimum of one academic year of “residence work”: i.e., the candidate must be registered for at least 4 units per semester for two semesters. Two summer sessions of at least 4 units each will be considered the equivalent of one-half year of residence.

All requirements for a master’s degree must be completed within a period of not more than seven years. Students who fail to meet all requirements within this period will have to reapply to the program.

All requirements for the Doctor of Education degree must be completed within five years from the date of advancement to Doctoral Candidacy and within nine years after the first day of the semester of enrollment in EdD coursework at Pacific following Provisional Admission to the EdD program.

All requirements for the PhD degree must be completed within seven years from the date of entrance into the degree program at this University, and within three years from the date of advancement to candidacy. A student working for the PhD degree is required to spend at least three years of work devoted only to graduate study and investigation under proper supervision—or the equivalent thereof in part-time work—for the completion of the residence requirement. If part-time work is done elsewhere other than at the University of the Pacific, such work shall be subject to the approval of the Committee on Graduate Studies. At least 30 units, in addition to the dissertation, must be completed at this University.

In the PhD program in Pharmaceutical and Chemical Sciences, two consecutive semesters of residence are required after the master’s degree or after one year of graduate work when the master’s degree is not taken. A minimum of 9 units or two courses of work must be taken during each semester of residence. In the PhD program in School Psychology, the residence requirements can be met by taking 18 units of coursework within 12 calendar months.

Courses taken ten or more years prior to the comprehensive examination (PhD program), Qualifying Scholarly Activity (EdD programs), or final examination (Masters Programs) do not apply towards the graduate degree and must be repeated to satisfy the degree requirements. Requests for variances are made to and evaluated by the major department, which subsequently recommends to the Office of Research and Graduate Studies what credit for previous coursework should be permitted. Final approval is granted by the Dean of Research and Graduate Studies.

To readmit to a program, a student must have attained an average grade of 3.0 both in the major department and in all work taken as a graduate student. A student must submit a readmit application and be accepted into a Graduate program and work with their current advisor to outline remaining requirements. This new program must be completed within a period of four years. No further extension is permitted.

**Theses and Dissertations**

The Office of Research and Graduate Studies makes available, to faculty and graduate degree candidates, instructions for the preparation of theses and dissertations. The instructions are to be applied to all theses and dissertations submitted at University of the Pacific in partial fulfillment of advanced degree requirements. Theses and dissertations must be submitted by the deadline dates published in the Graduate Academic calendar.

These courses are numbered 299 (Master’s Thesis) and 399 (Dissertation), the grade is given on a Pass/No Credit basis and submitted to the Dean of Research and Graduate Studies on an appropriate grade form available on the Graduate Studies web page. The Dean of Research and Graduate Studies submits the grade to the Registrar’s office after final approval of the thesis.

**Transfer Credit**

Work done in other institutions since completion of the baccalaureate will be considered and evaluated, but not more than 6 of the required units may be transferred, and they must be regular on-campus advanced courses, countable by that institution toward its graduate degrees, and have been completed with a grade of B- or better. Some departments set higher standards and these are identified in individual program descriptions.

Grade points earned in those courses will not be counted in the student’s Pacific grade point average.

Courses must be filed on the Request to Transfer Course Work Done In Other Institutions form and must be approved by the Department Chair/Advisor, Director of Graduate Programs or Dean of the attending school, and the Dean of Research and Graduate Studies.

**Unclassified Graduate Students**

Graduate Unclassified students may complete up to 12 units (16 units for student teachers) prior to being required to formally apply for admission to the university. Upon acceptance to the university, resident and transfer coursework will be evaluated by school/department for applicability to degree.

**Withdrawal from a Semester of the University**

Students intending to completely withdraw from the university will have to initiate the process in the Office of the Registrar. The withdrawal 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 withdrew from a semester you have to submit a request for Re-admission Form available on the Office of Graduate Studies web site. The deadline is August 1st for Fall admission or December 1st for Spring admissions.

If you completely withdraw from the University for more than a year you must file a full application for admissions to your program with the Office of Graduate Studies.

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.
Stockton is the center of a metropolitan area of more than 230,000 population, located near the geographical center of the state. It occupies a key location in the rich Central Valley, a fertile agricultural area. Stockton is the seat of government of San Joaquin County. It is also an inland, deep-water seaport and serves as the agricultural, industrial and transportation hub of the valley. Produce and manufactured goods are distributed from this port to all parts of the world.

The Mother Lode country, the Sierra Nevada, Lake Tahoe, Squaw Valley and Yosemite are all within a few hours’ driving distance. San Francisco and the rich and varied cultural life of the Bay Area are less than a two-hour drive from the campus.

Within its own community the University benefits from participation in the activities of the Stockton Symphony Orchestra, the Stockton Opera Association, the Stockton Chorale, the Civic Theatre, the Pioneer Museum and Haggin Galleries, and the Stockton Public Library.

**Student Housing**

The University provides student housing in residence halls, apartments, and Greek houses. 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.

**Residence Halls:** A majority of the rooms are double occupancy and are reserved for incoming freshmen and sophomore students. A limited number of single rooms are available to students at extra cost; medical documentation will be required for placement. Assignment requests to single rooms and other accommodations are not guaranteed.

Students living in the residence halls are required to take one of the three meal options: the Platinum level plan (3,850 Dining Dollars per year), the Gold level plan (3,600 Dining Dollars per year), or the Silver level plan (3,330 Dining Dollars per year). Dining points are subject to change.

**Apartments:** The University maintains five apartment complexes. All students living in the apartment must be on a Bronze level meal plan (approximately 1,200 Dining points per year).

The **University Townhouses** on the north campus have one-and two-bedroom apartments for students. A coeducational hall, **Manor Hall**, for upper-division and is located on Pacific Avenue across the street from the Conservatory of Music. This hall is made up of suites of rooms with each room having its own cooking alcove. Each suite of two rooms share a semi-private bath. The University’s newest apartment complexes, known as **Monagan and Brookside Halls**, are located on Brookside Road, between the Thomas J. Long School of Pharmacy and Health Sciences and the Cowell Health Center building. Each suite features four bedrooms, two full baths, living room and dining/kitchen area. Seniority for assignment to Brookside Hall is given to graduate level students and students in the Pharmacy and Health Sciences. The **McCaffrey Center** apartments are three bedroom, one-bath units which are located at the center of campus. The furnished three-person apartments are reserved for juniors and seniors. The McCaffrey Center complex is the hub of daily student activity such as the ASUOP student government offices, The Grove campus convenience store, and the Pacific Theatre. **Towerview** apartments are located on Dave Brubeck Way directly across from the library, and is made up of sixteen one and two-bedroom apartments. Priority for Towerview Apartments is given to students with spouse or domestic partners and students with one child three-years-old or younger. Towerview Apartment residents are responsible for payment and set-up of telephone service with the local provider.

The **Housing and Greek Life Office** also maintains off-campus apartment listings.

**Fraternities and Sororities Communities:**

Pacific offers 12 social Greek organizations. There are 6 fraternities: Delta Upsilon, Omega Delta Phi, Pi Kappa Alpha, Sigma Chi, Theta Chi, and Xi Chi Sigma. The 6 sororities include: Alpha Phi, Delta Delta Delta, Delta Gamma, Gamma Alpha Omega, Kappa Alpha Theta, and Rho Delta Chi. While each chapter has specific requirements to become a member, the minimum requirements include the completion of 12 college units, and a 2.50 cumulative college grade point average. Students with at least sophomore standing are eligible to live in a fraternity or sorority house beginning the following semester or term after becoming a member of a chapter. Of the 12 social Greek organizations, six offer a University-operated, on-campus living option in a fraternity or sorority house. These include Alpha Phi, Delta Delta Delta, Delta Upsilon, Pi Kappa Alpha, Sigma Chi, and Theta Chi.

**Eligibility:** Graduate students desiring University housing must be registered students to be eligible. Student Housing Agreements for apartments are for the academic year or for students in Pharmaceutical Sciences for a minimum of two consecutive terms. Housing for Graduate students is not guaranteed.
Health Services

Cowell Wellness Center (CWC), part of the Division of Student Life at Pacific, is a modern facility that where both Pacific Health Services and Counseling Services are co-located. It is located across the foot bridge, north of the main campus, at the corner of Brookside Road and Manchester. Together, Pacific Health Services and Counseling Services provide a professional staff of practitioners including a supervising physician, nurse practitioners, licensed psychologists, marriage and family therapists, pre-doctoral psychology interns, and a consulting psychiatrist. Students are provided with health education and wellness information as well as health care during illness in order to promote the skills and attitudes necessary for students to become responsible for their own health.

Therapists specialize in working with the student population and are trained to assist students in building self-confidence, being assertive, relating to others, reducing stress, solving problems, finding options, and managing on-going psychological conditions. Personal counseling, both one-to-one and group, is available.

Due to the Privacy Act, staff do not routinely discuss student’s care with anyone, including parents, unless the student has provided a written consent to release information. With consent, however, professional staff are available to address questions and concerns about students’ health issues and treatment plans.

The staff members of both Pacific Health Services and Counseling Services are active within the Student Life Division at Pacific and actively contribute to the goal of helping our students achieve academic and social success through attention to their health and wellness.

All students taking 9 units or more are automatically charged a Health Services fee of $120 per semester.

Pacific Health Services are available to students who have:
1. Registered for classes at the Stockton Campus, Pacific McGeorge School of Law, and Dugoni School of Dentistry
2. Paid the Health Services Fee and
3. Submitted the required health history form and have completed a physical exam

Counseling Services are available to students who have:
1. Registered for classes at the Stockton campus or Pacific McGeorge School of Law
2. Paid the Health Fee

Hours of Operation
Mon-Fri: 8 am to 6 pm

Summer Hours:
Mon-Thur: 7:30 am to 4 pm
Fri: 7:30 am to 1 pm

The Wellness Center is closed weekends, holidays and the holiday break in December.

Health Services Fee includes:
- Physician appointments
- Nurse Practitioner services
- Nutritionist services
- Health and wellness management
- Counseling appointments

Health Service Fees do not cover the cost of outside referrals. If students do not have insurance coverage a student plan is available through the University. The coverage period runs from August 1st to July 31st or students can choose to enroll on a semester-by-semester basis. Students can access information about the plan via the Internet: www.studentresources.netandstudenthealth.com or call CWC at (209) 946-2315 for assistance.

Please note: Students are automatically charged for the university contracted insurance policy with Anthem Blue Cross unless they have completed the waiver. The link to the waiver is available through the Health Services website at http://www.pacific.edu/Student-Life/Health-and-Recreation/Health-Services.html
The hallmark of all of our graduate programs in College of the Pacific is close personal interactions with dedicated faculty members who have a passion for teaching, research, and learning. For graduate students, this means discussion-based, personalized interactions with instructors in the classroom as well as opportunities to collaborate with faculty on original research projects and to co-author or co-present the results in professional venues. Graduate students in the College also have the opportunity to acquire additional training and apply their knowledge through internships in professional settings. Many also work with our undergraduates as teaching assistants, laboratory instructors, discussion leaders, and coaches. All graduates of our programs emerge “practice-ready,” prepared for employment in their field, careers as teachers of their disciplines, or entry into advanced degree programs.

Programs Offered
Master of Science in Biological Sciences
Master of Arts in Communication
  Communication Education
  Political Communication
  Media and Public Relations
  Public Communication
Master of Arts in Psychology
Master of Arts in Sport Sciences
  Sport Pedagogy
  Sports Medicine
  Sport Management
  Athletic Training
Master of Science in Pharmaceutical and Chemical Sciences*
Doctor of Philosophy in Pharmaceutical and Chemical Sciences*

*For detailed program requirements for these degrees please consult the School of Pharmacy section in this catalogue.
Biological Sciences

Phone: (209) 946-2181
Location: Classroom Building, South Campus
Website: www.pacific.edu/college/biology
Gregg Jongeward, Department Director of Graduate Program and Co-Chair
Craig Vierra, Department Director of Graduate Program and Co-Chair

Programs Offered

Master of Science in Biological Sciences

For a graduate degree in the Department of Biological Sciences, the candidate may take a broadly based program in biology or may specialize in areas such as molecular and cellular biology, physiology or ecology. Candidates for the MS degree in biological sciences must hold a bachelor’s degree which includes the equivalent of the baccalaureate program in biology at University of the Pacific. Candidates holding the bachelor’s degree with a major in fields other than biology may be accepted provided deficiencies in biology are made up.

Master of Science in Biological Sciences

In order to earn the master of science degree in biological sciences, students must complete a minimum of 32 units with a Pacific cumulative grade point average of 3.0.

I. Required Graduate Courses

<table>
<thead>
<tr>
<th>BIOL 101. Genetics</th>
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<tr>
<td>BIOL 122. Principles of Immunology</td>
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<td>BIOL 128. Histology</td>
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<tr>
<td>BIOL 130. Plant Kingdom</td>
<td>(4)</td>
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<tr>
<td>BIOL 145. Microbiology</td>
<td>(4)</td>
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<td>BIOL 147. Medical Microbiology</td>
<td>(4)</td>
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<tr>
<td>BIOL 151. Parasitology</td>
<td>(4)</td>
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<tr>
<td>BIOL 153. Cell Biology</td>
<td>(4)</td>
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<tr>
<td>BIOL 155. Biological Electron Microscopy</td>
<td>(4)</td>
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<tr>
<td>BIOL 157. Topics in Biomedical Research</td>
<td>(4)</td>
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<td>BIOL 158. Computerized Data Acquisition</td>
<td>(4)</td>
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<tr>
<td>BIOL 159. Molecular Biological Techniques</td>
<td>(4)</td>
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<tr>
<td>BIOL 162. Comparative Vertebrate Anatomy</td>
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<td>BIOL 165. Embryology and Development</td>
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<tr>
<td>BIOL 166. Vertebrate Embryology</td>
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<tr>
<td>BIOL 169. Elements of Biochemistry</td>
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<tr>
<td>BIOL 175. Ecology</td>
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<tr>
<td>BIOL 176. Ecology and Conservation Biology</td>
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<tr>
<td>BIOL 177. Evolution</td>
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<tr>
<td>BIOL 182. Medical Endocrinology</td>
<td>(4)</td>
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<td>BIOL 185. Comparative Animal Behavior</td>
<td>(4)</td>
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<tr>
<td>BIOL 188. Hormones and Behavior</td>
<td>(4)</td>
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<tr>
<td>BIOL 193. Special Topics</td>
<td>(3 or 4)</td>
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Graduate Course Offerings

<table>
<thead>
<tr>
<th>BIOL 222. Immunology</th>
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<tr>
<td>BIOL 224. Cancer Biology and DNA Repair</td>
<td>(4)</td>
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<tr>
<td>BIOL 234. Comparative Physiology</td>
<td>(4)</td>
</tr>
<tr>
<td>BIOL 244. Developmental Biology</td>
<td>(4)</td>
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<tr>
<td>BIOL 247. Medical Microbiology</td>
<td>(4)</td>
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<td>BIOL 251. Parasitology</td>
<td>(4)</td>
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<tr>
<td>BIOL 253. Cell Biology</td>
<td>(4)</td>
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<td>BIOL 255. Biological Electron Microscopy</td>
<td>(4)</td>
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<td>BIOL 279. Evolution</td>
<td>(4)</td>
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<tr>
<td>BIOL 291. Independent Study</td>
<td>(2 or 4)</td>
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<tr>
<td>BIOL 293. Special Topics</td>
<td>(3 or 4)</td>
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<tr>
<td>BIOL 295. Graduate Seminar</td>
<td>(4)</td>
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<tr>
<td>BIOL 297. Graduate Research</td>
<td>(1-6)</td>
</tr>
<tr>
<td>BIOL 299. Thesis</td>
<td>(2 or 4)</td>
</tr>
</tbody>
</table>
Chemistry

Phone: (209) 946-2271
Location: Classroom Building, Room 174
Website: http://web.pacific.edu/x13823.xml
Larry Spreer, Chair

Programs Offered*
Master of Science in Pharmaceutical and Chemical Sciences
Doctor of Philosophy in Pharmaceutical and Chemical Sciences

* For detailed program information for these degrees please consult the School of Pharmacy section in this catalog.

Communication

Phone: (209) 946-2505
Location: Psychology/Communication Building
Website: http://www.pacific.edu/college/communication/
Qingwen Dong, Chair
Jon Schamber, Department Director of Graduate Studies

Programs Offered
Master of Arts in Communication
Communication Education
Communication Studies
Political Communication
Media and Public Relations

The Department of Communication offers graduate-level instruction leading toward the Master of Arts degree. The degree program combines training in communication theory, methodology and practice for students who desire knowledge and skills for solving work-related communication problems and for students who intend to enter doctoral programs. The program offers four concentrations of study: 1) Communication Education, 2) Political Communication, 3) Media and Public Relations, and (4) Communication Studies. Three of the concentrations provide options for taking coursework from related disciplines, providing graduate students with an interdisciplinary approach to the study of communication. Each concentration is designed for students who regard knowledge of communication as important for their chosen professional careers but may or may not hold a bachelor's degree in communication.

The nature of the discipline of communication requires students to possess a high level of proficiency in written and spoken English. For this reason, students who come from non-English speaking cultures should only apply for the program if they have extensive training and experience in speaking and writing in the English language.

Thesis and Non-thesis Options
The thesis option (Plan A) requires 28 units of coursework and 4 units of thesis. Students must successfully complete a 6-hour written comprehensive examination and a 1-hour oral examination administered by a committee of three professors prior to starting the thesis. Students must also successfully defend a thesis proposal before a committee of three professors prior to collecting data for the thesis. The thesis must contribute to the body of knowledge of the field in a significant manner.

The non-thesis option (Plan B) requires 32 units of coursework. Students must also successfully complete a 12-hour written comprehensive examination and a 2-hour oral examination administered by a committee of four professors. Four hours of the written comprehensive examination covers material from a “landmark works in communication” list developed by the department faculty.

Grade Point Requirements
Candidates for a graduate degree must maintain a cumulative GPA of at least 3.0. No grade below a B- (2.7) will be counted toward the degree program in any course at the 200 level. No grade below a B (3.0) will be counted toward the degree program in any course at the 100 level.

Students seeking admission to the Department of Communication must maintain a GPA of 3.0 or above in all upper-division undergraduate study and complete the Graduate Record Examination with satisfactory results.
Graduate Assistant Requirements
A full-time graduate assistant will normally take 8 units. Graduate assistants who seek to take more than 8 units must receive department approval and approval of the Graduate Dean.

Master of Arts in Communication
Concentration Communication Education
In order to earn the master of arts degree in communication with a concentration in communication education, students must complete a minimum of 32 units with a Pacific cumulative grade point average of 3.0.

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 276 Communication in Learning Settings 4
One of the following courses from the School of Education: 3
   EDUC 204 Pluralism in American Education
   EDUC 209 Curriculum Theory
   EDUC 233 Seminar: Multicultural Education
   Or an approved course by advisor
One of the following courses: 4
   COMM 273 Graduate Seminar: Mass Communication
   COMM 275 Graduate Seminar in Public Relations
   COMM 277 Media Relations
   COMM 278 Political Communication
One of the following Options:
Thesis Option Plan A:
   COMM 297 Graduate Research 1
   COMM 299 Thesis 4
   6-hour written comprehensive examination
   1-hour oral examination
Non Thesis Option Plan B:
   COMM 291 Graduate Research 1
   COMM 200 level elective 4
   12-hour written comprehensive examination
   2-hour oral comprehensive examination

Master of Arts in Communication
Concentration Political Communication
In order to earn the master of arts degree in communication with a concentration in political communication, students must complete a minimum of 32 units with a Pacific cumulative grade point average of 3.0.

COMM 261 Critical and Qualitative Research Methods 4
COMM 262 Quantitative Research Methods 4
COMM 273 Graduate Seminar: Mass Communication 4
COMM 275 Graduate Seminar in Public Relations 4
COMM 277 Media Relations 4
COMM 278 Political Communication 4
One of the following courses from the Department of Sports Sciences or School of Business: 4
   SPTS 274 Advanced Sport Marketing and Promotions
   BUSI 109 Management and Organizational Behavior
   BUSI 214 Negotiation
   BUSI 279 Leadership
   Or an approved course by advisor
One of the following: 4
   COMM 287 Graduate Internship
   COMM 289 Graduate Practicum
One of the following Options:
Thesis Option Plan A:
   COMM 299 Thesis 4
   6-hour written comprehensive examination
   1-hour oral comprehensive examination
Non Thesis Option Plan B:
   COMM 200 level elective 4
   12-hour written comprehensive examination
   2-hour oral comprehensive examination

Master of Arts in Communication
Concentration Media and Public Relations
In order to earn the master of arts degree in communication with a concentration in media and public relations, students must complete a minimum of 32 units with a Pacific cumulative grade point average of 3.0.

COMM 261 Critical and Qualitative Research Methods 4
COMM 262 Quantitative Research Methods 4
COMM 273 Graduate Seminar: Mass Communication 4
COMM 275 Graduate Seminar in Public Relations 4
COMM 277 Media Relations 4
COMM 278 Political Communication 4
One of the following courses from the Department of Sports Sciences or School of Business: 4
   SPTS 274 Advanced Sport Marketing and Promotions
   BUSI 109 Management and Organizational Behavior
   BUSI 214 Negotiation
   BUSI 279 Leadership
   Or an approved course by advisor
One of the following: 4
   COMM 287 Graduate Internship
   COMM 289 Graduate Practicum
One of the following Options:
Thesis Option Plan A:
   COMM 299 Thesis 4
   6-hour written comprehensive examination
   1-hour oral comprehensive examination
Non Thesis Option Plan B:
   COMM 200 level elective 4
   12-hour written comprehensive examination
   2-hour oral comprehensive examination

Master of Arts in Communication
Concentration Communication Studies
In order to earn the master of arts degree in communication with a concentration in communication studies, students must complete a minimum of 32 units with a Pacific cumulative grade point average of 3.0.

COMM 261 Critical and Qualitative Research Methods 4
COMM 262 Quantitative Research Methods 4
One of the following options: 20
   COMM 271 Graduate Seminar: Rhetorical Thought
   COMM 272 Graduate Seminar: Interpersonal Communication
   COMM 273 Graduate Seminar: Mass Communication
   One of the following courses from Political Science department: 4
   COMM 287 Graduate Internship
   COMM 289 Graduate Practicum
   One approved elective from Political Science department
   200 level course
   Graduate Internship 4
COMM 249. Introduction to Organizational Communication (4)

This course takes both a theoretical and an applied approach in introducing the student to the role of communication in various aspects of organizational functioning, such as motivation, leadership, decision-making, conflict management, message management, etc. Prerequisites: COMM 027 and COMM 043 or permission of the instructor.

PREREQUISITE:
COMM 043 or permission of the instructor.

COMM 245. Human Communication Theory (4)

A study of contemporary understandings of human interaction. Beginning with epistemological issues as a framework, the course examines theory building, foundation theories of our discipline, and contextual theories.

COMM 247. Nonverbal Communication (4)

The course examines major dimensions of non-verbal behavior exhibited by human beings in social interactional contexts. Special emphasis is given to such areas as human proxemics, kinesics, vocalics, haptics, and artifactual codes. Prerequisite: COMM 043 or permission of the instructor.

COMM 249. Introduction to Organizational Communication (4)

This course takes both a theoretical and an applied approach in introducing the student to the role of communication in various aspects of organizational functioning, such as motivation, leadership, decision-making, conflict management, message management, etc. Prerequisites: COMM 027 and COMM 043 or permission of the instructor.

COMM 249. Introduction to Organizational Communication (4)

This course takes both a theoretical and an applied approach in introducing the student to the role of communication in various aspects of organizational functioning, such as motivation, leadership, decision-making, conflict management, message management, etc. Prerequisites: COMM 027 and COMM 043 or permission of the instructor.
COMM 275. Graduate Seminar in Public Relations (4)
The Graduate Seminar in Public Relations is designed through in-depth study and research to formalize understanding of Public Relations: theory and practice, functions in organizations and role in society. You will study concepts and theories related to public relations role in social systems. A “mock” APR will test knowledge at the end of the semester with both a written and an oral examination.

COMM 276. Communication in Learning Settings (4)
This graduate seminar is designed to develop knowledge of current communication education research and effective communication strategies for teaching undergraduate courses in communication.

COMM 277. Media Relations (4)
This course is to discuss and debate media relations principles and practice.

COMM 278. Political Communication (4)
This course is designed to provide a grounding in rhetorical approaches to persuasion in a political context, to acquaint students with the range of political ideologies, and to examine the theoretical and pragmatic opportunities and obstacles to advocacy in the current mediated content of national, regional, or location politics.

COMM 287. Graduate Internship (2-4)

COMM 289. Graduate Practicum (2-4)

COMM 291. Graduate Independent Study (2-4)

COMM 293. Special Topics (2-4)

COMM 295. Graduate Seminar (4)

COMM 297. Graduate Research (1-4)

COMM 299. Thesis (2 or 4)

**Psychology**

Phone: (209) 946-2133
Location: Psychology/Communications Building
Website: http://web.pacific.edu/x13811.xml
Carolynn Kohn, Chair
Matt Normand, Graduate Program Director

**Programs Offered**

Master of Arts in Psychology

The department offers a program of graduate study leading to the MA degree in psychology with special strengths in behavior analysis, behavioral psychology, and behavioral medicine. Students receive formal academic training in behavior analytic principles and techniques. All students obtain experience in relevant applied settings and/or teaching assistantships. The design and conduct of research is required throughout a student’s graduate work and students are provided with research mentorship and supervision.

The program prepares students for (1) entrance into doctoral programs and for (2) employment in applied behavior analysis settings. Students applying to the doctoral preparation track are those who wish to increase their experiences and skills in order to become more competitive doctoral program applicants. Students in this track are interested in obtaining their doctorate in behavioral clinical or counseling psychology, behavior analysis, and biological, developmental, social, or cognitive psychology. Previous graduates have been successful in entering quality doctoral programs and obtaining employment in a variety of settings.

Opportunities for specialized training, applied experience, and research are available in many settings including:

- The Community Re-Entry Program, a multifaceted treatment program for adults diagnosed with chronic mental illness closely affiliated with the Psychology Department. It is designed to move adults diagnosed with chronic mental illness to greater independence, and it provides special intervention and research opportunities with individuals diagnosed with schizophrenia;

- Behavior Assessment and Intervention Service, a program that provides in-home intervention for people with developmental disabilities in conjunction with Valley Mountain Regional Center;

- Contracts with local schools, several of which provide opportunities for experience in behavioral assessment and intervention. Most of these services are provided in the field, such as working with students and their teachers in area schools and working with parents of typically developing children with behavioral problems.

- Additional practicum facilities in the community include Stockton Children’s Home, Regional Youth Services Program, San Joaquin County Mental Health Services, Head Start, Stockton Unified School District, and the Transitional Learning Center for homeless children.

The Behavior Analyst Certification Board (BACB)® has accepted many of these applied experiences toward eventual board certification in Behavior Analysis.

Our course sequence and supervised experience have been approved by the BACB® and our students have had a high rate of sitting for and passing the BCBA® exam. Doctoral preparation students have a high rate of being accepted into quality doctoral programs. A list of former graduate students and their current employment or academic placements upon graduating our program is available upon request.
Master of Arts in Psychology

In order to earn the master of arts in psychology, students must complete a minimum of 30 units with a Pacific cumulative grade point average of 3.0.

Minimum 18 units, including each of these required courses:

- PSYC 207 Psychology of Learning (4)
- PSYC 283 Research Design (4)
- PSYC 253 Behavioral Treatments/Applications (4)
- PSYC 253 Supervising and Teaching Behavior Changes (2)
- PSYC 299 Thesis (4)

One of the following options:

Minimum 12 units each:

a) Doctoral Preparation Track

- PSYC Three electives from 200 level (PSYC 297 - Graduate Independent Research recommended)

b) Applied Behavior Analysis Track

- PSYC 258 Behavioral Assessment
- PSYC Two behavior analysis electives (e.g., Behavioral Medicine, Radical Behaviorism, Controversial Treatments in Applied Settings)

Note: 1) Students are expected to spend four semesters and one summer in residence in Stockton as part of completing the program. All students must complete a one year research apprenticeship with the same faculty research mentor during their first year. During their second year, students may continue with the same faculty mentor, change faculty mentors, or remain with the same faculty mentor and join additional research teams.

Course Offerings

**PSYC 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.

**PSYC 220. Clinical Neuropsychology (4)**

This course focuses on the relationship between human brain functioning and behavioral/psychological functioning. The primary emphasis is on the diagnosis and treatment of brain dysfunction in humans. Methods of evaluating clients for the presence of various types of brain dysfunction using psychological testing are studied in depth, along with corresponding neuroanatomy and neuropathology. Research techniques for developing a clearer understanding of both normal and abnormal brain functioning are studied. Instructor permission required.

**PSYC 251. Behavioral Treatment/Applications (4)**

This course focuses on the application of behavior analytic principles and methods in applied settings, with an emphasis on behavior change procedures, maintenance and generalization of behavior change, and emergency interventions. Topics addressed include the definition and characteristics of applied behavior analysis, selection and evaluation of intervention strategies, measurement of behavior, display and interpretation of behavioral data, and behavioral assessment. Additionally, basic behavioral principles, single-case experimental design, and ethical issues will be discussed in the context of behavioral assessment and intervention. Open only to graduate students with permission.

**PSYC 253. Supervising and Teaching Behavior Changes (2)**

Introduces graduate students to the role of applied supervisor and instructor. Under the supervision of the PSYC 053 course instructor, students develop, sustain, and evaluate behavior change interventions. Students conduct weekly discussion groups providing undergraduate students enrolled in PSYC 053 with additional resources for the course. Graduate students meet weekly with the instructor to discuss teaching and supervision responsibilities. Students gain practical experience supervising and teaching undergraduate students. All responsibilities are carried out under the supervision of the PSYC 053 instructor. Prerequisites: PSYC 251 and PSYC 258. Extensive training in behavior analysis AND instructor approval.

**PSYC 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 are childhood are also presented and discussed.

**PSYC 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.

**PSYC 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.

**PSYC 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.

**PSYC 283. Research Design (4)**

Design and analysis of research using single subject and group designs.

**PSYC 285E. Behavior Analysis Internship I (1)**

Clinical experience with the University of the Pacific Behavior Analysis Services Program. This course includes practice in conducting behavioral interventions, designing, implementing, and monitoring behavior analysis programs for clients, overseeing the implementation of behavioral interventions programs by others, attending behavioral program planning meetings, and reviewing program-related literature, as well as empirical articles related to the interventions being implemented. Faculty and staff will observe interns engaging the activities in the natural environment at least once every two weeks, and provide specific feedback to interns on their individual performance. Multiple populations and sites will be available, including but not limited to, typically developing school-aged children in school and home settings, and individuals with psychiatric diagnoses and/or developmental disabilities in their homes and/or in community settings. Instructor permission required.
PSYC 285F. Behavior Analysis Internship II (1)
Clinical experience with the University of the Pacific Behavior Analysis Services Program. This course includes practice in conducting behavioral interventions, designing, implementing, and monitoring behavior analysis programs for clients, overseeing the implementation of behavioral intervention plans by others, attending behavioral program planning meetings, and reviewing program-relevant literature, as well as empirical articles related to the interventions being implemented. Faculty and staff will observe interns engaging the activities in the natural environment at least once every two weeks, and provide specific feedback to interns on their individual performance. Multiple populations and sites will be available, including but not limited to, typically developing school-aged children in school and home settings, and individuals with psychiatric diagnoses and/or developmental disabilities in their homes and/or in community settings. Instructor permission required.

PSYC 291. Graduate Independent Study (1-4)
PSYC 293. Special Topics (1-4)
PSYC 295. Graduate Seminar in Psychology (4)
PSYC 297. Graduate Independent Research (1-4)
PSYC 299. Thesis (2 or 4)

Sport Sciences
Phone: (209) 946-2209
Location: Main Gym
Website: www.pacific.edu/college/sportsciences
Pete Schroeder, Chair and Graduate Studies Coordinator
The graduate program in Sport Sciences provides for scholarly study in the areas of exercise science, sport pedagogy and sport management. A major strength of the program lies in its flexibility. Academic programs are individually designed to meet the needs and objectives of students with a variety of emphasis areas.
A typical program includes a core content of classes in sport sciences. Students also supplement their programs with courses in biology, business, chemistry, communication, education, pharmacy, or psychology according to academic and professional goals. Graduate students are also given opportunities for experiential learning and collaborative research.

Programs Offered
Master of Arts in Sport Sciences
Exercise Science
Sport Pedagogy
Sport Management

Admission Requirements
1. Undergraduate degree in sport sciences and/or physical education/sport management/sports medicine or completion of essential undergraduate prerequisites, as determined by the Graduate Studies Committee.
2. Completion of the Graduate Records Examination (GRE)

Master of Arts in Sport Sciences
Plan A Thesis
In order to earn the master of arts degree in sport sciences, students must complete a minimum of 32 units with a Pacific cumulative and major/program grade point average of 3.0.
Courses must be graded B- (2.7) or higher to be counted toward the degree program.
SPTS 279 Research Methods in Sport Sciences 4
Note: 1) Fulfillment of the prerequisite requirement for SPTS 279: i.e., completion of a course in statistics or an introduction to research course involving statistical analysis of data, with a B- or better. 2) Units received for meeting this prerequisite requirement may not be included among the minimum units required for the master’s degree. 3) Courses may be taken concurrently.
SPTS Approved electives (12 of these units must be at the 200 level. Department may require that all must be at the 200 level) 24
SPTS 299 Thesis 4
Note: 1) Consult with advisor regarding thesis committee members. The thesis committee should include a minimum of three members. A committee member may be selected from outside the department when an area of study crosses disciplinary lines. 2) Present an open colloquium outlining the proposed thesis problem and basic design for problem-solving. 3) Must satisfactorily complete thesis during semester of registration or maintains continuing registration status until completed.
ORAL EXAM Must satisfactorily complete an open final oral examination encompassing the thesis and general professional knowledge.
Master of Arts in Sport Sciences
Plan B Non Thesis
In order to earn the master of arts degree in sport sciences, students must complete a minimum of 32 units with a Pacific cumulative and major/program grade point average of 3.0.

Courses must be graded B- (2.7) or higher to be counted toward the degree program.

SPTS 279 Research Methods in Sport Sciences 4

Note: 1) Fulfillment of the prerequisite requirement for SPTS 279, i.e., completion of a course in statistics or an introduction to research course involving statistical analysis of data, with a B- or better. 2) Units received for meeting this prerequisite requirement may not be included among the minimum units required for the master’s degree. 3) Courses may be taken concurrently.

SPTS Approved electives 28
(16 of these units must be at the 200 level)

Comprehensive Exam
Must satisfactorily complete a written comprehensive examination covering three general/comprehensive disciplinary areas.

Note: 1) The examination may be taken during the latter part of the semester in which coursework is being completed. The student’s graduate faculty advisor serves as the coordinator of the Comprehensive Examination, and the coordinator has the responsibility of obtaining questions from the appropriate colleagues. The examination questions are forwarded to the Graduate Studies Coordinator or designee who schedules and administers the examination. Following a review of the written examination by appropriate instructors, the results will be transmitted to the student in writing. There is a departmental mechanism by which a student who has an unsatisfactory result may apply for retesting in consultation with the Graduate Studies Committee.

General Guidelines Applicable to both Plan A and Plan B Students
1. An individual Plan A or Plan B study program is to be approved by the end of the first semester of study. Programs, developed by the student and advisor, are to be submitted to the department chair for review and approval. Changes in programs may subsequently be made by following the same review-approval process.

2. The student will be assigned to a graduate faculty advisor based on student/faculty interest and in consultation with the Graduate Studies Coordinator.

3. All Independent Studies and/or Independent Research must be reviewed and approved by the department chair or Graduate Coordinator prior to registration.

4. Dates for open colloquia, written comprehensive examinations and final oral examinations are to be confirmed by the Graduate Studies Coordinator.

Course Offerings
SPTS 233. Advanced Kinesiology 4
A graduate seminar which considers the musculoskeletal analysis of human movement, posture, exercise prescription, and rehabilitation. Prerequisite: SPTS 133. Graduate standing or permission of the instructor.

SPTS 235. Graduate Nutrition/Exercise Metabolism 4
A thorough study of the principles of nutrition as they relate to health and participation in sport or physical activity. The course includes calculation of energy needs and expenditures, and the role of carbohydrates, fats, protein, vitamins, minerals, and water in sport and physical activity.

SPTS 237. Advanced Sport Psychology 4
This course will provide a detailed examination of the theories and concepts that explain how the human psyche affects sport performance. Particular emphasis will be given to the application of these concepts for coaches and athletes.

SPTS 239. Advanced Applied Sport Psychology 4
A graduate seminar designed for advanced students exploring theoretical concepts of psychology as they relate to individual and group behavior in physical activity environments.

SPTS 241. Advanced Sociology of Sport 4
A graduate seminar dealing with theoretical concepts of sociology related to the American sport environment. This course uses a sociological perspective to provide an appreciation of sport as an integral part of our cultural dynamics. The relationship of sport and other social institutions such as media, economy, politics, and education will be covered, as well as the relationship of sport and social stratification such as gender, race, and class.

SPTS 247. Advanced Exercise Physiology 4
Advanced study of physiological responses to exercise with emphasis on laboratory methods and procedures for testing and demonstrating these responses for research application. Prerequisite: SPTS 147. Permission of the instructor. Lab fee required.

SPTS 248. Applied and Clinical Physiology 4
This course is designed to study the fundamental principles of exercise testing and interpretation for high risk, healthy, and athletic populations. The course is structured to focus on the cardiovascular, metabolic, and pulmonary responses to aerobic exercise and implications for designing training programs for enhancing health, fitness, and performance. This course will serve as a foundation for clinical exercise science and the use of exercise testing in the study of cardiac, metabolic and respiratory pathology.

SPTS 253. Advanced Adapted Physical Education 4
This course provides the culminating learning experience for those teaching credential candidates who are completing the waiver program with an emphasis in adapted physical education. Lab fee required.

SPTS 255. Advanced Motor Learning 4
This graduate course examines both the information processing and dynamical systems approaches to the study of human motor behavior and skill acquisition. Content is theoretically and research based with a behavioral emphasis. Topics covered will include: variability and motor control; visual control of action; the role of reflexes; task interference; limitations in information processing, effects of stress on performance, and the Schema theory. It is intended to provide students with an advanced understanding of the conceptual, functional properties of the motor system and human motor performance and their application to teaching, coaching, industrial and therapeutic settings.

SPTS 257. Advanced 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 the instructor.

SPTS 259. Professional Preparation in Sport Sciences 4
Course is designed for the future professional practitioner who wishes to deliver an effective, meaningful clinical or educational experience to a diverse population and help them sustain it through the knowledge to conceive and plan meaningful programs, the administrative skill to produce an organizational structure within school and/or practicum that optimizes the impact of the program, and the creative energy to link the program to opportunities for children and adults. Students will engage in an in-depth study of the research on teaching and the application of research-based knowledge to the teaching and clinical professions.
SPTS 261. Advanced Biomechanics of Sport (4)
Advanced study of mechanical principles which influence human movement; both non-cinematographic and cinematographic/ videographic techniques are used to analyze and evaluate motor skills and errors in performance; critical evaluation of current research findings in biomechanics. Prerequisite: Undergraduate course in kinesiology or biomechanics or permission of the instructor. Lab fee required.

SPTS 265. Advanced Sports Law (4)
This course addresses legal issues and responsibilities relevant to professionals in the areas of sports medicine, sport management, sport pedagogy and athletics. General legal principles supported by case law in such areas as negligence, contract law, constitutional law, antitrust laws and unlawful discrimination are offered.

SPTS 269. Advanced Management of Sport Enterprises (4)
The purpose of this class is to prepare graduate students to lead in the unique business environment of sport. The unique governance structure of intercollegiate athletics and professional sports will be presented. Students will then develop a multi-frame approach to management of sport organizations. Students will also explore the subjective nature of leadership to develop a style best suited for sport. Emphasis will be placed on the integration of applied research using leadership and management theories.

SPTS 272. Advanced Case Analysis of Sport and Fitness Management (4)
A graduate seminar designed to provide breadth and depth of topical knowledge beyond that covered in the introductory course.

SPTS 274. Advanced Sport Marketing and Promotions (4)
An in-depth study of the unique nature of sport marketing that focuses on three areas. Students will learn how to market sport products and events. The course will explore the many mechanisms through which sport is used as a marketing tool. Finally, students will learn to gain maximum benefit from the relationship between sport and the media.

SPTS 275. Advanced Sport Management (4)
This class provides graduate students with the knowledge base necessary to lead the mega-events and manage multipurpose and single-use facilities common in sport. The first portion of the course will be devoted to event planning, marketing and execution. The second part of the course will focus on the planning, design and maintenance of sports facilities. Special attention will be given to the environmental impact of sporting events and facilities.

SPTS 279. Research Methods in Sport Sciences (4)
An in-depth evaluation of the various methods used in the disciplines of the sport sciences, including experimental, descriptive, qualitative and historical; means of selecting a research problem and planning its solution; important considerations regarding review of the literature; overview of proper form and style in research writing. Student must complete a fully developed research proposal as part of this course. Prerequisites: Completion of a course in statistics. Senior standing.

SPTS 287. Advanced Internship: Sport Medicine (4)
An opportunity for qualifying students to work in an area of sports medicine that interests them. Prerequisite: SPTS 257. Graduate standing and approval of instructor.

SPTS 287A. Advanced Internship: Sport Management (4)
Professional leadership experience for graduate students. Agency placement is based on student goals and professional leadership background.

SPTS 287B. Advanced Internship: Sport Management (4)
Professional leadership experience for graduate students. Agency placement is based on student goals and professional leadership background.

SPTS 289A. Advanced Practicum: Sport Management (2-4)
This course is designed to provide students with a practical experience in the application of administrative theory. Prerequisite: SPTS 169 or SPTS 269.

SPTS 289B. Advanced Practicum: Coaching (2-4)
Non-classroom experiences in activities related to Sports Medicine, under conditions determined by the appropriate faculty member. SPTS 189 represents advanced practicum work involving increased independence and responsibility. Enrollment is limited to six units maximum of 089/189A, B, C, D offerings and no category within a course may be repeated for credit.

SPTS 291. Independent Study (2-4)

SPTS 293. Special Topics (3 or 4)
Graduate standing or permission of the instructor.

SPTS 297. Independent Research (1-4)

SPTS 299. Thesis (4)
College of the Pacific Faculty

Biological Sciences

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

Mark Brunell, 2002, Associate Professor, BA, California State University, 1988; MA, California State University, Fullerton 1991; PhD, University of California, Riverside, 1996.

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

Kirkwood 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.

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.

Stacey Luthy, 2007, Assistant Professor, BS, Louisiana State University, 1997; PhD, The University of Nittany, 2004.

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


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


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

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

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

Lisa Wrischnik, 1998, Associate Professor, BS, University of California, Berkeley, 1986; PhD, University of California, San Francisco, 1996.

Chemistry

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

Andreas Franz, 2002, Associate Professor, BS, Universitaet-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.

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

Jianhua Ren, 2002, Associate 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, Lomonov Moscow State University, USSR, 1974; PhD, MSU. 1982; DSci, MSU. 1991.

Bálint Száráy, 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

Marlin Bates, 2005, Assistant Professor, BA, University of the Pacific, 1996; MA, 1999; PhD, Pennsylvania State University, 2004.

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


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

Carol Ann Hackley, 1985, Professor, BA, California State University, Sacramento, 1961; MA, Ohio State University, 1984; PhD, 1985.

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 E. 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.

Psychology

Roseann Hannon, 1970, Chair, Professor, BS, Frostburg State College, 1965; MS, Pennsylvania State University, 1967; PhD, University of South Dakota, 1970.

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, 2003, Associate Professor and Co-Chair, BA, University of California Santa Barbara; MA, Hahnemann University, 1996; PhD 2000; BCBA.

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

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

Deborah Schooler, 2007, Assistant Professor, BA, Brown University, 1999; PhD, University of Michigan, 2004.
Sport Sciences

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


Darrin Kitchen, 2005, Assistant Professor, BA, California State University, Chico, 1996; MS, California State University, Sacramento, 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.

Michele Mielke, 2009, Assistant Professor, BS, Barry University, Miami, 1993; MS, Florida Atlantic University, Boca Raton, 2004; PhD, University of Nebraska, Lincoln, 2009.

Peter J. Schroeder, 2007, Assistant Professor, BS, Truman State University, 1996; MA, University of the Pacific, 1998; EdE, University of Missouri, 2003.

Christopher Snell, 1990, Professor and Chair, BA, Bedford College, England, 1987; MS, University of Oregon, 1990; PhD, 1995.

Mark Van Ness, 1999, Associate Professor, BS, Wheaton College, 1990; MS, California State University, Sacramento, 1993; PhD, Florida State University, 1997.
The Conservatory of Music offers one graduate degree in music education: the Master of Music, and two graduate level programs in music therapy (please see details under Music Therapy below). Additionally, the Master of Education (with an emphasis in music education) is available through the Benerd School of Education. Building on previous music and teaching experiences, the education programs are individualized and lead to a creative, productive career in teaching music, pre-K through college. The Conservatory graduate programs give students individual faculty attention and opportunities to work with experts in their field.

Graduate students in the Conservatory of Music take a range of coursework designed to enhance their musicianship and research skills. Graduate students develop advanced skills in music therapy, conducting, pedagogy, or other areas of music specialization depending on individual career goals. Music education degrees are designed for those with a previous degree/credential in music; in general, the Master of Music includes more coursework in music, while the Master of Education includes more education courses. Applicants who have not attained a music education degree/teaching credential previously will be expected to complete the credential program as part of earning their graduate degree. The Master of Arts in Music Therapy offers a choice of two tracks of study and includes advanced clinical skill development. The Certification (Equivalency) offers an entry level professional course of study open to qualifying individuals with a Bachelor’s degree either in music or in other fields.

**Comprehensive Examination**

At the conclusion of the master’s program, all students are expected to pass a comprehensive written and/or oral examination/thesis defense on all work covered during their graduate study at University of the Pacific.

**Admission Requirements**

Admission to any graduate program in music at University of the Pacific is based upon both academic qualifications and musicianship, including overt musical behavior as demonstrated in performance and listening. Academic considerations for the entering master's student, regardless of major, are discussed in earlier pages of this catalog under Admission. The graduate faculty of the Conservatory of Music consider each prospective graduate student based upon:

- **Music education majors** — a live audition or tape of either:
  1. The candidate's primary solo performing medium.
  2. A recent (within two years) example of a performance or demonstration by a school ensemble or class taught or conducted by the applicant.
  3. The candidate's original compositions (with scores).

  **Candidates must have a Bachelor's Degree in Music**

  **Candidates must apply for and be accepted into the Graduate School**

  **Grade point average of at least 3.0 for the last two year of undergraduate study**

  **Successful completion of the basic aptitude portion of the Graduate Record Examination (GRE). The music subject exam of the Graduate Record Examination is not required. In cases where a student has earned an exemplary undergraduate GPA (3.5 or higher), the GRE examination requirements may be waived by the Conservatory Graduate Studies Chair**

  **Candidates must apply for and be accepted into the Graduate programs of the Conservatory of Music (and the School of Education, if not already possessing a music education degree/teaching credential)**

  **CREDENTIAL candidates must apply for and meet the admission procedures and standards of the Credential Program of the School of Education during the first term of attendance**

  **Instructions regarding repertory and recording specifications are available in the Office of the Dean, Conservatory of Music and should be requested by all applicants.**
Master of Music Degree in Music Education

The music education graduate program offers a core course of study along with numerous electives in music and education, providing an individualized program that caters to the individual’s specific career goals. Candidates for the Master of Music degree must have their baccalaureate degree from an accredited school or department of music and must also give evidence of accomplishments during their undergraduate years commensurate with those leading to the Bachelor of Music degree at University of the Pacific. All transcripts and placement tests will be evaluated; recommendations for courses of study will be made accordingly. Supplementary undergraduate work may be prescribed if deemed advisable. The major field is music education.

The music education department offers two plans for students who have completed an undergraduate music education degree: Plan A with emphasis on research, Plan B with emphasis on advanced techniques and practices in music education and music. Students with an undergraduate music degree other than music education can obtain the master’s degree and California music certificate in teaching through the Master of Education in Music Education offered through the School of Education. See music education department chair for program description.

In certain cases (depending on previous teaching experience), a candidate may gain the teaching credential with the Master of Music Education degree, working with both the Conservatory of Music and the Benerd School of Education; see music education department coordinator for details. Note that both MM programs contain a number of electives; specific courses come from the upper division and graduate courses listed later in this catalogue and in the university’s general catalogue. This flexibility of electives allows for the personalization of the degree plan.

Program Requirements

In order to earn the master of music degree in music education, students must complete a minimum of 33 units with a Pacific cumulative grade point average of 3.0.

Plan A: Thesis

MUSC 202 Introduction in Music Research 3
MUSC 203 Contemporary Issues in Music Education and Therapy 3
Minimum ten units from the following:
- MHIS Minimum 2 units in Music History
- MCOM Minimum 2 units in Music Theory
- MAPP Additional units in Applied Music
Three to nine units of non music courses (such as education, psychology, languages, statistics) 3-9
Four to ten units from:
- MEDU Music Education
- MHIS Music History
- MTHR Music Therapy
- MCOM Music Theory
- MAPP Music Applied
MEDU 299 Thesis 4
One of the following must be met before degree is awarded:
- Bachelor's degree in Music Education
- Music Education Credential

Note: 1) 18 units must be at the graduate (200 or higher) level.

Plan B: Seminar

MUSC 202 Introduction in Music Research 3
MUSC 203 Contemporary Issues in Music Education and Therapy 3
Minimum ten units from the following:
- MHIS Minimum 2 units in Music History
- MCOM Minimum 2 units in Music Theory
- MAPP Additional units in Applied Music
Three to nine units of non music courses (such as education, psychology, languages, statistics) 3-9
Four to ten elective units from:
- MEDU Music Education
- MHIS Music History
- MTHR Music Therapy
- MCOM Music Theory
- MAPP Music Applied
One of the following must be met before degree is awarded:
- Bachelor's degree in Music Education
- Music Education Credential

Music Therapy

Pacific’s music therapy program offers post baccalaureate education for 1) entry to the music therapy profession (Certification/Equivalency) and 2) also offers a Master’s Degree in Music Therapy, which supports career advancement beyond the entry-level foundations required for Board Certification. Flexible learning options support a broad range of enhanced career opportunities for rapidly developing health care arenas. Advanced (MA) coursework affords students greater depth and breadth in knowledge and skills for advanced clinical competency and career development. Master’s degree students in music therapy receive individual mentoring throughout the process, from selecting an area for career focus, through the development of advanced skills and specialization.

Overview of Post-Bachelor’s Degree Music Therapy Options

1. Master of Arts Degree in Music Therapy. (See complete program description below.) This program is for Board-Certified Music Therapists seeking preparation for advanced level of practice, with specialization in either clinical or academic areas. Application is submitted to the graduate school; an informal musicianship assessment and interview is done prior to student advising.

2. Certification (Equivalency) Program in Music Therapy. (These students are not awarded a degree or certificate from Pacific.) This program is designed for individuals who already have bachelor’s degrees in music (e.g., performance, music education, music management, etc.) or those with degrees in areas other than music (e.g., psychology, special education, English, etc.). This option does not include all the coursework that would be required to earn a second bachelor’s degree. Instead, the Certification Program focuses on the completion of all necessary music/music therapy courses, competencies, and clinical internship as required by the AMTA as prerequisites to sit for the board certification examination, administered by CBMT (Certification Board for Music Therapists). Passing the board certification examination certifies individuals to begin the professional level of practice of music therapy with the MT-BC credential (Music Therapist-Board Certified).

A popular and flexible learning option for mature individuals making a career change, the overall length of time to complete the Certification program may vary due to practical issues of balancing work or family commitments. The number of courses required for the completion of the certification program will vary according to the academic background and musical skills of those who apply. The music therapy faculty works closely
with potential Certification students to design an individualized plan to enable students to complete the various requirements in a cost-effective and timely manner, to expedite their entry into the music therapy job market. An important first step in this supportive mentoring process is the initial interview and music skills assessment session with the music therapy faculty and the principal instrument audition with Conservatory Applied Faculty, which occur during the process of application to the Certification program. (See the detailed Certification/ Equivalency Program description below.)

3. Certification (Equivalency) Program Plus Master's Degree in Music Therapy (These students are classified as graduate students and are referred to as Certification Graduate Students.) This program supports rapid development of advanced clinical competencies for strong careers in music therapy clinical or academic settings. Persons who already have an undergraduate degree, demonstrate strong musicianship, and who qualify to enter the Graduate School may apply for this program. A complete application for graduate school admission is required for this program option, as well as the audition, interview, and music skills assessment described under the Certification program application procedure below. The Music Therapy Certification Graduate student first completes the Certification Program requirements. (See the Certification/Equivalency program description below.) Then, depending upon the individual’s situation, some students may begin work toward the graduate (MA) degree while completing their Certification requirements. Certification Graduate students who are making good progress in the certification/undergraduate level academic and competency work may concurrently take graduate level classes such as MUSC 202 or 203, music electives, or courses in other departments which support development of competencies for their area of specialization.

However, since all core music therapy courses in the Master of Arts in Music Therapy Program focus on advanced clinical skills, these courses can only be taken after successful completion of all (undergraduate level) Certification courses and the clinical internship (MTHR 187). Certification Graduate students usually earn the MT-BC credential shortly after completing internship, and are encouraged to work part-time as music therapists; this “real life” experience is extremely valuable in conjunction with the advanced coursework in music therapy. (For more information on the advanced phase of the Certification Graduate program option, see the MA program description below.)

Certification (Equivalency) Programs in Music Therapy

Program Description
The Music Therapy Certification program is designed for individuals who already have bachelor’s degrees in music (e.g., performance, music education, composition, etc.) or in areas other than music (e.g., psychology, special education, English, etc.). The MT certification program does not require students to earn a second bachelor’s degree. Instead, the Certification Program focuses on the completion of all required courses in music foundations, music therapy, and health/behavioral/natural sciences, AMTA-defined music therapy competencies, and the 6-month full time clinical internship, all required as prerequisites to sit for the board certification examination, administered by CBMT (Certification Board for Music Therapists). Passing the board certification examination certifies individuals to begin the professional level of practice of music therapy with the MT-BC credential (Music Therapist-Board Certified), recognized as the professional standard throughout the United States and in many other countries.
demonstrate interpersonal and professional skills appropriate to the clinical profession as evaluated by the Music Therapy Program faculty, in order to remain in the program.

Music foundations courses completed at a NASM-approved college level program may be applied to fulfill Music Therapy Certification requirements, subject to evaluation by Conservatory faculty.

1. Students who have completed a bachelor's degree in music at a NASM-Accredited institution will be considered to have completed music foundation coursework.

2. Students who have completed theory coursework at an institution not accredited by NASM will be assessed for knowledge and skill level. Failing to meet competencies in theory and musicianship, students will be required to take additional theory coursework.

3. Students who need to complete theory coursework at Pacific will be evaluated for placement in music theory.

Students must provide official college transcripts documenting any courses to be applied to the Certification requirements. Course description and course syllabus may be required to support evaluation of course equivalence. Courses with a grade lower than C+ will not be accepted for credit toward Certification requirements.

Required Health/Behavioral/Natural Sciences courses may be transferred from other accredited college level institutions. No courses with a grade lower than B- will be accepted in this category.

Program Requirements

I. Music Theory Foundation Courses
Minimum 16 units
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
Additional courses to reach minimum of 16 units: 16
MCOM 014 Introduction to Orchestration
MCOM 015 Music Theory IV: 20th Century
MCOM 016 Aural Perception IV
MCOM 019 Music & Computer Technology
MCOM 030 Jazz Theory and Aural Training

II. Music History Courses (3 semesters)
Minimum 9 units
Select from the following:
MHIS 006 Music of the World's Peoples
MHIS 008 History of Jazz
MHIS 012 Survey of Music History II
MHIS 013 Survey of Music History III

Note: 1) One semester may consist of world music or jazz/contemporary music. (Recommended)

III. Music Performance & Skills Foundations
MPPER 4 semesters of Ensembles 4
MEDU 105 1 semester of Percussion Instruments 1
MPPER 151 1 semester of Conducting 2
MAPP 010 2 semesters of Applied Instruction on Principal Instrument 2

IV. AMTA level Proficiencies
Piano Proficiency
Voice All students must take MAPP 001E 1
Guitar Proficiency

Note: 1) Individual assessments by the faculty determine whether the AMTA required music skills competencies have been met. 2) Course instruction at Pacific is available in any music foundation area if needed.

V. Health/Behavioral/Natural Science Courses
Minimum of 20 units
PSYC 111 Abnormal Psychology 4
SPED 123 The Exceptional Child 3
BIOL 011 Human Anatomy & Physiology 4
Additional courses to reach minimum of 20 units 11

Note: 1) Recommended; other college level Anatomy courses are also accepted by AMTA

VI. Music Therapy Courses
MAPP 001E Voice Class for Music Therapy and Music Education Majors 1
MTHR 011 Music as Therapy: A Survey of Clinical Applications 3
MTHR 018 Basic Music 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 & Educational Applications 3
One of the following: 3
MTHR 140 Psychology of Music
MTHR 240 Psychology of Music
[For students concurrently enrolled in the MA in Music Therapy program]
MTHR 141 Music Therapy in Mental Health and Social Services 3
MTHR 142 Music Therapy in Medicine and Health Care 3
MTHR 150 Fieldwork in Music Therapy 4
MTHR 187 Internship in Music Therapy 2

Master of Arts Program in Music Therapy

Program Description
The MA in music therapy requires a minimum total of 36 units and provides a balance across three main areas, with at least 13 units in music therapy foundation courses, 13 units in specialization field courses (much of which is selected by the student with faculty advisement), and 10 or more units of free electives. Students have the option to take additional elective courses related to their specific goals for clinical or for research/academic professional development, resulting in a range of 36-40 units earned within the MA in Music Therapy degree program.

The MA in MT program provides a foundation set of courses for all students, and then allows for individualization of the plan of study. Students pursuing the MA in Music Therapy are able to focus on their specific personal career goals by selecting one of two tracks supporting:

a. preparation for eventual entry into teaching and research careers
   (Generally, this requires completion of the master's degree in music therapy first, followed by doctoral level work available in other programs.) or
b. development of advanced clinical, administrative, and program development skills.
Application Procedure
The MA in Music Therapy degree program is designed for Board-Certified Music Therapists seeking preparation for advanced level of practice, with specialization in academic or clinical areas. Application is submitted to the graduate school, applicants who have a cumulative college GPA of 3.5 or higher are not required to take the GRE as part of the application process. For persons with the M-BC credential, an informal musicianship assessment and interview with the music therapy graduate faculty may be conducted at any time, and must be done prior to student advising and registration for courses.

Concurrent enrollment in the Certification and MA Programs: Students may apply concurrently or sequentially for enrollment in both the Certification and the MA in Music Therapy programs. (See Certification program requirements and Program Policies for the MA degree in Music Therapy.)

Plan of Study
Both tracks in the MA in Music Therapy Program allow for flexible designs for the individualized plan of study; MA Program students should consult with their advisor during the first term in residency, to determine their overall plan of study, and to detail their schedule of classes for each semester or summer term of the plan.

Master of Arts in Music Therapy
In order to earn the master of arts degree in music therapy, students must complete a minimum of 36 units with a Pacific cumulative and major/program grade point average of 3.0 or higher.

Music Therapy Foundational Courses:
Minimum 13 units

MTHR 231 Individual Music Therapy: Advanced Theory and Techniques 3
MTHR 232 Group Music Therapy: Advanced Theory and Techniques 3
MTHR 260 Advanced Clinical Practice in Music Therapy 2

Note: 1) Two semesters, one unit each semester. 2) Students may fulfill one unit of this requirement by completing a Special Topics course in a clinical practice area.

MTHR 251 Music Therapy Supervision I: Intro to Theory and Applications 1
MTHR 252 Music Therapy Supervision II: Applied Experience 1
MUSC 203 Contemporary Issues in Music Therapy and Music Education 3

Choose one of the following Options:

Academic/Research Track
(Option A, Thesis Plan)
Studies in this track prepare the graduate student to go on to doctoral level studies, leading to careers in academia and/or research. Students may receive mentored experience in college teaching as well as develop skills for research and scholarly work. Studies culminate in a research thesis. The thesis may consist of either experimental or applied research related to the student’s specialization interests.

Required Courses:
Minimum 13 units

MTHR 240 Psychology of Music 3

Note: 1) May be waived if prior upper division undergraduate coursework covered this course content.

Two Research Design & Statistics Course Electives 6

MUSC 202 Introduction in Music Research
200 level Research course

Note: Generally, students take MUSC 202 unless they have already had extensive coursework/experience in the research methodologies

MTHR 299 Thesis 4
Free Electives
Minimum 10-14 units

Area of Specialization Electives 6

Note: 1) All Music Therapy graduate students select a minimum of 6 elective units to support their chosen area of specialization and can benefit from graduate coursework selected from among many program offerings across the University in such areas as counseling/health psychology/experimental psychology/behavior analysis (Department of Psychology), special education/educational or counseling psychology (Bernd School of Education) or courses from the MEd in Music Education program. Academic Track students are also encouraged to consider electives from Speech-Language Pathology and other Health Sciences or helping professions offerings, as well as applied music studies or ensembles in the Conservatory.

Additional electives from the following:
MTHR 230 Bonny Method of Guided Imagery and Music Level I Training
MTHR 265 Supervised Experience in Music Therapy
Human Research; may be repeated
MTHR 291 Graduate Independent study
MTHR 275 Music Therapy College Teaching:
Curriculum, Competencies & Classroom
Other Music electives

Clinical Track
(Option B, Clinical Clerkship Plan)
Studies in this track support the development of skills for advanced clinical practice, program development, and administrative positions. Studies culminate in a Clinical Clerkship project, where the student designs, implements, and evaluates an innovative applied project or a model demonstration program in their area of clinical specialization.

Required Courses:
Minimum 13 units

MTHR 240 Psychology of Music 3

Note: 1) May be waived if prior upper division undergraduate coursework covered this course content.

Two Research Design & Statistics Course Electives 6

MUSC 202 Introduction in Music Research
200 level Research course

Note: Generally, students take MUSC 202 unless they have already had extensive coursework/experience in the research methodologies

MTHR 245 Clinical Clerkship in Music Therapy 4
Free Electives
Minimum 10-14 units

Area of Specialization Electives 6

Note: 1) All Music Therapy graduate students select a minimum of 6 elective units to support their chosen area of specialization and can benefit from graduate coursework selected from among many program offerings across the University in such areas as counseling/health psychology/experimental psychology/behavior analysis (Department of Psychology), special education/educational or counseling psychology (Bernd School of Education) or courses from the MEd in Music Education program. Clinical Track students are also encouraged to consider electives from applied music studies or ensembles in the Conservatory, electives from Speech-Language Pathology and other Health Sciences or helping professions offerings or liberal or fine arts studies which might enhance their careers as creative therapists. Electives in business management or music business are also options for Clinical Track students.
Additional electives from the following:

- MTHR 230  Bonny Method of Guided Imagery and Music Level I Training
- MTHR 265  Supervised Experience in Music Therapy Human Research; may be repeated
- MTHR 291  Graduate Independent study

Other Music Electives

Program Policies

Requirements for the MA Degree in Music Therapy and students concurrently enrolled in the Music Therapy Certification Program:

- Students enrolled in the Certification Graduate program option must complete all Certification coursework requirements, demonstrate functional music competencies, and complete an approved clinical internship prior to enrolling in any foundational music therapy graduate courses except MUSC 203.
- MUSC 203 requires prerequisite MTHR 141 for Certification Graduate students, but may be taken concurrently with MTHR 142 with permission of advisor.
- Students may take MTHR 230 concurrently with MTHR 187 (Internship) with permission of both the MTHR 230 instructor and the Clinical Training Director.
- Specialization field courses MUSC 203 and MTHR 240 may be taken concurrently with Certification coursework. Other MA specialization field and free elective graduate courses except Human Research, College Teaching, Thesis, or Clerkship may also be taken prior to the internship, MTHR 187.

For all MA in Music Therapy students:

- The work for the master's degree must be completed within 7 years from the date when the first 200 level course was taken at Pacific.
- Students must pass the Board Certification (CBMT) Examination or provide evidence of current re-certification (MT-BC) status prior to completion of the Master's Degree in Music Therapy.
- Students who provide evidence of equivalent prior coursework may substitute a free elective for any required course, with permission of advisor and music therapy program director.
- Students enrolled in Thesis or Clerkship will meet at least once each semester with their faculty advisor, and are encouraged to participate in Graduate Research Progress Meetings with peers and MT faculty members.
- In order to provide Protection of Human Research Subjects, IRB oversight, student liability insurance coverage, and ongoing faculty mentoring of students during Thesis and Clerkship work:
  - Students must be continuously enrolled for a minimum of 1 unit of credit (MTHR 299 or MTHR 245) each Fall or Spring semester while working with human subjects in thesis or clinical clerkship projects. Thesis and Clerkship students who wish to conduct human research during summer sessions will enroll in MTHR 265, Supervised Experience in Music Therapy Human Research, during each summer session the research is being conducted.
  - Students must be enrolled for a minimum of 1 unit of credit (MTHR 299 or MTHR 245) during the semesters in which the thesis or clinical clerkship is proposed and when it is defended. Thesis and Clerkship proposal and defense meetings with the student's faculty committee must be scheduled between September 1 and May 1.

Required Advanced Clinical Competencies

Students must demonstrate advanced clinical competence in music therapy as well as academic success, in order to receive the MA degree. The American Music Therapy Association (AMTA) defines advanced clinical competencies expected of individuals earning a graduate degree in Music Therapy: As the student progresses through the MA program coursework, the Music Therapy faculty will evaluate each student for demonstrations of advanced competencies. Particular emphasis is placed upon the acquisition of advanced competencies relevant to the student's area of specialization.

Assessment of advanced competencies are made by the Music Therapy faculty and are included in course requirements leading to the award of the MA degree in Music Therapy.

Course Offerings

Music Composition Department

- **MCOM 208. Counterpoint** (3)
  - Study of Palestrina's and Lassus' contrapuntal techniques accomplished through written exercises and analysis. Prerequisites: MCOM 010-017.
- **MCOM 209. Advanced Orchestration** (3)
  - Focus on orchestration techniques from the first half of the 20th Century, and new performance practices. This study is accomplished through orchestral analysis and writing exercises including a reading session with the orchestra. Prerequisites: MCOM 010-017.
- **MCOM 211. Advanced Computer Music** (3)
  - A course taught in the Conservatory Computer Studio for Music Composition which focuses on the use of sampling/sound design, digital audio recording and editing, automated mixing, and computer manipulation as resources for music composition. An additional project will be assigned for those wishing graduate credit. Prerequisites: MCOM 010-017, MCOM 019.
- **MCOM 212. Composition – Computer Music** (2)
  - Private composition study in computer music within the Conservatory Computer Studio for Music Composition.
- **MCOM 213. Advanced Analysis** (3)
  - Advanced topics in music analysis including the extensive study of Schenkerian analysis. An additional project will be assigned for those wishing graduate credit. Prerequisites: MCOM 010-017.
- **MCOM 291. Graduate Independent Study** (1-4)
- **MCOM 299. Thesis** (1-4)

Music Education Department

- **MEDU 200. Video Microrehearsal for Music Teaching Candidates** (3)
  - Microrehearsals, seminars, and group viewing sessions to define and develop rehearsal-teaching techniques with video recording as basic tool. Prerequisites: Bachelor's degree in music, approved by Music Education faculty.
- **MEDU 201. Video Microrehearsal for Experienced Music Teachers** (1-4)
  - Restructuring of music teaching techniques using video recording techniques; microrehearsals, seminars, and group viewing sessions; field application of new procedures. Prerequisites: Bachelor's degree in music, two years of full-time music teaching in public schools, permission of the instructor.
- **MEDU 202. Fieldwork in Music Education** (3)
  - Advanced work in schools. May include music drama, small ensembles, unique curriculum design as well as large ensembles and class instruction.
**Applied Music Department**

**MTHR 230.** Bonny Method of Guided Imagery and Music Level I Training (3)

Intensive 5-day residential seminar introduces theory and clinical applications of the Bonny Method of Guided Imagery and Music (BMGIM) and other music and imagery techniques. Participants gain intensive personal experience with BMGIM. Hands-on experiential exercises, demonstrations, and clinical examples introduce simple imagery techniques to add to participants’ existing repertoire of therapeutic interventions. This residential phase of the course meets the Association for Music and Imagery (AMI) requirements for introductory training in the Bonny Method. The on-line learning component extends and deepens the student’s understanding through exposure to literature in the Bonny Method, sharing of discoveries from readings and music listening, as well as personal reflection and integration of experiential learning. Prerequisites: Evidence of clinical experience and permission of instructor required. Due to the experiential nature of this course, participants must be willing to participate in all learning activities and in the group sharing process, and attend all seminar sessions as listed in the residential seminar course schedule. All students and instructors are expected to maintain confidentiality of personal material shared by group members.

**MTHR 231.** Individual Music Therapy: Advanced Theory and Techniques (3)

This course explores current theories and techniques of music-centered psychotherapy for supportive, re-educative/rehabilitative, and re-constructive levels of clinical practice with a variety of populations. Includes development of therapeutic relationship through music improvisation, and focused music-evoked imagery to address supportive and re-educative goals for individual clients. Experiential learning includes classroom simulations and supervised clinical practice. Prerequisites: Successful completion of MTHR 187 (or AMTA-approved clinical internship) and MTHR 230 (or Level I training in the Bonny Method of Guided Imagery and Music) or permission of instructor.

**MTHR 232.** Group Music Therapy: Advanced Theory and Techniques (3)

This course examines theories and models for group music therapy with applications for a variety of clinical populations. Includes approaches for quick group assessment and brief treatment environments. Focus is on therapist and member roles and tasks within group development processes. Students refine group facilitation skills using music-centered techniques of improvisation and music-evoked imagery through in-class simulations and supervised clinical practice. Prerequisite: Grade of B or better in MTHR 231 or permission of instructor.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTHR 240</td>
<td>Psychology of Music</td>
<td></td>
<td>Psychological foundations of music. Includes 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. Students enrolled for graduate credit also complete a formal research project proposal and a mock IRB proposal as preparation for eventual research activities within the graduate program or professional venues. Recommended for graduate students in music therapy or music education. Open to students in other majors. <strong>Prerequisites:</strong> Requires basic music reading skills.</td>
</tr>
<tr>
<td>MTHR 245</td>
<td>Clinical Clerkship in Music Therapy</td>
<td>1-4</td>
<td>As an alternate requirement for Thesis, Clinical Clerkship is designed for students who may want to focus on clinical skills and knowledge. Student completes a major project related to an applied therapeutic or educational setting.</td>
</tr>
<tr>
<td>MTHR 251</td>
<td>Music Therapy Supervision I: Introduction to Theory and Applications</td>
<td></td>
<td>This course provides a foundation for effective music therapy clinical supervision. Introduces multicultural, ethical, and legal considerations; explores factors unique to music therapy supervision. Readings, assignments, field observations and in-class discussion of theories and techniques prepare students for MTHR 252, and practical experience supervising undergraduate students in clinical training settings. <strong>Prerequisites:</strong> Completion of MTHR 187 (or AMTA approved clinical internship)</td>
</tr>
<tr>
<td>MTHR 252</td>
<td>Music Therapy Supervision II: Applied Experience</td>
<td></td>
<td>Provides mentored practice in clinical supervision; supports individualized skill development of competencies for professional participation in clinical management and student, volunteer, or peer supervision situations. Learning experiences include direct on-site supervision of undergraduate music therapy students in fieldwork placements, maintaining the on-site learning environment, monitoring student progress, conducting formal evaluations, conducting group student supervision and regular participation in supervisor’s group consultation meetings with faculty. <strong>Prerequisite:</strong> Grade of B or better in MTHR 251.</td>
</tr>
<tr>
<td>MTHR 260</td>
<td>Advanced Clinical Practice in Music Therapy</td>
<td></td>
<td>This course provides individualized experiences for development of advanced clinical skills in music therapy. Students may focus on a new area of specialization, or may work within a familiar clinical environment, developing skills at a more advanced level. Experiences may include supervised practice in advanced music therapy techniques, interdisciplinary collaboration, new program development, or expansion of an existing clinical program. <strong>Prerequisites:</strong> MTHR 187 or clinical internship. Two semesters required.</td>
</tr>
<tr>
<td>MTHR 265</td>
<td>Human Research in Music Therapy: Supervised Experience</td>
<td></td>
<td>This course offers individualized experiences for development of advanced research skills in music therapy. Provides faculty oversight and supervision of human research in clinical or laboratory settings. Students may focus on their own independent research project or may work within a collaborative or faculty directed research environment. Required for students conducting summer research activities with human subjects, including projects contributing to completion of the master’s thesis. <strong>Prerequisites:</strong> Completion of University Human Subjects (IRB) training for student investigators, and permission of instructor. May be repeated.</td>
</tr>
<tr>
<td>MTHR 275</td>
<td>College Teaching in Music Therapy: Curriculum, Competencies and Classroom</td>
<td></td>
<td>Students review AMTA requirements for music therapy undergraduate program curriculum and for competency-based education and clinical training. Course provides mentored practice in teaching foundational level music therapy college courses; supports individualized skill development for professional participation in academic music therapy programs as an instructor. <strong>Permission of instructor.</strong></td>
</tr>
<tr>
<td>MTHR 291</td>
<td>Graduate Independent Study</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>MTHR 293</td>
<td>Special Topics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTHR 293A</td>
<td>Special Topics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTHR 299</td>
<td>Thesis</td>
<td></td>
<td>An original monograph embodying original research.</td>
</tr>
</tbody>
</table>
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 Brittin, Program Director and Professor of Music Education, 1997; BME, Texas Tech University, 1983; MME, 1985; PhD, Florida State University, 1989.

K. Allen Brown, 1981; Assistant Professor of Percussion, BM, University of Oregon, 1969; MM, Western Michigan University, 1972; Doctoral study at the University of Illinois.

Edward Cetto, 1994; Assistant Professor of Music, Director of Choral Activities, MM, Boston Conservatory of Music, 1992; BME, Hart School of Music (University of Hartford), 1981; Certificate, Kodaly Musical Training Institute (Hungary), 1980.

Robert Coburn, 1993; Chair, Composition and Music History, Professor of Music Theory and Composition, BM, University of the Pacific, 1972; MA, University of California, Berkeley, 1974; PhD, University of Victoria (Canada), 1995.


Daniel Ebbers, 2004; Assistant Professor of Voice, BM, University of Wisconsin-Stevens Point, MM, University of Southern California.

James Haffner, 1999; Assistant Professor, Director of Opera, BA, Baldwin Wallace College, 1993; MFA, University of Cincinnati College, 1996.

Eric Hammer, 1993; Professor, Director of Band Activities, Professor of Music Education, BM, University of the Pacific, 1973; MM, University of Oregon, 1990; DMA, University of Oregon, 1994.

Keith N. Hutschek, 2001; Associate Professor, BA, University of California, Berkeley, 1973; Certificate in Marketing, University of California Berkeley, 1993.

James W. Hipp, Interim Dean of the Conservatory of Music, 2007; BM, University of Texas, Austin, 1956; MM, University of Texas, Austin, 1963; Doctor of Music, University of Texas, Austin, 1979.

Feilin Hsiao, 2006; Assistant Professor of Music Therapy, 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).

Patrick Langham, 2003; Associate Professor of Jazz Studies; BM, University of Tennessee, 1992; MM, 1994.

Burr Cochran Phillips, 2007; Assistant Professor of Voice, BM, University of North Texas, 1982; MM, Texas Christian University, Fort Worth, TX, 1994.

Francois Rose, 1997; Associate Professor of Composition; BM, McGill University, 1986; MM, 1991; PhD, University of California, San Diego, 1997.

Patricia Shands, 1995; Associate Professor of Clarinet, BM, Peabody Conservatory of Music, 1981; MM, University of Southern California, 1985.
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.

Learning goals, objectives, and outcomes

The goals of the Eberhardt School graduate programs are to produce graduate students who possess business knowledge and skills, who are able to apply their knowledge and skills in a global business setting, who are able to work as part of a team, and who are able to communicate effectively.

The specific objectives and outcomes are:

1. Demonstrate business knowledge and skills
   a. For each business discipline, each student will demonstrate knowledge of business principles, concepts, theories, and perspectives.
   b. For each business discipline, each student will be skilled in the use of business procedures, methods, strategies, and approaches.
   c. Each student will demonstrate an understanding of the interrelationships among business disciplines.

   The business disciplines include accounting, finance, organizational behavior, marketing, operations management, managerial economics, information systems, quantitative analysis, and strategy development and implementation.

2. Apply business knowledge and skills

   Each student will apply knowledge and skills to business situations and problems in domestic and international settings. This includes:

   a. Strategic thinking. Each student will analyze business environments and opportunities, and to align business activities in developing and implementing organizational strategy and change in complex and uncertain conditions.
   b. Critical thinking. Each student will identify problems, define objectives, gather and analyze information, evaluate risks and alternatives, and make decisions that are ethical and socially responsible and incorporate cultural perspectives.

3. Demonstrate effective teamwork skills

   Each student will work effectively with others as a colleague and as a manager. This includes:

   a. Teamwork. Each student will be able to work in a team and collaborate effectively with others.
   b. Group and organization effectiveness. Each student will be able to manage, influence, and lead others.

4. Communicate clear ideas and plans

   a. Each student will demonstrate effective oral communication skills.
   b. Each student will demonstrate effective written communication skills.
Master of Business Administration

Admission Requirements

- Admission to the Eberhardt MBA Program is competitive and based on criteria which indicate a high promise of success. Performance in prior coursework and standardized test scores are strong considerations in the admission decision.
- A U.S. bachelor’s degree or its equivalent is required for admission. The MBA Admissions Committee gives equal consideration to all undergraduate majors in the admissions process.
- MBA admission decisions are made on a rolling basis. Applicants are notified immediately when decisions have been made.
- The completed application packet must be submitted before the Admissions Committee can render a final decision. The required materials include:
  - The completed application form and supporting materials.
  - Transcripts from all undergraduate, graduate and professional schools attended.
  - Two letters of recommendation written by people knowledgeable of the applicant’s qualifications for graduate work.
  - A score on the Graduate Management Admissions Test (GMAT). For GMAT information and materials go to www.mba.com. These scores must be less than five years old.
  - Applicants are encouraged to prepare for the GMAT by obtaining review material and sample questions published specifically for this purpose.

Master of Business Administration Programs

Eberhardt 16-Month MBA Program

The Eberhardt MBA Program is designed to train the managers of the 21st century. The rigorous and intellectually challenging coursework goes beyond the traditional business school curriculum to emphasize important managerial skills like leadership, innovation, communication and a global perspective.

Program Requirements

Program Prerequisites: All students are required to complete prerequisite courses in subjects necessary for success in MBA coursework prior to beginning the MBA. The required prerequisites are three semester units of basic Macroeconomics, three units of basic Microeconomics, three units of Probability and Statistics, and three units of College level Finite Math/Calculus. Three semester units of Managerial Economics may be taken in lieu of the six units of basic economics. Prerequisite courses may be taken at either the undergraduate or graduate level.

Internship Program:

All students are required to participate in an internship during the MBA program.

Applied Research/Consulting Projects:

All students participate in field projects throughout their MBA courses. Students desiring additional field experience may apply for additional internships or consulting projects.

International Experience:

Because international competency is an essential element of success in today’s global economy, all Eberhardt MBA students participate in an international business experience through the Global Business Competition course (BUSI 268). This course requires overseas travel of approximately two-weeks. BUSI 268 has been conducted locations such as Turkey, Panama, Costa Rica, Chile, Finland, Hong Kong, Korea, Singapore, France, Spain, Taiwan, England and Ireland. Students are responsible for all travel costs including airfare, lodging, ground transportation, meals, and other program costs.

Curriculum:

The MBA curriculum has a global orientation and is designed around an intensive phase of foundation courses and an advanced phase of integrated management studies. It offers a carefully designed combination of rigorous classroom work, intensive case-based discussions, and off-campus experiences. Students progress through the program as part of a cohort.

To earn the master of business administration degree students must complete a minimum of 53 units with a Pacific cumulative grade point average of 3.0.

First Fall Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 211</td>
<td>Applied Business Principles</td>
<td>18</td>
</tr>
</tbody>
</table>

Spring Semester:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 220</td>
<td>Corporate Finance</td>
<td>3</td>
</tr>
<tr>
<td>BUSI 278</td>
<td>Entrepreneurial Management</td>
<td>3</td>
</tr>
<tr>
<td>BUSI 265</td>
<td>Global Marketing Strategy</td>
<td>3</td>
</tr>
<tr>
<td>BUSI 274</td>
<td>Managing Quality and Productivity</td>
<td>3</td>
</tr>
<tr>
<td>Plus one elective course*</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

First Summer Session:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 268</td>
<td>Global Business Competition</td>
<td>3</td>
</tr>
</tbody>
</table>

Second Fall Semester:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 213</td>
<td>Corporate Social Responsibility</td>
<td>2</td>
</tr>
<tr>
<td>BUSI 214</td>
<td>Negotiation</td>
<td>2</td>
</tr>
<tr>
<td>BUSI 279</td>
<td>Leadership</td>
<td>2</td>
</tr>
<tr>
<td>BUSI 280</td>
<td>Strategy Implementation</td>
<td>2</td>
</tr>
<tr>
<td>Plus three elective courses*</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>53</td>
</tr>
</tbody>
</table>

Electives

The 16-month MBA includes electives in Finance, Marketing, Entrepreneurship, Sport Management, and Healthcare Management.

Finance Electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 221</td>
<td>Entrepreneurial Finance</td>
<td></td>
</tr>
<tr>
<td>BUSI 222</td>
<td>Student Investment Fund</td>
<td></td>
</tr>
<tr>
<td>BUSI 223</td>
<td>Investment Management</td>
<td></td>
</tr>
<tr>
<td>BUSI 226</td>
<td>Financial Statement Analysis</td>
<td></td>
</tr>
<tr>
<td>BUSI 263</td>
<td>International Finance</td>
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</tr>
</tbody>
</table>

Marketing Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 241</td>
<td>Marketing Research</td>
<td></td>
</tr>
<tr>
<td>BUSI 248</td>
<td>Marketing of Services</td>
<td></td>
</tr>
<tr>
<td>BUSI 247</td>
<td>Consumer Behavior</td>
<td></td>
</tr>
<tr>
<td>BUSI 293</td>
<td>Special Topics in Marketing</td>
<td></td>
</tr>
</tbody>
</table>

Entrepreneurship Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 221</td>
<td>Entrepreneurial Finance</td>
<td></td>
</tr>
<tr>
<td>BUSI 272</td>
<td>Entrepreneurship</td>
<td></td>
</tr>
<tr>
<td>BUSI 275</td>
<td>Technology and Innovation</td>
<td></td>
</tr>
<tr>
<td>BUSI 293</td>
<td>Special Topics in Entrepreneurship</td>
<td></td>
</tr>
</tbody>
</table>
**Healthcare Management Electives**
- BUSI 250 Health Finance: Health Insurance
- BUSI 251 International Healthcare Systems
- BUSI 252 Healthcare Law
- BUSI 254 Health Economics
- BUSI 293 Special Topics in Healthcare Management

**Sport Management Electives.**
- SPTS 265 Advanced Sports Law
- SPTS 269 Advanced Management of Sport Enterprises
- SPTS 274 Advanced Sport Marketing and Promotions
- SPTS 275 Advanced Sport Management
- SPTS 287A/B Advanced Internship: Sport Management

**Doctorate of Pharmacy / Master of Business Administration Joint Degree**

*PharmD/MBB: This joint-degree program allows students interested in management positions in the pharmaceutical, biotechnology, and healthcare industries to develop the needed expertise. Both degrees can be completed in four years, regardless of academic background. Students interested in this program must apply and be accepted by both the MBA and Doctor of Pharmacy programs separately. Please see MBA application for special instructions.*

The Eberhardt PharmD/MA is modeled after the 16-month Eberhardt MBA. Students will spend one year as a member of a full-time MBA cohort before beginning their pharmacy studies. Students will return to the Eberhardt MBA program in the fall of their third year for a two-unit capstone MBA course.

In order to earn the PharmD/MA degrees student must complete a minimum of 51 units with a cumulative grade point average of 3.0.

<table>
<thead>
<tr>
<th>First Year Fall Semester</th>
<th>MBA Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 255</td>
<td>15</td>
</tr>
<tr>
<td>BUSI 254</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First Year Spring Semester:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 250</td>
</tr>
<tr>
<td>BUSI 276</td>
</tr>
<tr>
<td>BUSI 265</td>
</tr>
<tr>
<td>MBA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First Year Summer Session:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 268</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Year Fall, Winter, and Spring: Pharmacy Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Year Fall Semester: Pharmacy Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Year Winter and Spring Semester: Pharmacy Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2*</td>
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</table>

<table>
<thead>
<tr>
<th>Fourth Year Fall, Winter and Spring Semester: Pharmacy Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>6*</td>
</tr>
</tbody>
</table>

**Total: 51**

* Nine units of MBA credit is awarded for the following pharmacy (PHRM) courses:
  - PHRM 111 Pharmacy Practice and Professionalism
  - PHRM 152 Pharmacy Law and Ethics
  - PHRM 161 Pharmacy Management
  - PHRM 173 Hospital Pharmacy APPE
  - PHRM 174 Community Pharmacy APPE

**Juris Doctorate / Master of Business Administration Joint Degree**

*Joint-degree JD/MBB Program: The joint-degree JD/MBB Program allows students to complete their three-year law degree at Pacific's McGeorge School of Law and the 16-month Eberhardt MBA Program together in only four years. To combine the two programs, students can count up to 24 units of course credit toward both degrees. Students interested in the joint-degree JD/MBB Program must apply and be accepted by both the MBA Program and the Law Program separately.*

Contact the MBA program for sample Plan of Study.

**Master of Business Administration**

**Peace Corps International Program**

*Peace Corps Masters International MBA Program: Masters International students complete a portion of their studies on campus prior to entering the Peace Corps. Students will then leave for a Peace Corps assignment, including language, technical, and cross-cultural training. After completing a Peace Corps assignment, students will return to campus for a semester to complete their degree. All returned Peace Corps volunteers will receive a stipend from the Peace Corps for their volunteer service. Students interested in the Masters International Program must apply and be accepted by both the MBA Program and the Peace Corps separately.*

Contact the MBA Program Office for a sample plan of study.

**Course Offerings**

A student must receive a grade of ‘B’ or better in BUSI 211 and BUSI 255, and a ‘C’ or better in all other prerequisite courses.

**BUSI 210. Business and Public Policy** *(3)*

This course is about the public policy process and the role business plays in it. It will examine national, regional and international policy issues of relevance to business and the larger society. It will also involve an examination of the ethical dimensions of business decision-making. Prerequisite: Completion of Phase I of MBA Program or the permission of the instructor and the MBA Director.

**BUSI 211. Applied Business Principles** *(18)*

This course is an applied and intensive overview of business administration. Topics include eight academic modules covering managerial economics, information systems, data analysis and decision making, accounting, finance, marketing, organizational behavior, and strategy formulation. In addition, there is one required pass/no credit module on career development. The course concludes with a competition between teams consisting of students in the course. The course is taught by faculty in the Eberhardt School of Business, each in their own area of specialization. This course is the required beginning course for all students in the MBA program. Students must earn an B or better in the course to continue in the MBA program. In addition, the overall grade cannot include a grade of D or F in any module, and cannot include more than two grades of C or C-. Prerequisites: Admission into the MBA Program, ECON 053 and ECON 055, MATH 037 and MATH 045, or equivalent courses.

**BUSI 212. MBA Career Development Seminar** *(1)*

This course is designed to enable business students to clearly define their career objectives and available opportunities as it relates to the Pacific MBA. Through the course, MBA students will be trained in the tactics and methods of conducting a successful job search and in preparing for multiple career transitions over the course of their entire business career. Prerequisites: Acceptance into the MBA Program.
BUSI 213. Corporate Social Responsibility (2)
The purpose of this course is to improve your abilities as a manager to anticipate, analyze, respond to and manage issues of social responsibility and ethics that you will face in your career. You will have an opportunity to consider challenges that arise across different business functions in both domestic and global markets. Sample topics may include compliance with a variety of laws, fair and unfair competition, responsibility to customers, shareholders, employees, and the environment, insider trading, product safety and more. Prerequisite: BUSI 211. Graduate students from other programs may enroll with permission of the associate dean in the Eberhardt School.

BUSI 214. Negotiation (2)
The purpose of this course is to understand the theory and processes of negotiation as it is practiced in a variety of settings. This course is designed to be relevant to the broad spectrum of negotiations problems that are faced by managers and individuals. Thus, the content is relevant to students interested in marketing, entrepreneurship, consulting relationships, international management or mergers and acquisitions. In addition, the course will emphasize negotiations that occur in the daily life of the manager. Prerequisite: BUSI 211.

BUSI 220. Corporate Finance (3)
An advanced course in financial management that introduces a set of analytical tools needed to make sound corporate decisions in such areas as capital budgeting, capital structure and dividend policy. Prerequisite: BUSI 211.

BUSI 221. Entrepreneurial Finance (3)
An in-depth analysis of the financial issues facing a business start-up. Specific attention is paid to the acquisition of financing for new ventures and the financial management of new and growing businesses. Prerequisite: BUSI 211.

BUSI 222. Student Investment Fund (3)
Student Investment Fund (SIF) is 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 portfolio, strives to outperform the market (S&P 500). Prerequisite: BUSI 211 and permission of instructor.

BUSI 223. Investment Management (3)
This course teaches students a set of analytical tools necessary to evaluate the profitability of a vast array of financial assets such as stocks, bonds, options and financial futures. Prerequisite: BUSI 211.

BUSI 225. Investments/Portfolio Analysis (3)

BUSI 226. Financial Statement Analysis (3)
This course will familiarize students with the types of financial statements and analysis processes used by bankers and analysts. This course will also provide students with a basic understanding of the many issues bankers and analysts face in understanding a company through its financial statements. Prerequisite: BUSI 211 or permission of associate dean.

BUSI 230. Enterprise Systems Analysis (3)
An Enterprise Resource Planning (ERP) system is a tool that integrates data across a business organization. This class uses a sample system to examine the features, capabilities, and business advantages of ERP systems. The class investigates the roles of the individual modules and the importance of the integration. It also discusses the strategic implications of vendor and customer interactions through ERP systems. Various issues of implementation and customization will be covered. By its nature, the study for ERP systems ties together knowledge from a variety of business disciplines.

BUSI 231. Database Management (3)
Students will learn to design and develop large-scale business applications using database management systems. The course will emphasize teamwork, team management, and joint application development tools. It will use large-scale commercial database tools such as Oracle and SQL Server.

BUSI 236. Business Programming (3)
Introduction to program logic and design. Visual Basic is used in the development of various business applications in the context of Windows design elements, forms, and events.

BUSI 238. Computer Networking and Telecommunications Management (3)
A study of modern networks and telecommunications systems, including wireless and mobile applications, and Web-based systems. The course will develop the skills to manage business telecommunication and network infrastructures. It will equip managers with the foundations of the technical, economic, and political structure of modern communication systems. The course will emphasize design and management of large-scale enterprise networks. Prerequisite: BUSI 200 or equivalent.

BUSI 239. MIS Project (3)
Students will define and create a MIS e-business application, using a DBMS and the Internet. Projects will be team-oriented and encompass MIS concepts from database, usability, and the Internet. Students will use project management and workgroup software to set schedules and maintain communication. Discussions will emphasize the challenges and potential solutions for dealing with large-scale projects. Prerequisite: BUSI 231. Prerequisite may be taken concurrently: BUSI 230 or permission of the instructor and MBA Director.

BUSI 241. Marketing Research (3)
A study of 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. Prerequisite: BUSI 211.

BUSI 245. Customer Relationship Management (3)
This course explores the process of understanding, creating and delivering value to targeted business markets and individual customers. Relying upon assessment of value in the marketplace, it provides a means of gaining an equitable return on value delivered and enhancing a supplier firm’s present and future profitability. It also provides students with the knowledge and skills necessary to perform consumer analyses that can be used for understanding markets and developing effective marketing strategies. Prerequisite: BUSI 211.

BUSI 246. Marketing of Services (3)
This class explores the theory and strategies that drive service consumption. Students will be exposed to the unique characteristics of marketing services, including the importance of the physical environment to service encounter success; the creation of customer satisfaction; the delivery of service quality and value; and the development of strategies to overcome service failure. Prerequisite: BUSI 211.

BUSI 247. Consumer Behavior (3)
This interdisciplinary course discusses the customer as the focus of the marketing system. Knowledge about the customer behavior, obtained through the application of a series of analytic frameworks and tools, is presented as the basis for marketing decisions at both the strategic and tactical levels. Central focus of the course is the analysis of customer decision-making processes 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. Prerequisite: BUSI 211.

BUSI 248. Marketing Management (3)
This course describes the processes that drive the development and implementation of successful marketing programs. Students will be exposed to the unique characteristics of marketing services, including the importance of the physical environment to service encounter success; the creation of customer satisfaction; the delivery of service quality and value; and the development of strategies to overcome service failure. Prerequisite: BUSI 211.

BUSI 249. Marketing Management (3)
This course describes the processes that drive the development and implementation of successful marketing programs. Students will be exposed to the unique characteristics of marketing services, including the importance of the physical environment to service encounter success; the creation of customer satisfaction; the delivery of service quality and value; and the development of strategies to overcome service failure. Prerequisite: BUSI 211.

BUSI 250. Marketing Management (3)
This course describes the processes that drive the development and implementation of successful marketing programs. Students will be exposed to the unique characteristics of marketing services, including the importance of the physical environment to service encounter success; the creation of customer satisfaction; the delivery of service quality and value; and the development of strategies to overcome service failure. Prerequisite: BUSI 211.

BUSI 251. Marketing Management (3)
This course describes the processes that drive the development and implementation of successful marketing programs. Students will be exposed to the unique characteristics of marketing services, including the importance of the physical environment to service encounter success; the creation of customer satisfaction; the delivery of service quality and value; and the development of strategies to overcome service failure. Prerequisite: BUSI 211.
BUSI 249. Strategic Marketing (3)
This course develops students’ decision-making skills in the complex and fast changing international marketplace. The course provides an integrated analysis of the marketing functions of a firm, viewed primarily from the upper level of management. Emphasis is placed on formulation of goals and objectives and selection of strategies under conditions of uncertainty as they relate to the pricing, distribution and promotion of new and existing products, to achieve corporate objectives in today’s global environment. Prerequisite: BUSI 211.

BUSI 250. Health Finance: Health Insurance (3)
A survey of the theory and practice of health insurance in the United States. Students who complete this course will understand the history and institutional framework of health insurance, will understand how health insurance operates, and will be able to assess the efficiency and equity of health care finance. Prerequisite: BUSI 211 or BUSI 255.

BUSI 251. International Healthcare Systems (3)
This course is an international overview of healthcare finance and delivery that will familiarize students with healthcare finance and delivery around the world. Students will develop critical analytical skills to enable them to compare and contrast health systems, identify relative strengths and weaknesses, and assess the possibilities for structural reform of the US healthcare system. Prerequisite: BUSI 211 or BUSI 255.

BUSI 252. Healthcare Law (3)
Analysis and application of statutes, regulations, case law and policies affecting the health care system in the U.S. Upon completion of this course students will understand the roles of the legal, legislative and administrative systems in health care, will be able to discuss critically important legal, ethical and policy issues in health care, and will be able to recognize situations that may occur in health systems management that will require consultation with legal counsel. Prerequisite: BUSI 211 or BUSI 255.

BUSI 254. 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 payment (e.g. health insurers). The course is built around individual’s 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-effectiveness analysis. Prerequisite: BUSI 211 or concurrent with BUSI 255.

BUSI 255. Applied Business Principles for Pharmacy (15)
This course is an applied and intensive overview of business administration. Topics include seven academic modules covering information systems, data analysis and decision making, accounting, finance, marketing, organizational behavior, and strategy formulation. The course concludes with a competition between teams consisting of students in the course. The course is taught by faculty in the Eberhardt School of Business, each in their own area of specialization. This course is the required beginning course for all students in the PharmD/MBA program. Students must earn an A or better in the course to continue in the MBA program. In addition, the overall grade cannot include a grade of D or F in any module, and cannot include more than two grades of C or C-. Prerequisite: Admission into the PharmD/MBA program.

BUSI 263. International Finance (3)
This course provides students with a conceptual framework for analyzing key financial decisions faced by multinational corporations. The major focus of this class will be on spot exchange markets, forward exchange markets, the balance of payments, exchange rate determinations, hedging strategies, financing alternatives, transfers of international payments, and international bonds and equities investment and diversification. Prerequisite: BUSI 211.

BUSI 265. Global Marketing Strategy (3)
A course to develop students’ decision-making skills in the complex and fast changing international marketplace. Emphasis will be placed on the frameworks and techniques used in deciding which countries offer potential markets for products, how and to what degree the components of the marketing mix must be customized to an international market, and which strategies are best suited to entering a country.

BUSI 267. International Business Law (3)
An introduction to the legal environment of international business. The course will provide students with the opportunity to study international sales and commercial transactions. Additionally, students will have the opportunity to become familiar with international and domestic laws which directly affect global trade. Finally, students will have the opportunity to become familiar with laws and events which indirectly affect international trade such as environmental standards, privatization and intellectual property protection. The emphasis of the course will be on the recognition of legal problems and the discovery and application of appropriate principles of international and domestic laws which may assist in resolving these problems.

BUSI 268. Global Business Competition (3)
Today, all levels of business operations are becoming global. Business people must consider additional parameters when they enter the global sphere. The rules of the game such as laws, customs, theories, and business practices may be different. This course will work on business problems and strategies within the global environment in which U.S. businesses compete. The key objective of this course is to analyze the operation of global firms; various types of entry strategies into foreign countries, impacts on host and home countries, and the powerful flexibility of global systems. Prerequisite: BUSI 211 or the permission of the instructor and the MBA director.

BUSI 269. Comparative Management (3)
This course explores research, theory, and practical applications to administrative problems in human resource management. The course provides students with an understanding and appreciation of: strategic HRM, HRM law, job analysis and design, employee recruitment, selection & placement, training & development, performance evaluation, compensation & benefits, labor relations & collective bargaining, safety & health, international HRM, HRM computer simulation, HR information/management systems and other HRM technological innovations.

BUSI 272. Entrepreneurship (3)
This course will provide an experiential introduction to the creation of a new business enterprise. Building upon mentor experiences, internship and work experiences and the use of selected guest speakers, the course will focus on writing a business plan that could be presented to a venture capitalist (or other source) for funding. Topics will include the traits of successful entrepreneurs, generating business opportunities, screening opportunities, “the window of opportunity,” the venture team, family businesses, management/marketing/financial skills needed, “intrapreneurship,” etc. Prerequisite: BUSI 211.

BUSI 274. Managing Quality/Productivity (3)
The purpose of this course is to recognize the essence of an organization as its operations, or as its production and service delivery. Topics will include the life cycle of operations and supply chain strategies for goods and services, the integration of and information flows between business functions, and the challenges of the globalization of operations and supply chain choices. Students will apply analytical methods for developing, delivering, and improving production systems in a “real world” field experience. Prerequisite: BUSI 211.
BUSI 275. Technology and Innovation (3)
The process of taking science and technology to the marketplace has taken on strategic importance to company leadership in many industries. This course will provide students with concepts, frameworks and tools for managing technology and innovation. How can companies identify the major developments in science and technology that will affect them directly and indirectly? What avenues are available for maintaining technological leadership, and how can they be integrated into a company’s overall objectives? What global strategies are available for developing technology and taking it to the marketplace? Prerequisite: BUSI 211.

BUSI 276. Entrepreneurial Management (3)
This course is designed to integrate the functional knowledge you have acquired in your first semester as an MBA student and to teach you how to apply it within innovative and entrepreneurial business settings that call upon managers to make decisions and plans under conditions of uncertainty. The focus on the entrepreneur and entrepreneurial management reflects two considerations. The first is the growing recognition of the critical importance of entrepreneurial activities in capitalist economics. The second is that it introduces you to a set of opportunities that most of you will encounter in your careers. New companies as well as innovative businesses at larger firms often look for businesspeople with the perspective and skills needed to thrive in innovative business environments and our aim is to help prepare you for such opportunities. Prerequisite: BUSI 211. Graduate students from other programs may enroll with permission of the associate dean in the Eberhardt School.

BUSI 277. Small Business Consulting (3)
Provides students with a structured opportunity to apply knowledge gained from the classroom to a small business environment. Students work in teams to address operational problems and identify methods of capitalizing on growth opportunities in actual companies.

BUSI 279. Leadership (2)
This course utilizes the research and practice of recent years concerning situational leadership and transformational leadership. The class emphasis will be experiential. Emphasis will be placed on consensus building, values alignment and vision building. Prerequisite: BUSI 211.

BUSI 280. Strategy Implementation (2)
This course addresses the managerial challenge of strategy implementation by examining the organizational elements that must be drawn into line to support a strategy, and by examining the immense difficulties inherent in changing an organization. The aim of the course is to provide participants with a conceptual and practical understanding of the strategic and organizational challenges of multinational corporate management. Prerequisite: BUSI 211.

BUSI 281. Strategic Management (3)
This course uses the case method in a multinational corporate setting to address the managerial challenge of strategy formulation and implementation by examining the organizational elements that must be drawn into line to support a strategy, and by examining the immense difficulties involved in changing an organization. Prerequisite: BUSI 211.

BUSI 282. Entrepreneurial Rapid Growth (3)

BUSI 283. Administrative Internship (1-3)

BUSI 291. Graduate 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 Bakin, 1996, Associate Dean for Graduate Programs, Associate Professor, BS, Florida State University, 1986; MAcc, 1988; PhD, 1993.

Lewis R. Gale, 2010, Dean and Professor, BA, California State University, Fresno, 1989; MS, Arizona State University, 1994; PhD, Arizona State University.

Joel Herche, 1994, Associate Professor, BA, Central Washington University, 1979; MBA, Golden State 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 Hovestad, 1990, Associate Professor, BA, Augsburg College, 1974; MBA, St. Cloud State University, 1981; PhD, University of Minnesota, 1986.

Albert H. 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.

Unno Lee, 1990, Professor, BA, University of Southern California, 1977; MA, Indiana University, 1981; PhD, Purdue University, 1986.

Jeffery A. Miles, 1996, Professor, BA, Ohio State University, 1984; MPG, Cornell University, 1986; MLHR, Ohio State University, 1992; PhD, 1993.

Stefanie Naumann, 1999, Associate Professor, BS, Tulane University, 1993; PhD, Louisiana State University, 1998.

Gerald V. Post, 1999, Professor, BA, University of Wisconsin-Eau Claire, 1978; PhD, Iowa State University, 1983.


Chris Sablinski, 2009, Associate Professor, BS, University of Florida, 1986; MS, San Francisco State University, 1996; PhD, University of Washington, 2002.

Ray Sylvestre, 1972, Associate Dean, Professor, BA Gettysburg College, 1962; MBA, University of Michigan, 1963; PhD, 1972.

Dara M. Szliwczik, 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, Columbia, 1986; MA, Florida State University, 1996; PhD, University of Washington, 2002.


R. Daniel Wadhawan, 2006, Assistant Professor, BA, Yale University, 1991; PhD, University of Pennsylvania, 2003.

Suzanne B. Waichl, 2000, Associate Professor, BA, Duke University, 1975; MBA, Wharton Graduate Division, University of Pennsylvania, 1978; PhD, Northwestern University, 1996.

Cynthia Wagner Weick, 1990, Professor, BS, Ohio State University, 1979; MS, 1980; PhD, University of Pennsylvania, 1986.

Stephen W. Wheeler, 1994, Professor, BA, California State University, Sacramento, 1976; MS, 1982; PhD, Arizona State University, 1988.

PengCheng Zhu, 2009, Assistant Professor, BBA, Shanghai Institute of Foreign Trade, 2002; MBA, Carleton University, 2004; PhD, 2009.
Programs Offered

Master of Education (MEd)
- in Curriculum and Instruction
- and a Single, Multiple and/or Educational Specialist (mild/moderate) or (moderate/severe) Level I Credential

Master of Arts (MA)
- in Curriculum and Instruction
- in Curriculum and Instruction and a Single Subject Credential
- in Educational Administration
- and a Preliminary Administrative Services Credential
- in Educational Administration
- with a concentration in Student Affairs
- in Educational Psychology*
- in Special Education
- and an Educational Specialist (mild/moderate) or (moderate/severe) Level I/II Credential

Educational Specialist (EdS) *
- in School Psychology
- and a Pupil Personnel Services Credential in School Psychology

Doctor of Education (EdD)
- in Curriculum and Instruction
- in Educational Administration
- with a concentration in K-12 Administration/Leadership
- in Educational Administration
- with a concentration is Higher Education Administration

Doctor of Philosophy (PhD) *
- in Educational Psychology with a specialization in School Psychology
- with a Pupil Personnel Services Credential in School Psychology

* The Master of Arts in Educational Psychology is a non-terminal degree available to students pursuing a EdS or PhD in the Educational and School Psychology department.

Credentials Offered

Preliminary Multiple Subject Credential
Preliminary Single Subject Credential in the following areas:
- Educational Specialist (mild/moderate) — Level I and Level II
- Educational Specialist (moderate/severe) — Level I and Level II
- Preliminary Administrative Services Credential
- Professional Clear Administrative Services Credential
- Personnel Services Credential in School Psychology
- Speech-Language Pathology Services Credential
  (For more information contact Speech Language Pathology Department)

Mission

The Benerd School of Education embraces a mission of preparing thoughtful, reflective, caring, and collaborative educational professionals for service to diverse populations. Further, the Benerd School of Education directs its efforts toward researching the present and future needs of schools and the community, fostering intellectual and ethical growth, and developing compassion and collegiality through personalized learning experiences.

Admissions Requirements

General Admissions Requirements:

1. A cumulative GPA of 3.0 or better for the last 60 units of college or post-baccalaureate work.
2. An appropriate degree from an accredited university (Bachelor’s for admission to master’s programs; masters for admission to doctoral programs).
3. A completed application portfolio to the Graduate School, an essay following departmental guidelines; official transcripts from all college-level coursework including official verification of the awarding of degrees; and three letters of recommendation attesting to the candidate’s ability to undertake doctoral studies.
4. Some programs may require the Graduate Records Examination (GRE). Please see specific programs for information.
5. Doctoral programs require an admissions interview. Please see specific programs for information.
6. Evidence of qualities and character in keeping with the philosophy and standards of this University and the School of Education.
**Basic Education Policies**

**Master of Education Degree**
The Gladys L. Benen School of Education offers a master’s degree which is designed for high potential graduate students who desire to become candidates for an initial teaching credential. This degree is the Master of Education degree (MEd). This degree prepares teachers to deal with instructional theory and applied research, and to develop competence beyond the skills of the usual beginning teacher. For specific information about MEd program requirements, please refer to the Curriculum and Instruction program information.

**Requirements for the Master of Arts Degree**
Graduate students wishing to secure a Master of Arts degree with a major in the School of Education must meet the requirements specified for all Master of Arts degrees. Students should consult with the assigned departmental advisor within the first semester of enrollment to develop a plan of study. The Gladys L. Benedict School of Education has four programs leading to a master’s degree, of which plans A, B, and C require a core of common courses in the major. The core courses include:

- EDUC 204 Pluralism in American Education 3
- EDUC 209 Curriculum Theory 3
- EPSY 201 Techniques of Research 3
- EPSY 220 Nature and Conditions of Learning 3

**Program with Thesis (Plan A)**
The requirements of the thesis plan are as follows:
1. Thirty units of graduate work, with 16 units in courses numbered 201 or above.
2. Required core courses common to all master’s degree programs in education.
3. A minimum of 16 units in education, including a thesis of 4 units.
4. Such additional courses as may be required for the adequate development of the thesis problem.
5. With the approval of the Dean or appropriate departmental chair, the candidate may choose coursework in not more than two other departments outside the School of Education.
6. An acceptable thesis must be submitted within the deadlines as stated in the Graduate School calendar.
7. Successfully pass a final oral examination.

**Program with Seminars (Plan B)**:
The requirements of the seminar plan are as follows:
1. Completion of 32 units of graduate work, with 18 units in courses numbered 201 or above.
2. Required core courses common to all master’s degree programs in education.
3. Completion of a minimum of 18 units in the School of Education.
4. Completion of a minor of 6 or more units selected from a discipline department other than education.
5. Specializing in an area of interest: (at least 10-12 units as approved by advisor), such as curriculum and instruction, special education, bilingual/cross-cultural education, English as a second language, educational and counseling psychology or foundations.
6. A seminar and/or research paper in the field of specialization.
7. Successfully pass a final examination.

**Program with Projects (Plan C)**:
The program under Plan C is designed for the Master of Arts degree and concurrently to meet certain state certification and licensing requirements and/or to prepare candidates for careers in specific professions (e.g. Student Affairs).

**General Requirements**:
1. A minimum of 32 units of graduate work, with 18 units in courses numbered 200 or above.
2. Required courses common to all master’s degree programs in the School of Education.
3. Completion of the specific program requirements as described in departmental/program information.

**Master of Arts Degree: Special Program (Plan D)**:
Although most candidates will utilize Plans A, B or C, a special program can be designed for well-qualified students who have professional or personal needs for specialized study. Such special programs provide opportunity for course offerings in the School of Education to be linked with those of other schools and departments. Requirements for special programs, in addition to departmental approval, include the following:
1. A content major of at least 21 units. This will represent the student’s primary area of interest and need for professional development. Courses may be chosen within a given department but are likely to include relevant courses from several departments.
2. Research and evaluation methodology and/or theoretical constructs of at least 6 units. The student will be expected to develop relevant competencies in one or more of the following: research methods, critical analysis, inquiry techniques or theory.
3. Field experience and/or research of not less than 4 nor more than 6 units. Depending on the specific area of study, this may include supervised field experience, practicum, action research or thesis. The purpose will be to synthesize the total program by demonstrating competencies in the field or through some research project.
4. A minimum of 32 units of graduate coursework with 16 units at the 200 level or above.
5. A minimum of 18 units in Education.

With the framework described above, this program operates on a highly individualized basis. A student is assigned a primary advisor in the School of Education who is responsible for working out a program. Students and their advisors will submit a rationale and description of their program for the departmental file. For an interdisciplinary program, the student also will receive appropriate advising from a department outside the School of Education.

**Doctor of Education Degree Basic Policies**
The EdD degree is designed to ensure that each graduate possesses a deep understanding of foundational issues; key theories related to the student’s academic focus; historic and emerging research related to student’s academic focus; critical issues of research, policy, and practice; moral dimensions of research, policy, and practice; leadership challenges and opportunities; and methods and limitations of research. The degree is also designed to ensure that the candidate can identify key issues and problems and engage in focused and systematic research into problems and related questions. Further, the degree is designed to ensure that graduates possess leadership competencies including verbal and written communication skills; professional maturity; personal discipline; and social and emotional intelligence competencies.
Requirements for the Doctor of Education Degree

Graduate students wishing to secure a Doctor of Education (EdD) degree with a major in the School of Education must meet the requirements specified for all Doctor of Education degrees. Students should consult with the assigned departmental advisor within the first semester of enrollment to develop a plan of study. The Gladys L. Benerd School of Education has two departments which offer EdD degree: the Department of Curriculum and Instruction and the Department of Educational Administration and Leadership. Students seeking EdD degrees through both departments will take the following core courses:

EDUC 352  Applied Inquiry I
EDUC 354  Applied Inquiry II
EDUC 356  Applied Inquiry III
EDUC 358  Applied Inquiry IV

Candidates seeking EdD degrees must also complete a doctoral dissertation and register for a minimum of 2 and a maximum of 7 units of EDUC 399. Students may register for EDUC 399.

Program Stages:

The successful completion of Applied Inquiry I will qualify each student for full admission to the doctoral program;
The successful completion of Applied Inquiry III with the production of a quality problem statement and literature review coupled with an interview with faculty advances the student to Doctoral Candidacy.

Dissertation:

An acceptable dissertation must be based on an original investigation. It must present either a contribution to knowledge and/or understanding, or an application of existing knowledge to the candidate’s special field of study. The dissertation must be submitted by the appropriate deadlines as stated in the current Graduate Academic Calendar. As noted above, students admitted to the EdD program in the Benerd School of Education will require a minimum of 2 units and maximum of 7 units of EDUC 399. Dissertation to be completed after the dissertation proposal is completed.

Period of Candidacy:

The maximum time allowed for completion of an EdD program is governed by the following: All requirements for the Doctor of Education degree must be completed within nine years after the first day of the semester of enrollment in EdD coursework at Pacific as a provisionally admitted doctoral student. Failure to complete within nine years will require the student to register for five additional units of EDUC 399. Dissertation Students who do not meet these deadlines will be dropped from the doctoral program.

Final Oral Examination:

A final oral examination usually of two hours, conducted by the candidate’s dissertation committee, shall be held in accordance to the deadline established by the Graduate School. This oral exam shall concern itself with the candidate’s dissertation and implications thereof. Supplemental information is available in School of Education department offices.

Semester Hour Requirements:

A minimum of 55 doctoral units is required for the EdD degree. Some (usually no more than 6) post master degree units may be approved by petition for transfer from another university will count toward the 55 doctoral units.

Credit value of the dissertation: Not less than 2 nor more than 7 units.

Grade Point Average Requirements:

Grade point average of at least 3.0 in all work taken while in graduate studies. Preferably this should be 3.5.

Minimum Residence:

The period of residence work represents an opportunity to secure additional competency in the area of specialization as well as the development of an acceptable dissertation. Residency requirement can be met by taking 18 units of coursework within 12 calendar months.

Courses Outside the Field of Education:

Related graduate courses outside the field of education may count towards the EdD upon prior approval of the advisor and the Dean of the School of Education.

Requirements for the Doctor of Philosophy Degree:

The Doctor of Philosophy degree in Educational Psychology with a specialization in School Psychology prepares professionals for systems interventions as school psychologists, and provides advanced training in applied development with diverse populations and consultation methods. For specific information about the PhD program in Educational Psychology with a specialization in School Psychology, please refer to Educational and School Psychology program information.

Curriculum and Instruction

Website: www.pacific.edu/education
Location: Gladys L. Benerd School of Education
Marilyn E. Draheim, Chair

Degree Programs

Master of Education in Curriculum and Instruction (MEd)
  with a Single, Multiple and/or Educational Specialist (mild/moderate) or (moderate/severe) Level I Credential
Master of Arts in Curriculum and Instruction (MA)
Master of Arts in Special Education (MA)
  with an Educational Specialist (mild/moderate) or (moderate/severe) Level I/II Credential
Doctor of Education in Curriculum and Instruction (EdD)

Credentials Offered

Preliminary Multiple Subject Credential
Preliminary Single Subject Credential in the following areas:
  Art, Biology, Chemistry, English, Geosciences, Social Sciences, Mathematics, Physical Education, Physics, Sciences, Spanish, and Music.
Educational Specialist (mild/moderate) — Level I and Level II
Educational Specialist (moderate/severe) — Level I and Level II

The School of Education also offers professional masters degree programs in partnership with the San Joaquin County Office of Education and the Fortune School of Education/Project Pipeline. These are MA programs that follow Plan D. See the C & I department for additional information.
Admissions Requirement

1. A cumulative GPA of 3.0 or better for the last 60 units of college or post-baccalaureate work.
2. An appropriate degree from an accredited university (Bachelor’s for admission to master’s programs; masters for admission to doctoral programs).
3. A completed application portfolio to the Graduate School, an essay following departmental guidelines; official transcripts from all college-level coursework including official verification of the awarding of degrees; and three letters of recommendation attesting to the candidate’s ability to undertake doctoral studies.
4. Official Scores on the Graduate Records Examination (GRE). For the EdD program only.
5. Departmental interviews if requested.
6. Evidence of qualities and character in keeping with the philosophy and standards of this University and the School of Education.

Master of Education in Curriculum and Instruction Degree Requirements

In order to earn the master of education degree in curriculum and instruction, students must complete a minimum of 38 units, of which 22 must be in courses 200 or above, with a Pacific cumulative grade point average of 3.0.

I. Teacher Education Courses: Multiple Subject

EDUC 130 Technology Enhanced Learning Environments 2
EDUC 140 Transformational Teaching and Learning 4
EDUC 141 Transformational Teaching and Learning Practicum 2

Multiple Subject and Education Specialist candidates take:
EDUC 150 Teaching and Assessment (Multiple Subject)

Education Specialist Candidates, in addition take:
SPED 123 The Exceptional Child 3
SPED 166 Building Family Professional Partnerships 3

II. Professional Courses:

Complete one of the following groups:

Group A) Multiple and Single Subject candidates:
EDUC 151 Teaching Science 2
EDUC 152 Teaching Mathematics 2
EDUC 160 Productive Learning Environments for Diverse Classrooms 2
OR
EDUC 161 Literacy Development 4
EDUC 162 Literacy Assessment 2
EDUC 163 Teaching English Learners 3
SPED 195E/295E Positive Behavior Support in the Classroom 3

Group B) Single Subject Candidates:
EDUC 163 Teaching English Learners 3
EDUC 255 Teaching in the Content Areas I 3
EDUC 256 Content Area Literacy Development for Secondary Schools 3
EDUC 280 Productive Learning Environments for Diverse Classrooms 3
EDUC 285 Teaching in the Content Areas II 2
EDUC 275 Teaching in the Content Areas III 2

Group C) Single Subject Music Education Candidates:
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

Note: N.B. These titles, units, and ordering of courses for the Single Subject SB 2042 program are subject to change.

Group D) Education Specialist, Mild/Moderate Disabilities, Level I Candidates:
SPED 224 Assessment of Special Education Students 3
SPED 228M Advanced Programming for Students with Mild/Moderate Disabilities 3
SPED 242M Curriculum and Instruction for Students with Mild/Moderate Disabilities 3
SPED 293 Autism Spectrum Disorders 3
SPED 295E Positive Behavioral Support in the Classroom 3
EDUC 161 Literacy Development 4

Group E) Education Specialist, Moderate/Severe Disabilities, Level I Candidates:
SPED 224 Assessment of Special Education Students 3
SPED 228S Advanced Programming for Students with Moderate/Severe Disabilities 3
SPED 242S Curriculum and Instruction for Students with Moderate/Severe Disabilities 3
SPED 293 Autism Spectrum Disorders 3
SPED 295E Positive Behavioral Support in the Classroom 3
EDUC 161 Literacy Development 4

III. Professional Practice (Student Teaching or Internship):

Complete one of the following groups:

Group A) Multiple and Single Subject candidates:
SPED 125X Teaching Exceptional Learners 2
Complete 12 units from:
EDUC 270**Professional Practice 2
EDUC 271 Professional Practice Music 2
EDUC 172* Professional Practice Seminar 2

(EDUC 270 and EDUC 172 and EDUC 271 and EDUC 172 normally total 12 units.)

Note: 1) Internship requires a teaching contract and Memorandum of Understanding for the Teacher Education Program and the Employer. 2)*** The Single Subject Program for Music, the Department of Music Education’s chair assists students in the Single Subject Program in Music Education with internship placements. Some students in Music Education take a portion of Directed Teaching in Summer Session I by enrolling in Video-Micro Rehearsal so that Directed Teaching credits are divided over three grading periods.

Group B) Education Specialist Credentials

One of the following:
SPED 298M Directed Teaching: Special Education, Mild/Moderate 6-10
SPED 298S Directed Teaching: Special Education, Moderate/Severe 6-10
SPED 298IM Internship: Special Education, Mild/Moderate 5, 5
SPED 298IS Internship: Special Education, Moderate/Severe 5, 5

Note: As approved Internship is an option for Directed Teaching for the Education Specialist Credentials. To be approved for Internship, a student must have a bachelor’s degree and meet all program requirements for an Internship. Normally, candidates enroll in two semesters of five units each. On a case by case basis, candidates may be approved to begin an internship while taking professional methods courses in the Special Education Program.
**IV. Additional Graduate Level Courses (Multiple Subject):**
A minimum of 12 units at the 200 level, including:

- EPSY 201 Techniques of Research 3
- One of the following Theory and Practice courses: 3
  - EDUC 209 Curriculum Theory
  - EDUC 212 Instructional Strategies and Classroom Processes
  - EDUC 214 Supervision of Instruction
  - EDUC 295A Seminar: Middle School Curriculum
  - EDUC 295B Seminar: Secondary Curriculum
  - EDUC 295G Seminar: Elementary Curriculum

**Electives:** Minimum 6 units at the 200 level from the CURR, SPED, EADM or EPSY Departments to complete a minimum of 22 units at the 200 level and to satisfy a minimum of 38 units.

**Additional Graduate Level Courses (Single Subject):**
- EDUC 246 Teaching as Reflective Inquiry I 2
- EDUC 266 Teaching as Reflective Inquiry II 2
- EDUC 267 Understanding Adolescents in School Contexts 3
- EDUC 276 Teaching as Reflective Inquiry III 3

**Additional Graduate Level Courses (Education Specialist):**
- EPSY 201 Techniques of Research 3
- SPED 295A Seminar: Crucial Issues in Special Education 3

**Note:** Students may not double count the unit value of credential courses taken as an undergraduate to complete a bachelor’s degree in the 38 unit count for the Master of Education Degree.

**V. Successful passage of an one hour oral examination.**

**VI. California Requirements for a Teaching Credential must be met to qualify for a credential. These include:**
1. Successful completion of the State Certificate of Clearance (Fingerprint review for the Commission on Teacher Credentialing)
2. Clearance of TB test (within past four years)
3. Clearance of fingerprints for the program’s credential office
4. Passage of the California Basic Education Skills Test (CBEST) or appropriate writing subtest on CSET-MS examination
5. Passage of the appropriate California Subject Examination for Teachers (CSET)
6. Completion of United States Constitution Requirement
7. Passage of the Reading Instruction Competency Assessment (RICA) for Multiple Subject or Education Specialist Credentials
8. Successful Passage of a Teaching Performance Assessment (PACT Teaching Event)
9. Passage of all Program Assessments and Program Transition Phases including the following:
   a. Entry level GPA requirements (3.0 or higher); recommendations; essay
   b. Advancement to Credential Candidacy (essay; interview; recommendations)
   c. Embedded Signature Assignments and PACT Teaching Event
   d. Content Area Assessments
   e. Advancement to Professional Practice (Student Teaching or Internship)
   f. Approval of Teaching Performance Expectations
   g. Minimum GPA of 3.0, with no credential specific course grade below 2.0 (“C”)
   h. Exit from the Program Assessments
10. CPR Infant, Child and Adult Certification

(N.B. Requirements are subject to change as credential requirements change to satisfy California licensure requirements.)

**Master of Arts in Curriculum and Instruction Degree Requirements**
Master of Arts programs in Curriculum and Instruction are designed to meet the professional and academic needs of educators. Master of Arts Degree programs in the department of curriculum and instruction typically follow Plans A, B, and D described above.

**Plan A (Thesis)**
In order to earn the master of arts degree in curriculum and instruction plan A, students must complete a minimum of 30 units, of which 16 must be in courses 200 or above, with a Pacific cumulative grade point average of 3.0.

**I. Core Courses:**
- EDUC 204 Pluralism in American Education 3
- EDUC 209 Curriculum Theory 3
- EPSY 201 Techniques of Research 3
- EPSY 220 Nature and Conditions of Learning 3

**II. Thesis:**
- EDUC 299 Master’s Thesis 4

(Note: An acceptable thesis must be submitted within the deadlines as stated in the Graduate School calendar.)

**III. Additional Courses:**
- Electives With the approval of the Dean or an appropriate department chair, the candidate may choose coursework in not more than two other departments outside the School of Education.
  - Courses selected from a discipline department other than education. 6
  - Electives Area of interest courses from Curriculum and Instruction Department (EDUC or SPED) 10-12

(Note: Specializing in an area of interest: at least 10-12 units as approved by advisor, such as curriculum and instruction, special education, bilingual/cross-cultural education, English as a second language, educational psychology or foundations.)

- Electives Courses to complete a minimum of 18 units at the 200 level and to satisfy a minimum of 32 units
III. Successfully pass a final examination.

Plan D (Special)

In order to earn the master of arts degree in curriculum and instruction plan D, students must complete a minimum of 32 units, of which 16 must be in courses 200 or above, with a Pacific cumulative grade point average of 3.0.

Electives

Content major. This will represent 21 the student's primary area of interest and need for professional development. Courses may be chosen within a given department but are likely to include relevant courses from several departments.

Electives

Courses in Research and evaluation methodology and/or theoretical constructs

Note: The student will be expected to develop relevant competencies in one or more of the following: research methods, critical analysis, inquiry techniques or theory.

Electives

Courses in Field experience and/or research

Note: Depending on the specific area of study, this may include supervised field experience, practicum, action research or thesis. The purpose will be to synthesize the total program by demonstrating competencies in the field or through some research project.

Electives

Courses to complete a minimum of 16 units at the 200 level and to satisfy a minimum of 32 units

Master of Arts and a Single Subject Credential (minimum of 36 units)

This Master of Arts with a Single Subject Credential is intended for a cohort group that begins in Summer Session II each year.

In order to earn the master of arts degree in curriculum and instruction and a single subject credential, students must complete a minimum of 36 units, with a Pacific cumulative grade point average of 3.0.

EDUC 163 Teaching English Learners 3
EDUC 246 Teaching as Reflective Inquiry I 2
EDUC 255 Teaching in the Content Areas I 3
EDUC 256 Content Area Literacy Development in Secondary Schools 3
EDUC 260 Productive Learning Environments for Diverse Classrooms 3
EDUC 265 Teaching in the Content Areas II 2
EDUC 266 Teaching as Reflective Inquiry II 2
EDUC 267 Understanding Adolescents in School Contexts 3
EDUC 275 Teaching in the Content Areas III 2
EDUC 276 Teaching as Reflective Inquiry III 3
SPED 125y Teaching Exceptional Learners 2

CBEST and appropriate CSET examinations must be passed, prior coursework and GPA requirements met. CPR Certification for infant, child, and adult, and to apply for a credential. Graduate units can be used to substitute for EDUC 270 and 172 if the CBEST and/or CSET are not passed to be able to student teach or intern in order to complete the Master of Arts degree without a credential.

EDUC 172/272 Professional Practice Seminar 2-4 **
EDUC 270 Professional Practice (Student Teaching) 5-10 **

Or Courses at the 200 level to substitute for EDUC 270 and 172

Note: 1) ** The exact number of units will be conveyed depending on student teaching or internship placement.

Master of Arts in Special Education with an Educational Specialist (Mild/Moderate) or (Moderate/Severe) Level II Credential

In order to earn the master of arts degree in special education, students must complete a minimum of 32 units, of which 18 must be in courses 200 or above, with a Pacific cumulative grade point average of 3.0.

SPED 250 Introduction to Induction Plan 2
SPED 252 Portfolio Assessment 2
SPED 295A Seminar: Crucial Issues in Special Education 3
Electives Course chosen with advisor 18
Electives Add’l Courses in Research and evaluation methodology and/or theoretical constructs 4-6

Note: The student will be expected to develop relevant competencies in one or more of the following: research methods, critical analysis, inquiry techniques or theory.

Electives Courses in field experience and/or research 4

Note: Depending on the specific area of study, this may include supervised field experience, practicum, action research or thesis. The purpose will be to synthesize the total program by demonstrating competencies in the field or through some research project.

Electives Courses to complete a minimum of 16 units at the 200 level and to satisfy a minimum of 32 units

Master of Arts in Special Education with an Education Specialist (Mild/Moderate) or (Moderate/Severe) Level I Credential

Graduate students may enroll in a Master of Arts in Special Education degree program if they already hold a valid Multiple or Single Subject Credential. Candidates will complete the requirements for the Education Specialist: Mild/Moderate Disabilities Credential, Level I or the Education Specialist: Moderate/Severe Disabilities Credential, Level I. Some prerequisite credential courses may have been completed because of holding a valid Multiple or Single Subject Credential. Additional required courses to complete a minimum of 32 units include:

EPSY 201 Techniques of Research 3
EPSY 220 Nature and Conditions of Learning 3
EDUC 204 Pluralism in American Education 3
EDUC 209 Curriculum Theory 3

Education Specialist Level II Credentials

Mild/Moderate and Moderate/Severe Disabilities

Graduate students may enroll in the Level II program in order to complete the credential or combine a Level II Education Specialist Credential with a Master of Arts degree. Upon successful completion of all the requirements for the Level I Education Specialist Credential (32 units), the student, with the assistance of a special education advisor from the University, will develop an individual induction plan. A Level II portfolio is required. To complete the Level II credential, students will need to take:

SPED 250 Introduction to Induction Plan 2
SPED 252 Portfolio Assessment 2
SPED 295A Seminar: Crucial Issues in Special Education 3
Electives 2 courses of 3 units each 6

Also, to complete the Level II credential, students must complete elective courses or elective courses and district support activities for a total of 16 units. Students may complete 25% of the program requirements by completing approved district support activities, equivalent of 1 to 4 units, and a satisfactory exit interview. They must complete a minimum of 12-
units of university coursework. Students in the Master of Arts program will work with a university advisor to design a program plan for the additional graduate units for a total of a minimum of 32 units.

**Doctor of Education in Curriculum and Instruction**

In order to earn a doctor of education degree in curriculum and instruction, students must complete a minimum of 55 units post master’s work units, of which 38 must be in courses 200/300 level with a Pacific cumulative grade point average of 3.0.

I. **Core Courses**:
- 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 399 Doctoral Dissertation 2-7

II. **Electives in the major**:
Electives Courses to complete a minimum of 38 units at the 200/300 level and to satisfy a minimum of 55 units

III. **Students successfully complete various stages of the EdD program in the following manner**:
- **Full Admission**
  - Successful completion of EDUC 352
- **Advancement**
  - Successful completion of EDUC 356 to Candidacy with the production of a quality problem statement and literature review coupled with an interview with faculty
- **Registration for Successful completion of a dissertation**
- **Dissertation proposal (likely in conjunction with EDUC 358)**
- **Program**
  - Successful completion of a minimum of two units of EDUC 399, presentation and successful dissertation defense, satisfactorily meeting all graduation requirements (including those of the Graduate School) for graduation

**Educational Administration and Leadership**

Phone: (209) 946-2580
Website: www.pacific.edu/education
Location: Gladys L. Benerd School of Education
Dennis Brennan, PhD, Chair

**Degree Programs**
- Master of Arts in Educational Administration and a Preliminary Administrative Services Credential
- Master of Arts in Educational Administration with a concentration in Student Affairs
- Doctor of Education in Educational Administration with a concentration in K-12 Administration/Leadership
- Doctor of Education in Educational Administration with a concentration in Higher Education Administration

**Credentials Offered**
- Preliminary Administrative Services Credential
- Professional Clear Administrative Services Credential

**Admissions Requirement**
1. A cumulative GPA of 3.0 or better for the last 60 units of college or post-baccalaureate work
2. An appropriate degree from an accredited university (Bachelor’s for admission to master’s programs; masters for admission to doctoral programs).
3. A completed application portfolio to the Graduate School, an essay following departmental guidelines; official transcripts from all college-level coursework including official verification of the awarding of degrees; and three letters of recommendation attesting to the candidate’s ability to undertake doctoral studies.
4. Official Scores on the Graduate Records Examination (GRE). For the EdD program only.
5. Departmental interviews if requested. Interviews are required for the EdD program.
6. Evidence of qualities and character in keeping with the philosophy and standards of this University and the School of Education.

For experienced educators who desire to prepare for positions as supervisors, consultants, vice principals, principals, or district office staff, the School of Education offers programs meeting the requirements for the Preliminary and Professional Clear Administrative Services Credentials. The credential programs may be combined with the master’s degree or the doctorate in education.
Master of Arts in Educational Administration and a Preliminary Administrative Services Credential

Additional Admission Requirements:
1. Application to department chair and subsequent approval by department.
2. Possession of a valid basic teaching credential or a services credential with a specialization in pupil personnel, health or librarian, or clinical and rehabilitative services as specified in the State of California Education Code, and verification of three years of successful full-time experience in the public schools or private schools of equivalent status.
3. Verification of having passed CBEST.
4. Written verification of desirable personal and professional characteristics for supervisory service.

Degree Requirements:
In order to earn master of arts in educational administration and a preliminary administrative services credential, students must complete a minimum of 33 with a Pacific cumulative grade point average of 3.0.

I. Core courses:
EDUC 204 Pluralism in American Education 3
EDUC 209 Curriculum Theory 3
EPSY 201 Techniques of Research 3
EPSY 220 Nature and Conditions of Learning 3

II. Preliminary Administrative Services Credential courses:
EDUC 295C Sem.: Educational Planning, Delivery and Assessment 3
EDUC 278 Educational Organizations and Diverse Constituencies 3
EDUC 280 Education Law and Legal Processes 3
EDUC 283 School Finance and Business Administration 3
EDUC 286 Administration of Human Resources 3
EDUC 285E Educational Leadership 3
EDUC 292 Field Experience in Administration and Supervision 3-4

Note: Candidates must complete an approved program at one institution.

In addition to the above program, an Administrative Intern Credential is offered for qualified candidates leading to certification as an administrator. Interns are required to complete 4 units of EADM 292. Consult the department chair for further information.

Professional Clear Administrative Services Credential
The Professional Clear Administrative Services Credential Program is an advanced preparation program extending the knowledge and skills of those who have a Preliminary Administrative Services Credential. Consult the department chair for further information.

Master of Arts in Educational Administration with a concentration in Student Affairs
The program is designed to meet CAS standards

Degree Requirements:
In order to earn master of arts in educational administration with a concentration in student affairs, students must complete a minimum of 36 units, of which 18 must be in courses 200 or above, with a Pacific cumulative grade point average of 3.0.

I. Core courses:
EDUC 204 Pluralism in American Education 3
EDUC 209 Curriculum Theory 3
EPSY 201 Techniques of Research 3
EPSY 220 Nature and Conditions of Learning 3

II. Educational Administration core courses:
EDUC 278 Educational Organizations and Diverse Constituencies 3
EDUC 285E Educational Leadership 3

III. Student Affairs Core Courses:
EDUC 240 Introduction to Student Affairs 3
EDUC 241 Student Development Theory 3
Complete one of the following: 3
EDUC 243 Legal Issues in Higher Education Student Affairs
EDUC 244 Assessment in Student Affairs

IV. Field Experience:
EDUC 292C Student Affairs Field Experience 3

V. Optional Thesis and/or Cognate Courses
Complete six units from the following: 6
EDUC 299 Master’s Thesis
Electives Courses chosen in cognate with advisor approval.

Note: 1) Thesis must be completed for 3-6 units within the specifications and deadlines established by The Office of Research and Graduate Studies. 2) With the approval of the Dean or appropriate departmental chair, the candidate may choose coursework to complete the cognate in not more than two other departments outside the School of Education.

VI. Successfully pass a final oral examination.

Doctor of Education in Educational Administration and Leadership
In order to earn a doctor of education degree in educational administration, students must complete a minimum of 55 units post master’s work units, of which 38 must be in courses 200/300 level with a Pacific cumulative grade point average of 3.0.

I. Core Courses
EADM 352 Applied Inquiry I 3
EADM 354 Applied Inquiry II 6
EADM 356 Applied Inquiry III 3
EADM 358 Applied Inquiry IV 3
EADM 399 Doctoral Dissertation 2-10

II. Electives
Electives Courses to complete a minimum of 38 units at the 200/300 level and to satisfy a minimum of 55 units

III. Students successfully complete various stages of the EdD program in the following manner:
Full Admission
Successful completion of EADM/CURR 352
Advancement
Successful completion of EADM/CURR 356 to Candidacy with the production of a quality problem statement and literature review coupled with an interview with faculty
Registration for Successful completion of a dissertation
Dissertation proposal (likely in conjunction with EADM/CURR 358)
Program
Successful completion of a minimum of two units of EADM/CURR 399, presentation and successful dissertation defense, satisfactorily meeting all graduation requirements (including those of the Graduate School) for graduation.

Department of Educational and School Psychology
Phone: (209) 946-2559
Website: www.pacific.edu/education
Location: Gladys L. Benerd School of Education
Linda Webster, PhD, Chair

Degree Programs
Master of Arts in Educational Psychology *
and a Pupil Personnel Services Credential in School Psychology
Doctor of Philosophy in Educational Psychology (PhD) *
with a specialization in School Psychology
and a Pupil Personnel Services Credential in School Psychology
* The Master of Arts in Educational Psychology is a non-terminal degree available to students pursuing an EdS or PhD in the Educational and School Psychology department.

Credentials Offered
Pupil Personnel Services Credential in School Psychology

Admissions Requirements
1. Students must hold the baccalaureate or equivalent.
2. A cumulative GPA of 3.0 or better in all college work.
3. A completed application portfolio to the Office of Admission, which includes the filing of official test scores for the Graduate Record Examination (both the General test and the Advanced Subject test in Psychology are required); an essay emphasizing the desire to work as a school psychologist in the public schools; official transcripts from all college level coursework including official verification of the awarding of degrees; and three letters of recommendation attesting to the candidate's ability to undertake graduate studies.
4. An admissions interview with representative(s) of the Department of Educational and School Psychology.
5. Review by the Department of Educational and School Psychology and the Dean of Research and Graduate Studies.
6. Evidence of qualities and character in keeping with the philosophy and standards of this University and the profession of School Psychology.
7. Applications are accepted only for admission for the Fall semester.

Educational Specialists in School Psychology
The Educational Specialist degree program in school psychology leads to a Pupil Personnel Services Credential in school psychology. The program requires two years of full-time coursework with fieldwork (leading to a "non-terminal" MA), and culminates in an additional third-year internship. Applications are accepted only for admission for the fall semester. The program is designed to prepare highly effective school psychologists who are knowledgeable regarding the developmental issues and needs of both regular and special education. The program also intends to prepare highly effective school psychologists who apply skills in data-based decision making and accountability for work with individuals, groups, and programs. Additional goals include preparing highly effective school psychologists who apply developmental knowledge from cognitive, learning, social and emotional domains across diverse socio-cultural and linguistic contexts and ensuring school psychologists can demonstrate the necessary positive interpersonal skills they will need to facilitate communication and collaboration among students, school personnel, families, and other professionals. The EdS. program requirements include the following required courses:
In order to earn an Educational Specialist degree in school psychology, students must complete a minimum of 60 units with a Pacific cumulative grade point average of 3.0.

Master of Arts in Educational Psychology (Optional degree):
Minimum of 32 units, including:
EPSY 201 Techniques of Research 3
EPSY 214 Intermediate Statistics 3
EPSY 220 Nature and Conditions of Learning 3
EPSY 294B School Psychology Fieldwork 2
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 309 Consultation Methods 3
EPSY 315 Individual Assessment 3
EPSY 316 Behavior and Personality Assessment in the Schools 3
EPSY 321 Seminar: Advanced Human Development III 3

Additional Requirements for Education Specialist degree:
EPSY 294B School Psychology Fieldwork 2
EPSY 300 Seminar: Introduction to School Psychology 1
EPSY 308 History, Systems, and Indirect Interventions 3
EPSY 310 Crisis Intervention 3
EPSY 311 California Law and Professional Ethics 1
EPSY 312 Child Psychopathology and Wellness Promotion 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 398 School Psychology Internship 6
SPED 295E Positive Behavioral Support in the Classroom 3
EDUC 204 Pluralism in American Education 3
SPED 224 Assessment of Special Education Students 3
SPED 228M/S Advanced Programming for Special Educ Students 3

Portfolio Examination:
Students are required to present a portfolio that addresses competencies in the domains of school psychology as delineated by the National Association of School Psychologists. This includes obtaining a passing score (165) on the Praxis II exam in school psychology.
In addition to meeting degree requirements and completion of the program outlined above, a student seeking a Pupil Personnel Services credential in School Psychology must also:
Complete the CBEST exam prior to internship.
Complete the PRAXIS II exam in School Psychology prior to internship.
Doctor of Philosophy in Educational Psychology

The doctoral degree program represents a year to two year program of study beyond the EdS. Thus, it requires a four-to-five year course of study, including a year-long internship. The PhD Program in School Psychology prepares professionals for systems interventions as school psychologists, and provides advanced training in consultation, applied development, and program evaluation. The following courses are required for the PhD program:

In order to earn a Doctor of Philosophy in educational psychology, students must complete a minimum of 90 units with a Pacific cumulative grade point average of 3.0.

Master of Arts in Educational Psychology (Optional degree):

Minimum of 32 units, including:

- EPSY 201 Techniques of Research 3
- EPSY 214 Intermediate Statistics 3
- EPSY 220 Nature and Conditions of Learning 3
- EPSY 294B School Psychology Fieldwork 2
- 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 309 Consultation Methods 3
- EPSY 315 Individual Assessment 3
- EPSY 316 Behavior and Personality Assessment in the Schools 3
- EPSY 321 Seminar: Advanced Human Development III 3

Additional Requirements for Doctor of Philosophy degree:

- EPSY 294B School Psychology Fieldwork 4
- EPSY 300 Seminar: Introduction to School Psychology 1
- EPSY 308 History, Systems, and Indirect Interventions 3
- EPSY 310 Crisis Intervention 3
- EPSY 311 California Law and Professional Ethics 1
- EPSY 312 Child Psychopathology and Wellness Promotion 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 324 Seminar: Advanced Consultation and Supervision 3
- EPSY 395C Quantitative Research Design and Method 3
- EPSY 395D Advanced Statistical Methods 3
- EPSY 395J Seminar: Promoting Cultural Competence Across Systems 3
- EPSY 397 Graduate Research 6
- EPSY 398 School Psychology Internship 6
- EPSY 399 Doctoral Dissertation 4
- SPED 295E Positive Behavioral Support in the Classroom 3
- SPED 224 Educational Assessment of Special Education Students 3
- SPED 228M/S Advanced Programming for Special Education Students 3

Portfolio Examination:

Students are required to present a portfolio that addresses competencies in the domains of school psychology as delineated by the National Association of School Psychologists. This includes obtaining a score of 175 on the Praxis II exam in school psychology.

Qualifying Scholarly Activities:

The student may either produce an empirical study of publishable quality contributing to the scientific literature relevant to school psychology, or a scholarly review of the scientific literature relevant to an issue or problem relevant to the practice of school psychology. This review must also be of publishable quality.

Dissertation:

An acceptable dissertation must be (1) a significant contribution to the advancement of knowledge or (2) a work of original and primary research in the domain of psychology. The dissertation must be submitted by the appropriate deadlines as stated in the current Graduate School calendar. The minimum number of dissertation units is 4.

In addition to meeting degree requirements and completion of the program outlined above, a student seeking a Pupil Personnel Services credential in School Psychology must also:

- Complete the CBEST exam prior to internship
- Complete the PRAXIS II exam in School Psychology prior to internship

Course Offerings

Undergraduate

See General Catalog for course descriptions

The courses listed below, when taken by graduate students, may be used to a limited extent toward meeting requirements for graduate degrees in education. For the Master of Education all courses used to satisfy teaching credentials requirements may be offered toward meeting degree requirements.

Department of Curriculum and Instruction

EDUC 010. Dean's Seminar (1)
EDUC 011. Children's Literature (3)
EDUC 100. Introduction to Language (3)
EDUC 110. Introduction to Syntax and Semantics (3)
EDUC 120. First and Second Language Acquisition (3)
EDUC 130. Technology Enhanced Learning Environments (2)
EDUC 140. Transformational Teaching and Learning (4)
EDUC 141. Transformational Teaching and Learning Practicum (2)
EDUC 142. Visual Arts in Education (4)
EDUC 150. Teaching and Assessment (3)
EDUC 151. Teaching Science (MS) (2)
EDUC 152. Teaching Mathematics (MS) (2)
EDUC 155. Teaching in the Content Areas I (2)
EDUC 157. ESL Theory and Practice (3)
EDUC 160. Productive Learning Environments for Diverse Classrooms (2)
EDUC 161. Literacy Development (MS) (4)
EDUC 162. Literacy Assessment (MS) (2)
EDUC 163. Teaching English Learners (3)
EDUC 164. Introduction to Bilingual Education (3)
EDUC 165. Teaching in the Content Areas II (2)
EDUC 170. Professional Practice (2-10)
EDUC 171. Professional Practice Music (2-10)
EDUC 172. Professional Practice Seminar (2-10)
EDUC 175. Teaching in the Content Areas III (2)
Department of Special Education

EDUC 209. Curriculum Theory (3)
An examination of curriculum from various philosophical and learning theory points of view. Models and rationales of curriculum will be explored. Historical perspectives and specialized areas of the curriculum will be examined in terms of present and future societal needs. Methods of curriculum dissemination will be delineated.

EDUC 212. Instructional Strategies and Classroom Processes (3)
Use of a variety of instructional strategies to achieve course objectives. Includes a review of research on effective teaching skills related to motivation, expectations, modeling, questioning, grouping, direct instruction, cooperative learning and classroom management. Knowledge of contemporary lines of inquiry with regard to classroom processes.

EDUC 214. Supervision of Instruction (3)
Review of models of supervision and processes that support effective descriptions of classroom practices, analysis and feedback regarding those data and the provision of instructional support for continuing classroom improvement. Includes a practicum component.

EDUC 221. Research in Second Language Acquisition (3)
This course focuses on the linguistic, psychological, social and cultural processes in learning and teaching a second language. It is designed to examine the major theoretical perspectives and research studies in second language acquisition. It involves critical analysis and critique of important literature and research studies in second language acquisition. It covers techniques for conducting classroom-based research in second language learning and teaching. Students in this course will learn to develop a research proposal to investigate an area of interest in the field of second language acquisition.

EDUC 225. Psychology of Reading (3)
An exploration of current theory and research findings related to the psychological processes involved in literacy acquisition and development. Emphasis on a cognitive and psycholinguistic approach to understanding the processes of reading. Implications for instruction.

EDUC 246. Teaching as Reflective Inquiry I (3)
Teaching as Reflective Inquiry I is the first of a three-part course in which preservice teachers will be introduced to the concept of teacher research. Participants first critically analyze readings and teacher-inquiry products of experienced teacher researchers. Then they conduct a mini-inquiry into their own practices that emerge as a result of their participation in the summer experience. These activities set the stage for more advanced consideration and application of teacher inquiry methods in parts II and III of the course, leading to a culminating project during the professional practice practicum.

EDUC 252. Teaching the Creative, Talented and Gifted Child (3)
A review of the major writings and research dealing with the creative learner and his classroom needs. Will present opportunities to develop curriculum plans and methods and approaches that can successfully be applied in an on-going educational program to assist the creative student in reaching his full potential.

EDUC 255. 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 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 256. Content Area Literacy Development in Secondary Schools (3)
This course provides an introduction to the teaching of reading and writing in the content areas. The course focuses on understanding the processes of reading and language and how to design appropriate teaching strategies to encourage growth in learning from text. An emphasis will be placed on integration of reading and writing throughout the curriculum. The course meets credential requirements. Prerequisite: Admission to credential candidacy.

EDUC 257. TEOSL 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 concomitant instruction and curriculum will be analyzed while developing a working model for the development of curriculum which will be appropriate for the teaching situation.

EDUC 260. Productive Learning Environments for Diverse Classrooms (3)
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 instructor approval required.

EDUC 262. Advanced Methods in Bilingual Education (3)
This course provides a critical interpretation of current practice in bilingual education, based on theory and research.
EDUC 264. Introduction to Bilingual Education: Global Perspective (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.

EDUC 265. 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 266. Teaching as Reflective Inquiry II (2)
Teaching as Reflective Inquiry II is the second of a three-part course in which preservice teachers continue to learn and apply the principles of teacher research. Participants will examine their teaching practices and generate inquiry questions that examine their impact on student achievement in their year-long professional practice placements (student teaching). This semester’s emphases include the development of research questions, research methods, design and data collection which will lead to a year-long study.

EDUC 267. Understanding Adolescents in School Contexts (3)
This course is designed for secondary preservice teachers to consider the principles of adolescent development in 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 268. Microcomputers in Education (3)
This course introduces the student to the major concepts and applications related to the use of microcomputers in education. Students will learn basic operations, terminology and capabilities of microcomputers within an educational context. Key issues related to the use of instructional technology will be discussed. Application and evaluation of software for classroom instruction and management will be investigated.

EDUC 269. Microcomputers and Curriculum Design (3)
Issues related to the educational application of instructional technology and its impact on education will be investigated. Students will do in-depth analyses of software applications and their validity in relation to learning models and current curriculum. Students will work with multi-media software and develop media projects. Various projects related to evaluation and use of software, teaching strategies and research in new technologies will be required. Prerequisite: EDUC 261 and EDUC 130.

EDUC 270. Professional Practice (2-10)
Student teaching for the SR 2042 Multiple Subject credential in public schools, for full-day placement. Requires additional assignments and action research for the MEd Degree. Prerequisites: Completion of prerequisite coursework with grade “C” or higher; minimum GPA of 3.0; Admission to Teacher Education/Credential Candidacy; CBEST passed; subject matter completed and approved; approval of a Certificate of Clearance. TB test clearance; program assessments 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 EDUC 172 and SPED 125X and weekend and vacation workshops, except that a candidate must petition in advance to the Curriculum and Instruction Department’s Director of Field Experiences for enrollment in an additional concurrent course. Open only to MEd Degree candidates. Corequisites: EDUC 172 and SPED 125X.

EDUC 271. Professional Practice Music (2-10)
Student Teaching or Internship for the Music Single Subject credential. The Music Education Department Chair approves one or more semesters of Directed Teaching and assigns number of units for each semester. The total over one or more semesters must be ten (10) units. Open to Master of Education candidates. Prerequisites: 1) Student Teaching; 2) Internship. 1) Completion of all prerequisite coursework with grade of “C” or higher; minimum GPA of 3.0; Admission to Teacher Education/Credential Candidacy; CBEST passed; subject matter completed and approved; approval of a Certificate of Clearance, TB test clearance; program assessments completed; completion of Directed Teaching approval process and clearance by the Director of Field Experiences and Music Education Department Chair. The United States Constitution requirement must be completed to apply for a teaching credential. 2) Prerequisites are the same as those for Student Teaching: a GPA of 3.0 in Teacher Education courses is required, and the United States Constitution requirement must be completed prior to enrolling in an internship. A contract from the district and a Memorandum of Understanding between the district and the University of the Pacific are required. Corequisites: EDUC 172 and SPED 125X. These corequisites must be taken once, if Directed Teaching is split over two or more semesters.

EDUC 275. 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 schools. 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 I teaching credential, the Performance Assessment for California Teachers (PACT) Teaching Event (TE) is completed as part of this course.

EDUC 276. Teaching as Reflective Inquiry III (3)
Teaching as Reflective Inquiry III is the culminating section of a three-part course in which preservice teachers continue to apply principles of teacher research. This is also the capstone course for the MEd. Participants will complete their year-long action research project and report to various audiences the impact of the study on student achievement. At the semester’s conclusion, participants will submit research reports and make presentations of their findings to panels made up of University and K-12 faculty.

EDUC 281. Modern Trends in Early Childhood Education (3)
Acquaintance with current trends in the education of children from birth through third grade.
EDUC 282. Advanced Curriculum and Theory in Early Childhood Education (3)
Involvement with curriculum design, analysis and evaluation.

EDUC 284. Directed Teaching Special Assignment (2-10)

EDUC 289. Practicum (2-4)

EDUC 291. Graduate Independent Study (1-3)
Graduate students may enroll in library research with consent of the department chair.

EDUC 292. Advanced Fieldwork (1-6)
Department chair permission required.
EDUC 292A. Elementary Education
EDUC 292B. Secondary Education
EDUC 292D. Early Childhood Education
EDUC 292F. Reading
EDUC 292H. Special Projects
EDUC 292L. Advanced Fieldwork in Bilingual Education

EDUC 293. Special Topics (1-3)
Department chair permission required.

EDUC 295A. Seminar: Middle School Curriculum (3)
Review of curricular issues in middle schools in the United States, including an analysis of curriculum concepts and the social, economic and political forces that may shape forthcoming curricular design. Specific content includes historical and philosophical foundation; curriculum trends, alternative approaches; and curriculum materials analysis.

EDUC 295B. Seminar: Secondary Curriculum (3)
Review of the curriculum issues in middle and secondary schools in the United States, including an analysis of curriculum concepts and the social, economic and political forces that may shape forthcoming curricular design. Specific content includes historical and philosophical foundations, curriculum trends, alternative approaches, curriculum materials, analysis and issues that relate to adolescence.

EDUC 295E. Seminar: Teaching Reading and Writing (3)
Examines current theory, research, trends, and issues in the teaching of reading and writing. Students will translate theory into practice through observation of and participation with children in reading and writing activities. Prerequisites: graduate standing and previous coursework in one of the following: reading, writing, language development.

EDUC 295G. Seminar: Elementary Curriculum (3)
Review of curricular issues in elementary schools in the United States, including an analysis of curriculum concepts and the social, economic, and political forces that may shape forthcoming curricular design. Specific content includes historical and philosophical foundation; curriculum trends; alternative approaches; and curriculum materials analysis.

EDUC 295H. Seminar in Language Teaching (3)
A seminar in ESL methods, materials, theories and current research. Prerequisite: EDUC 127 or 227 or concurrent enrollment in 227.

EDUC 297. Graduate Research in Education (1-3)
Graduate students may enroll in some field investigation with consent of the department chair.

EDUC 299. Master’s Thesis (1-4)
Permission of instructor or department chair is required.

EDUC 302. Issues in Teacher Education (3)
Review and analysis of current curricular topics related to pre-service and in-service teacher preparation.

EDUC 304. Program Evaluation (3)
Selection and use of formal and informal devices for the purpose of making diagnosis of learner strengths and weaknesses, measuring learner progress and making summative evaluations of learner achievement, both on an individual and larger scale basis.

EDUC 306. Curriculum Materials Development (3)
Design and development of appropriate curriculum materials for achieving program and course objectives.

EDUC 308. Issues in Curriculum and Instruction (3)
Exploration of crucial issues and trends in curriculum and instruction: their historical origins, current manifestations and implications for teaching and learning in effective schools.

EDUC 314. Contemporary Issues in Schooling and Education (3)
The intent of this course is to further inquiry into the ways in which school policies and practices have historically been initiated and implemented. In addition focus will be paid to the role teachers and students play in the operationalizing of policies and research-based practices. Attention to review of pertinent readings will be emphasized.

EDUC 316. Interdisciplinary Curriculum Inquiry (3)
The purpose of this course is to engage doctoral candidates in exploring the ways subject matter content can be viewed through an interdisciplinary curricular lens. Educational problems, like political, economic, environmental, social, cultural problems are viewed from multiple perspectives requiring synthesis rather than separation of content disciplines. The challenge to better understanding the world around us lies in the ways in which we organize and utilize available knowledge. The intent of this course is to provide students with an interdisciplinary framework for understanding problems and inquiry-based skills necessary for understanding the ways in which content knowledge is interrelated. Emphasis will be placed on systems thinking and strategies associated with the integration of subject matter content knowledge and holistic ways of knowing.

EDUC 318. Research in Classroom Context (3)
This course will focus on developing skills and knowledge related to conducting research in culturally and ethnically diverse classroom settings. Emphasis will be placed on collection and analysis of data, primarily through observations, interviews and curriculum documents. Students will design and implement a study in a classroom context and present their work both oral and written form.

EDUC 320. Advanced Curriculum Studies (3)
This course is intended to be a capstone research course in curriculum studies. Emphasis will be placed on critical analysis of curriculum issues and subsequent research-based and theoretical perspectives relative to areas of doctoral scholarship.

EDUC 352. Applied Inquiry I (3)
In this course, students will work collaboratively in learning communities to identify and explore general and specific educational/social/political issues that are affecting learners/learning outcomes for key educational constituencies. Each student will identify a preliminary issue/problem/concern for investigation/research and engage in early exploration of foundational issues, key theories, and seminal and emerging research on these topics.

EDUC 354. Applied Inquiry II (6)
This course will provide doctoral students with an overview of assumptions/limitations/strengths and claims of educational research. Further, it will provide them with an overview of quantitative methodologies (data collection and analysis strategies) and of the relevance of these for specific problems and questions. Prerequisite: EDUC 352.
EDUC 356. Applied Inquiry III (3)
This course will place doctoral students into professional learning communities with colleagues and a faculty leader. In these communities, students will work collaboratively and independently to ensure that each student develops a refined problem statement and draft literature review. Prerequisite: EDUC 354.

EDUC 358. Applied Inquiry IV (3)
This course will place doctoral students into professional learning communities with colleagues and a faculty leader. In these communities, students will work collaboratively and independently to ensure that each student develops a defense ready dissertation proposal. Prerequisite: EDUC 356.

EDUC 391. Graduate Independent Study (1-3)
Doctoral students may enroll in directed library research with consent of the department chair.

EDUC 389. Curriculum Practicum (2-4)

EDUC 390. Qualitative Research Design and Methods (3)
This course focuses on methods of designing and conducting qualitative research in education. Topics include: characteristics of qualitative research, data collection and analysis, determining validity and reliability, and ethical issues related to qualitative research. Students will engage in qualitative research at off-campus field sites. This course is a component in the set of research courses required for all EdD students. Prerequisites: completion of a graduate level course which surveys various types of educational research, and introduces methodological concepts and techniques, such as EFSY 201, with a letter grade of B or better, and EFSY 214.

EDUC 393. Special Topics (2-4)

EDUC 397. Graduate Research in Education (1-3)

EDUC 398A. QSA Proposal Development (1)
Doctoral students prepare and obtain approval of a proposal for three Qualifying Scholarly Activity (QSA) projects approved by a department faculty mentor and two additional department faculty. Students may enroll in EDUC 397A as early as the semester after Advancement to Full Admission has been completed or as late as the semester after they have completed a minimum of thirty units.

EDUC 398B. QSA Projects (1)
Doctoral students develop and complete each of three proposed QSA projects. Students work with a mentor and two department faculty in conducting research relevant to three proposed projects. Doctoral students must have completed the approval of the Qualifying Scholarly Activity proposal (EDUC 397A) or may have permission to be concurrently enrolled in EDUC 397B. Students may enroll more than one time in EDUC 397B until all three QSA projects have been completed and defended.

EDUC 398C. Dissertation Proposal Development (1)
Open to a doctoral student who has successfully completed all coursework and three Qualifying Scholarly Activities after taking EDUC 397A and EDUC 397B. The student prepares and defends the dissertation proposal and Institutional Review Board (IRB) proposal. The student concurrently enrolls in a minimum of one unit of EDUC 399: Doctoral Dissertation.

EDUC 399. Doctoral Dissertation (1-15)

SPED 224. Assessment of Special Education Students (3)
The role of assessment in teaching students with disabilities will be explored. In addition, teacher made tests, curriculum based assessment, portfolio assessment and commonly used standardized tests will be examined. This course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Preliminary Level I Credential for Educational Specialist: Mild/Moderate or Moderate/Severe Disabilities. Prerequisites: SPED 123, SPED 166 and Admission to Teacher Education/Credential Candidacy or permission of Special Education Coordinator or Department Chair of Curriculum and Instruction.

SPED 228M. Advanced Programming for Students with Mild/Moderate Disabilities (3)
Theoretical and applied information pertaining to the characteristics and educational needs of students with mild to moderate disabilities will be presented. The course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Preliminary Level I Credential for Educational Specialist: Mild/Moderate Disabilities. Prerequisites: SPED 123, SPED 166 and Admission to Teacher Education/Credential Candidacy or permission of Special Education Coordinator or Department Chair of Curriculum and Instruction.

SPED 228S. Advanced Programming for Students with Moderate/Severe Disabilities (3)
Presentation of theoretical and applied information pertaining to specialized health care and sensory needs as well as educational characteristics for students with moderate/severe disabilities. This course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Preliminary Level One Credential for Educational Specialist: Moderate/Severe Disabilities. Prerequisites: SPED 123, SPED 166 and Admission to Teacher Education/Credential Candidacy or permission of Special Education Coordinator or Department Chair of Curriculum and Instruction.

SPED 242M. Curriculum and Instruction for Students with Mild/Moderate Disabilities (3)
Presentation of theoretical and applied information pertaining to methods of curriculum and instruction for students with mild to moderate disabilities. This course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Preliminary Level One Credential for Educational Specialist: Mild/Moderate Disabilities. Prerequisites: SPED 123, SPED 166 and Admission to Teacher Education/Credential Candidacy or permission of Special Education Coordinator or Department Chair of Curriculum and Instruction.

SPED 242S. Curriculum and Instruction for Students with Moderate/Severe Disabilities (3)
This course will present theoretical and applied information pertaining to methods of curriculum and instruction for students with moderate to severe disabilities. This course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Preliminary Level One Credential for Educational Specialist: Moderate/Severe Disabilities. Prerequisites: SPED 123, SPED 166 and Admission to Teacher Education/Credential Candidacy or permission of Special Education Coordinator or Department Chair of Curriculum and Instruction.

SPED 250. Introduction to Induction Plan (2)
The purpose of this practicum-based course is two fold: to introduce the student to the induction plan process, and provide an opportunity for candidates enrolled in the Mild/Moderate or Moderate/Severe Level II Educational Specialist Credential Program to identify their particular professional needs, set goals and objectives for their continued teacher development and apply theoretical understandings to the classroom. The course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Level II Professional Development Educational Specialist Mild/Moderate and Moderate/Severe Clear Credential. Prerequisite: Completion of the Preliminary Level I Educational Specialist Credential Program in Mild/Moderate and/or Moderate/Severe.

Curriculum and Instruction: Special Education Program

SPED 224. Assessment of Special Education Students (3)
The role of assessment in teaching students with disabilities will be explored. In addition, teacher made tests, curriculum based assessment, portfolio assessment and commonly used standardized tests will be examined. This course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Preliminary Level I Credential for Educational Specialist: Mild/Moderate or Moderate/Severe Disabilities. Prerequisites: SPED 123, SPED 166 and Admission to Teacher Education/Credential Candidacy or permission of Special Education Coordinator or Department Chair of Curriculum and Instruction.
SPED 292. Portfolio Assessment (2)
This is the last class in the 16-unit course sequence for the Level II phase of the Educational Specialist credential program. The course provides an opportunity for candidates enrolled in the Mild/Moderate or Moderate/Severe Credential Program to apply theoretical understandings to the classroom and demonstrate professional competencies, through a series of evaluation processes. Students enrolled in this course are expected to log 40 contact hours in the field. Students must have two years of teaching experience as an Educational Specialist. This course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Level II Professional Development Educational Specialist Mild/Moderate or Moderate/Severe Disabilities Clear Credential. The Special Education coordinator or department chair must be consulted prior to enrollment to update progress on the Professional Induction Plan. Prerequisites: SPED 250, SPED 295A or SPED 395A and completion of electives in the Professional Development Plan.

SPED 291. Independent Graduate Study (1-3)

SPED 293. Special Project (1-3)
Prerequisite: Consent of the department chair.

SPED 295A. Seminar: Crucial Issues in Special Education (3)
Provides a methodology and format for advanced special education students and other related disciplines to explore crucial issues and trends and their historical origin. Attention to research and the development of positions on trends, issues and current law.

SPED 295E. Positive Behavioral Support in the Classroom (3)
Theoretical and applied information pertaining to methods of providing positive behavioral support to students with and without disabilities in educational settings will be examined. This course will comply with the California Commission on Teacher Credentialing (CCTC) requirements for the Preliminary Level One Credential for Educational Specialist Mild/Moderate or Moderate/Severe Disabilities. Prerequisites: SPED 123, SPED 166 and Admission to Teacher Education/Credential Candidacy or permission of Special Education coordinator or department chair.

SPED 297. Graduate Research (1-3)

SPED 298IM. Internship: Mild/Moderate (5)
This internship experience provides an opportunity for candidates in the mild/moderate credential program to apply theoretical knowledge and acquire skills to the classroom in an internship experience. Students must register for five units for each of two semesters for a total of ten units. All prerequisite and required courses must be completed to enroll in an Internship and permission must be obtained from the Director of Special Education.

SPED 298IS. Internship: Moderate/Severe (5)
This internship experience provides an opportunity for candidates in the moderate/severe credential program to apply theoretical knowledge and acquire skills to the classroom in an internship experience. Students must register for five units for each of two semesters for a total of ten units. Prerequisites: All prerequisite and required courses must be completed to enroll in an Internship and permission must be obtained from the Director of Special Education.

SPED 298M. Directed Teaching: Special Education (mm) (6-10)
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.

SPED 298S. Directed Teaching: Special Education (ms) (6-10)
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.

SPED 299. Master’s Thesis (4)

SPED 391. Independent Graduate Study - Special Education (1-3)

SPED 393A. Special Topics (1-3)
Department chair permission required.

SPED 395A. Seminar: Crucial Issues in Special Education (3)
Provision of a methodology and format for advanced special education students and other related disciplines to explore crucial issues and trends and their historical origin. Attention to research and the development of positions on trends, issues and current law.

SPED 397. Graduate Research (1-3)

Department of Educational Administration and Leadership

EDUC 204. Pluralism in American Education (3)
A multi-disciplinary examination of the effects of cultural and social pluralism on educational policy, philosophy, classroom instruction and professional ethics in American public education, both historically and as contemporary issues.

EDUC 206. Comparative Education (3)
Educational principles, practices and organizational structure and school administration in the United States and other societies.

EDUC 207. Sociology of Education (3)
Study of sociology of education and the classroom.

EDUC 210. Seminar in American Educational Thought (3)
A philosophical treatment of American education.

EDUC 220. Seminar: Social Class Effects in Education (3)
Explores the nature of social class and its effects on learning in the classroom.

EDUC 229. Seminar: Cultural Basis Conflicts in Education (3)
Analysis of cultural diversity in American classrooms. Not open to doctoral students.

EDUC 231. Seminar: Educational Anthropology (3)
Analysis of culture, language and values in education.

EDUC 232. Gender Issues: Cross-cultural Perspectives (3)
An examination of social, economic and political forces which foster and perpetuate gender stratification and related issues. Trends/movements regarding gender roles/status are investigated from the perspective of economic and political systems in the context of Eastern and Western societies.

EDUC 233. Seminar: Multicultural Education (3)
Analysis of the theoretical and philosophical foundations of cultural pluralism, acquire an understanding of strategies for implementation of cross-cultural education, and the development of units of instruction for use in cross-cultural education.

EDUC 234. Seminar: Asian Cultures (3)
This course provides knowledge of East and Southeast Asian value systems. By studying Eastern philosophies and Eastern ways of life the student will gain a deeper understanding of cross-culturalism and its implications for American education and society.
EDUC 240. Introduction to Students Affairs (3)
A comprehensive introduction and overview of student affairs functions within institutions of higher education. Emphasis will be on the history and evolution of the student affairs movement; gaining an understanding of the multiple roles of the student affairs practitioner; creating an awareness of the best practices in student personnel; and developing knowledge of current issues regarding students and student services functions in higher education.

EDUC 241. Student Development Theory (3)
A forum for students to critically examine and evaluate current student development theories, research, and implications for practice. The course content includes study of attitudes and characteristics of American college students and their various cultures. This course also explores current issues in higher education as they impact student affairs roles and practice.

EDUC 242. College Student Environment (3)
The characteristics and attitudes of traditional and non-traditional American college students and the effect of the college environment on students. Students will study the historical and contemporary characteristics of students, understand the characteristics and needs of various sub-populations, and research the effects of college and its environments on students.

EDUC 243. Legal Issues in Higher Education Student Affairs (3)
Provides an overview of legal issues in American higher education, specifically those related to Student Affairs. This course is designed to ensure that students have the opportunity to learn basic legal principles necessary to function in an administrative or managerial capacity in post-secondary institutions. Administrative arrangements, policy issues, and case law will be reviewed and discussed.

EDUC 244. Assessment in Student Affairs (3)
This course assists students in understanding the various purposes of assessment and with developing the knowledge and skills necessary to assess student learning in higher education, particularly in Student Affairs programs and departments. The course includes an experiential component that affords students the opportunity to develop a capstone project based in a curricular or co-curricular setting. Further emphasis is placed on analysis and critical reflection on the published literature on assessment, as well as research writing and reporting.

EDUC 245. Counseling Theories in College Student Affairs (3)
A critical and comprehensive study of current counseling theories and their application for student affairs practitioners.

EDUC 246. Counseling Special Populations (3)
The course focuses on the study of counseling processes and techniques with student client populations that are ethnically and racially diverse. We will build on the skills that students learned in the basic counseling theories course taught in prior semesters. Students will explore theory and research beyond the contention that students of color may have different needs and experiences in counseling situations. We will also look at personal ethnic identity and how it affects the assumptions brought to counseling. Students will also learn what it means to be “culturally competent” in regard to counseling skills.

EDUC 277. Diversity and Constituency in Educational Administration (3)
Explores the values and concerns of the many diverse communities that constitute a school community. Effective ways to involve various communities in the participation of school life are presented.

EDUC 278. Educational Organizations and Diverse Constituencies (3)
Organizational patterns and issues that are related to the administration of educational organizations will be presented. Particular emphasis is placed on effectively involving diverse stakeholders in the organizational culture of educational institutions.

EDUC 280. Education Law and Legal Processes (3)
Laws, legal principles, interpretations and practices governing federal, state, county and local school organization and administration; laws relating to youth; contracts, liability and tort; effect of federal and state laws on education.

EDUC 283. School Finance and Business Administration (3)
Public schools as economic institutions; the roles of the federal, state and local governmental agencies related to school finance; public school revenues and expenditures; budget development and administration; operational finance of funds and services.

EDUC 285. Educational Leadership (3)
Functions, responsibilities and relationships of the school principal. Emphasis given to instructional leadership, leadership styles, human relations skills, working with school-community task groups and forces, public relations, needs assessment, decision-making analysis and computers as a management tool.

EDUC 286. Administration of Human Resources (3)
Skills and techniques of employee selection, orientation, administration, supervision and evaluation; staff development activities; determining personnel need; employee organizations.

EDUC 290. Seminar: Computers in Educational Administration (3)
Techniques of computer utilization as a management tool in school site and central office administration.

EDUC 291. Graduate Independent Study (1-3)
Graduate students may enroll in library research with consent of the department chair.

EDUC 292C. Student Affairs Field Experience (1-3)
Student Affairs Field Experience allows students to experience a variety of professional roles under the guidance of mentorship of a qualified Student Affairs or Higher Education Administration practitioner. Field experience serves as a complement to students’ classroom learning and integrates classroom theories and ideas with practical applications.

EDUC 292D. Field Experience in Administration and Supervision (1-4)
Experience in practical on-the-job administrative and supervisory functions at a school site. One unit over each of three semesters is required. Open only to administrative credential candidates at the University. Permission of department chair.

EDUC 293. Special Topics (1-3)
Permission of the department chair required.

EDUC 295C. Seminar: Educational Planning, Delivery, and Assessment (3)
The role of the administrator as the instructional leader is the focus. Facets of the instructional program include curriculum planning, programmatic issues, delivery systems and assessment and evaluation.

EDUC 299. Master’s Thesis (1-4)
Permission of instructor or department chair is required.

EDUC 351. Seminar: Social Scientific Thinking (3)
A doctoral course that provides a meaningful theoretical context within which various methodologies and research designs may be better understood.

EDUC 352. Applied Inquiry I (3)
In this course, students will work collaboratively in learning communities to identify and explore general and specific educational/social/political issues that are affecting learners/learning outcomes for key educational constituencies. Each student will identify a preliminary issue/problem/concern for his/her dissertation project and engage in early exploration of foundational issues, key theories, and seminal research on these topics.
EDUC 354. Applied Inquiry II (6)
This course will provide doctoral students with an overview of assumptions/limitations/strengths and claims of educational research. Further, it will provide them with an overview of quantitative and qualitative methodologies (data collection and analysis strategies) and of the relevance of these for specific problems and questions. Prerequisite: EDUC 352.

EDUC 356. Applied Inquiry III (3)
This course will place doctoral students into professional learning communities with colleagues and a faculty leader. In these communities, students will work collaboratively and independently to ensure that each student develops a refined problem statement and draft literature review. Prerequisite: EDUC 354.

EDUC 358. Applied Inquiry IV (3)
This course will place doctoral students into professional learning communities with colleagues and a faculty leader. In these communities, students will work collaboratively and independently to ensure that each student develops defense ready dissertation proposal. Prerequisite: EDUC 356.

EDUC 360. Seminar: Trends, Issues, and the Dynamics of Change (3)
Examines current issues and the impact of change in administration of educational programs.

EDUC 361. Seminar: Ethics, Law and Finance (3)
An examination of the relationships between ethics, law, and finance as each impacts upon administrating decision-making in educational institutions.

EDUC 362. Seminar: Administration of Instructional Programs (3)
Instructional leadership, staff development, educational program planning/evaluation, curriculum designs and instructional delivery strategies, monitoring and evaluating student progress, use of instructional time and resources.

EDUC 363. Seminar: Personnel Issues (3)
Personnel management, resource allocations, employee evaluation, collective bargaining, staffing, staff development, conflict mediation.

EDUC 364. Seminar: Educational Policy Making and Politics (3)
Issues and techniques relative to policy formulation and implementation are examined. The political, social and economic forces that impact policy decisions are emphasized.

EDUC 365. Seminar: Administration of Higher Education (3)
A study of administrative, educational and personnel problems and issues in community colleges and four-year institutions.

EDUC 366. Seminar: Communications and Public Relations in Education (3)
Techniques of effective communications in educational organizations are presented. Developing and maintaining positive public relations and public support for educational problems are emphasized.

EDUC 367. Seminar: Cultural Diversity and Educational Administration (3)
Techniques for working with culturally diverse student, community and faculty populations.

EDUC 368. Seminar: Administering Complex Educational Organizations (3)
An in-depth examination of the theories, issues, trends, and challenges of administering complex educational organizations.

EDUC 369. Seminar: District Office Administration (3)
To provide an in-depth examination of the structure, functions, politics, and purpose of school district administration.

EDUC 370. Professional Induction Planning (2)
Development of a collaborative professional induction plan to meet the requirements for the Professional Administrative Services Credential.

EDUC 371. Professional Assessment (2)
A formal assessment of candidates for the Professional Administrative Services Credential.

EDUC 372. Program Evaluation and Grant Writing (3)
This course prepares doctoral students with the attitudes, ethics and skills to evaluate a variety of public and private programs, and develop requests for funding to meet grant specifications.

EDUC 373. Economics of Education (3)
This course prepares students to analyze alternative methods of assessing the contributions of education to economic growth, education and inequality, education production functions, cost analysis and planning, and economic aspects of innovation.

EDUC 381. Law in Higher Education (3)
This course prepares students to examine the legal dimensions of the college-level decision process. Administrative arrangements, policy issues and case law will be analyzed.

EDUC 382. Leadership in Higher Education (3)
This course prepares doctoral students with the attitudes and skills to analyze leadership theories, challenges and strategies in higher education.

EDUC 383. Administering Curriculum, Pedagogy and Assessment in Higher Education (3)
The application of principles and promising practices for teaching and learning in higher education. This course will examine curriculum design, pedagogy and assessment in post secondary programs of study.

EDUC 391. Graduate Independent Study (1-3)
Department chair permission required.

EDUC 392. Internship and Advanced Field Experience in Administration (1-4)
Department chair permission required.

EDUC 393. Special Topics (1-3)
Department chair permission required.

EDUC 394. Seminar: Doctoral Research in Educational Administration (3)
The goal of this semester is to have doctoral students develop an acceptable dissertation proposal. Faculty members will lead discussions, provide individual assistance, and collaborate on individual student progress with the aim of assisting the student in the proposal development process. The seminar will be divided into group sessions and individual meetings with student selected dissertation advisors. Department chair permission required.

EDUC 398D. Qualifying Scholarly Activities (1)
A doctoral candidacy qualifying requirement to demonstrate competence in research and subject matter. Student will (a) identify a research area and level, (b) complete a scholarly annotated bibliography, (c) respond to a question in the form of a scholarly paper, and (d) orally defend the response to the question.

EDUC 399. Doctoral Dissertation (1-15)
Department of Educational and School Psychology

EPSY 201. Techniques of Research (3)
Study of the various research methodologies including qualitative, descriptive, causal-comparative, survey, correlational and experimental. Emphasis on learning to read and comprehend research published in professional journals. This includes understanding how basic descriptive and inferential statistics are applied to address quantitative research questions.

EPSY 214. Intermediate Statistics (3)
Not intended to be a first course in statistics. Review of descriptive statistics including correlation and probability; introduction to applied inferential statistics including t-test for means, tests for proportions, tests for correlations and ANOVA utilizing statistical computing software. Emphasis is placed on conceptual understanding to ensure students recognize the power as well as the limitations of statistical techniques.
EPSY 220. Nature and Condition of Learning (3)
Study of both cognitive and traditional learning theories, their applications to instruction and the development of effective teaching strategies. In addition, information processing models are explored and their implications for instruction are addressed. Prerequisite: EPSY 121x or equivalent or permission of the instructor.

EPSY 285. Alcohol and Drug Dependency Counseling (1)
Course focuses on the etiology and treatment of substance abuse disorders. Emphasis is on theoretical consideration of causes and basis of treatment as related to theory. Topics will include an overview of rehabilitation and the dynamics of recovery. Emphasis is on the counselor’s role in treatment, working with families, relapse prevention and adjunctive resources.

EPSY 286. Child Abuse Counseling Issues (1)
Provides students of family therapy with an understanding of the nature of child abuse/molest and the dynamic implications for victims and perpetrators, reporting procedures and the law, as well as discussion of the manifestations of abuse in adulthood.

EPSY 287. Human Sexuality and Sexual Counseling (1)
This course provides the student of family therapy a focus on the study of the biological, social, cultural, personal and relational aspects of human sexuality. Course emphasis is on sexual dysfunction and therapy, current research on sexuality, varieties of sexual behavior and preference, and gender identity and gender role. Permission of the instructor.

EPSY 291. Independent Graduate Study (1-4)
Department chair permission required.

EPSY 293. Special Project (1-3)
Department chair permission required.

EPSY 294B. School Psychology Fieldwork (1-4)
Advanced supervised field placement in preschool and/or K-12 setting(s). Instructor consent required for selection: field site/ supervisor.

EPSY 297. Graduate Research (1-3)
Department chair permission required.

EPSY 299. Master’s Thesis (4)
Department chair permission required.

EPSY 300. Seminar: Introduction to School Psychology (1)
This course serves as an introduction to the specialization of school psychology. It is intended to give the student an overview of the field of school psychology focusing on the role and function of the school psychologist in the public schools and other settings. Topics include the history of school psychology, pupil personnel services in schools, service delivery models, school psychology, organizations, research traditions in school psychology, international school psychology, ethical and legal issues, publications and resources in school psychology. Prerequisite: Admission to school psychology program.

EPSY 301. Data-Based Decision Making I (2)
This course introduces the graduate student to the systematic processes used by school psychologists to collect and analyze data. This course is accompanied by one unit of EPSY 294b School Psychology Field Work. Students will learn various methods of data collection, including interviews, systematic observations, and review of records. Prerequisite: Admission to school psychology program.

EPSY 302. Data-Based Decision Making II (2)
This course is a continuation of EPSY 301 Data-Based Decision Making I. This course is accompanied by one unit of EPSY 294b School Psychology Field Work. Students will learn various methods of data collection, including interviews, systematic observations, and review of records. Students are also introduced to the response-to-intervention model, and some of the basic curriculum-based assessment techniques. Prerequisites: Admission to school psychology program and successful completion of EPSY 301.

EPSY 306. Psychotherapeutic Interventions in School (3)
This course prepares school psychologists to design, implement, and evaluate wellness, prevention, intervention, and other mental health programs at the individual, group, and program level to school-aged children. Prerequisite: Admission to school psychology program.

EPSY 307. Group Counseling (3)
This course prepares school psychologists to use direct methods and techniques of group counseling for school-aged children. Prerequisite: Admission to school psychology program.

EPSY 308. History, Systems, and Indirect Interventions for the School Psychologist (3)
This course introduces students to issues of school and system organization, policy development, and climate. Students will gain a current professional knowledge base of school and systems structure and organization and of general education and regular education, with an emphasis on the importance of the PPS provider in providing leadership, vision, and operating as a systems change agent.

EPSY 309. Consultation Methods (3)
This course prepares school psychologists to provide mental health consultation to school personnel and parents. Various consultation methodologies will be studied with applications particularly appropriate to children in the public school system.

EPSY 310. Crisis Intervention (3)
This course helps prepare school psychologists to be able to work with school personnel, pupils, parents, and the general community in the aftermath of personal, school, and community crises.

EPSY 311. California Law and Professional Ethics (1)
Designed for students in credential and licensing graduate programs in human services. Students will study approaches to ethical decision-making in addition to learning relevant law and regulation and existing ethical codes of behavior.

EPSY 312. Child Psychology/Wellness Promotion (3)
This course will examine various programmatic approaches to the primary and secondary prevention of emotional disturbance and educational failure, and the promotion of health and mental health in public schools.

EPSY 315. Individual Assessment (3)
This course prepares school psychologists to use assessment information in a problem-solving process, and to use data-based decision making to improve outcomes for instruction, development of cognitive and academic skills, and the development of life competencies. Students will also be exposed to process and procedures identified in federal and state laws related to special education services.

EPSY 316. Behavior/Personality Assessment in School (3)
This course is designed to prepare school psychologists to gain proficiency in the administration, scoring, and interpretation of several instruments commonly used in behavioral and personality assessment in the schools. The writing of professional reports, theoretical aspects and measurement of behavior and personality, and legal and ethical issues will be addressed.

EPSY 317. Neuropsychology in the Schools (3)
This course provides a general overview of: brain-based behavior; neuropsychology and physiology; conceptualizing psychoeducational assessment data from a neuropsychological perspective; the effects and uses of psychotropic agents; and information on neuropathology as it pertains to learner-centered problems.
EPSY 320A. Seminar: Advanced Human Development I (3)
This course, the first in a two-course sequence, focuses on the developmental periods of early and middle childhood. The course examines theoretical and research-based knowledge of the influences of biological, social, affective, cultural, ethnic, experiential, socioeconomic, gender-related, and linguistic factors in children’s development.

EPSY 320B. Seminar: Advanced Human Development II (3)
This course, the second in a two-course sequence, focuses on the developmental period of adolescence. Prerequisite: EPSY 320a.

EPSY 321. Seminar: Advanced Human Development III (3)
This course focuses on early childhood development, and will examine theoretical and research-based knowledge of the influences of biological, social, affective, cultural, ethnic, experiential, socioeconomic, gender-related, and linguistic factors in early childhood development.

EPSY 324. Seminar: Advanced Consultation and Supervision (3)
This course provides doctoral students with advanced training in and exposure to effective models of collaboration and supervision, with an emphasis on systems-level change with diverse populations in public schools.

EPSY 391. Graduate Independent Study
Doctoral students with permission of the department chair. (1-3)

EPSY 393. Special Topics (1-3)

EPSY 395C. Quantitative Research Design and Method (3)
This course exposes students to and develops their ability to conceptualize a broader range of research questions dealing with (a) significance of group differences; (b) degree of relationship among variables; (c) prediction of group membership; and/or (d) structure that quantitative design and analysis strategies might inform than those typically introduced in a first course (e.g., EPSY 201). Topics emphasized in the course relate to (a) the purpose and principles of research design; (b) the use of multivariate approaches and analysis; and (c) the construction and validation of measuring instruments. Prerequisite: EPSY 214.

EPSY 395D. Advanced Statistical Methods (3)
This course acquaints the student with the use of the general linear model as a data analytic tool. Students learn how to generate and interpret output produced by SPSS statistical software in conducting a) multiple regression analyses involving both continuous and categorical independent variables; b) logistic regression analyses involving categorical dependent variables; c) structural equation modeling; and d) other multivariate techniques. Prerequisite: EPSY 214.

EPSY 395F. Seminar: Promoting Cultural Competence Across Systems (3)
This course is designed to provide the doctoral student with advanced training in and exposure to effective models of promoting cultural competence in public schools, with an emphasis on systems-level change with diverse populations.

EPSY 395G. Measurement Theory and Practice (3)
This course is designed to solidify students’ understanding of classical test theory and introduce them to modern test theory, including Item Response Theory. Prerequisites: EPSY 204 and EPSY 215 or equivalent.

EPSY 397. Graduate Research (1-3)
Doctoral students with permission of the department chair.

EPSY 398. School Psychology Internship (1-6)
Student will perform duties of a school psychologist in multicultural school settings at both elementary and secondary levels under the direct supervision of a credentialed school psychologist. Placement must be half- or full-time. Prerequisite: Students must have an intern credential and permission of the instructor before beginning an internship.

EPSY 399. Doctoral Dissertation (1-15)

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Gladys L. Benerd School of Education Faculty

Harriett Arnold, 1994, Associate Professor, BA, San Francisco State College, 1968; MA, San Jose State University, 1974; EdD, University of San Francisco, 1984.

Lynn G. Beck, 2005, Dean and Professor of Education, BA, Bethaven College, 1974; MA, University of Mississippi, 1976; PhD, Vanderbilt University, 1991.

Dennis Brennan, 1980, Associate Professor, BS, Clarion State College, 1966; MEd, University of Pittsburgh, 1970; PhD, 1978.

Kellie Cain, 2002, Assistant Professor, Assistant Director of Field Experiences, BA, University of California, Davis, 1987; MA, University of the Pacific, 1999; EdD, 2005.

Marilyn E. Draheim, 1986, Associate Professor, 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, 1990, Instructor, Educational Resource Center, BA, California State University, Sonoma, 1976; MA, University of California, Davis, 1980.

Rachelle Hackett, 1994, Associate Professor, 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, 1979; MPA, University of Southern California, 1988; EdD, Oregon State University, 2002.

Thomas G. Nelson, 1995, Assistant Professor, BA, California State University, Northridge, 1975; MA, California State University, Sacramento, 1988; PhD, University of Arizona, 1993.


Gregory R. Potter, 2002, Assistant Professor, BA, University of California, Davis, 1992; MS, 1996; PhD, 2000.

Joanna Royce-Davis, 2008, Associate Professor, BS, Indiana University, 1990; MA San Jose State University, 1994; PhD, Syracuse University, 2001.

Jonathan Sandoval, 2006, Professor, AB, University of California, Santa Barbara, 1964; MA, University of California, Berkeley, 1966; PhD, 1969.

Claudia W. Schwartz, 1987, Instructor, BA, University of the Pacific, 1974; MA, 1981.
Craig Seal, 2009, Assistant Professor, BS, Santa Clara University, 1991; MA, Boston College, 1995; PhD, George Washington University, 2007.

Antonio Serna, 2006, 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, BA, California State University, Fresno, 1981; MA, University of California, Berkeley, 1984; PhD, 1988.
The Master of Science in Engineering Science (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.

The goal of the graduate program in the School of Engineering and Computer Science is threefold: (1) to advance student professional standing; (2) to extend the curiosity, intellectual capacities, and knowledge of its students; (3) and to stimulate and support the products of intellectual inquiry. 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 graduate-level practicum experience in industry, or by taking additional coursework.

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.

Program Learning Objectives
Graduates will demonstrate:

- A broad understanding of problem-solving, design, and research skills necessary to operate in the interdisciplinary arena of engineering and computer science
- Sufficient depth in an area to be able to design increasingly complex systems or to pursue a more advanced degree
- Skills necessary to engage in lifelong careers as practicing professional engineers or computer scientists

Accelerated Five Year Blended Program
The accelerated five year 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.

Thesis and Non-thesis Options
The MSES program has two degree options: thesis and non-thesis plans, each requiring a minimum number of 30 units. The thesis plan will require students to perform independent research and will culminate in the completion of a thesis based on the findings of the research. The thesis plan is intended for students who plan to pursue a career in research or plan to pursue a PhD. The non-thesis option allows students to complete a project, engage in directed experiential learning, or complete all their units through coursework.

Blended Program Admission Criteria
School of Engineering and Computer Science undergraduates maintaining a minimum institutional GPA of 3.0 and a major GPA of 3.0 upon reaching senior status are given priority consideration for admission to the Blended Program and if admitted may begin taking graduate level courses at that time, allowing the
BS and MS degrees to blend together. Students who choose to withdraw from the program prior to completing all the requirements may be awarded the Bachelor of Science degree alone, contingent upon having completed all of the respective program requirements, including the co-op experience.

Graduate Program Admission Criteria
Prospective students with earned bachelor’s degrees must submit the following materials to the Research and Graduate Studies Office at the University of the Pacific. A completed application includes:
1. The Graduate School application form
2. Three letters of references
3. Transcripts from the institution where the BS in engineering or computer science (or relevant degree) was granted
4. A personal statement on professional goals and objectives
5. Acceptable scores on the GRE General Examination (a minimum combined score of 1000 for the verbal and quantitative reasoning part of the exam).
6. A 3.0/4.0 GPA on the last 60 units of undergraduate study
7. For students whose first language is not English, Test of English as a Foreign Language (TOEFL) is required. The minimum score for admission is 550 (paper) or 213 (computer) and the minimum score for a teaching assistantship award is 575 (paper) or 231 (computer)

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
All courses counting toward the MS of Engineering Science must be taken for a letter grade.

Graduate 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 a graduate independent study. The qualified student should initiate discussions with his/her advisor and a professor who is knowledgeable in the subject. If both parties are in agreement, the student must complete the Individualized Study Form and submit it to the instructor and Office of the Registrar prior to the last day to add (see University Academic Calendar). 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. 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.

Course Substitutions
The substitution of course(s) from the printed degree 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.

MS Engineering Science Curriculum
All students receiving an MSES will complete a set of core courses that cover the broader subjects of research and analysis. In addition, depending upon the option chosen, six units of thesis, project, directed experiential learning or coursework.

Core courses that cover the broader subjects of research and analysis:
Graduate Seminar, 2-3 units (required for thesis)
Techniques in Research, 3 units
Math or Computational Science Elective, 3 units
Breadth Elective, 3 units
Concentration Specified Courses, 12-15 units
Thesis, Project, Directed Experiential Learning, or Coursework, 6 units

Students must first choose whether they plan to complete the “Thesis Option” or the “Non-thesis Option.”

A. Thesis Option
1. Students must complete a minimum of 30 units.
2. All students must perform independent research which must culminate in the completion of a thesis based on the findings of the research. For successful completion of the thesis course, students must submit a research proposal, conduct the research, write the thesis, and successfully complete a final oral defense. Students who choose the Thesis Option may not get credit for directed experiential learning at the graduate level.
3. All students must enroll in the one-unit seminar course, ENGR 295, Graduate Seminar, a minimum of two terms, and a maximum of three.
4. All students complete six units of ENGR 299, Thesis Research.
B. Non-thesis Option

1. Students must complete a minimum of 30 units.
2. Students who choose the Non-thesis Option may choose to do a project, directed experiential learning, or they may satisfy all the unit requirements through coursework.
   1. For the directed experiential learning option, the SOECS will assist students in securing engineering or computer science employment or a paid internship at a graduate engineer level. Students will work with the Co-op Director, their faculty advisor, and their worksite supervisor to develop a research/design project along with a list of expected professional and technical learning objectives, with the experience culminating in the preparation of a report which documents the fulfillment of the project and these objectives.
   2. For the project option, students will need to be employed in an engineering or computer science capacity. They will come up with a special project in conjunction with their worksite supervisor and their faculty advisor. Upon completion of the project, the student will submit a comprehensive report outlining the project and documenting its completion. The success of the project will be judged by the faculty advisor, with input from the worksite supervisor.
   3. Students may elect to satisfy the entire degree through courses.

Master of Science in Engineering Science
Civil Engineering Concentration

Within the Civil Engineering concentration, students can focus on the areas of environmental, management or structural.

In order to earn the master of science in engineering science degree, students must complete a minimum of 30 units with a Pacific cumulative grade point average of 3.0.

Core courses that cover the broader subjects of research and analysis:
ENGR 201 Techniques in Research 3
Select one Math or Computational Science Elective 3
   (may be specified by concentration):
   ENGR 219 Numerical Methods for Engineering
   ENGR 250 Probability and Statistics for Engineers and Computer Science

Breadth elective (One from approved list for concentration) 3-4
Select one option:
   a) Thesis Option
      ENGR 295 Graduate Seminar 2-3
      ENGR 299 Thesis 6
   b) Project Option
      Graduate Independent Study or Graduate Research 6
      ENGR 291 Graduate Independent Study
      ENGR 297 Graduate Research
   c) Directed Experiential Learning Option
      ENGR 281-288 Directed Experiential Learning 6
   d) Course work Option
      Courses approved by advisor as coherent plan 6-9

Concentration requirements:
ENGR 292 Managing Science Technology and Innovation 3
Three electives approved by advisor as coherent plan 9-12

Master of Science in Engineering Science
Mechanical Engineering Concentration

In order to earn the master of science in engineering science degree, students must complete a minimum of 30 units with a Pacific cumulative grade point average of 3.0.

Core courses that cover the broader subjects of research and analysis:
ENGR 201 Techniques in Research 3
Select one Math or Computational Science Elective 3
   (may be specified by concentration):
   ENGR 219 Numerical Methods for Engineering
   ENGR 250 Probability and Statistics for Engineers and Computer Science

Breadth elective (One from approved list for concentration) 3-4
Select one option:
   a) Thesis Option
      ENGR 295 Graduate Seminar 2-3
      ENGR 299 Thesis 6
   b) Project Option
      Graduate Independent Study or Graduate Research 6
      ENGR 291 Graduate Independent Study
      ENGR 297 Graduate Research
   c) Directed Experiential Learning Option
      ENGR 281-288 Directed Experiential Learning 6

Concentration requirements:
ENGR 292 Managing Science Technology and Innovation 3
Three electives approved by advisor as coherent plan 9-12

Master of Science in Engineering Science
Computer Engineering / Electrical Engineering / Computer Science Concentration

In order to earn the master of science in engineering science degree, students must complete a minimum of 30 units with a Pacific cumulative grade point average of 3.0.

Core courses that cover the broader subjects of research and analysis:
ENGR 201 Techniques in Research 3
Select one Math or Computational Science Elective 3
   (may be specified by concentration):
   ENGR 219 Numerical Methods for Engineering
   ENGR 250 Probability and Statistics for Engineers and Computer Science

Breadth elective (One from approved list for concentration) 3-4
Select one option:
   a) Thesis Option
      ENGR 295 Graduate Seminar 2-3
      ENGR 299 Thesis 6
   b) Project Option
      Graduate Independent Study or Graduate Research 6
      ENGR 291 Graduate Independent Study
      ENGR 297 Graduate Research
   c) Directed Experiential Learning Option
      ENGR 281-288 Directed Experiential Learning 6
d) Course work Option

Courses approved by advisor as coherent plan 6-9

Concentration requirements
ENGR 292 Managing Science Technology and Innovation 3
Three electives approved by advisor as coherent plan 9-12

Course Offerings

Courses are numbered in accordance with the general University system.

BENG 202. Biosensor (3)
Course will provide a comprehensive introduction to the basic features of biosensors. Discussion topics include types of most common biological agents and the ways in which they can be interfaced with a variety of transducers to create a biosensor for biomedical applications. Focus on optical biosensors and systems (e.g. fluorescence spectroscopy, microscopy). Prerequisite: MS in Engineering Science major and BENG 103 or permission of the instructor.

BENG 205. Advanced Biomaterials (3)
The strategies and fundamental bioengineering design criteria behind the development of cell-based tissue substitutes, artificial skin, muscle, tendons, bone, and extracorporeal systems that use either synthetic materials or hybrid (biological-synthetic) systems. Topics include biocompatibility, biological grafts and bioreactors. Prerequisite: MS in Engineering Science major and BENG 103.

BENG 291. Graduate Independent Study (1-4)
Special individual projects are undertaken under the direction of one or more faculty. Prerequisite: MS in Engineering Science major or permission of the instructor.

BENG 293. 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 297. Graduate Research (1-4)
Approval by the faculty supervisor and the department chairperson is required. Prerequisite: MS in Engineering Science major or permission of the instructor.

BENG 299. Thesis (1-6)
Minimum of six units will be required for Thesis Option students. Prerequisite: MS in Engineering Science major and permission of research advisor.

BENG 202. Biosensor (3)

CIVL 263. Earthquake Engineering (3)
Overview of seismology: Determination of loads on structures due to earthquakes. Methods of estimating equivalent static lateral forces; response spectrum and time history analysis. Concepts of mass, damping and stiffness for typical structures. Design for inelastic behavior. Numerical solutions and code requirements. Prerequisite: MS in Engineering Science major or permission of the faculty member involved.

CIVL 265. Advanced Structural Steel Design (3)
Design of steel structural members, including composite beams, plate girders and connections following the AISC specifications, economy evaluation of building design, and design of frame structures including second order effects. Prerequisites: CIVL 165 and MS in Engineering Science major or permission of the instructor.

CIVL 266. Advanced Reinforced Concrete Design (3)
Design and proportioning of structural systems to satisfy design criteria for reinforced concrete and pre-stress design in concrete, including: retaining walls, slabs, footings, and other structural members. Prerequisites: CIVL 166 and MS in Engineering Science major or permission of the instructor.

CIVL 267. Design of Timber Structures (3)
The design and analysis of timber structures due to gravity, lateral and combined loadings. Both member and connection details are considered. The design procedures, material properties and allowable stress computations are based on IBC, NDS and other governing standards. Prerequisite: MS in Engineering Science major or permission of the faculty member involved.

CIVL 291. Graduate Independent Study (1-4)
Special individual projects are undertaken under the direction of one or more faculty. Prerequisite: MS in Engineering Science major or permission of the instructor.

CIVL 293. 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.

CIVL 297. Graduate Research (1-4)
Approval by the faculty supervisor and the department chairperson is required. Prerequisite: MS in Engineering Science major or permission of the instructor.

CIVL 299. Thesis (1-6)
Minimum of six units will be required for Thesis Option students. Prerequisite: MS in Engineering Science major or permission of research advisor.

COMP 241. Programming Language Semantics (3)
This course examines a variety of modern programming languages from a theoretical perspective. The focus will be on languages designed to support particular novel or interesting concepts. Formal techniques for the specification of the semantics of languages will be used to compare and contrast languages. Prerequisites: COMP 141 and MS in Engineering Science major.

COMP 251. Multi-Agent Systems (3)
This course will focus on distributed systems of intelligent agents particularly the interaction between multiple agents and between agents and humans. It will examine both theoretical models of multi-agent systems and practical applications. Course topics will include: logical and decision theoretic models of planning and teamwork, game theory, distributed constraint reasoning, combinatorial auctions, adjustable autonomy and agent modeling. Prerequisite: MS in Engineering Science major or permission of the instructor.

COMP 253. Virtual Reality (3)
This course will provide an overview of the field of virtual reality (VR). Topics to be covered include stereoscopic display, force feedback and haptic simulation, viewer tracking, virtual worlds, 3D user interface issues, augmented reality, and contemporary applications of VR in simulation, teaching, and training. Students will gain practical experience designing a virtual world. Prerequisite: COMP153 or ECPE 153 or MS in Engineering Science major.

COMP 291. Graduate Independent Study (1-4)
Special individual projects are undertaken under the direction of one or more faculty. Prerequisite: MS in Engineering Science major or permission of the instructor.

COMP 293. 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.

COMP 297. Graduate Research (1-4)
Approval by the faculty supervisor and the department chairperson is required. Prerequisite: MS in Engineering Science major or permission of the instructor.

COMP 299. Thesis (1-6)
Minimum of six units will be required for Thesis Option students. Prerequisite: MS in Engineering Science major or permission of research advisor.
Topics covered include discrete time signals, systems, spectral analysis (DTFT), the Discrete Fourier Transform and the Fast Fourier Transform algorithm, decimation and interpolation, multi-rate signal processing, and filtering random signals. Speech processing: speech models and characteristics, short time Fourier analysis, linear predictive coding. Image processing: 2D signals and systems, image coding, image enhancement. Prerequisites: ECPE 121 or equivalent and MS in Engineering Science major or permission of instructor.

Advanced topics related to the recent development of the emerging field of nano-electronics where the feature lengths of the electron devices are of the order of several nanometers. The transport phenomenon in nano-structures using quantum atomistic transport approach. Topics include: quantum confined effects, nanofabrication, quantum wells, quantum wires, quantum dots, and quantum optoelectronic devices. The purpose of this course is to prepare the framework for analyzing, modeling, and designing of these non-scale electron devices. Prerequisites: Light familiarity with physics of semiconduc- tor devices, light exposure to quantum physics, ability to solve second order differential equations, and an exposure to complex analysis, or consent of instructor. Familiarity with MATLAB is a must. MS in Engineering Science major or permission of the instructor.

Advanced topics in computer-generated graphics such as procedural modeling, surface simplification, shaders, texture synthesis and mapping, volume rendering, ray tracing, photon mapping, image-based rendering techniques, non-photorealistic rendering, 3D hardware/GPUs and animation. Course includes programming projects and presentation of research topics. Prerequisites: COMP 153 or ECPE 153, C programming experience (C++ or Java is acceptable, but you will be expected to program in C), MS in Engineering Science major or permission of the instructor.

Recent Trends in global warming and rising cost of energy has resulted in significant interest in renewable energy sources including solar thermal, solar photovoltaics, hydrogen fuel cells, biomass, geothermal, wind, hydraulic, and hybrid technologies. This course is a survey of the these energy sources and covers the theory, economic feasibility, current level of technological development, renewability, abundance, and environmental impacts of the renewable sources and compares them to the non-renewable sources including, oil, gas, coal, nuclear, and other current energy technologies. The emphasis is given to research in these fields by the students and term papers and projects. Permission of instructor.

Special individual projects are undertaken under the direction of one or more faculty. Prerequisite: MS in Engineering Science major or permission of the instructor.

Special courses will be organized and offered from time to time to meet the needs or interests of a group of students.

Approval by the faculty supervisor and the department chairperson is required. Prerequisite: MS in Engineering Science major or permission of the instructor.

Minimum of six units will be required for Thesis Option students. Prerequisites: MS in Engineering Science major and permission of research advisor.

Special individual projects are undertaken under the direction of one or more faculty. Prerequisite: MS in Engineering Science major or permission of the instructor.

Special courses will be organized and offered from time to time to meet the needs or interests of a group of students.

Approval by the faculty supervisor and the department chairperson is required. Prerequisite: MS in Engineering Science major or permission of the instructor.

Minimum of six units will be required for Thesis Option students. Prerequisites: MS in Engineering Science major and permission of research advisor.
ENGR 281-283. Directed Experiential Learning (1-6) Directed Experiential Learning (DEXL) credit recognizes student attainment of professional as well as technical learning objectives acquired through a Cooperative Education placement. Upon completing the Professional Practice Seminar (School-to-work learning objectives) as well as a minimum of six MSE units, student may accept a Co-op assignment with specific technical learning objectives.

ENGR 290. Engineering Project Management and Leadership (3) This course is directed to the graduate student who have a basic knowledge of project management but seeks to explore the human side and strategic aspects of project management. The course introduces and describes the skills, qualities and attributes needed to successfully lead projects. Among the topics discussed are management styles, strategies, systems engineering, interpersonal competencies and other advanced topics not usually covered in a basic course on project management. Prerequisites: EMGT 174 and MS in Engineering Science major.

ENGR 291. Graduate Independent Study (1-4) Special individual projects are undertaken under the direction of one or more faculty. Prerequisite: MS in Engineering Science major or permission of the instructor.

ENGR 292. Managing Science Technology and Innovation (3) Provide students with a fundamental understanding of research and development organizations and their categories, elements needed for a productive research organization, organization effectiveness, managing conflicts in organizations, dealing with diversity in research and scientific organizations, strategic planning, motivation and leadership in research and innovation, the innovation process, technology transfer, and science policy and ethics in science and engineering. Ethics and the Impact of Technology on Society. Two hours of lecture and one hour of discussion per week. Prerequisite: MS in Engineering Science major or permission of the instructor.

ENGR 293. 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.

ENGR 295. Graduate Seminar (1) This course is a graduate paper-reading seminar. Students are expected to read classic and current technical papers and actively participate in class discussion. Each student will present at least one paper per semester. Prerequisite: MS in Engineering Science major.

ENGR 297. Graduate Research (1-4) Approval by the faculty supervisor and the department chairperson is required. Prerequisite: MS in Engineering Science major or permission of the instructor.

ENGR 299. Thesis (1-6) Minimum of six units will be required for Thesis Option students. Prerequisites: MS in Engineering Science major and permission of research advisor.

MECH 204. Advanced Mechatronics (3) The design of mechatronic systems which integrate mechanical, electrical, and control systems engineering. Laboratories form the core of the course. They cover topics such as mechanism design, motors and sensors, interfacing and programming microprocessors, mechanical prototyping, and creativity in the design process. Project topics vary from year to year. Prerequisites: MECH 104 and MS in Engineering Science major or permission of the instructor.

MECH 262. Combustion (3) Introduction to combustion processes and systems. Study of the conservation equations for reacting flows, chemical kinetics, conserved scalars, premixed flames, diffusion flames, and droplet burning. Primary applications studied are internal combustion engines and gas turbine combustors. Prerequisites: ENGR 122 and permission of the instructor.

MECH 291. Graduate Independent Study (1-4) Special individual projects are undertaken under the direction of one or more faculty. Prerequisite: MS in Engineering Science major or permission of the instructor.

MECH 293. 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 297. Graduate Research (1-4) Approval by the faculty supervisor and the department chairperson is required. Prerequisite: MS in Engineering Science major or permission of the instructor.

MECH 299. Thesis (1-6) Minimum of six units will be required for Thesis Option students. Prerequisites: MS in Engineering Science major and permission of research advisor.

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, BScEngE, University of South Florida, 1986; MScEngE, 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.

Gary M. Litton, 1993, Professor and Chair of Civil Engineering, BS, University of Arizona, 1980; MS, 1990; PhD, 1993. Registered Professional Engineer; Environmental engineering, water quality, engineering 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.

Electrical and Computer 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.

Gary M. Litton, 1993, Professor and Chair of Civil Engineering, BS, University of Arizona, 1980; MS, 1990; PhD, 1993. Registered Professional Engineer; Environmental engineering, water quality, engineering 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.


Jeffrey Shafer, Assistant Professor of Computer Engineering, BS, Computer Engineering, University of Dayton, 2002; MS, Electrical Engineering, University 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, BScpE, University of South Florida, 1986; MSCpE, 1987; PhD, Computer Science and Engineering, 1990. Iris Biometrics, computer vision, artificial intelligence, digital design, computer graphics, virtual reality.


Engineering Management Department


Mechanical Engineering Department


Ashland O. Brown, 1991, Professor of Mechanical Engineering, BSME, Purdue University, 1966; MSME, University of Connecticut, 1968; PhD, 1974. Licensed Professional Engineer, fluid mechanics, thermal sciences and finite element analysis.

Jeffrey S. Burmeister, 2002, Associate Professor of Bioengineering, BS, Mechanical Engineering, 1988, University of Delaware; PhD 1995, Duke University, Biomedical Engineering.


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.

Kyle 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.
The Master of Arts in Intercultural Relations (MAIR) is a limited-residency program designed to provide seasoned and aspiring professionals with the knowledge and expertise to respond to the challenges of working across cultures domestically and internationally. The MAIR program, jointly sponsored by University of the Pacific’s School of International Studies and The Intercultural Communication Institute in Portland, Oregon, prepares students to meet the demands of working in the complex cultural diversity of our world. This program offers a unique curriculum in a creative format.

MAIR is designed for adult professionals who find the schedule and structure of a traditional full-time master’s program unsuitable for their situation, and wish to earn an advanced degree in a two-and-one-half to three-year period while maintaining employment or other commitments. In this limited-residency program, students complete nine core courses in 18 months by attending 3 two-week residencies held in Portland every six months (January and July). Directed course assignments are completed at home after each residency.

The MAIR curriculum balances classroom instruction, extensive coursework assignments between residencies, independent study, and thesis research and writing. It 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. The program attempts to directly link the ongoing professional aspirations and responsibilities of its adult learners with all their academic work, equipping them with practical tools and concepts to accomplish their goals.

Students work with a faculty advisor who is responsible for overseeing their entire program and serving as a liaison between them and the cooperating institutions. Students also work with a thesis committee composed of MAIR faculty members and other recognized, practicing professionals in the field of Intercultural Relations. The committee assists and supports students during the thesis process.

The study of Intercultural Relations provides the opportunity to develop cultural competency, including the skills that will be essential to compete in the global workplace. Students and graduates work in areas such as business, government, nonprofit organizations, education, tourism, and human services. Their occupations include positions in human resources, communication, teaching, diversity training, international transition assistance, consulting, marketing, counseling, program development, administration, and healthcare.

The MAIR program partners with the Peace Corps Master’s International program, allowing students to combine Peace Corps service with graduate study to complete the requirements for the MAIR degree. Students must apply separately to the MAIR program and the Peace Corps, and be accepted by both. They must satisfy specific course requirements before traveling overseas for Peace Corps service. While overseas, students complete a written project to obtain academic credit for their Peace Corps service. The Master’s International program allows students to apply their classroom learning to benefit a host country, and graduate with both an advanced degree and two years of substantive international/intercultural work experience.

Applicants to the MAIR program must demonstrate previous successful academic performance; an understanding of the field of intercultural relations through previous academic coursework and/or professional employment, volunteer service, or field experience; clear educational goals that are compatible with the program philosophy; sensitivity to intercultural situations; the ability to operate effectively in small learning groups; the ability to develop and manage personal distance-learning strategies; and the ability to write and organize thoughts at a graduate level.
Degree Requirements

Central to the MAIR program is the fundamental assumption that there is a core body of knowledge and theory in intercultural relations that all students need to internalize as part of their graduate education, for domestic and/or international work. The program—built around a set of nine core courses—allows students to focus on areas of specific personal interest through electives and their thesis.

Three core courses are taken during each of the 3 two-week residencies and completed through assignments at home undertaken during the six months following each residency. If students miss a residency or core course for some reason, they can take these courses at subsequent residencies. Students work with their faculty advisor to map out the focus of their programs and the schedule for completing all requirements given the challenges in their lives.

Master of Arts in Intercultural Relations

In order to earn the master of arts degree in intercultural relations, students must complete a minimum of 40 units with a Pacific cumulative grade point average of 3.0.

I. Required Core Courses:

Complete nine core courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAIR 200</td>
<td>Concepts of Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>MAIR 201</td>
<td>Ethnicity and Intergroup Relations</td>
<td>3</td>
</tr>
<tr>
<td>MAIR 202</td>
<td>Research I</td>
<td>2</td>
</tr>
<tr>
<td>MAIR 220</td>
<td>Advanced Intercultural Communication Theory</td>
<td>3</td>
</tr>
<tr>
<td>MAIR 221</td>
<td>Research II</td>
<td>3</td>
</tr>
<tr>
<td>MAIR 222</td>
<td>Process of Change</td>
<td>2</td>
</tr>
<tr>
<td>MAIR 240</td>
<td>Leadership and Adult Learning</td>
<td>3</td>
</tr>
<tr>
<td>MAIR 241</td>
<td>Change Agentry</td>
<td>3</td>
</tr>
<tr>
<td>MAIR 242</td>
<td>Culture in the Organizational Context</td>
<td>2</td>
</tr>
</tbody>
</table>

II. Electives for specialized focus:

Complete a minimum of 8 units (at least 2 units must be from Pacific) from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAIR 223</td>
<td>Personal Leadership</td>
<td>2</td>
</tr>
<tr>
<td>MAIR 260</td>
<td>Intercultural Context of Training</td>
<td>3</td>
</tr>
<tr>
<td>MAIR 291</td>
<td>Independent Study</td>
<td>1-4</td>
</tr>
<tr>
<td>Electives</td>
<td>(Graduate-level courses at other institutions, or courses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>taken at the Intercultural Communication Institute’s Summer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Institute for Intercultural Communication (SIIC).</td>
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</tbody>
</table>

Note: 1) No more than six (6) units total may be transferred in from either SIC or other institutions. Transfer units must represent regular, graduate-level courses, countable by that institution toward its graduate degree, and have been completed with a B or better grade. Pass/fail grading is not transferable. 2) Extension or continuing education courses will be accepted for credit toward the degree only if they are recognized as graduate courses by the home institution.

III. Research and Thesis

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAIR 297</td>
<td>Graduate Research</td>
<td>4</td>
</tr>
<tr>
<td>MAIR 299</td>
<td>Thesis</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Graduate research and a thesis are the last of the program requirements, and are targeted toward students’ own professional goals.

Course Offerings

MAIR 200. Concepts of Intercultural Communication (3)

This course will review the major concepts, theories, and models that contribute to a general process description of communication across cultures, and it will consider how cultures pattern communication. This work is intended to provide a vocabulary and framework for analysis and discussion throughout the program. Important topics in this course include: The dynamics of face-to-face interaction, conflict styles across cultures, societal influences on ethnocentrism and racism, cultural value orientations, nonverbal dimensions of communication, language interaction, stereotypes, relationship development, and intercultural adaptation.

MAIR 201. Ethnicity and Intergroup Relations (3)

Assuming an intercultural communication perspective on ethnic relations, this course will examine group theory with particular emphasis on dynamics common in domestic multicultural contexts. Topics include an examination of research on ethnic identity development, cross-cultural psychology, prejudice and stereotyping, and interaction patterns specific to particular ethnic groups. It will also consider models for managing diversity at the organizational level. Participants will review models for multicultural group behavior and learn approaches to facilitation that are applicable in both small groups and organizations.

MAIR 202. Research I (2)

In intercultural relations, practitioners face a crucial question: How do I know what is real? This is the central issue in what is called “ontology,” and intercultural researchers must be familiar with alternatives to the positivist research tradition in arriving at answers to the question. This course will explore, through a phenomenological perspective, cultural differences in the search for meanings. Symbolic interactionism and ethnomethodology provide a foundation for exploring nonwestern ways of insight about human experience, via the paradigms of Consciousness, Transcendence, and Connectedness. Nonwritten channels for expression of learning will often be explored.

MAIR 220. Advanced Intercultural Communication Theory (3)

This course examines theories from the field of social science that have been influential in the development of intercultural communication concepts, with an emphasis on the contributions of constructivism. It provides an overview of major paradigms in scientific thought that are mirrored in social scientific theories, and of where intercultural communication fits into the scheme. We will review classic sources in the field of intercultural communication and examine current writings that pertain to the future of the field. We will specifically explore the body of theory that underlies the planning of programs and conducting of communication research—interpersonal, small group, and intercultural. We will also consider ethical questions that arise in intercultural encounters, in teaching and training, and in the conduct of research, especially across cultures.

MAIR 221. Research II (3)

In this course, both quantitative and qualitative research tools will be examined for their usefulness in the intercultural context. Exercises and readings will consider surveying, sampling, content analysis, depth interviewing, participant observation, personal document analysis, and unobtrusive methods, with equal attention paid to the disadvantages and advantages of each. Students will experience using a range of methods and designing research plans which address issues of bias and ethics as well as matching research strategies to the research question.

MAIR 222. Process of Change (2)

In the process of individual identity development, culture plays a primary role. This course will systematically examine the intrapersonal impact of cultural adaptation by reviewing theories of change, ethnic identity development, acculturation, and cultural marginality. Special topics include: loss and change, models of transition, adaptation, and acculturation, and culture shock and re-entry as developmental processes.
MAIR 223. **Personal Leadership** (2)
This course focuses on exploring what it means to be a practicing interculturalist, specifically the internal states and external behaviors that promote appropriate and ethical interactions when working across cultural boundaries in professional and personal contexts. The course has three parts, sequenced over three residencies. Topics include the basic framework of Personal Leadership (two principles and six practices), crafting a vision of oneself as an effective interculturalist, and real-time application of the self-reflective process known as the Critical Moment Dialogue.

MAIR 240. **Leadership and Adult Learning** (3)
This course provides an opportunity for learners to explore theories of leadership and adult learning from a developmental and intercultural perspective. First, leadership theories amenable to use across cultures are examined, including Jean Lipman-Blumen’s connective leadership model and Belenky, Bond & Weinstock’s work on community and developmental leadership. Global leadership and multiple intelligences frameworks are explored from a critical intercultural perspective. Second, the course explores theories and practices of adult and transformative learning, again within a critical framework informed by intercultural concerns. Students practice translation and interpretation of selected models for multicultural and intercultural contexts.

MAIR 241. **Change Agentry** (3)
Managing the transition process for people and human systems in an intercultural context requires expertise in planned change, innovation theory, and systems diagnosis and intervention. This course will review the nature of change in communities and cultures with special attention to social action research and organization development. It will also involve students in both critiquing and designing programs for planned change.

MAIR 242. **Culture in the Organizational Context** (2)
The impact of culture in the organization occurs at multiple levels. Employees as well as clients may come from a variety of domestic or international cultures to participate in an organizational culture, which in itself requires adaptation. The interplay of cultural patterns affects management and leadership styles, decision-making, negotiation, conflict mediation, and team-building. This course provides an overview of modern organizational theory with a view to extracting principles and methods, which are relevant to this multicultural context.

MAIR 260. **Intercultural Context of Training** (3)
This course explores the impact of culture on training design. Through application of specific frameworks from adult learning, instructional design, and student development, participants learn specific strategies for modifying training to take culture into account.

MAIR 291. **Independent Study** (1-4)
MAIR 297. **Graduate Research** (1-4)
MAIR 299. **Thesis** (4)

INTL 200. **Introduction to Social Entrepreneurship** (3)
This graduate level course is a general introduction to social entrepreneurship, an emerging field that lies at the intersection of the fields of entrepreneurship and social change. Building on a theoretical base of relevant literature from both fields, students are given examples throughout the course of real social entrepreneurs - a growing number of talented, ambitious, and courageous individuals who are creating initiatives to mitigate some of the world’s most intractable social problems. This master’s level course includes weekly assignments/papers covering the major topics: entrepreneurship theory, models of social change, definitions of social entrepreneur and social entrepreneurship, management skills for social entrepreneurial organizations, scaling of social impact, and social performance measurement. An in-depth look at a classic example of social entrepreneurship, microfinance, is also featured. The end-of-course project is the writing of a case study on a real social entrepreneurial organization.
School of International Studies Faculty

Laura Bathurst, 2005, Assistant Professor of Anthropology and International Studies, BA, Kansas State University, 1997; MA, University of California-Berkeley, 1999; PhD, 2005.

Bruce La Brack, 1975, Professor Emeritus, BA, University of Arizona, 1967; MA, M Phil, Syracuse University, 1975; PhD, 1979.

Affiliated Faculty

Janet M. Bennett, 2001, Executive Director of the Intercultural Communication Institute, BA, San Francisco State University, 1972; MA, University of Minnesota, 1976; PhD, 1985.


Christopher Deal, 2010, BA, American University, 1993; MA, 1997; PhD, University of New Mexico, 2004.


Havva Houshmand, 2001, BA, Chapman University, 1965; MLA, St. John’s College, 1987; PhD, Amsterdam University, 1970.

Elizabeth Kirkhart, 2001, BA, University of Maryland, 1971; PhD, University of Southern California, 1991.

Larry Kirkhart, 2001, BBA, University of Missouri-Kansas City, 1964; MPA, University of Southern California, 1968; PhD, 1971.


Donna Stringer. 2011, BA, California State University-Sacramento, 1971; MA, University of California-Davis, 1973; PhD 1981.

Francisca Trujillo-Dalbey, 2001, BS, Marylhurst College, 1990; MS, Portland State University, 1997; PhD, 2006.

Kent Warren. 2001, Director of Graduate Program, BA, University of Southern California, 1964; MA, 1968; PhD, University of Minnesota, 1974.


The mission of the Thomas J. Long School of Pharmacy and Health Sciences is to prepare students for lifelong success in health careers by providing an excellent, student-centered learning environment. Students will be developing their leadership skills and strong commitment to their professions and to society. We support outstanding professional and graduate teaching, research and other scholarly activity, and service as the means of achieving our mission.

The graduate programs offered by the Thomas J. Long School of Pharmacy and Health Sciences include the Doctor of Philosophy and Master of Science degrees in the Pharmaceutical and Chemical Sciences, the Doctor of Physical Therapy degree, the Master of Science degree in Speech-Language Pathology and the combined degrees, the Doctor of Pharmacy/Doctor of Philosophy and Doctor of Pharmacy/Master of Science in Pharmaceutical and Chemical Sciences, the Doctor of Pharmacy/Master of Business Administration. Each of these programs provides excellent education, training and mentoring.

**Pharmaceutical and Chemical Sciences Program**

Phone: 209.946.2405  
Website: go.pacific.edu/pharmchem

**Programs Offered**  
Master of Science in Pharmaceutical and Chemical Sciences  
Doctor of Philosophy in Pharmaceutical and Chemical Sciences  
Doctor of Physical Therapy  
Doctor of Pharmacy/Doctor of Philosophy in Pharmaceutical and Chemical Sciences  
Doctor of Pharmacy/Master of Science in Pharmaceutical and Chemical Sciences  
Doctor of Pharmacy/Master of Business Administration

The Pharmaceutical and Chemical Sciences Program (PCSP) curriculum is to prepare students for the challenges of both basic and applied research, to advance knowledge in an area of specialization, to encourage fundamental discovery in the chemical, pharmaceutical and healthcare sciences, and to attain advanced degrees. Faculty from the departments of chemistry, pharmaceutics and medicinal chemistry, physiology and pharmacology, and pharmacy practice bring their research interests and expertise to the program. Students are encouraged to combine the talents of the faculty into a unique, student-centered and interdisciplinary program that will meet their individual educational goals. Upon the completion of the education from PCSP, graduates will be self-motivated learners who possess broad knowledge in pharmaceutical and chemical sciences and specialized knowledge in their area of focus, as well as research and experimental skills needed for success in pharmaceutical, biotechnological, and chemical industries or academia.

**Admission Requirements**

Entering students should have the equivalent of a Pacific Bachelor degree with at least a “B” average (3.0 GPA) in all upper-division coursework and GRE score (not older than 5 years) with a total of 1100 for Verbal and Quantitative and 3.0 for the Analytical section. Depending on the research focus area, there are minimum undergraduate units required in the mathematical, physical, chemical, pharmaceutical and biological disciplines. Students should also include an essay or personal statement focusing on their career objectives and personal ideals, and three letters of recommendation, no older than 1 year old.

**International Students:** In addition to meeting coursework, GPA and GRE requirements, International Students whose native language is not English must submit their TOEFL (Test of English as a Foreign Language) scores when applying to the program. The minimum acceptable score is 550 (paper-based) or 79 (Internet-based). Those students who want to be
considered for a Graduate Assistant (GAs) position, must score at least 575
(paper-based test), or 89 (Internet) on TOEFL and are required to
demonstrate English speaking skills by a telephone interview. TOEFL scores
can be no older than 2 years old. Students must also provide financial
supporting documentation, which can be no older than 6 months old.

International students who attended schools outside of the United States
must submit an evaluation of their academic records. We recommend
ASCISS, (American Service Center for International Students and
Scholars), www.asciiss.org, ECE, (Educational Credential Evaluators),
www.ece.org or WES, (World Education Services), www.wes.org for
credential evaluation. Please request a course-by-course evaluation
including a grade point average (GPA) and have an official copy sent
directly to the Graduate School. Your transcripts will need to be translated
into English before an evaluation can be processed. Please check with the
evaluation service of your choice.

Please refer to the Admissions section of this catalog or visit
www.pacific.edu and go to the Office of Research and Graduate Studies
web page and consult the International Applicants and Transcript
Evaluation sections for up-to-date admissions criteria or for more
information concerning other required application materials and
instructions.

Master of Science
in Pharmaceutical and Chemical Sciences

In order to earn the master of science degree in pharmaceutical and
chemical sciences, students must complete a minimum of 32 units with a
Pacific cumulative grade point average of 3.0.

I. Category I (minimum 8 units)

PCSP 201 Statistics and Experimental Design 3
PCSP 203 Information and Laboratory Management 1
PCSP 209 Technical Writing and Presentation 1
Select one of the following:
PCSP 205 Instrumental Analytical Chemistry 4
PCSP 207 Bioanalytical Techniques 3
PCSP 208 Applied Pharmaceutical Analysis 4

II. Category II (minimum 7 units)

PCSP 283 Multidisciplinary Project 1
PCSP 295 Graduate Seminar (Required to register once every academic year) 2
PCSP 297 Graduate Research 2
PCSP 299 Thesis 2

Thesis – minimum required and elective courses in
specialized area:

(Categories 1 and 2) 12 units

Total minimum required units for MS degree: 32 units

Note: Students are encouraged to complete coursework during the early part of their
graduate studies so that the latter part of the program can be spent on full-time research.

Thesis Requirement

Students conduct research, write a thesis and complete a final oral defense
of their thesis. The thesis is based upon a research project that constitutes a
contribution to knowledge, or the student must design and evaluate a
unique procedure or program in their field. A minimum of two semesters of
full-time residence at the University is required following the baccalaureate
degree or the equivalent in part-time residence during summers. The
average time to complete the program is approximately 2-3 years.

Thesis Committee

The committee is formed after a student selects an advisor for his/her
research. The committee assists the student in designing a plan of study,
providing the student with guidance in his/her thesis research and
monitors the student’s research progress.

Doctor of Philosophy
in Pharmaceutical and Chemical Sciences

In order to earn the doctor of philosophy degree in Pharmaceutical and
Chemical Sciences, students must complete a minimum of 45 units with a
Pacific cumulative grade point average of 3.0.

I. Category I (Minimum 8 units)

PCSP 201 Statistics and Experimental Design 3
PCSP 203 Information and Laboratory Management 1
PCSP 209 Technical Writing and Presentation 1
Select one of the following:
PCSP 205 Instrumental Analytical Chemistry 4
PCSP 207 Bioanalytical Techniques 3
PCSP 208 Applied Pharmaceutical Analysis 4

II. Category II (Minimum 14 units)

PCSP 283 Multidisciplinary Project 1
PCSP 387 Internship 2-4
PCSP 395 Graduate Seminar (Required to register once every academic year) 3
PCSP 397 Graduate Research 6
(6 units is minimum total degree requirement)
PCSP 399 Dissertation 2
(2 units is minimum total degree requirement)

Minimum required and elective courses in specialized areas:
(Category 1 and Category 2) 22 units

Total minimum Required Units for PhD: 45 units

Note: Students are encouraged to complete coursework during the early part of their
graduate studies so that the latter part of the program can be spent on full-time research.

Internship

Students complete an internship outside the University in either an
industry setting or at another research institution. The internship provides
valuable work experience and better prepares the student for future careers
working within an interdisciplinary research and development team.

Dissertation Committee

The committee is formed after a student selects an advisor for his/her
research. The committee assists the student in designing a plan of study,
providing the student with guidance in his/her research, and monitoring
the student’s research progress. The student will ultimately present his/her
dissertation to the committee. The dissertation must provide a genuine
contribution to knowledge in the student’s focus area. The committee will
also conduct the dissertation defense. The defense is the final
comprehensive oral examination based for the most part on the
dissertation, but also covering the entire field of study.

Qualifying Examinations

To be eligible for qualifying exams, the student must complete all core
courses and required courses for dissertation research that the student has
elected to pursue. Exams should be taken within an appropriate amount of
time, preferably at the end of the second year. The content and
requirements of the qualifying exams are defined by the research focus
area and consist of comprehensive written and oral examinations.
Specialized Areas

Complete required and elective courses in one of the following specialized areas:

A. Bioanalytical and Physical Chemistry

REQUIRED COURSES: (minimum 8 units)
PCSP 240 Molecular Spectroscopy 4
PCSP 244 High-Resolution NMR Spectroscopy 4
PCSP 247 Mass Spectrometry 4

Total minimum required and elective courses in specialized area:
PhD: 22 units
Thesis MS: 14 units

B. Chemical Synthesis, Drug Discovery and Design

REQUIRED COURSES: (minimum 12 units)
PCSP 215 Molecular Modeling and Drug Design 4
PCSP 241 Advanced Organic/Bioorganic Chemistry 4
PCSP 244 High-Resolution NMR Spectroscopy 4

Total minimum required and elective courses in specialized area:
PhD: 22 units
Thesis: 14 units

C. Pharmacoeconomics and Health Care Outcomes and Services

Courses to be chosen with advisor.

D. Drug Targeting and Delivery (minimum 9 units)
PCSP 222 Thermodynamics of Pharmaceutical Systems 3
PCSP 223 Pharmacokinetics and Pharmacodynamics 3
PCSP 224 Diffusion in Pharmaceutical Sciences 3
Preferred Elective courses: PCSP 207, 217, 225, 228, 229 or 237.

Total minimum required and elective courses in specialized area:
PhD: 22 units
Thesis MS: 14 units

E. Molecular-Cellular Pharmacology and Toxicology (minimum 10 units)
PCSP 231 Molecular Pharmacology I 4
PCSP 232 Molecular Pharmacology II 4
PCSP 235 Current Topics in Pharmacology 2
Preferred Elective courses: PCSP 205, 213, 233, 236, 237 or other approved electives.
Preferred Elective courses can be any graduate level course(s) from any department consisting of 3 or more units as suggested by the faculty advisor.
Total minimum required and elective courses in specialized area:
PhD: 22 units
Thesis MS: 15 units

PharmD/MS and PharmD/PhD Programs

This dual-degree program combines the features of the professional PharmD degree with the teaching and research components of the MS and PhD. It offers a unique opportunity for students who intend to extend their professional pharmacy training into a career in teaching and/or research. The combined program trains outstanding teachers and researchers who are in high demand for employment by industry and academia.

Program Description: The PharmD/MS is usually completed in four years and the PharmD/PhD in five years. During the first two years, students concentrate on the PharmD curriculum, but take graduate level elective courses when possible. The Doctor of Pharmacy curriculum is described in the University’s General Catalog. Students do not need to decide in which area of pharmaceutical science they will focus when applying to the program but are expected to choose an area of research concentration and a research advisor in their first year of study. The later years of the program are devoted to graduate course work, experiential training in the Stockton area, research, and thesis or dissertation writing. The State Pharmacy Board Exam may be taken following completion of the Doctor of Pharmacy curriculum, usually in the fourth year.

Admission Procedure: The minimum requirement for admittance to the program is a BA or BS degree with a GPA of 3.0 or greater. The application process requires separate applications to the PharmD professional program and the graduate programs. The application fee for the MS and PhD programs is waived. The Office of Admission accepts two letters of recommendation and transcripts submitted with the PharmD application. Four additional items are required for admission:
1. The completed graduate application form;
2. A personal statement from the applicant stating his/her goals relative to a research and/or teaching career and selecting one of the five tracks preferred;
3. GRE scores on the General Test
4. A letter of recommendation from someone who is familiar with the student’s research abilities. If such a letter is already included in the PharmD application, a third letter from an academic person is acceptable.

Course Offerings

PCSP 201. Statistics and Experimental Design (3)
This course involves the study of the application and limitations of statistical methods of inference as they apply to the fields of chemistry and the pharmaceutical sciences. Topics include the use of parametric statistics for statistical inference, comparisons of means, analysis of variance and linear regression. Parametric statistics and nonparametric measures of association and elements of good experimental design are also included. Graduate standing.

PCSP 203. Information and Laboratory Management (1)
This course covers basic knowledge of Information Management, Intellectual Property and Patenting, Research Laboratory Operations and Safety, Good Maintenance Practice (GMP) and Good Clinical Practice (GCP). Graduate standing.

PCSP 204. Introduction to Nanotechnology (4)
Molecular nanotechnology (MNT) is a rather young discipline which came up in the 90s. Predictions say MNT will change our lives and society more than computer technology and electricity have done together. The course will provide a systematic overview of MNT. 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. Graduate standing or permission from instructor.
PCSP 205. Instrumental Analytical Chemistry (4)
Lecture focuses on the theory and physical principles of instruments for the analysis of matter. Laboratory lecturer will describe the actual operation of instruments. Students gain hands-on experience on the operation of instruments. Graduate standing.

PCSP 206. Models and Concepts in Chemistry (4)
The course focuses on a general understanding of chemistry in terms of models and concepts that describe structure, stability, reactivity and other properties of molecules in a simple and yet very effective way. Many chemical problems from organic, inorganic, and transition metal chemistry and biochemistry will be presented and the applicability of the various models and concepts as well as their limitations will be demonstrated. Graduate standing or permission from instructor.

PCSP 207. Bioanalytical Techniques (3)
An introduction to techniques of bioanalysis for the pharmaceutical and chemical sciences. Course provides a conceptual understanding and practical familiarity with techniques used for analysis of proteins and nucleic acids. Basic biochemistry recommended.

PCSP 208. Applied Pharmaceutical Analysis (4)
A practical study of analytical methods applied for the assessment of pharmaceutical quality, and the identification and quantification of active pharmaceutical molecules and metabolites in biological samples. Prerequisites: Any analytical chemistry or biology background and permission from instructor.

PCSP 209. Technical Writing and Presentation (1)
This course covers common written and oral forms of communication and scientific material. Graduate standing.

PCSP 211. Drug Design (4)
A study of modern methods used in the design of new drugs. Target selection, lead compound discovery and molecular modifications to optimize activity will be studied. Graduate standing or bachelor’s degree and permission from instructor.

PCSP 213. Biotransformation of Pharmaceutical Agents (3)
This course teaches the graduate students the chemical and biological principles of the transformations of pharmaceutical agents in the body and the impact of such transformations on pharmacokinetics, pharmacodynamics, toxicity, drug design and drug delivery. Graduate student standing in TJ Long School of Pharmacy & Health Sciences or in Chemistry Department, or permission from instructor.

PCSP 215. Molecular Modeling and Drug Design (4)
The emphasis of this course is to provide a student with an introduction to computer aided/assisted drug design (CADD). Topics focus on the current computational approaches currently used in rational drug design, including quantum calculations, molecular dynamics, QSAR, docking, and template based modeling. For each subject, the theoretical background will be coupled to practical hands on experience as well as a discussion of the method’s current use(s). Graduate standing or permission from instructor.

PCSP 217. Drug Biotransformation (3)
This course generally meets two times a week (two 75-min. lectures per week). In this course, a mechanistic approach is employed to study human drug metabolizing enzymes. Other aspects related to the differential expression of these enzymes will be discussed. Students need to submit a research proposal at the end of the course. Graduate standing or permission from instructor.

PCSP 221. Fundamentals of Dosage Forms (3)
In this course the fundamental physicochemical properties and composition of various dosage forms will be taught. Graduate standing.

PCSP 222. Thermodynamics of Pharmaceutical Systems (3)
This is a classical course on the applications of thermodynamics to the study of pharmaceutical systems. The course includes a review of the basic principles of thermodynamics. These principles are used to describe and study physical and chemical transformations of pure substances and mixtures in pharmaceutical systems. Graduate standing or permission from instructor.

PCSP 223. Pharmacokinetics and Pharmacodynamics (3)
This course teaches critical concepts and basic principles of pharmacokinetics and pharmacodynamics. Such concepts and principles are required for the students to understand the drug behavior in the body. Graduate standing or permission from instructor.

PCSP 224. Diffusion in Pharmaceutical Sciences (3)
Discussion of diffusion theories, experimental methods, and application to pharmaceutical/biological systems. Prerequisite: CHEM 161 and MATH 033 or equivalent or permission from instructor.

PCSP 225. Pharmaceutical Technologies (2)
A study of theory and practice in industrial pharmacy including pre-formulation, formulation and pharmaceutical manufacture. Prerequisites: PHAR 114, 123, 133. Graduate standing.

PCSP 228. Mathematical Modeling in Pharmaceutical Research (3)
A study of mathematical modeling theory and application to problems in pharmaceutical research. Modeling will be applied to three major areas: drug delivery, metabolic/biological cascades and pharmacological response kinetics. Prerequisite: PHAR 113 or permission from instructor. Recommended courses: MATH 057, PHAR 114 and PHAR 134.

PCSP 229. Advances in Drug Delivery Systems (3)
In this course the design and formulation/fabrication of controlled release and other novel drug delivery systems for oral, transdermal, ocular and other routes of delivery will be covered. The biopharmaceutical rational and evaluation of such systems will also be discussed. Graduate standing.

PCSP 230. Molecular Pharmacology of Nucleic Acid (3)
A study of the mechanisms by which drugs and other chemicals can affect gene expression and cell division through actions on DNA structure and nucleic acid and protein metabolism. Graduate standing.

PCSP 231. Molecular Pharmacology I (4)
The first course in the Molecular Pharmacology series, effects of autonomic and central nervous system 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 molecular principles of drug action and receptor theory will be covered. Enrollment in the PCSP Program.

PCSP 232. Molecular Pharmacology II (4)
The second course in the Molecular Pharmacology 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. Enrollment in the PCSP program.

PCSP 233. Molecular Pharmacology III (4)
The third course in the Molecular Pharmacology 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 are also covered. Enrollment in the PCSP Program.

PCSP 234. Neurochemical Pharmacology (3)
A study of neurobiology of nerve cells and the neurochemical pharmacology associated with function of central and peripheral nervous systems. Graduate standing.
PCSP 235. Current Topics in Pharmacology and Toxicology (2)
This course will be focused each week on a different area of current research interest in pharmacology and toxicology. It will involve discussions of assigned research papers providing students with a current perspective and understanding of issues and techniques associated with the selected research topics. Graduate standing in PCSP.

PCSP 236. Selected Topics in Advanced Toxicology (2)
An organ systems and mechanistic approach to toxicological assessment. Quantitative, environmental and regulatory aspects of toxicology are included as essential elements of toxicological evaluation. Graduate standing in PCSP or permission of instructor.

PCSP 237. Cell Culture Techniques (3)
This course teaches students basic techniques in mammalian cell culture. In addition, advanced topics of cellular techniques are demonstrated and discussed representative of current research methods. Permission of PCSP Program Director.

PCSP 240. Molecular Spectroscopy (4)
The basic theory behind infrared, visible, ultraviolet, and magnetic resonance spectroscopy are studied. The course includes the quantum mechanics of light absorption, atomic absorption and emission spectroscopy, vibrational spectroscopy of diatomic and polyatomic molecules, absorption and emission electronic spectroscopy and magnetic resonance spectroscopy. Graduate standing or permission from instructor.

PCSP 241. Advanced Organic/Bioorganic Chemistry (4)
Synthetically useful organic reactions not normally covered in the introductory courses are emphasized. The reactions are grouped according to their mechanistic type and discussed in terms of their reaction mechanisms and synthetic utility. Prerequisites: CHEM 121 and CHEM 123 with a “C” or better.

PCSP 242. Selected Topics in Advanced Organic Chemistry (4)
Topics presented at various times under this course description include: Physical organic, natural products and structure elucidation, stereochemistry, heterocycles and carbohydrate chemistry. Prerequisites: CHEM 121 and CHEM 123 with a “C” or better.

PCSP 244. High-Resolution NMR Spectroscopy (4)
A study of one and two dimensional FT-NMR techniques used for structure elucidation of organic molecules. Emphasis placed on understanding the capabilities and limitations of these techniques, the information they provide and the practical aspects of their implementation. Permission from instructor.

PCSP 245. Proteins and Nucleic Acids (3)
Chemical, physical and biological properties of the proteins and nucleic acids and their constituents; isolation, determination of composition, sequence and structure; correlation of structure and biological properties. Prerequisite: CHEM 151 with a “C” or better.

PCSP 247. Mass Spectrometry (4)
Fundamentals of mass spectrometry, theory, instrumentation and applications to organic and biological molecules. Prerequisite: PCSP 205.

PCSP 248. Enzymology (4)
This class gives an introduction into the biochemistry of the various classes of enzymes with emphasis on laboratory techniques. Prerequisite: CHEM 151 with a “C” or better.

PCSP 255. Long Term Care Practice (3)
A clinical pharmacy component on a long term facility with special emphasis on opportunities and research needs; a systematic approach to monitoring the drug therapy of the long term care patient. Graduate standing.

PCSP 257. Ambulatory Care Practice (3)
Application of clinical pharmacy to ambulatory care settings in an affiliated clinic or community pharmacy, with special emphasis on opportunities and research needs. Graduate standing.

PCSP 259. Topics in Acute Case Practice (3)
Application and investigation of clinical pharmacy in acute care setting with emphasis on medical management of common diseases and rational drug selection and dosing. Graduate standing.

PCSP 260. Advances in Neuropsychiatric Pharmaceutical Care (2)
Pharmaceutical care for the patient with neurologic and psychiatric disorders, emphasizing appropriate use of drug therapy in the management of these disorders. Graduate standing and permission of instructor.

PCSP 261. Advances in Cardiovascular Pharmaceutical Care (3)
Application of Drug Therapy to patient care with assignments expanding students’ knowledge of background material supporting therapeutic guidelines. Permission of instructor.

PCSP 262. Vascular, Renal and Pulmonary Care (4)
Pharmaceutical care for the patient with cardiovascular, respiratory and renal diseases, emphasizing appropriate use of drug therapy in the management of the disease. Prerequisite: Successful completion of all courses in semesters 1-3 of the Doctor of Pharmacy Program.

PCSP 263. Analytical Techniques in Pharmacoeconomics and Health Care Outcomes and Services (4)
Prepares graduate students in Pharmacoeconomics and Health Care Outcomes and Services to meet the challenges of a broad assortment of health services related research by providing fundamental principles and tools for the discipline while using real world examples of research design, statistical evaluations and database selection and use to assess therapeutic, economic and humanitarian outcomes. Prerequisites: PCSP 201 and PCSP 203.

PCSP 264. Applied Statistics in Health Services Research and Analysis (3)
Prepares graduate students in Pharmacoeconomics and Health Care Outcomes and Services to meet the challenges posed by the need to rapidly and accurately review, critique and assimilate information from health care and economic literature and to complete a full, advanced statistical dissertation in pharmacoeconomics and health care outcomes. Prerequisites: PCSP 201, 203, 263.

PCSP 270. Theory and Methodology of Simulation of Natural Rock Formation (BioGeo-Material Science and Technology) (4)
Created particularly for PhD students of the Pharmaceutical and Chemical Sciences Program, this course offers a comprehensive integration of multi-disciplinary sciences such as biology, life science, geoscience, ocean science, environmental science, material science, etc. Course introduces some new breakthroughs and frontier discovery which reveal the mystery relationship between life science and geoscience. Upon completion of this course, PhD students will be able to carry out professional lab and on-site tests and measurements. Prerequisites: Graduate student standing in chemistry, biology, geology, material science, environmental science and engineering or permission from the instructor.

PCSP 283. Multidisciplinary Project (1)
Students in the Pharmaceutical and Chemical Science Graduate Program will design an interdisciplinary project based upon the relevant contributions of their backgrounds. Enrollment in PCSP Graduate Program.
PCSP 287/387. Internship (1-4)
An experiential learning program at a pharmaceutical/chemical/biotechnological industry, research institute or a clinical site that entitles the students to learn advanced techniques and practical application of the theoretical principles learned in a number of courses. Prerequisite: Graduate students that have completed Category I course work, or obtained permission of co-ordinator shall enroll in this course. For students in thesis/dissertation tracks, concurrence of thesis/dissertation advisor(s) is required.

PCSP 291/391. Independent Study (1-4)
Restricted to masters or doctoral (PhD) candidates. May be repeated with permission as progress warrants. No more than eight credits may be used toward doctoral degree requirements. Graduate student in good standing, permission of the instructor, and completion and approval of the required contract for Independent Graduate Study.

PCSP 295/395. Graduate Seminar (1)
Seminar presentation on research-related topics given by both PCSP faculty and graduate students. Enrolled students are required to attend all seminars given throughout the pharmacy academic year and to give one seminar in that year. This course is required for all graduate students for the first three years of their tenure in the PCSP. Students who have already enrolled in this course for three years are encouraged to attend seminars without official enrollment. PCSP faculty members present a short talk on their research areas at the beginning of the fall semester each year. Graduate standing.

PCSP297/397. Graduate Research (1-4)
Limited to masters or doctoral (PhD) candidates. May be repeated with permission as progress warrants. No more than eight credits may be used toward doctoral degree requirements. Admission to the graduate program and permission of research director.

PCSP 299. Thesis (1-6)
One-to-one work by student with faculty research mentor to plan, organize, conduct, evaluate and write an original research project as a thesis for partial fulfillment of the MS degree. Admission to MS thesis program (PCSP) and permission of research advisor.

PCSP 399. Dissertation (1-6)
Only open to doctoral (PhD) candidates. No more than eight credits may be used toward doctoral degree requirements. Admission to PhD program (PCSP) and permission of research advisor.

Physical Therapy
Phone: (209) 946-2886
Location: Rotunda; Thomas J. Long School of Pharmacy and Health Sciences
Website: www.pacific.edu/pharmacy/dpt
Cathy Peterson, Chair

Programs Offered
Doctor of Physical Therapy

Program Philosophy
Physical therapists are experts in human movement and function who serve patients/clients at all points along the continuum between health and optimal physical function and disease in a wide variety of circumstances and settings. Physical therapists must be autonomous, highly skilled practitioners to meet the needs of their patients and the expectations of society. These skills are optimally developed in a doctoral level graduate educational program that includes learning experiences in the cognitive, affective and psychomotor domains and emphasizes the following:

Basic Sciences
Basic sciences are the foundation on which the theory and practice of physical therapy is based. Emphasis on basic sciences provides students with a solid framework in which to view established theory and practice of physical therapy in the educational setting, evaluate new theory and practice as they move to the clinical setting, and to contribute to theory and practice of physical therapy in the future. Additionally, a solid foundation in basic sciences provides students with the tools needed for clinical reasoning based on evidence, and a common language with which to communicate with other clinicians and scientists.

Professional Behavior
Professional behavior is an essential component of professional success and clinical excellence. Students enter physical therapy programs with a wide variety of past experiences. What constitutes appropriate professional behavior for a physical therapist may not be immediately obvious to all students; therefore professional behavior must be consciously included in the curriculum.

Clinical Experiences
Ongoing and progressive clinical exposure promotes accelerated learning and development of clinical competence and facilitates continued student engagement.

Integration of Clinical Relevance throughout the Curriculum
Integration of clinical relevance in all courses promotes efficient acquisition of clinical reasoning skills.

Student-Centered Learning
Student-Centered Learning promotes intellectual rigor, depth, and accountability for each individual student and fosters the development of the independent learner.

Excellence in Teaching
Excellence in teaching practice results in a deep and efficient learning experience for the student, promotes clinical and intellectual excellence, and fosters lifelong learning.
Mission

The mission of Pacific’s physical therapy program is to prepare lifelong learners who are skilled, reflective, autonomous practitioners. The program is committed to furthering the body of knowledge of physical therapy and providing leadership within the profession advocating for optimal health, wellness and performance for all members of society.

We accomplish this through a concise program of study emphasizing evidence-based reasoning and creative skills grounded in the basic and clinical sciences. Our academic program is enhanced by a wide variety of innovative clinical experiences and involvement in professional societies.

Pacific’s Doctor of Physical Therapy program is committed to:

1. Producing high caliber, practice-ready graduates evidenced by students’ abilities to:
   - demonstrate safety and competence with current clinical skills;
   - demonstrate clinical reasoning that utilizes both the best available scientific evidence and the patient’s perspective;
   - demonstrate cultural competence;
   - demonstrate attributes consistent with effective leadership and advocacy;
   - demonstrate accurate self-reflection; and
   - demonstrate characteristics consistent with long-long learning.
2. Contributing to the body of knowledge of the profession evidenced by students’ abilities to:
   - engage in scholarly pursuits.
3. Providing leadership in the University and profession evidenced by students’ abilities to:
   - hold leadership positions in the program, School and University, as well as local, national and international professional organizations.
4. Participating in on-going assessment to maintain currency and relevance in teaching and practice evidenced by students’ abilities to:
   - participate in ongoing assessment activities.
5. Engaging in local, regional, national, and international service evidenced by students’ abilities to:
   - engage in service.
6. Fostering diversity and cultural competence evidenced by students’ abilities to:
   - demonstrate cultural competence.
7. Promoting life-long relationships with the Pacific Physical Therapy community evidenced by students’ abilities to:
   - participate in alumni activities.

Conclusion

Commitment to a core curricular philosophy that involves an emphasis on basic sciences, professional behavior, clinical relevance in all courses, early and progressive clinical experiences, student centered learning, and excellence in teaching provides the foundation for an efficient and concise educational experience for students. The field of Physical Therapy and its practice is a dynamic and evolving profession. Following a rigorous and balanced 25 month professional program, graduates of Pacific’s Doctor of Physical Therapy program are prepared to meet the needs of their patients and society and to develop their expertise through their commitment to lifelong learning.

The Doctor of Physical Therapy Degree

The entry level Doctor of Physical Therapy (DPT) degree is a highly structured 25-month course of study, consisting of six consecutive trimesters. Coursework includes foundational sciences (anatomy, physiology, pathophysiology), clinical sciences, management of professional life and practice, clinical applications, and substantive clinical practical experiences.

A major element of the program is the opportunity for students to be involved in meaningful professional clinical experiences under the supervision of carefully selected practitioners. Opportunities include acute care facilities, skilled nursing facilities and rehabilitation sites in California, throughout the US, and internationally. All students must successfully complete the clinical internship requirements as an inherent part of the professional program.

Prerequisites to participation in the clinical internships are:

1. Satisfactory completion of all other required courses with a minimum GPA of 3.0 (in accordance with the Standards of Academic Success delineated in the Physical Therapy Student Handbook);
2. Advancement to degree candidacy; and
3. Permission of the department faculty.

To receive the Doctor of Physical Therapy degree, each student must demonstrate clinical competence as well as academic success. Academic success means:

1. Maintenance of a cumulative GPA of at least 3.0.
2. No grade below a B- in any required course at the 300 level will be counted toward the degree program (See the Standards of Academic Success in the Physical Therapy Student Handbook).

Clinical competence means:

1. The ability to evaluate individuals with movement dysfunction and identify problems appropriate for physical therapy intervention.
2. The ability to establish appropriate treatment goals and plans, including specific physical therapy procedures or modalities.
3. The ability to effectively apply the various physical therapy procedures and modalities.
4. The ability to relate effectively to clients, their families and other health care providers.

Assessment of these competencies will be made by faculty before recommending the awarding of the degree.

Accreditation and Licensing

The Physical Therapy Program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association. Successful completion of an accredited program qualifies the graduate to take the licensing examination. Admission to the program is highly competitive and limited to 36 openings each year.

Prerequisites

Prerequisites for admission to the program include the following:

1. Bachelor’s degree with a major of student’s choice.
2. Successful completion of the listed prerequisite courses.
   a. Prerequisite courses must be completed with a grade of “C” or above.
   b. Courses are taken on a graded basis; pass/fail courses are not acceptable.
c. Biological science, chemistry and physics courses must all include significant laboratory experiences. Prerequisite science courses must be taken within the last ten years.
d. Correspondence, on-line or extension coursework is not acceptable without approval from the Admissions Committee or Department Chair. All coursework must have defined objectives, course description, an objective grading system, and meet the content expectations of the prerequisite.

3. At least 50 hours spent in one or more physical therapy practice settings, including at least 25 hours with inpatients in an acute care hospital setting.

4. GRE test scores must be less than 5 years old at the time of application.

5. A personal interview at the invitation of the selection committee is required.

Prerequisite Coursework

General Biology with lab or Cell Biology:
4 semester credits/5-6 quarter hours minimum. The course should include animal biology.

Human Anatomy with lab:
4 semester credits/5-6 quarter hours minimum. Vertebrate anatomy is acceptable if human anatomy is not available.

Human Physiology with lab:
4 semester credits/5-6 quarter hours minimum. Animal physiology is acceptable if human physiology is not available.

Note: A single semester course combining anatomy and physiology does not meet the anatomy and physiology requirements. However, a two-semester sequence of the combined subjects will meet these requirements.

General Chemistry with lab:
8 semester credits/12 quarter hours minimum. A standard full-year course.

General Physics with lab:
8 semester credits/12 quarter hours minimum. A standard full-year course. Calculus level physics is not required but is accepted.

Abnormal Psychology plus one other Psychology course:
6 semester credits/9 quarter hours minimum.

Statistics:
3 semester credits/4-5 quarter hours minimum.

Exercise Physiology:
3 semester credits/4-5 quarter hours minimum. Introduction to the study of human physiological responses and adaptations - resulting from muscular activity, including demonstration and measurement of basic physiological responses that occur with exercise.

Medical Terminology:
1-3 semester credits/2-4 quarter hours minimum. A basic course in bioscientific terminology; analyzing the Latin and Greek elements in scientific English.

Doctor of Physical Therapy

In order to earn the doctor of physical therapy degree, students must complete a minimum of 100 units with a Pacific cumulative grade point average of 3.0.

I. First Year

Fall
PTHR 311 Gross Human Anatomy 6
PTHR 312 Exercise Physiology in Physical Therapy 2
PTHR 313 Clinical Kinesiology I 3
PTHR 314 Introduction to Physical Therapy and Clinical Observations I 1
PTHR 316 Physical Therapy Examination and Evaluation 4
PTHR 318 Physical Therapy Patient Care Skills 1
PTHR 319 Physical Agents 1

Winter
PTHR 321 The Nervous System and Behavior 5
PTHR 323 Clinical Kinesiology II 3
PTHR 326 Therapeutic Exercise: Basic Theory and Application 4
PTHR 327 Clinical Observations II 0
PTHR 328 Research: Theory and Application 2
PTHR 329 Pathophysiology 4

Spring
PTHR 332 Electrotherapy 2
PTHR 333 Analysis of Human Movement Through the Life Span 3
PTHR 334 Medical Conditions and Screening for Medical Disease 4
PTHR 335 Cardiovascular and Pulmonary Physical Therapy 4
PTHR 336 Clinical Experience I 1
PTHR 338 Clinical Experience II 1
PTHR 339 Motor Learning and Motor Control 2
PTHR 398 Research Literature Review 1

II. Second Year

Fall
PTHR 341 Integumentary Physical Therapy 1
PTHR 342 Administration and Management of Physical Therapy Services I 2
PTHR 344 Neuromuscular Physical Therapy 5
PTHR 345 Advanced Clinical Problems I 1
PTHR 346 Seminar 2
PTHR 347 Musculoskeletal Physical Therapy I 5
PTHR 351 Prosthetics and Orthotics 1
PTHR 391/393 Graduate Independent Study/Special Topics Elective (1)

Winter
PTHR 343 Geriatric Physical Therapy 1
PTHR 352 Administration and Management of Physical Therapy Services II 2
PTHR 353 Diagnostic Imaging for Physical Therapists 2
PTHR 354 Pediatric Physical Therapy 1
PTHR 355 Advanced Clinical Problems II 1
PTHR 356 Psychosocial Aspects of Illness and Disability 3
PTHR 357 Musculoskeletal Physical Therapy II 2
PTHR 358 Clinical Education and Professional Behavior 1
PTHR 359 Clinical Internship I 4
PTHR 391/393 Graduate Independent Study/Special Topics Elective (1)
Spring

PTHR 368 Clinical Internship II 6
PTHR 369 Clinical Internship III 6
PTHR 391/393 Graduate Independent Study/Special Topics Elective (1-3)

Application Information for the Entry Level Doctor of Physical Therapy Degree:

For the most current information regarding the application process and requirements, please visit the web site: www.pacific.edu/dpt.

Course Offerings

PTHR 311. Gross Human Anatomy (6)
This course involves the detailed regional analysis of the structure of the human body including the lower extremity, upper extremity, head, neck and trunk, and thoracic, abdominal, and pelvic cavities. Functional correlates to the structures will also be presented and discussed. The course has a laboratory component as well as a cadaver dissection-based laboratory/discussion component. Admission into the DPT program or permission of instructor.

PTHR 312. Exercise Physiology in Physical Therapy (2)
This course is designed to give the physical therapy student a strong foundational knowledge of the physiological response to exercise under normal and pathological conditions, and the mechanisms responsible for those changes. Admission into the DPT program or permission of instructor.

PTHR 313. Clinical Kinesiology I (3)
This course introduces students to the basic principles of kinesiology and biomechanics. It emphasizes the integration of basic science knowledge from multiple disciplines into an applied clinical approach to the study of human movement. Course content focuses on the basis of human movement from cells to systems, as well as normal and pathological movement of the lower extremity. Admission into the DPT program or permission of instructor.

PTHR 314. Introduction to Physical Therapy and Clinical Observations I (1)
This course introduces students to the principles and practice of physical therapy. Students explore the history of the profession of physical therapy and the role of physical therapists in the healthcare system and as a member of the healthcare team. Students begin to develop professional behaviors and communication skills required to function in that role. This course includes an introduction to the various practice areas of physical therapy. Admission into the DPT program or permission of instructor.

PTHR 316. Physical Therapy Examination and Evaluation (4)
This lecture and laboratory provides an overview of basic examination procedures and clinical reasoning approaches used throughout the practice of physical therapy. Course content includes history-taking, vital signs, inspection, palpation, range of motion measurement, manual muscle testing, neurologic testing, selected special tests, and other functional tests. Admission into the DPT program or permission of instructor.

PTHR 318. Physical Therapy Patient Care Skills (1)
This course introduces the student to the basic principles and practice of patient care in physical therapy. Course content includes patient education, bed mobility and related techniques, transfers and body mechanics, gait devices, wheelchairs, documentation, and aseptic bandaging techniques. Additionally, students are introduced to soft tissue mobilization. Admission into the DPT program or permission of instructor.

PTHR 319. Physical Agents (1)
This course will enable the student to properly select and safely and competently apply the various physical agents used by physical therapists. Topics covered will include physiological responses to and indications, contraindications and precautions for each modality. Case studies will be used to illustrate the principles of evaluation and treatment planning. Admission into the DPT program or permission of instructor.

PTHR 321. The Nervous System and Behavior (5)
This course is designed to give the student an in depth understanding of the structure and function of the nervous system, how it controls movement and behavior, and how deficits in the system affect movement and behavior. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 323. Clinical Kinesiology II (3)
This course is a continuation of PTHR 313 and extends the examination of normal and pathological human movement to the upper extremities, trunk, and TMJ regions. Basic biomechanical and kinesiological principles are presented. The relationship of these principles to the clinical environment is stressed. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 326. Therapeutic Exercise: Basic Theory and Application (4)
This course provides an introduction to the theory and application of therapeutic exercise in physical therapist practice. Students will gain an understanding of the physiological effects of training and de-training on the human body and develop the evaluative skills necessary to prescribe a therapeutic exercise plan. Students will learn therapeutic exercise techniques for addressing strength, power, endurance, balance, stability, motor control and neuromuscular re-education in a variety of patient populations. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 327. Clinical Observations II (0)
Students will observe and participate with supervision in clinical activities with volunteer participants. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 328. Research: Theory and Application (2)
This course will help the student develop an understanding of the scientific method of inquiry, research design and methodologies, critical analysis of health science information including research articles and development of clinical research projects through application of the basic principles of the scientific method. This course will provide the fundamental background to help students understand evidence-based practice in Physical Therapy. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 329. Pathophysiology (4)
This course involves the detailed analysis of the structure, function and pathology of the organs and organ systems of the body. Functional correlates to physical therapy care will be included. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 332. Electrotherapy (2)
This course will enable the student to properly select and safely and competently apply various therapeutic electrical devices. Topics will include physiological responses to, indications, contraindications, and precautions for the use of these electrical devices. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 333. Analysis of Movement Through the Life Span (3)
This course focuses on the development and refinement of human movement from infancy to older adulthood. Students will develop visual observation skills and handling techniques used to facilitate normal movement in various patient populations. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.
PTHR 334. Medical Conditions and Screening for Medical Disease (4)
This course focuses on the process of screening for medical referral in the practice of physical therapy. The students will learn the major signs and symptoms, and medical and pharmacologic management of various medical diseases and conditions. This course also covers the possible sources of referred pain from systemic diseases that may mimic or increase pain caused by neuromuscular or musculoskeletal pathology. The students will learn through the use of patient/client interview and other tests and measurements to recognize signs and symptoms that may require referral to other practitioners. During this process, the student will apply principles of professional communication to interactions with patients, physicians and other health care providers. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 335. Cardiovascular and Pulmonary Physical Therapy (4)
This course addresses physical therapy examination, evaluation and intervention used with the individual with cardiovascular and/or pulmonary disease. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 336. Clinical Experience I (1)
This course consists of a clinical experience under the supervision of a licensed, qualified physical therapist(s) for the purpose of practicing basic examination and intervention techniques and professional behaviors learned in the first two terms of the program. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 337. Clinical Experience II (1)
This course consists of a clinical experience under the supervision of a licensed, qualified physical therapist(s) for the purpose of practicing basic examination and intervention techniques and professional behaviors learned in the first year of the program. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 338. Motor Learning and Motor Control (2)
This course focuses on current theories of motor learning and motor control. These theories will provide a foundation for clinical diagnosis of movement and postural control disorders, as well as assessment and treatment interventions. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 339. Integumentary Physical Therapy (1)
This course serves as an introduction to the integumentary system with a primary focus on wound and burn care. Topics include an in-depth study of the healing process, the affect of disease on the healing process, and integumentary changes over the lifespan. Physical therapy evaluation and treatment options for burns and wounds of vascular, traumatic, and surgical origin are presented as well as precautions and contraindications associated with these interventions. Lab sessions will cover wound assessments, debridement, adjunctive interventions, and dressings. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 340. Administration and Management of Physical Therapy Services I (2)
This course is designed to provide an introduction to principles of management, with emphasis on the application of these principles in health care facilities and other patient care settings. The application of these principles within various physical therapy practice settings, including the clinical practice of physical therapy, is specifically addressed. As appropriate, discussion of issues facing the profession of physical therapy is included. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 341. Administration and Management of Physical Therapy Services II (2)
This course is designed to provide an introduction to principles of management, with emphasis on the application of these principles in health care facilities and other patient care settings. The application of these principles within various physical therapy practice settings, including the clinical practice of physical therapy, is specifically addressed. As appropriate, discussion of issues facing the profession of physical therapy is included. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 342. Administration and Management of Physical Therapy Services I (2)
This course is designed to provide an introduction to principles of management, with emphasis on the application of these principles in health care facilities and other patient care settings. The application of these principles within various physical therapy practice settings, including the clinical practice of physical therapy, is specifically addressed. As appropriate, discussion of issues facing the profession of physical therapy is included. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 343. Geriatric Physical Therapy (1)
This course focuses on physical therapy management of the geriatric patient population. Students will gain an understanding of age related changes in biology, physiology, anatomy and function as well as psychological issues and pathological changes associated with aging. Students will integrate this knowledge with previous coursework to identify orthopedic, neurological, cardiopulmonary, cardiovascular and integumentary treatment considerations for geriatric patients. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 344. Neuromuscular Physical Therapy (5)
This course focuses on examination, evaluation and intervention for patients and clients with neuromuscular dysfunction. This course will emphasize the establishment of a diagnosis by a physical therapist, identification of a realistic prognosis and selection of various intervention options based on best evidence. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 345. Advanced Clinical Problems I (1)
This course will facilitate the integration of knowledge from all prior course work using case studies and actual patient contacts to perform physical therapy examination, evaluation, and intervention. Case studies and patient contacts may include examples of patients/clients with orthopedic, neurologic, integumentary, cardiopulmonary, and multiple systems disorders. Students will perform all elements of patient care under faculty supervision. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 346. Seminar (2)
During this course students will have opportunities to practice the range of physical therapy problem solving through analysis and discussion of various clinical scenarios. The continuum from evaluation to diagnosis to prognosis to treatment selection will be incorporated into each presented discussion, with emphasis on clinical decision-making and systems interaction approach to patient management. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 347. Musculoskeletal Physical Therapy I (5)
This course integrates and expands the student’s understanding of previous physical therapy coursework as it applies to the musculoskeletal setting, and introduces the student to manual therapy techniques. Students will apply concepts from previous coursework to the examination, evaluation, and intervention of patient/clients in the musculoskeletal/orthopedic setting with a regional emphasis on the extremities. Additionally students will develop basic competencies in manual therapy techniques for the extremities. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 351. Prosthetics and Orthotics (1)
This course provides the student with a basic understanding of the prescription, fitting and use of various orthotic and prosthetic devices. Biomechanical properties of normal and pathological gait for the user of lower extremity devices will be discussed. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 352. Administration and Management of Physical Therapy Services II (2)
This course emphasizes the physical therapy profession and the practice of physical therapy as it is affected by the health care delivery system, professional organizations, State and Federal laws. Professional ethics, professional issues and societal trends. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.
PTHR 353. Diagnostic Imaging for Physical Therapists (2)
This course covers basic principles and interpretation of diagnostic imaging modalities as they apply to the physical therapist. This course will cover medical imaging of musculoskeletal and neuromuscular/neurological systems. More common normal anatomical variants, as well as pathological variants and congenital anomalies will be addressed. A discussion of special imaging techniques will also be presented with the emphasis on CT Scans and Magnetic Resonance Imaging (MRI). The course aims to prepare the students to recognize the importance of integrating imaging into clinical analysis of the patient’s presentation and to incorporate the results of medical imaging studies when making clinical judgments. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 354. Pediatric Physical Therapy (1)
This course will provide the student with a foundational understanding of issues and problems affecting the pediatric population addressed by the practice of physical therapy. Students are expected to incorporate knowledge of previous course work used in the evaluation and development of intervention strategies for patients in this population. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 355. Advanced Clinical Problems II (1)
This course will provide for integration of all prior course work using case studies and actual patient contacts to perform physical therapy examination, evaluation, and intervention. Case studies and patient contacts may include examples of patients/clients with orthopedic, neurological, integumentary, cardiopulmonary, and multiple systems disorders. Students will perform all elements of patient care under faculty supervision. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 356. Psychosocial Aspects of Illness and Disability (3)
This course is a survey of psychological and social factors related to physical illness and disability. Scientific, theoretical and clinical literature is highlighted with emphasis on understanding the impact of illness and/or disability on the individual, the family, and the health care professional. This course also covers stress management and professional burn-out. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 357. Musculoskeletal Physical Therapy II (3)
This course is a continuation of PTHR 347. This course integrates and expands the student’s understanding of previous physical therapy coursework as it applies to the musculoskeletal setting, and extends the student’s knowledge of manual therapy techniques. Students will apply concepts from previous coursework to the examination, evaluation, and intervention of clients in the musculoskeletal/orthopedic setting with a regional emphasis on the spine and TMJ. Additionally students will develop basic competencies in manual therapy techniques for the spine and TMJ. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 358. Clinical Education and Professional Behavior (1)
This course will prepare students for their full-time clinical experiences. Students are oriented to the performance instrument that will be used to evaluate their clinical performance. Teaching and learning methods used by clinical instructors are discussed, and students explore options for problem-solving and conflict resolution in the clinical setting. Through lectures, discussions, and group activities, students will identify the cognitive, psychomotor, and affective behaviors that will lead to success in the clinical environment. Prerequisite: Successful completion of all previous DPT courses or permission of instructor. (Graded P/NC only)

PTHR 359. Clinical Internship I (4)
This course consists of a full-time clinical experience under the supervision of a licensed physical therapist (designated as “Clinical Instructors” aka “CI”) at specified facilities. Students have the opportunity to perform clinical rotations in a variety of clinical settings. Three Clinical Internships occur between Winter/Spring/Fall sessions of the final graduate year. By conclusion of Clinical Internship III, students are required to complete one acute care experience and one outpatient clinical experience. A third experience is assigned according to student interest and clinic availability. Each rotation should be in a physically different clinical setting to provide the student with a well rounded education and to prepare him/her for entry level practice, as recognized by Commission on Accreditation in Physical Therapy Education. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 368. Clinical Internship II (6)
This course consists of a full-time clinical experience under the supervision of licensed physical therapists (designated as “Clinical Instructors” aka “CI”) at specified facilities. Students have the opportunity to perform clinical rotations in a variety of clinical settings. Three Clinical Internships occur between Winter/ Spring/Fall sessions of the final graduate year. By conclusion of Clinical Internship III, students are required to complete one acute care experience and one outpatient clinical experience. A third experience is assigned according to student interest and clinic availability. Each rotation should be in a physically different clinical setting to provide the student with a well rounded education and to prepare him/her for entry level practice, as recognized by Commission on Accreditation in Physical Therapy Education. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 369. Clinical Internship III (6)
This course consists of a full-time clinical experience under the supervision of licensed physical therapists (designated as “Clinical Instructors” aka “CI”) at specified facilities. Students have the opportunity to perform clinical rotations in a variety of clinical settings. Three Clinical Internships occur between Winter/Spring/Fall sessions of the final graduate year. By conclusion of Clinical Internship III, students are required to complete one acute care experience and one outpatient clinical experience. A third experience is assigned according to student interest and clinic availability. Each rotation should be in a physically different clinical setting to provide the student with a well rounded education and to prepare him/her for entry level practice, as recognized by Commission on Accreditation in Physical Therapy Education. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.

PTHR 391. Graduate Independent Study (1-3)

PTHR 393. Special Topics (1-3)

PTHR 398. Research Literature Review (1)
This course will help the student apply the basic principles of research methods to the professional literature and to critically analyze new concepts and findings in that literature. The student will choose a research topic in health science, perform a literature search of primary research articles related to their topic, critically analyze those research articles, and write a related literature paper summarizing and synthesizing the information gathered from their literature search. Prerequisite: Successful completion of all previous DPT courses or permission of instructor.
Speech-Language Pathology

Phone: (209) 946-2381
Location: Chan Family Learning Center and Clinics Building
Website: http://web.pacific.edu/x9613.xml
Robert Hanyak, Chair

Program Offered
Master of Science in Speech-Language Pathology

Mission
Study and research in this department focus on normal and abnormal speech, language and hearing processes. Students are prepared for professional careers in the field of Speech-Language Pathology. Clinical experience which supplements the students’ academic preparation is obtained in the University’s Speech, Hearing and Language Center, Scottish Rite Language Center, hospitals, clinics and schools. This program is designed to provide academic, clinical, and research experiences leading to the Master of Science degree, the Certificate of Clinical Competence in Speech-Language Pathology. Students may also qualify for the California Speech-Language Pathology Services Credential.

The Master’s degree program in Speech-Language Pathology is accredited by the Council of Academic Accreditation of the American Speech-Language-Hearing Association. All students must successfully complete clinical practicum requirements as an inherent part of the department program. A prerequisite to the participation in clinical practicum is admission to degree candidacy and/or permission of the departmental faculty. To receive a master’s degree in Speech-Language Pathology, each student must demonstrate clinical competence as well as academic success. Clinical competence means:

1. The ability to identify individuals with communication handicaps;
2. The ability to perform comprehensive evaluation of individuals with communication handicaps;
3. The ability to effect positive changes in the communication skills of individuals with communication handicaps;
4. The ability to relate effectively to clients, their families and fellow professionals. Assessment of these competencies will be made by the faculty before recommending award of the degree.

Master of Science in Speech-Language Pathology

In order to earn the master of science degree in speech-language pathology, students must complete a minimum of 55 units with a Pacific cumulative grade point average of 3.0.

15 - Month Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td></td>
<td>4</td>
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<tr>
<td>Physical Science Course (Physics or Chemistry)</td>
<td>4</td>
<td></td>
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<tr>
<td>Child Development</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Statistics</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Psychology or Sociology</td>
<td>4</td>
<td></td>
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<tr>
<td>SLPA 201</td>
<td>Professional Issues</td>
<td>1</td>
</tr>
<tr>
<td>SLPA 205</td>
<td>Adult Neurological Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLPA 209</td>
<td>Language Disorders II</td>
<td>3</td>
</tr>
<tr>
<td>SLPA 211</td>
<td>Language Disorders III</td>
<td>3</td>
</tr>
<tr>
<td>SLPA 215</td>
<td>Aural Rehabilitation</td>
<td>3</td>
</tr>
<tr>
<td>SLPA 217</td>
<td>Voice Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLPA 219</td>
<td>Phonological Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SLPA 222</td>
<td>Neurological Disorders –Treatment</td>
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<tr>
<td>SLPA 225</td>
<td>Public School Issues</td>
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<tr>
<td>SLPA 229</td>
<td>Dysphagia/Swallowing Disorders</td>
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<tr>
<td>SLPA 231</td>
<td>Augmentative/Alternative Communication</td>
<td>2</td>
</tr>
<tr>
<td>SLPA 233</td>
<td>Cleft Palate and Syndromes</td>
<td>2</td>
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<tr>
<td>SLPA 237</td>
<td>Managed Care</td>
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<tr>
<td>SLPA 241</td>
<td>Research Methods</td>
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<td>SLPA 245</td>
<td>Disorders of Fluency</td>
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<tr>
<td>SLPA 247</td>
<td>Autism Spectrum Disorders</td>
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<td>SLPA 285</td>
<td>Colloquium in Speech-Language Pathology</td>
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<tr>
<td>SLPA 287A</td>
<td>Internship in Speech and Hearing</td>
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<tr>
<td>SLPA 287B</td>
<td>Fieldwork in Speech and Hearing</td>
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<tr>
<td>SLPA 288</td>
<td>Externship</td>
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<tr>
<td>SLPA 289A</td>
<td>Advanced Clinic 1</td>
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</tr>
<tr>
<td>SLPA 289B</td>
<td>Advanced Clinic 1</td>
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</tbody>
</table>

The student may elect to complete one of the following tracks:
A. Traditional (Clinical Focus) – Fulfilled by coursework above
B. SLPA 299 Thesis (See Graduate Director for further information

CBEST Recommended

24 - Month Program
Complete all the requirements above in the 15 – month program and the following courses:

<table>
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<td>SLPA 121</td>
<td>Speech and Language Development</td>
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<td>SLPA 123</td>
<td>Language Disorders I</td>
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<tr>
<td>SLPA 125</td>
<td>Articulation and Phonology</td>
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<tr>
<td>SLPA 127</td>
<td>Audiology</td>
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<td>XPDH 122</td>
<td>Audiometry for Nurses</td>
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<tr>
<td>SLPA 129</td>
<td>Anatomy and Physiology of Speech</td>
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<td>SLPA 131</td>
<td>Phonetics</td>
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<td>SLPA 137</td>
<td>Speech and Hearing Science</td>
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<td>SLPA 139</td>
<td>Diagnostics</td>
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<td>SLPA 143</td>
<td>Multicultural Populations</td>
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<td>SLPA 183</td>
<td>Diagnostic Laboratory</td>
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<tr>
<td>SLPA 189B</td>
<td>Intermediate Clinic</td>
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Course Offerings

Undergraduate

See General Catalog for course descriptions

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<th>Course Title</th>
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<td>SLPA 051</td>
<td>Introduction to Communication Disorders</td>
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<tr>
<td>SLPA 053</td>
<td>Sign Language I</td>
<td>(3)</td>
</tr>
<tr>
<td>SLPA 055</td>
<td>Sign Language II</td>
<td>(3)</td>
</tr>
<tr>
<td>SLPA 101</td>
<td>Clinical Methods I</td>
<td>(1)</td>
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<tr>
<td>SLPA 103</td>
<td>Clinical Methods II</td>
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<td>SLPA 105</td>
<td>Clinical Methods III</td>
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<td>SLPA 107</td>
<td>Clinical Methods IV</td>
<td>(1)</td>
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<tr>
<td>SLPA 110A/B</td>
<td>Clinical Observations</td>
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<td>SLPA 121</td>
<td>Speech and Language Development</td>
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</tr>
<tr>
<td>SLPA 123</td>
<td>Language Disorders I</td>
<td>(3)</td>
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</tbody>
</table>
Graduate

SLPA 201. Professional Issues (1)
Seminar in ethical and legal issues, practice standards, employment and business considerations for the practice of speech-language pathology.

SLPA 205. Adult Neurological Disorders (3)
Neurologically based speech and language disorders in adults will be investigated. The understanding and management of aphasia and similar language disorders are included. Graduate standing.

SLPA 209. Language Disorders II (3)
Assessment and treatment of children and adolescents with language disorders in the language-for-learning and advanced language stages. An overview of language disorders in children and adolescents and the relationship between language and literacy are also components of this course. Graduate standing.

SLPA 211. Language Disorders III (3)
Assessment and treatment of children with language disorders in the prelinguistic, emerging, and developing language stages. Causation, prevention, and early intervention issues, as well as considerations for special populations, are also covered in this course. Prerequisite: SLPA 209 or permission of instructor.

SLPA 213. Advanced Audiology (3)
Audiologic tests for site of lesion, and central auditory dysfunction; test procedures include advanced speech, and auditory brain stem response testing. Graduate standing.

SLPA 215. Aural Rehabilitation (3)
Theory and methods of habilitation/rehabilitation of hearing impaired children and adults. Procedures include speech and language development, speech conservation, speech reading, auditory training and amplification with individual and group hearing aids. Prerequisite: SLPA 127. Graduate standing.

SLPA 217. Voice Disorders (3)
This graduate course concerns the study of the human voice and related disorders. Course content includes normal vocal development as well as functional and organic voice disorders. The primary course objective is to instruct students in the etiology, diagnosis, and treatment of vocal pathologies. Graduate standing.

SLPA 219. Phonological Disorders (3)
Critical analysis of research and theory in etiology, diagnosis, and treatment of speech sound disorders. Emphasis on current scientific research findings and their application to clinical work. Assessment and intervention techniques for speech sound disorders. Graduate standing.

SLPA 221. Motor Speech Disorders (2)
Disorders associated with apraxia and dysarthria in adults and children, including cerebral palsy and head injury. Graduate standing.

SLPA 222. Neurological Disorders-Treatment (3)
This class will focus on various treatment strategies for adult individuals with differential diagnoses of various communication disorders. Evidence-based treatment approaches, structured treatment approaches, and pragmatic treatment approaches in concert with appropriate goal setting strategies will be emphasized. Treatments for motor speech disorders, the aphasics, and communicative deficits secondary to traumatic brain injury will be offered.

SLPA 225. Public School Issues (1)
Seminar in organization and administration of language, speech, and hearing programs in public schools. Review of federal and state legislation and legal decisions influencing public school speech-language pathologists. Graduate standing.

SLPA 229. Dysphagia/Swallowing Disorders (3)
This graduate-level course investigates the nature of normal and abnormal swallowing function, the causes of dysphagia, its assessment and clinical management. Graduate standing.

SLPA 231. Augmentative/Alternative Communication (2)
The course will provide students with information about unaided and aided systems for alternative and augmentative communication. Students will gain information and laboratory experiences which help them determine the most appropriate devices and methods of therapy for an individual and how to incorporate them into a complete communication system. Graduate standing.

SLPA 233. Cleft Palate and Syndromes (2)
Analysis of research and theory in etiology, diagnosis and treatment of craniofacial anomalies and other genetic syndromes involving communicative disorders. Diagnosis and treatment of speech disorders associated with cleft palate will be emphasized. Graduate standing.

SLPA 237. Managed Care (1)
Graduate seminar in ethical and legal issues, practice standards, employment and government regulations for the speech-language pathologist practicing in the medical environment.

SLPA 241. Research Methods (3)
Exploration of various research methodologies and statistical designs applicable to communicative disorders. Study and critical evaluation of empirical studies from current literature. Scholarly and professional writing skills. Application of the scientific method, including use of qualitative and quantitative data, to assessment and treatment of clients with communicative disorders.

SLPA 245. Disorders of Fluency (2)
Introductory course in fluency disorders with emphasis upon etiology, theory, diagnosis, and treatment of stuttering and cluttering.

SLPA 247. Autism Spectrum Disorders (2)
Assessment and treatment of children and adolescents with autism spectrum disorders. An overview of the nature and characteristics of autism spectrum disorders, as well as associated neurobiological factors, are additional topics taught in this course.

SLPA 285. Colloquium in Speech-Language Pathology (2)
Lectures presented by invited professionals covering current issues in speech-language pathology. (SLPA 285 may be repeated annually.)
SLPA 287A. Internship in Speech and Hearing (2-4)
SLPA 287B. Fieldwork in Speech and Hearing (2)
SLPA 288. Externship (3-9)
Graduate student status. This experience is designed to provide students with a full-time, supervised experience in the field. Educational and medical settings are available. Prerequisite: Open only to graduate students in the Department of Speech-Language Pathology who have completed all of their academic coursework, comprehensive examinations and have maintained a graduate GPA of 3.0 or higher. (Course may be repeated.)
SLPA 289A. Advanced Clinic (1)
SLPA 289B. Advanced Clinic (1)
SLPA 291. Graduate Independent Study (1-4)
SLPA 293. Special Topics (1-4)
SLPA 297. Graduate Research (1-4)
SLPA 299. Thesis (2 or 4)

Thomas J. Long School of Pharmacy and Health Sciences Faculty
Pharmaceutical and Chemical Sciences

Richard R. Abood, 1991, Professor of Pharmacy Practice, BS Pharm, University of Nebraska, 1972; JD, University of Nebraska, 1976.

Jesika S. Faridi, 2004, Associate Professor of Physiology & Pharmacology, BS, University of California, Davis, 1995; PhD, Loma Linda University, 2001.

Andre Franck, 2002, Associate Professor, BS, Universitaet-Gesamthochschule Siegen, 1994; MS, University of the Pacific, 1997; PhD, University of the Pacific, 2000.

Xin Guo, 2003, Associate Professor of Pharmaceutical Chemistry, BS, School of Pharmacy, Shanghai Medical University, 1993; MS, Duquesne University, 1995; PhD, University of California, San Francisco, 2001.


Ayeshas V. Samoshin, 1997, Professor, MS, 1974; PhD, 1982; DSc, 1991; Lomonosov Moscow State University, USSR.

Timothy J. Smith, 1993, Chair, Department of Physiology and Pharmacology, Professor of Physiology and Pharmacology, BS, Purdue University, 1978; PhD, University of Minnesota, 1983.

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

Henghu Sun, 2009, Professor, Director of Pacific Resources Research Center, BS, Beijing University of Science and Technology, 1982; MS, China University of Mining and Technology, 1985; PhD, 1988.

Qinliang Zhao, 2010, Assistant Professor, BS, Zhejiang University, Hangzhou, China, 2003; PhD, Texas A&M, 2007.

Balint Sztray, 2008, Associate Professor, MS, Eotvos Lorand University, Hungary, 1997; PhD, 2001.

David W. Thomas, 2000, Associate Professor of Physiology and Pharmacology, BS, California State University, Sacramento, 1985; MS, 1989; PhD, University of California, Davis, 1996.

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

James A. Uchizono, 2000, Assistant Dean and Director, Pre-Health Programs, Associate Professor of Pharmacuetics, BS, 1985, BS, University of California, Irvine, 1985; PharmD, 1990; PhD, University of California, San Francisco, 2001.
Katerina Venderova, 2011, Assistant Professor of Physiology and Pharmacology, M.Pharm, 2000; PharmD, 2003; PhD, 2003; Charles University, Czech Republic,  
Mark Walberg, 2009, Assistant Professor of Pharmacy Practice, PhD, University of the Pacific, 2009; PharmD, University of the Pacific, 2006; MA, University of California, Los Angeles, 2003; BS, University of California, Los Angeles, 2001.  
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.  
Liang Xue, 2007, Assistant Professor, BS, Fudan University, Shanghai, China, 1996; PhD, Clemson University, 2004.  

Physical Therapy  
Sandra Bellamy, 2002, Associate Professor of Physical Therapy, BA, University of the Pacific, 1997; MSPT, University of the Pacific, 1999; DPT, University of the Pacific, 2003.  
Todd L. Davenport, 2007, Assistant Professor of Physical Therapy, BS, Willamette University, Salem, (OR), 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., San Diego, CA 2000; EdD, University of the Pacific, 2008.  
Jim K. Mansoor, 1992, Professor of Physical Therapy, BA, California State University, Sacramento, 1980; MS, 1986; PhD, University of California, Davis, 1996.  
Katrin Mattern-Baxter, 2007, Assistant Professor of Physical Therapy, AB, Freiburg University, Germany, 1985; DPT AT Still University, Arizona, 2007.  
Cathy Peterson, 2002, Chair and 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, BS, State University of New York-Downstate Medical Center, 1978; MA, Columbia University, 1983; PhD, McGill University, 1995.  

Speech-Language Pathology  
Jill 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, 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 and Associate Professor of Speech-Language Pathology, 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 Wustig, 2010, Assistant Clinical Professor of Audiology, Clinical Director, B.S. Speech Pathology and Audiology, California State University, Sacramento, 2004; AuD, Utah State University, 2008.
The Administration

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Director, International Programs and Services (Acting) ......................... Berit Gunderson

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Donor Relations and Stewardship .............................Kathy Ruvolo

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Student Activities ....................................................Jason Velo
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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, Multicultural Affairs ................................Serjio Acevedo
Director, New Student and Family Programs ...............Linda Dempsey
Director, Public Safety...........................................Mike Belcher
Director, Residential and Greek Life .........................Vacant
Director, Dining Services .......................................Sia Mohsenzadegan
Director, Pacific Recreation & MOVE Program .........Wendy Stratton
### Fall Semester 2011
- **International Student Orientation**.........................August 22
- **Orientation for New Teaching Assistants**................August 24 (9 am – 11pm)
- **Orientation for New Graduate Students**..................August 25 (9 am – Noon)
- **Registration**.................................................................August 29 – September 9
- **Classes Begin**..............................................................August 29
- **Labor Day Holiday**......................................................September 5
- **Deadline to file Application for Graduation Form** (December 2011 Graduates)..................September 6
- **Last Day to Add Classes**...........................................September 9
- **Last Day for Pass/No Credit or Letter Grade Option** September 9
- **Last Day to Drop Classes without a “W” grade**.........September 9
- **Fall Student Break**.....................................................October 7
- **Advising Appointments and Early Registration for Spring 2012 continuing students**....October 10 – October 28
- **Last Day for Pro-Rated Refund**................................October 19
- **Last Day to Withdraw from Courses**..........................October 2
- **Early Registration – Spring 2012 Continuing Graduate Students**............................October 24 – January 20
- **Deadline for Masters Written/Oral Exams and Thesis/Dissertation Defense (December 2011 Graduates)** November 1
- **Deadline for Thesis/Dissertation Review by the Graduate School (December 2011 Graduates)** November 14
- **Thanksgiving Vacation**................................................November 23 – 25
- **Classes Resume**..............................................................November 28
- **Deadline to file Application for Graduation Form** (May 2012 Graduates)..............................December 2
- **Deadline to file Petition to Participate (Walk) in Commencement Ceremonies (May 2012 Graduates)** December 2
- **Deadline for Final Submission of Thesis/Dissertation to Dean (December 2012 Graduates)** December 2
- **Classes End**..............................................................December 9
- **Final Examination Period**.................................December 12 – 16

### Spring Semester 2012
- **Payment Deadline for Spring 2012**.................................January 1
- **International Student Orientation**...............................January 4
- **Classes Begin**..............................................................January 9
- **Registration Reopens**................................................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 a “W” grade**........January 20
- **President’s Day Holiday**...........................................February 20
- **Last Day for Pro-Rated Refund**.................................March 2
- **Spring Break**.............................................................March 5 – 9
- **Classes Resume**..............................................................March 12
- **Advising Appointments and Early Registration for Fall 2012 Continuing Graduate Students** March 12-30
- **Last Day to Withdraw from Courses**..........................March 30
- **Early Registration for Fall 2012 for continuing students**.................................March 26 – September 7
- **Deadline for Thesis or Dissertation Review by the Graduate School (May 2012 Graduates)** April 6
- **Classes End**..............................................................April 6
- **Study Day**.................................................................April 25
- **Deadline for Submission of Thesis or Dissertation to Dean (May 2012 Graduates)** April 26
- **Deadline for Thesis or Dissertation Review by the Graduate School (May 2012 Graduates)** April 27
- **Final Examination Period**.................................April 27 - May 3
- **Commencement Weekend**.................................April 27 - May 5
University of the Pacific

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