

# Preprofessional Preparation

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Preprofessional programs are available for students who plan to transfer to other institutions for the completion of professional curricula in such fields as law, medicine, veterinary medicine, pharmacy, dentistry, optometry, architecture, theology, librarianship, chiropractic therapy, osteopathic medicine, and podiatric medicine. Some of these programs are described here.

Students planning to complete a pre-professional program and degree at California State University, Fresno must complete a major offered at this university. They should include their preprofessional area plus their university major on all registration forms; for example, premedical-chemistry, premedical-biology, prelaw-history, prelaw-political science. There are no preprofessional majors per se. Instead, preprofessional students work toward various university degrees and while doing so, incorporate into their college programs courses required for entry into professional schools.

Careful program planning is important in order to select proper classes and complete requirements in a timely way. Regular advising is essential since professional schools change their requirements occasionally. Preprofessional students should contact their respective major and preprofessional advisers before enrolling in classes each semester to stay abreast of changes.

A current list of preprofessional advisers is available in the Office of Advising Services, Joyal Administration Building, Room 224. For more information, call Advising Services, 559.278.1787 or fax 559.278.2323.

**Preclinical laboratory sciences.** Students interested in a medical career in clinical laboratory science (CLS) can satisfy their pre-CLS requirements at California State University, Fresno. Successful completion of the following is required: CHEM 1A-B, CHEM 128A-B, CHEM 129A, CHEM 150, CHEM 105, BIOL 120, BIOL 157 and 157L, BIOL 160 or BIOL 162 and 162L, BIOL 121, BIOL 164, and PHYS 2A-B. For more information, contact a pre-CLS adviser and consult education coordinators at hospitals with one-year CLS training programs.

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**Predental.** The minimum training for dentistry is a seven-year course — the first three years (90 units) of predental training in a college or university and the remaining four years (dental training) at a school of dentistry.

However, most students are not accepted by dental schools until four years of college are completed. Due to the large number of applicants, students who do not have better than a 3.5 GPA should earn a bachelor's degree before applying to a dental school. Majors that are most compatible with required classes are in the sciences, particularly biology and chemistry. However, as long as the required preprofessional courses are completed, any major is acceptable.

The minimum predental program required by accredited dental schools is one year each of English, general chemistry, physics, and biology, plus one semester (and often one year) of organic chemistry. Check with each dental school for specific additional requirements like psychology. The Dental Admission Test (DAT) is required. Many dental schools also require a personal interview; some schools administer additional tests. For other information, contact a predental adviser and consult dental school catalogs or the American Dental Education Association at [www.adea.org](http://www.adea.org)

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**Prehealth careers.** Advisement is available for students interested in preparing for health careers in occupational therapy, chiropractic medicine, radiological technology, related areas, or as a physician's assistant. While these programs are not offered at California State University, Fresno, most, if not all, prerequisites are. Students should seek academic and career advisement early in their academic programs.

For preoccupational therapy and other prehealth careers, see the Interdisciplinary Health and Rehabilitation Sciences (IHRS) major, under the Physical Therapy Department, or contact the IHRS undergraduate adviser, Dr. Cheryl Hickey, 559.278.3030. Students seeking information on other undergraduate and graduate allied health programs not offered at this campus may contact the College of Health and Human Services:

**Penny Lacy, Academic Adviser**  
College of Health and Human Services  
McLane Hall, Room 194  
559.278.4004; FAX: 559.278.6360

**Prelegal.** Most fully accredited law schools require a bachelor's degree for admission. Since a prelegal program providing a broad cultural background is recommended by the law schools, any baccalaureate major, depending on the student's interest, may be chosen from the university offerings. (See *Degree Programs, Majors and Minors*.) Law schools suggest courses, but not necessarily a major, in the following: written and oral English, American and English constitutional history, world history, accounting, business administration, elementary logic, mathematics, statistics, economics, political science, philosophy, science and foreign language. A score on the Law School Admission Test (LSAT) is required before students can be accepted into law school. It is recommended that the LSAT be taken no later than December of the student's senior year. In addition, most law schools require a personal statement and letters of recommendation that address academic skills and preparation for the study of law. For further information consult a prelaw adviser and law school catalogs.

For a list of prelaw advisers, contact the Office of Advising Services in Joyal Administration, Room 224. 559.278.1787; FAX: 559.278.2323

**Prelibrarianship.** Librarianship offers many career opportunities to people of different academic backgrounds, interests, and talents. Librarianship is the profession concerned with collecting, organizing, and preserving the records of society and providing access to them. Librarians work with a wide variety of people and materials (books, music, films, slides, maps, computer files, and more). Professional opportunities include service in academic, research, public, and school libraries as well as libraries and information centers in corporations, medical centers, law firms, museums, and archival collections. Computer technology offers additional career opportunities in traditional library settings and elsewhere. The basic level of education for library and information studies professional positions is the master's degree. The entrance requirements of graduate programs vary, but most library schools require a bachelor's degree, a reading knowledge of a foreign language, and courses in statistics and computer science.

For additional information about library schools, their requirements and programs, and library career opportunities, contact the prelibrarianship adviser.

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**Premedical.** Requirements for admission to medical school vary somewhat from one medical school to another and change from time to time, but a well-balanced liberal education is usually specified. Any major will do; choose a major according to your interests. Some aptitude and university training in science and English are essential in medicine. The minimum requirements in these subjects specified by most medical schools can be satisfied by specific courses in biology (BIOL 1A-B), chemistry (CHEM 1A-B, 128A-B, 129A and often 129B), physics (PHYS 2A-B), and two semesters of English. A course in biochemistry is often required or strongly recommended. Courses in physiology, genetics, molecular biology, immunology, and cell biology may be helpful in preparation for the Medical College Admission Test (MCAT). Also, some facility with mathematical concepts is usually expected; one semester of calculus and one semester of statistics will meet the requirements for most medical schools. Because of competition for admission to medical schools, a grade point average of about 3.6 is highly desirable. The MCAT is required before students can be accepted into medical school. It is recommended that the MCAT be taken and application for medical school be made at least one year before anticipated matriculation into medical school.

Students considering a career in medicine should review the information at [www.csufresno.edu/premed](http://www.csufresno.edu/premed). For consultation on a course of study and on becoming a competitive medical school applicant, contact a premedical adviser.

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**Preoptometry.** California State University, Fresno provides courses for the completion of preprofessional requirements of an optometry program. Most professional schools require junior standing and coursework which includes two years of biology and chemistry as well as one year of mathematics, physics and English, and one semester of psychology and statistics with above-average scholarship. The Optometry

Admission Testing Program (OAT) exam is required before application can be made to optometry school.

Application should be made one year in advance of anticipated enrollment.

For further information, see optometry school catalogs and consult the preoptometry adviser.

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**Prepharmacy.** California State University, Fresno provides prepharmacy coursework to prepare a student for admission into a four-year pharmacy program. All new and transfer students should indicate an interest in prepharmacy on application, admittance, and registration papers. Admission to most pharmacy schools now requires a **B+** average or better in a minimum of 60 semester units, including one year each of general chemistry, organic chemistry, physics, calculus, biology, and English composition. Certain schools may have additional specified requirements. Although some students gain admission to pharmacy school after two or three years of undergraduate study, most students are not accepted until they have completed four years of college. Students, especially those without a high cumulative grade point average, should plan to graduate with a bachelor's degree before entering a pharmacy program. Majors that are most compatible with required classes are in the sciences, particularly biology and chemistry. However, as long as the required preprofessional courses are completed, any major is acceptable. For further information, see a prepharmacy adviser and consult pharmacy school Web sites ([www.aacp.org](http://www.aacp.org)).

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**Preveterinary.** Students preparing for the veterinary profession can satisfy their preveterinary curriculum requirements at California State University, Fresno. A minimum of 60 semester units of required courses (see next column) must be taken prior to acceptance into a veterinary

school program. Most students combine the required science courses with General Education and major requirements as they work toward a bachelor's degree in either animal sciences or biology. In addition to performance in required classes, prospective veterinary students are evaluated by their performance on the general portion of the Graduate Records Examination which is to be taken within five years of veterinary school application.

All students interested in veterinary medicine are encouraged to take ASCI 68, Preveterinary Orientation (taught each fall in the Department of Animal Sciences and Agricultural Education), for updated information regarding admission requirements and policies. Courses recommended by the Department of Animal Sciences and Agricultural Education for its majors preparing for veterinary school include ASCI 65, 135, 155, 165; BIOL 1A, 1B, 20, 102, 103, 162; CHEM 1A, 1B, 128A-B, 129A, 150; and PHYS 2A, 2B. Preveterinary students completing a degree in biology should take the following courses recommended by the Department of Biology: BIOL 1A, 1B; CHEM 1A, 1B; PHYS 2A, 2B; CHEM 128A-B, CHEM 129A-B; CHEM 150; BIOL 102, 103; and PHYAN 151 or 163. In addition, a statistics class, two writing classes, and a speech class are required by most veterinary schools.

The College of Agricultural Sciences and Technology is equipped to provide valuable experience with large animals through the labs and projects at the university farm laboratory. Admission to veterinary school in California requires a minimum of about 4.5 week equivalents (180 hours) of relevant veterinary experience in activities that specifically give the applicant an appreciation and understanding of the profession of veterinary medicine. For further information, contact the chair of the Animal Sciences Department, the campus veterinarian, and/or the adviser in the Biology Department.

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