

PRE-DENTAL: ACADEMIC AND CAREER INFORMATION

Health Professions Advising Office (HPAO) • Jensen Student Access to Science (SAS) Center FO5-109

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NATURE OF THE WORK, EARNINGS AND OCCUPATIONAL OUTLOOK

Dentistry is a branch of the healing arts and sciences devoted to maintaining the health of the teeth, gum, and other hard and soft tissues of the oral cavity and adjacent structures. The American Dental Association (ADA) reports that as of 2005, 176,634 dentists were professionally active in the United States. Dentistry requires diagnostic ability and manual skills. Dentists should have good visual memory, excellent judgment of space and shape, a high degree of manual dexterity, and scientific ability. Good business sense, self-discipline, and communication skills are helpful for success in private practice.

Though earnings vary according to number of years in practice, location, hours worked, and specialty, the ADA reports that in 2005 the average net income for an independent private practitioner who owned all or part of his or her practice was \$198,350 while dental specialists earned an average net income of \$304,020. Employment of dentists is expected to grow about as fast as average for all occupations through 2016. Although employment growth will provide some job opportunities, most jobs will result from the need to replace the large number of dentists expected to retire. Job prospects should be good as new dentists take over established practices or start their own. (Occupational Outlook Handbook, 2008-2009.)

DENTAL EDUCATION

Currently there are 58 dental schools in the United States (6 in California) and 10 Canadian dental schools. Most dental schools award the degree of Doctor of Dental Surgery (D.D.S.). The rest award an equivalent degree, Doctor of Dental Medicine (D.M.D.). Dental school usually lasts 4 academic years. Studies begin with classroom instruction and laboratory work in basic sciences including anatomy, microbiology, biochemistry, and physiology. Beginning courses in clinical sciences, including laboratory techniques, are also provided at this time. During the last 2 years, students treat patients, usually in dental clinics, under the supervision of licensed dentists. All 50 States and the District of Columbia require dentists to be licensed. In most states, a candidate must graduate from a dental school accredited by the American Dental Association's Commission on Dental Accreditation, and pass written and practical examinations to qualify for a license. A degree in dentistry can lead to dental careers in a variety of settings including, academic dentistry, general dentistry (private or group practice), dental specialties, dental research, public policy, international health, and government/military.

THERE ARE 10 CLINICAL FIELDS IN DENTISTRY:

General Dentistry: use their oral diagnostic, preventive, surgical, and rehabilitative skills to restore damaged or missing tooth structure and treat diseases of the bone and soft tissue in the mouth and adjacent structure

Dental Public Health: treats the community rather than the individual patient

Endodontics: deals with diseases of the pulp and other dental tissues

Oral and Maxillofacial Pathology: study and research of the causes, processes, and effects of diseases with oral manifestations

Oral and Maxillofacial Radiology: taking and interpretation of conventional, digital, CT, MRI, and allied imaging modalities of oral-facial structures and disease.

Oral and Maxillofacial Surgery: concerned with diseases, injuries, and defects of the neck, head, jaw, and associated structures

Orthodontics and Dentofacial Orthopedics: concerned with treating problems related to irregular dental development, missing teeth, and other abnormalities

Pediatric Dentistry: concerned with the treatment of children, adolescents and young adults whose dental development is not complete

Periodontics: concerned with diseases that affect the oral mucous membranes that surround and support the teeth

Prosthodontics: science and art of replacing missing natural teeth with fixed or removable substitutes

PRE-DENTAL PREPARATION

Most schools require a minimum of 2 years of undergraduate education (also called “predental education”). However, most dental students have at least a bachelor’s degree. According to ADEA: Official Guide to Dental Schools, of all the United States students entering dental schools, more than 90% had completed 4 or more years of college. When selecting students, schools consider scores earned on the Dental Admission Test (DAT), the applicants’ grade point average, and information gathered through recommendations and interviews.

Aside from prerequisite courses, it is recommended that students engage in extracurricular activities such as volunteering in a dental setting and community service. Pre-dental students should be able to demonstrate their potential for independent critical thought, leadership, concern for others, and an understanding of the dental profession. Additionally, pre-dental students should work at developing and/or improving manual dexterity and eye-hand-coordination.

For the year 2008, about 38% of applicants were accepted to dental school (12,500 applicants and 4,758enrollees). **The average Science and Total GPA for accepted students to US dental schools is a 3.5.**

MAJOR:

Any major is appropriate for dental school preparation. While a science major requires many of the same basic prerequisites, selecting a science major is not required for admission to any dental school. Students are advised to select a major they find interesting and to work at developing a broad-based, interdisciplinary foundation of knowledge and skills from which they can build upon.

COURSE REQUIREMENTS FOR DENTAL SCHOOLS:

Prerequisite admission requirements vary from school to school. For the specific requirements at individual dental schools, refer to [ADEA: Official Guide to Dental Schools](#) available in the HPAO Resource Library or the American Dental

Education Association (ADEA) website: <http://www.adea.org>. Listed below are the prerequisite admission requirements for most U. S. Dental schools.

This is NOT a comprehensive list of prerequisites for all dentistry programs. Students maintain responsibility for verifying course selection with individual dental programs.

CSULB Courses that fulfill admission requirements for dental schools:

Pre-requisite Courses	CSULB Courses
One Year of General Chemistry with Lab	Chemistry 111A&111B
One Year of Organic Chemistry with Lab	Chemistry 320A & 320B (<i>Chem. & Biochem. majors</i>) OR 322A w/ 323A & 322B w/ 323B (<i>Biology & other majors</i>)
One Year of General Biology with Lab	Biology 111 w/ 111L & 212 w/ 212L & 213 w/ 213L*
One Year of General Physics with Lab	Physics 100A & 100B OR 151 & 152
One Year of English (Comp. and Lit.)	English 100 AND one of the following 101,102, 184 or 300 (some schools MAY take equivalent courses)

*Required or **Highly** Recommended

Recommended courses (required at some schools):

Pre-requisite Courses	CSULB Courses
One or more courses in Psychology	Psychology 100 (required at UCLA, UCSF)
One or more courses in Biochemistry	Chemistry 441A and/or 441B or 448** (required at UCLA, UCSF, Loma Linda)
One semester to one year of Math (Calculus)	Math 119A & 119B OR 122 & 123
One course in Statistics	Biology 260 OR Statistics 108

**Some schools may not accept 448 ex. Loma Linda

Other courses for consideration include: anatomy, histology, physiology, microbiology, social sciences, communication, business, technical writing, fine arts, drafting, sculpting, engineering, speech, and foreign language.

DAT:

All United States dental schools require applicants to take the Dental Admissions Test (DAT). All Canadian schools require the Canadian Aptitude Test. The American Dental Association states that successful participation in the Dental Admission Test Program requires completion of at least one year of collegiate education (courses in Biology, General Chemistry, and Organic Chemistry). The DAT is entirely multiple-choice and consists of 4 separate sections:

Survey of Natural Sciences (Biology, General Chemistry, and Organic Chemistry)

Perceptual Ability (Two- and three-dimensional problem-solving)

Reading Comprehension (Dental and Basic Science)

Quantitative Reasoning (Mathematical problems in algebra, numerical calculations, conversions, etc.)

Schools vary in their emphasis on the different parts of the test. The DAT is administered on computer almost any day of the year. Applicants should register to take the DAT at least one month before the intended test date.

The UCLA School of Dentistry offers pre-dental laboratory courses to strengthen perceptual skills. These courses are offered over weekend days a few times a year. Visit the following website for additional information:

<http://uclasod.dent.ucla.edu/continuingeducation/> and click “Pre-Dental Courses.”

APPLICATION:

The Associated American Dental Schools Application Service (AADSAS) is a centralized application service sponsored by American Dental Education Association (ADEA). This web-based service is required of all students applying to the 55 dental schools and one Canadian dental school that participate in the application service. AADSAS simplifies the application process by allowing applicants to complete only one application form. AADSAS then sends the applicant’s information in a standardized format to the dental schools that the applicant listed on the AADSAS application. Applications for dental schools that do not participate in AADSAS can be obtained directly from the individual schools.

For more information about dental school, visit www.adea.org/dental_educational_pathways and see your HPAO advisor for further information on the application process, application assistance, and a list of upcoming workshops and events..