

PRE-MED/PRE-DENT FACT SHEET

Prepared by the Pre-Health Sciences Advisory Committee, Creighton University, Omaha, NE 68178 Revised: September 2010

This is a summary of up-to-date information and general advice for Creighton students who plan to apply to medical or dental school. More detailed information can be obtained by consulting <http://www2.creighton.edu/health/prehealth/>

COURSE REQUIREMENTS: Competitive applicants for admission to medical school have Bachelor's degrees. Competitive applicants for admission to dental schools have at least 90 semester hours (3 years) of college work in an accredited institution, and most have Bachelor's degrees. By the end of the junior year both medical and dental school applicants should have completed the following virtually universal minimum course requirements:

- * English (6 hrs min., including ENG 150)
- One-year courses with laboratory (8 hrs. each) in:
 - * General Biology (BIO 211 and 212)
 - * General Chemistry (CHM 203-206; CHM 285/286 can substitute for CHM 205/206)
 - * Organic Chemistry (CHM 321-324)
 - * General Physics (PHY 211 and 212)

Additional science courses such as physiology, genetics, and biochemistry are recommended. Some schools actually require additional science and/or mathematics courses. The University of Nebraska Medical Center College of Medicine (UNMC-CoM), for example, requires biochemistry, genetics, and either calculus or statistics. We recommend that most all pre-medical and pre-dental students take both calculus and statistics. Most pre-medical and pre-dental students nationwide take at least one semester of calculus (usually as freshmen) because it's used in general physics courses at many college and universities, including Creighton. A statistics course is often part of a student's major and thus is often taken later, after the student has chosen a major.

Introductory Psychology (PSY 111) is recommended for all students interested in the health professions. At least one additional social science course, including one from a different department, should be chosen after consultation with your advisor.

Some medical schools, including UNMC-CoM, may not accept credit hours earned through examinations (such as CLEP or AP) as equivalent to taking particular required courses, though they may allow higher-level college courses to be used as substitutes. Data about specific schools and their requirements, as well as other valuable information about applying to medical and dental schools (admissions statistics, financial aid, *etc.*), may be found in the following annual publications:

Medical School Admissions Requirements, United States and Canada, available from the Association of American Medical Colleges - Web site: <http://www.aamc.org> - Phone: (202)-828-0416

Osteopathic Medical College Information, available from the American Association of Colleges of Osteopathic Medicine - Web site: <http://www.aacom.org> - Phone: (301)-968-4100

Admission Requirements of U.S. and Canadian Dental Schools, available from the American Dental Education Association - Web site: <http://www.adea.org> - Phone: (202)-667-9433

These books are sold at the Creighton Bookstore and are available in the Reinert Alumni Library (in the reference section and on closed reserve) and in the Career Center. These and other printed resource materials are also available in the College of Arts and Sciences Advising Resource Center (ARC) in Hixson Lied Room G06.

SCHEDULING COURSES: Pre-medical and pre-dental freshmen and sophomores are normally advised to take only two science or math courses each semester. Pre-medical students should also start in PMED during the freshman spring semester.

- Unless completed in high school, Calculus I (MTH 245) is often taken in the freshman fall semester. Those intending to major or minor in math, physics, or chemistry (including biochemistry) should eventually complete additional calculus.
- General Chemistry I (CHM 203/204) and General Chemistry II (CHM 205/206 or 285/286) are good for the freshman fall and spring semesters, respectively, as long as some chemistry, and sufficient algebra, were completed in high school.
- Organic Chemistry (CHM 321-324) is usually taken in the sophomore year (both semesters).
- If no physics was taken in high school, Introduction to Physics (PHY 187) is a good choice for pre-medical or pre-dental freshmen in the fall semester. The sophomore fall semester will likely be busy enough with BIO 211 and CHM 321/322.
- BIO 212 is usually taken in the freshman spring semester, before taking BIO 211 in the sophomore fall semester.

Physiology is often helpful before taking the MCAT or the DAT. Genetics is often helpful too, especially for the MCAT. Biochemistry or some molecular/cell-level biology course such as Microbiology (BIO 351) or Cell Structure and Function (BIO 362) is also recommended before taking the MCAT or DAT; eventually biochemistry should be taken, even if post-MCAT/DAT.

GRADES: The detailed academic record is the prime indicator of talent, performance, and judgment. In general, medical and dental schools look for A to B grades in both science/math courses and other courses. GPAs calculated on medical and dental school applications normally include coursework done at all colleges attended, including courses not transferred to Creighton. If a course is repeated, both grades will be included in the GPAs calculated by the medical and dental schools. GPAs should be ≥ 3.5 .

AVOIDING GRADE BLUNDERS: C is an honorable grade, though most if not all grades should be higher! An F or even a D can be a serious obstacle. Faced with a likely low grade, some students will want to withdraw (W) and later try for a higher grade; consult with your advisor as you decide. More than two W's indicates a lack of judgment and an inability to handle the situation.

CHOOSING A MAJOR: Students are accepted into medical and dental schools with a wide variety of academic backgrounds. No particular major is given preference. In choosing a major the rule is to follow your own interests. Ideally, the major should be one that will support an alternate career. Your choice may range from a concentrated science major to a major in social studies or the humanities. Since so much of medicine and dentistry is derived from a scientific basis, most students who major in a nonscientific field should still take more than the minimum number of science courses. However, the point to realize is that demonstrated ability in the sciences is of greater importance to admissions committees than the quantity of science coursework.

NATIONAL ADMISSION TESTS: All applicants must take the appropriate national, standardized computer-based test. The Medical College Admission Test (MCAT) and Dental Admission Test (DAT) are normally taken in the spring of the junior year. The DAT is administered year-round. The MCAT is only offered on about 20 different days during the year, so seats will fill quickly for each date and registration must be submitted early in order to test on the date you desire. To do well on these standardized tests it is necessary that the required science courses listed above be essentially completed, and intensive study specifically designed to prepare for the test also be completed. Registration websites are: <http://www.aamc.org/students/mcat/> for the MCAT, and <http://www.ada.org/dat.aspx> for the DAT. Please release your scores to your pre-health advisor.

OTHER FACTORS: 1) Letters of Recommendation from three of the applicant's professors, of whom at least two taught the applicant in natural science or math courses and at least one in non-science courses emphasizing the human condition (social sciences or humanities), are usually a required part of the application process. Some medical schools require that one of the letters be from a professor in the applicant's major department. Supervisors of relevant paid or volunteer work, research, *etc.* may also provide helpful evaluations, so the total number of letters may be more than three. The College of Arts and Sciences Advising Resource Center in Hixson-Lied Room G06 offers a service that facilitates the solicitation and distribution of these letters. Contact the Advising Resource Center at 280-3594 for more information. 2) Extracurricular activities are very important. Clinical experiences (such as paid employment, volunteer service, and observational shadowing) in hospitals, clinics, nursing homes, *etc.* are essential. Some volunteer service not in a health care setting is also essential. Leadership experience such as positions of responsibility in student groups, and research experience (especially in a health sciences laboratory) are very helpful. 3) Most dental and medical schools will interview promising applicants. (The Career Center offers assistance preparing for an interview, including holding mock interview sessions). 4) Creighton gives special consideration to applicants who have attended Creighton for at least two years. Some special consideration is given by most schools to applicants from socioeconomic groups underrepresented in the profession. A state (public) school is chiefly interested in applicants from that state. All pre-medical students should participate in Creighton's PMED program (typically freshman spring plus entire sophomore and junior years).

FOR MORE INFORMATION: Meet with a pre-health advisor at least once each semester. Subscribe to the prehealth_news listserv¹. Access the College of Arts and Sciences pre-health advising web pages², the Pre-Medical Education (PMED) web pages³, as well as the web pages of Creighton's medical and dental schools⁴ and the web page of the National Association of Advisors for the Health Professions⁵. Participate in Creighton's pre-medical (<http://groups.creighton.edu/premedsociety>) or pre-dental (<http://groups.creighton.edu/dentalsociety>) student groups. Visit the web pages of national medical (AMSA⁶) or dental (ASDA⁷) student organizations. Make an appointment with medical or dental admissions office personnel in spring of the junior year to personalize the application process and open lines of communication as you complete the application.

¹ Prehealth_news is a listserv of interest to all Creighton pre-health students. To subscribe, see

<http://www.creighton.edu/doi/lists/>

² <http://www.creighton.edu/health/prehealth/>

³ <http://www.creighton.edu/PMED/>

⁴ Creighton's professional school web pages can all be accessed from the "academics" link at the university home page: <http://www.creighton.edu/>

⁵ <http://www.naahp.org/>

⁶ <http://www.amsa.org/>

⁷ <http://www.asdanet.org/>