

If you're interested in attending allopathic medical school (schools which grant the M.D. degree), osteopathic medical school (D.O. degree), or podiatric medical school (D.P.M. degree) you should consult the Career Service's Center's (CSC) "Medicine" web page at <http://career.ucsd.edu/undergraduates/consider-grad-school/field-of-study/medicine.html> for valuable information and helpful links. For students pursuing the M.D. degree, the best comprehensive source of information on allopathic medical school admission is [Medical School Admissions Requirements \(MSAR\)](#), an online publication revised annually by the Association of American Medical Colleges (AAMC; [www.aamc.org](http://www.aamc.org)). You can purchase a subscription to [MSAR Online](#) or purchase at the UCSD bookstore. Reference copies are available at CSC and in campus libraries. For information on osteopathic medical education, start with the American Association of Colleges of Osteopathic Medicine's (AACOM) website, [www.aacom.org](http://www.aacom.org) and read the CSC's Osteopathic Medicine handout found on our Medicine page on <http://career.ucsd.edu>. Students interested in D.O. programs should consult the *Osteopathic Medical College Information Book* (CIB) available for reference in CSC or from the AACOM website at <http://www.aacom.org/resources/bookstore/cib/Pages/default.aspx> for purchase or as a free download. Information on podiatry school is available at the American Association of Colleges of Podiatric Medicine site at <http://www.aacpm.org/>.

### What Courses Do I Need to Take?

There is no required or preferred undergraduate major. Most medical schools require a bachelor's degree and seek applicants whose undergraduate academic record demonstrates their potential for success in medical school. If you're interested in medicine, major in a field which engages you and in which you can perform well.

Most medical schools require a minimum of one year each of biology, general (inorganic) chemistry, organic chemistry, and physics. The pass/fail grade option is not recommended (and typically not allowed) for required courses. Details about schools' requirements can be found on their websites or in the MSAR or CIB. Study in these foundation courses also prepares you to take the Medical College Admission Test (MCAT).

**AP Credits** – Medical schools require applicants to prepare for medical school while in college. Therefore, AP (Advanced Placement) credit cannot be used to fulfill **all** of the pre-med course requirements. If you have AP credit in courses required for medical school (biology, chemistry, math, physics) you **may** need to take additional courses in those areas (e.g., 3 quarters of upper-level biology courses) to complete school admission requirements.

The table below lists courses at UCSD which can be used to fulfill admission requirements at most medical schools.

<b>Biology</b>	One year of general biology course work and one quarter of lab are required by most medical schools. Well prepared applicants typically complete more than this one year minimum. BILD 1 and 2 cover the content tested on the MCAT and are pre-requisites for most upper division biology courses. Unless you have AP or transfer credit for BILD 1 and 2 you should take these two courses. BILD 3 is one option to complete the minimum of one year. If you have AP credit, plan to take a minimum of three upper division biology courses. Genetics, mammalian physiology, cell biology and molecular biology are suggested upper division options to complete the biology requirement. You may take your pick of labs, which, at UCSD, are typically offered at the upper division level only. Some medical schools will not accept biochemistry in fulfillment of the minimum requirement in biology, but do require it for admission. Biochemistry is a pre-requisite for many upper division courses in biology at UCSD. Note: Biology courses developed for non-science majors may not meet the requirements for medical school.
<b>Chemistry</b>	One year with one quarter of lab in both general and organic chemistry is typically required. <i>E.g.</i> , CHEM 6 A,B,C and 7L <u>and</u> Chem 140 A,B,C with 143A (lab). If you have AP credit for Chem 6A,B,C, consider taking upper division inorganic or biochemistry coursework to supplement your record, <u>or</u> the honors general chemistry series (6AH, BH, CH). Some medical schools may accept AP chemistry, so please refer to specific schools admission's offices.
<b>Physics</b>	You'll need to take PHYS 1A, 1AL, 1B, 1BL, 1C & 1CL or 2A, 2B, 2BL, 2C & 2CL, or the 4 series with labs (2BL & 2CL or 2CL and 2DL).
<b>Mathematics</b>	While not often specifically required for admission to medical school, a calculus background is expected as pre-requisite to UCSD courses in chemistry and physics. Math 10 A, B, and either C or 11; or 20A, B, C will fulfill requirements. (Be sure to check math requirements for your major as well.) Of the schools explicitly requiring a year of college math, some schools require or recommend that the year include statistics (MATH 11 or PSYCH 60). Applicants who will complete less than three quarters of calculus at UCSD due to AP credits should take MATH 11.
<b>English Composition</b>	One year is strongly encouraged and often required. Typically, completion of the writing sequence at one of the six UCSD colleges is adequate. We encourage you to seek opportunities to further develop your writing skills by taking additional courses that utilize writing and reading skills which can help to improve your verbal and writing scores on the MCAT and strengthen the skills needed for advanced studies.

In addition to these courses, mastery of the required science material should be augmented with a variety of courses in the humanities and the social and behavioral sciences. Courses like anthropology, economics, philosophy, psychology, sociology and urban studies, which address a range of topics including medical anthropology, health care economics, bio-medical ethics, drugs and addictions, abnormal psychology and health care organization, may be of particular interest to students who wish to become health care providers. The Health Care – Social Issues minor allows students to examine health care-related issues from the perspective of these disciplines. Conversational Spanish is strongly recommended for those anticipating practicing medicine in many parts of the country.

Independent studies such as a 199 or 197, research project, or academic internship allow you to explore a subject in more depth, become involved in a knowledge-making activity, and get to know professors and recommenders. For these reasons they are encouraged but by no means required.

### **What Experience Do I Need to Have?**

Admissions committees are interested in your *demonstrated* ability to communicate, think critically, deal with complex information and situations, and solve problems. Admissions committees are most interested in energetic applicants who are self-learners, mature, interested in serving others, and who have common sense and the ability to persevere. Seek activities that enhance the development of your interpersonal skills, study habits and time management skills.

Medical school is very demanding, as is the practice of medicine. Thus admissions committees are interested in your motivation. You should develop a realistic picture of the practice of medicine by speaking with health care professionals and getting involved in some activity – whether paid, volunteer or academic – which enables you to gain experience in a clinical setting. Generally, you'll find that participation in these activities helps you develop career awareness and self-confidence. Participate in activities you find interesting and/or find a physician mentor who is genuinely interested in helping students. Volunteering in a health care setting can provide an opportunity to develop understanding of the day-to-day practice of medicine through observation. See "Getting Experience" on the Med School Information webpage at <http://career.ucsd.edu/undergraduates/consider-grad-school/field-of-study/medicine.html> for information on volunteering. The Health & Medical Professions Preparation Program (HMP<sup>3</sup>), part of UCSD's Academic Enrichment Program, offers a mentor program for students interested in exploring careers in health care. Go to <http://hmp3.ucsd.edu/> for information about HMP<sup>3</sup> and the mentor program.

Although not required for admission, most successful applicants have some record of service to others. If you already have an understanding of the daily work of a physician, you may prefer to serve others by participating in a community organization which is not necessarily medically-related but offers you the chance to help others while developing interviewing, listening, counseling, teaching or other skills. Put yourself in situations where you'll work with people different from yourself. For suggestions on how to find and get the most out of a volunteer opportunity, see the handout "Maximizing Your Volunteer Experience" at <http://career.ucsd.edu/files/maxvolun.pdf>.

If you're interested in a career in medical research, get involved in research as an undergraduate. UCSD offers opportunities for upper division students through departmental independent study programs (199s), the Academic Internship Program (<http://aip.ucsd.edu>) and the Academic Enrichment Programs (<http://aep.ucsd.edu>). Opportunities may also be found through UCSD's research portal (<http://urp.ucsd.edu>). Paid internships and research jobs are listed on CSC's Internship Supersite at <http://career.ucsd.edu>. Information on M.D./Ph.D. programs is available in CSC and via [www.aamc.org](http://www.aamc.org).

### **What Do Admissions Committees Look For In Medical School Applicants?**

Admissions committees want to admit students who will perform well in their school's academic program. Your academic record and your score on the Medical College Admission Test (MCAT) are the two most important criteria used as predictors of this academic performance. To further evaluate your potential to be an effective physician, the committees will look at your extracurricular and community activities, work experience, personal background, letters of recommendation and personal statement to determine if you have the personal characteristics that are desirable in a physician (e.g., initiative, communication and leadership skills, maturity, integrity, etc.). Medical schools seek to admit students from diverse socioeconomic, cultural, educational and ethnic backgrounds; there is no stereotypical candidate.

The MSAR, CIB, and AACOM, AAMC and AACPM websites contain admission data, and the MSAR and CSC have average MCAT and GPA information for admitted allopathic students. Admission is competitive. Assess your credentials accurately and apply where your grades and scores align with the schools' previous admitted students.

### **Medical College Admission Test (MCAT)**

Almost all medical schools require applicants to take the MCAT. The MCAT tests your knowledge of the biological and physical sciences acquired through foundation work in biology, chemistry, physics and organic chemistry and your verbal reasoning abilities. **Note:** The MCAT exam will be changing in the spring of 2015. The new exam, known as MCAT2015 will have four sections: Biological and Biochemical Foundations of Living Systems, Chemical and Physical Foundations of Living Systems, Psychological, Social, and Biological Foundations of Behavior, & Critical Analysis and Reasoning Skills.

Details about these four sections, including the topics covered and the scientific inquiry and reasoning skills tested can be found at <https://www.aamc.org/students/applying/mcat/mcat2015/>. Plan to complete required courses in the sciences in time to take the MCAT before you need to apply (offered about 22 times a year). Information on the format and content of the MCAT and is available in CSC or online at [www.aamc.org/students/mcat](http://www.aamc.org/students/mcat). MCAT practice tests are also for sale by the AAMC. For more information, see the CSC MCAT handout at <http://career.ucsd.edu/files/mcat.pdf>.

- **Grade Point Average (GPA) and Academic Record**

Admissions committees look at your cumulative GPA, your science GPA (biology, chemistry, physics, and math), your non-science GPA, and a year-by-year breakdown of your grades from all colleges and universities attended (including English Comp.– Entry Level Writing courses taken at SDCC) as calculated by the medical application services. They may also consider the difficulty of your courses, the rigorousness of your course load, your major, and the school(s) you attended. Substantial and continuing academic improvement will work to your advantage. While “W”s and “Pass/Not Pass” courses on your transcript will not be calculated into your GPA for medical school application, frequent withdrawals or courses taken P/NP or a pattern of Ws or Ps (e.g., you withdrew from every math class you took) may be viewed negatively. Also, although “D” or “F” grades are removed from your UCSD GPA when you retake a class, the M.D. medical school application service will include the D or F grade as well as your retake grade when calculating your GPA (D.O. schools do not). UCSD applicants typically have undergraduate GPAs of 3.4 and above; the mean cumulative GPA of our students admitted to M.D. programs is about 3.6. Osteopathic admittees average around a 3.3 GPA. Admitted podiatry students’ GPAs can be lower.

- **Recommendation Letters**

Recommendation letters should be from people who know you well enough to write valuable and relevant comments. Most schools require three or more letters in support of each candidate, two of these from science instructors. Many schools further specify that the required letters be written by lecture and laboratory course instructors, not lab job supervisors. Some schools want a third letter from a non-science instructor. Additional letters can come from other professors, or from professionals with whom you’ve worked or volunteered. Typically, a packet of 4 or 5 letters will suffice. Letters from personal friends or acquaintances are not helpful. Most osteopathic and podiatric medical colleges require or recommend a letter from an osteopathic or podiatric physician, respectively. The handout “A Student Guide to Obtaining Recommendation Letters” is available in CSC.

- **Personal Statement**

Most of the initial application involves listing biographical and transcript information, but the application also requires an essay. No particular topic is specified. Medical school admissions committees are interested in learning about you, so the essay should be used to both describe the process and experience through which you decided to pursue a career in medicine and to communicate information about your general interests, values, skills and personal accomplishments. See <http://career.ucsd.edu/files/personalstmt.pdf> for the “Professional School Personal Statement” handout with tips and suggestions. Essay writing workshops are offered in the winter and spring quarters. Typed, double-spaced drafts of your personal statement can be dropped off at CSC for a critique by a writing expert.

### **When and How Do I Apply for Medical School?**

M.D. and D.O. medical schools begin to accept applications around June 1 for admission in the fall of the following calendar year. Deadlines vary, but are often around November or December. These medical schools use a rolling admissions process by which the schools review and decide upon applications as they receive them. Therefore, completing your application early in the process is to your advantage. *Apply early, usually by the end of June or July*, after you receive Spring grades. (Note: The podiatric application timing and process differs; consult <http://www.aacpm.org/> for details.)

- **American Medical College Application Service (AMCAS) and Association of American Colleges of Osteopathic Medicine Application Service (AACOMAS)**

Both the AAMC and the AACOM serve the admissions process at the majority of their member schools through a centralized application processing service, AMCAS for the M.D. schools and AACOMAS for the D.O. schools. Medical schools use these services to reduce the time and expense of the application procedure for you and for admissions committees. You must request *all* undergraduate or graduate institutions you attended to forward official transcripts directly to the service. The service verifies and then distributes your application, including MCAT scores and personal statement, to each school you designate. Complete your AMCAS or AACOMAS applications online at [www.amcas.org](http://www.amcas.org) or <http://aacomas.aacom.org>. Applications typically become available via the AAMC’s and AACOM’s websites one to two months before the application cycle begins in June each year.

- **Supplemental (Secondary) Applications**

Upon receipt of the AMCAS or AACOMAS application, individual medical schools then notify the applicant directly if they require supplemental information in the form of a secondary application which often includes requests for additional essays, recommendation letters, and additional fees. Some schools request secondary applications only from “screened” applicants. Others invite virtually everyone to complete a secondary. School-specific application information in the CIB and MSAR indicate whether a school screens first or requires a supplemental application from all applicants. The varied essays and different requirements for each school can seem overwhelming, but the process will be more easily managed if you plan ahead, stay on top of it and don’t get intimidated.

- **Interviews**

Applicants considered competitive for admission are invited to interview. The interview allows the medical schools to evaluate your ability to communicate effectively and relate to people, and gives you a chance to tour the campus, meet with

faculty and currently enrolled students, and learn about financial aid and housing. Interviews are scheduled primarily in fall and winter but can continue into spring. Information on what to expect in an interview and how to prepare is available at <http://career.ucsd.edu/undergraduates/consider-grad-school/interviewing.html>. You'll find a preparation checklist and links to interview feedback information there. The Career Services Center offers workshops on interviewing each fall and winter quarter.

### **What Should I Look For in a Medical School?**

There are many factors. First, make a realistic assessment of your chances for admission based on the average MCAT and GPA information available in the MSAR, CIB, and the "Allopathic Medical School Admission Data" handout available in CSC. When you accurately "target" schools, you increase your odds for admission. Secondly, because California schools are very competitive, be sure to consider schools all across the country, keeping in mind the residency requirements of each school (some schools give preference or restrict admission to residents of their own states). Next, research schools on the web to consider the schools' missions and which schools offer special programs, clinical experiences, or research opportunities of interest to you. The average UCSD student applies to around 20-25 schools. Keep in mind the cost of applying to multiple schools and plan ahead for what you can afford.

### **What Role Does Diversity Play in Medical School Admissions?**

To best meet the health care needs of the population, AAMC and AACOM have committed to increasing the number of underrepresented minorities in the medical profession. African Americans, Native Americans, Mexican Americans/Chicanos, Latinos and mainland Puerto Ricans continue to be underrepresented in the medical profession, especially in rural and underserved areas. Both AAMC and AACOM provide resources for minority students including summer medical education programs, scholarships and other information on their websites. A reference copy of the book *Minority Student Opportunities in United States Medical Schools* is available in CSC. See also [www.aspiringdocs.org](http://www.aspiringdocs.org).

### **How Am I Going to Pay For Medical School?**

The MSAR and CIB include information on the cost of attending each school along with a section on financial aid. The financial aid officer at each medical school is the best source of information about federal and private loans, scholarships and grants, and is responsible for coordinating all sources of financial aid for each student. Loans are the most common form of financial aid, and the average student will graduate with \$120,000-150,000 in debt. Endeavor to maintain a good credit rating to qualify for loans, and to learn about debt management. Don't be deterred from medical school just for financial reasons – aid is available. For more information, see "Financing your Medical Education" at [www.aamc.org/students/financing/start.htm](http://www.aamc.org/students/financing/start.htm) or <http://www.aacom.org/InfoFor/students/finaid/Pages/default.aspx> for AACOM's guide to financial aid.

### **What's Medical School Like and How Do I Get Licensed?**

Medical school is typically four years plus a residency of three or more years. Your first two years are spent studying the basic sciences and disease processes through lecture-based courses, labs and tutorials. You'll also begin to learn how to take medical histories, do physical exams and interview patients. In your third and fourth years, you'll do clinical rotations in clinics and hospitals to learn patient care in different areas of medicine. The AAMC Curriculum Directory, available on line at <http://services.aamc.org/currdir> includes a chart that provides a quick comparison of medical school curricula. Medical students do not become specialists while in medical school. Specialty training is completed after graduation during a graduate medical education program called a residency. You'll take the U.S. Medical Licensing Examination in three parts throughout your medical education: Part 1 at the end of your second year, Part 2 at the end of your fourth year, and Part 3 at the end of your first year of residency. After that you may become licensed according to the specific requirements of the various state licensing boards.

### **Where Can I Get More Information About Medical School?**

CSC presents a graduate school fair each Fall and a health professions fair in the Spring where you can meet informally with representatives from medical and other health professional schools to learn about their programs. Your UCSD professional school advisors are available at CSC for individual advising appointments. Other CSC services include workshops and information sessions, printed reference materials (including the MSAR and the CIB), medical school catalogs, admission data on UCSD graduates, links to relevant websites from our website <http://career.ucsd.edu>, personal statement critique, interview preparation, and helpful written guides. Stop by our office or call 858.534.3750 to set up an appointment with an advisor.

\*To receive updates of upcoming pre-med events at UCSD, sign up for the [HMP3 listserv](#) and the [CSC Tumblr](#) page.

### **What Other Health or Science Related Fields Could I Pursue?**

Competition for medical school acceptance is keen; recent years' acceptance rate of graduates into U.S. M.D. programs has been below 50%. The percentage is higher for applicants with GPAs and MCAT scores which are higher than average. It is important to keep in mind the diversity of attractive professional career opportunities in health (pharmacy, dentistry, optometry, nursing, podiatric medicine, public health, veterinary medicine, etc.), science and human services. CSC's advisors can help you explore these and other opportunities through individual advising. Utilize the resources at <http://career.ucsd.edu/> or in the CSC libraries and check the CSC calendar to find out about workshops on careers and graduate or professional programs of interest to you.