



# Pre-Health Professions at Case Western Reserve University



## **General Information for Undergraduate Students considering Careers in Medicine, Dentistry and other Health Professions.**

Healthcare is one of the most emergent and dynamic career fields an individual can enter. According to the Bureau of Labor Statistics, healthcare is expected to be the fastest growing industry in the United States over the next decade, generating 3.2 million new wage and salary jobs between 2008 and 2018. For those interested in a career in the health professions, a rich and diverse undergraduate experience, both inside and outside of the classroom, is essential for admission to graduate health professional programs and schools.

Successful preparation for a career in the health professions requires a lot of planning and commitment. As you begin your studies at Case Western Reserve University, there are some questions you may have about which classes to choose, what majors are best, what will make you a strong applicant to the professional schools beyond a good GPA and admissions test score, and where to find help planning a path of success to your chosen profession. To help you begin to address these questions, and many more, this information sheet provides a list of **FAQs** covering health career advising and planning at CWRU.

### **What is Health Career Advising and where can I find it?**

Health Career Advising is available through the Office of Undergraduate Studies, located in Sears 357. Steven Scherger, Director of Health Career Advising, works with undergraduate students seeking a career in the health professions. (Students in the Bachelor of Science in Nursing Program should work with advisors in the Frances Payne Bolten School of Nursing.) The Director of Health Career Advising helps students select appropriate courses based on their long term goals both professional and academically, suggests opportunities to gain experience in your chosen profession, and provides a letter of recommendation when applying to professional health schools. Undergraduate Studies also maintains a Blackboard website as a means to share important information about open houses, research opportunities and guest speakers. If you are not already a member of the Health Professions Blackboard Page, you may request access by sending an email to [steven.scherger@case.edu](mailto:steven.scherger@case.edu).

## What if I am interested in a health profession other than medicine or dentistry?

Although the majority of CWRU undergraduate students are interested in attending medical or dental school, advising is available to students interested in other health-related professional school programs. The list below includes a few examples with the National Organizations that provide information on a variety of health careers. The organizations websites are a great place to explore and learn about these careers.

Professional Career	National Organization Website
Allopathic Medicine	<a href="#"><u>Association of American Medical Colleges</u></a>
Osteopathic Medicine	<a href="#"><u>American Association of Colleges of Osteopathic Medicine</u></a>
Dentistry	<a href="#"><u>American Dental Education Association</u></a>
Nurse Practitioner	<a href="#"><u>American Association of Colleges of Nursing</u></a>
Optometry	<a href="#"><u>Association of Schools and Colleges of Optometry</u></a>
Pharmacy	<a href="#"><u>American Association of Colleges of Pharmacy</u></a>
Physician Assistant	<a href="#"><u>American Academy of Physician Assistants</u></a>
Physical Therapy	<a href="#"><u>American Physical Therapy Association</u></a>
Podiatry	<a href="#"><u>American Association of Colleges of Podiatric Medicine</u></a>
Public Health	<a href="#"><u>Association of Schools of Public Health</u></a>
Veterinary Medicine	<a href="#"><u>Association of American Veterinary Colleges</u></a>

## Do medical and dental schools prefer certain majors over others?

No, medical and dental, as well as most health professional schools, do not give preference to one type of major over another. Likewise, these schools do not give preference to a Bachelor of Science degree over a Bachelor of Arts degree; nor do they give preference to students with multiple majors and/or minors. Most medical and dental schools prefer to construct a class of students that is diverse in academic and experiential backgrounds. They look at the depth and the richness of a student's undergraduate experience rather than the quantity of majors or titles earned. Therefore, pre-health professional students should select their major(s) based upon interest in a subject and a passion for studying it.

**If there is no pre-medicine or pre-health science major at CWRU, are there prerequisite courses I need to complete?**

Medical and dental schools are most concerned with strong records of aptitude for the sciences and a strong commitment to the medical or dental field (conveyed through volunteer experience, clinical experience, research experience and leadership. In general, medical and dental schools require: one year of biology with labs; two years of chemistry with labs (one year of general and one year of organic); one year of physics with labs; one or two semesters of calculus; and one year of college writing (covered through SAGES seminars). In the table below, possible sequences are shown indicating the science courses required by most medical and dental schools.

**Possible Schedule of Pre-Medical/Pre-Dental Courses:**

**STUDENTS IN ARTS AND SCIENCES MAJORS**

Year	Fall	Either semester	Spring
First Year	MATH 125 CHEM 105 BIOL 214 & 214L FSCC/FSNA/FSSO/FSSY	CHEM 113	MATH 126 CHEM 106 BIOL 215 & 215L* USNA/USSO/USSY
Second Year	CHEM 223 CHEM 233 BIOL 216 & 216L*		CHEM 224 CHEM 234
Third Year	PHYS 115		PHYS 116

**STUDENTS IN ENGINEERING AND SOME OTHER B.S. PROGRAMS**

Year	Fall	Either semester	Spring
First Year	MATH 121 CHEM 111 PHYS 121 FSCC/FSNA/FSSO/FSSY	CHEM 113	MATH 122 ENGR 145 PHYS 122 USNA/USSO /USSY
Second Year	CHEM 223 CHEM 233 BIOL 214 & 214L* USNA/USSO/USSY		CHEM 224 CHEM 234 BIOL 215 & 215L*
Third Year	BIOL 216 & 216L*		

\*Most medical and dental schools only require two semesters of biology with labs. Students may choose to take only two of these three courses. However, taking all three will aid in preparation for standardized tests required by the schools: the MCAT and DAT.

*Note: An introductory course in Biochemistry is becoming more common as a requirement for a number of medical schools. As such, **BIOC 307** or **CHEM 328** is strongly recommended in the third year.*

## What other courses will help me prepare for a career in medicine?

A broad education is of great value to pre-professional students, and as mentioned previously, no one major is preferred by medical or dental schools. Many CWRU students major in Biology, Chemistry, Biochemistry, Anthropology, Nutrition or Psychology, but successful students have majored in just about every field including Asian Studies, Economics, Engineering, English, History, Management, Music, and Spanish. Whatever your major, some of these courses might be of special interest:

**ANTH 102** Being Human: Introduction to Social and Cultural Anthropology  
**ANTH 215** Introduction to Medical Anthropology  
**ANTH 302** Darwinian Medicine  
**ANTH 311** Mental Health as Global Public Health  
**ANTH 317** Asian Medical Systems  
**ANTH 318** Death and Dying  
**ANTH 326** Power, Illness and Inequality  
**ANTH 337** Comparative Medical Systems  
**ANTH 359** Introduction to International Health  
**ANTH 361** Urban Health  
**ANTH 397** Epidemiology and Evolution of Human Disease  
**COGS 101** Introduction to Cognitive Science  
**COGS 102** Introduction to Cognitive Neuroscience  
**COGS 330** Cognitive Brain Imaging  
**COSI 100** Introduction to Human Communication  
**COSI 101** Introduction to Health Communication  
**ECON 378** Health Care Economics  
**ENGL 217B** Writing for the Health Professions  
**HIST 265** History of the Professions  
**HIST 395** History of Medicine  
**MPHP 306** History and Philosophy of Public Health

**NTRN 201** Nutrition  
**NTRN 328** Child Development and Health  
**PHIL/BETH 271** Bioethics: Dilemmas  
**PSCL 101** Introduction to Psychology  
**PSCL 230** Child Psychology  
**PSCL 317** Health Psychology  
**PSCL 321** Abnormal Psychology  
**PSCL 334C** Hospitalized Child  
**PSCL 352** Physiological Psychology  
**PHED 105** CPR/First Aid  
**PHED 332** Care & Prevention Of Athletic Injury  
**PHED 339** Advanced Athletic Training  
**SOCI 101** Introduction to Sociology: Human Interaction  
**SOCI 203** Human Development  
**SOCI 269** Young and Old in the 21<sup>st</sup> Century  
**SOCI 302** Sociology of Race and Ethnicity  
**SOCI 311** Health, Illness and Social Behavior  
**SOCI 313** Stress and Coping  
**SOCI 319** Sociology of Institutional Care  
**SOCI 333** Deviance  
**SOCI 345** Sociology of Mental Illness  
**SOCI 355** Aging and Health of Diverse Populations  
**SOCI 365** Health Care Delivery  
**SOCI 369** Aging in American Society  
**SOCI 443** Medical Sociology

**If you were to recommend a few extracurricular activities that are most important for pre-health students, what would they be?**

Volunteer experience in health, clinical experience, research, shadowing, community service and exhibited leadership.

**Do CWRU graduates get into the "top" medical schools?**

Most people who ask this mean the medical schools ranked highest by US News and World Report. The most highly ranked school is not always the best choice for a particular student. But, yes some of our students do get into very highly ranked schools. In 2008, CWRU students were accepted to 46 different medical schools; to 56 medical schools in 2009; and to 42 medical schools in 2010. The medical schools students have been admitted to and matriculated during this time period represent a large range which include, but are not limited to the following:

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| Boston University               | Tufts University                  |
| Case Western Reserve University | University of Cincinnati          |
| Columbia University             | University of Chicago-Pritzker    |
| Dartmouth Medical School        | University of Illinois at Chicago |
| Georgetown University           | University of Iowa                |
| Indiana University              | University of Louisville          |
| Johns Hopkins University        | University of Maryland            |
| Loyola University Chicago       | University of Michigan            |
| NEOUCOM                         | University of Minnesota           |
| New York University             | University of Pittsburgh          |
| Northwestern University         | University of Rochester           |
| Ohio State University           | University of Texas               |
| Rosalind Franklin University    | University of Toledo              |
| Rush Medical College            | University of Virginia            |
| Saint Louis University          | Washington University             |
| SUNY at Buffalo                 | West Virginia University          |
| Temple University               | Wright State University           |
| Texas A&M University            | Yale University                   |

**Does receiving a bachelor's degree from CWRU provide any advantage in being accepted by the Case School of Medicine?**

While the Case School of Medicine (SOM) does not have any set number of seats reserved for CWRU undergraduates, it does offer the advantage that CWRU undergraduates with a competitive academic record will get an interview at the Case SOM. From 2006-2010, the number of accepted CWRU applicants by the Case SOM have ranged from seven to seventeen (not including PPSP students).

## **When is it best to take the standardized test affiliated with the professional school I am interested in applying to?**

The best time to take any standardized test is when you are best prepared. Most students applying to medical school take the MCAT in April or May of their junior year. Students typically receive their MCAT score at the beginning of June allowing them to submit their medical school application relatively early in the rolling admissions process. Students taking the MCAT exam in August, will receive their scores in early October. Medical schools will not review an application until it is complete with a MCAT score. The same timing applies to the DAT; most students take it near the end of their junior year. Applying early is an advantage in the dental school admissions process as well.

## **A few last items to help you prepare for Professional school:**

### **First and foremost, maintain academic integrity!**

Any record of an Academic Integrity violation will *seriously* weaken your application.

### **Second, do not forget about: Medical volunteer work, shadowing, and reaching out to the community**

By volunteering in a hospital, clinic, nursing home, camp for children with illnesses, etc - you can **confirm your motivation** to enter the health professions, **develop greater self-confidence** in dealing with people about sensitive issues, **and put to good use your innate humanistic concern for others.**

### **Third, research is a plus for your application**

Research is a valuable experience for applying to medical and dental schools. Becoming involved in research allows you to better understand the research process and evaluate research papers you will read as a doctor. There are many opportunities for exploring research while you are an undergraduate at Case.

### **Fourth, get involved and be a leader.**

Get involved on campus and take on leadership positions in student government, Greek Life, the marching band, or a student interest group. Establishing yourself as a leader at CWRU will help you to demonstrate your time management and teamwork skills.

### **Finally, take chances, challenge yourself, and find the path that works for you.**

While there are common traits of successful medical and dental school applicants (e.g., strong GPA and test scores, volunteer or shadowing experience, leadership experience as an undergraduate, pre-health science curriculum), there is no one single path to these schools. Medical and dental schools are looking for students who distinguish themselves during their undergraduate years, so it is to your advantage to take chances and challenge yourself, both in and out of the classroom.