

School of Arts and Sciences

PRE-MEDICINE

INCLUDES PREPARATION FOR BOTH ALLOPATHIC
AND OSTEOPATHIC MEDICINE PROGRAMS

www.placement.pitt.edu/advisors/aabt.html

The University of Pittsburgh is a unique place in which to explore and deepen your interest in medicine as an undergraduate. We provide the resources you need to become a successful candidate for medical school, while offering a variety of options for your undergraduate education.

You will be an undergraduate student in a city renowned for training healthcare professionals and transforming research developments into methods of patient care. The University of Pittsburgh campus shares a half-square-mile section of the city with a concentration of hospitals, institutes, clinics, and specialty practices. The University of Pittsburgh Medical Center (UPMC) is one of the largest academic medical centers in the country, encompassing several teaching hospitals such as UPMC Montefiore and UPMC Presbyterian; top-notch research centers such as the University of Pittsburgh Cancer Institute, Western Psychiatric Institute and Clinic, and the Musculoskeletal Research Center; and comprehensive services in areas such as geriatrics, occupational and environmental medicine, trauma treatment, and critical care. UPMC is the leading center for organ transplantation in the world, ranked fifth in the nation for otolaryngology (a.k.a. the ear, nose, and throat doctor), a top recipient of national research funding, and home to nationally prominent research on heart disease, AIDS, and neurosurgery.

Having a major medical center on campus puts you in touch with professionals who can help you in terms of advising, professional connections, volunteer and research opportunities, and internships. You also can benefit from the counsel of current medical students and faculty at the University of Pittsburgh School of Medicine, which is ranked among the top 20 accredited medical schools in the United States by *U.S. News and World Report*. There are five other graduate schools of the health professions at the University of Pittsburgh—the Schools of Nursing, Pharmacy, Dental Medicine, and Health and Rehabilitation Sciences, and the Graduate School of Public Health. To maintain close contact with pre-med classmates, you can live on a residence hall floor reserved exclusively for students interested in pursuing health-related careers.

Your Undergraduate Degree

When selecting candidates for admission, medical schools do not require a particular undergraduate major. They instead emphasize the importance of receiving a broad liberal arts education and avoiding narrow specialization in any one area. Therefore, while the University does offer a pre-professional studies program in pre-medicine, it does not have a major in pre-medicine, per se. However, you can select from among a variety of majors, including more than 50 in the School of Arts and Sciences, or undergraduate degree programs in other Pitt areas such as business administration, bioengineering, pharmacy, or social work. Regardless of the major, every student who would like to apply to medical school must take the prerequisite science courses needed for admission. Should you decide not to attend medical school, the structure of the curriculum you follow as a pre-med student gives you an excellent background for many types of graduate programs and employment. Some majors in the School of Arts and Sciences include:

Africana Studies
Anthropology
Applied Mathematics
Biological Sciences
Chemistry
Communication: Rhetoric
English Literature
English Writing
Environmental Studies

Film Studies
Foreign culture, language, and
literature, including Chinese,
French, Japanese, Russian,
and Slavic
History and Philosophy of Science
Mathematics
Microbiology
Molecular Biology

Music
Neuroscience
Philosophy
Physics and Astronomy
Political Science
Psychology
Religious Studies
Sociology
Urban Studies



Many pre-med students pursue an undergraduate degree in biology, chemistry, or neuroscience because they are interested in the sciences and many of the courses required for these majors coincide with the preparatory course work needed for medical school.

Required Courses

Regardless of major, all students interested in applying to medical school should show competence in the required science courses (3.5 is the mean quality point average in the sciences for student acceptances nationally). Medical schools also look for excellent communication and problem-solving abilities, a love of learning, creativity, motivation, and a commitment to medicine in academic performance and areas such as volunteering, hospital experience, and community service.

The following courses are required for admission to medical school and must be completed by the end of your junior year:

Biology

BIOSC 0150 Foundations of Biology 1 (3 credits)
BIOSC 0050 Foundations of Biology Lab 1 (1 credit)
BIOSC 0160 Foundations of Biology 2 (3 credits)
BIOSC 0060 Foundations of Biology Lab 2 (1 credit)

English (6 credits minimum)

Any composition or literature courses

Math

MATH 0220 Analytic Geometry and Calculus 1 (4 credits)

Chemistry

CHEM 0110 General Chemistry 1 (4 credits)
CHEM 0120 General Chemistry 2 (4 credits)
CHEM 0310 Organic Chemistry 1 (3 credits)
CHEM 0330 Organic Chemistry Lab 1 (1 credit)
CHEM 0320 Organic Chemistry 2 (3 credits)
CHEM 0340 Organic Chemistry Lab 2 (1 credit)

Physics

PHYS 0110 Introduction to Physics 1 (3 credits)
PHYS 0111 Introduction to Physics 2 (3 credits)
PHYS 0212 Introduction to Laboratory Physics (2 credits)

It is also recommended that students take additional upper-level courses in the sciences.

University Honors College

Many students interested in medical school take courses through the University Honors College (UHC) as undergraduates. UHC courses typically offer a more in-depth, rigorous treatment of the material covered in a nonhonors course. Students work more problems, write more, read more, and discuss more. About 40 UHC courses are offered each semester in a variety of departments, and many of these are honors equivalents of the science courses required for admission to medical school. Taking an honors course introduces you to an academic community of talented and motivated students and supplements your credentials for applying to medical school. UHC also offers assistance in applying for prestigious international scholarships. Students usually must meet certain academic qualifications for individual courses.

Certificate in Conceptual Foundations of Medicine

The Department of History and Philosophy of Science offers a Certificate in the Conceptual Foundations of Medicine program that gives students an opportunity to explore the connection between medicine and the humanities. Students take courses on topics such as the aims of medicine, the nature of diagnosis, and philosophical approaches to ethical dilemmas in contemporary medicine. This program is of particular interest to students interested in the healthcare professions, although it does not provide an advantage for being accepted into medical school. The certificate program consists of the following courses:

- HPS 0612 Mind and Medicine
- HPS 0613 Morality and Medicine
- One two-term college-level course in biology (satisfied by BIOSC 0150 and 0160)
- Two upper-level courses dealing with social and conceptual issues in the medical sciences (these courses must be from two different departments)
- At least a C grade in each of the required courses and at least a C+ average overall in the certificate requirements

Advising

The School of Arts and Sciences advising center helps pre-med students plan their course work to satisfy the requirements of their major, take the science courses required by both allopathic and osteopathic medical schools, and pursue a broad-based education that reflects their interests. Students also may meet with the health professions consultant to help them clarify their career goals and balance the pre-med academic life with extracurricular activities and community service. Near the end of the junior year, most students elect to prepare a personal file to be reviewed by the pre-professional health committee, a group of University faculty. The committee prepares a composite evaluation for each student based on the file, which is submitted as part of the medical school application.

Pre-med students generally take the Medical College Admission Test (MCAT), the entrance examination required for admission to most allopathic and osteopathic medical schools, during the spring of their junior year. The MCAT tests skills in physical sciences, biological sciences, verbal reasoning, and critical reading and writing.

For more information on the pre-medicine program or other pre-professional allied health career programs (optometry, podiatry, veterinary science, chiropractic medicine), contact:

University of Pittsburgh
Career Development Office
Pre-professional Health Advising
224 William Pitt Union
Pittsburgh, PA 15260
412-648-7130
www.placement.pitt.edu/advisors/aabt.html

For information on other majors, including how to prepare for health science careers such as occupational therapy, clinical dietetics and nutrition, and emergency medicine, contact:

University of Pittsburgh
Office of Admissions and Financial Aid
Alumni Hall, 4227 Fifth Avenue
Pittsburgh, PA 15260
412-624-PITT
E-mail: oafa@pitt.edu
www.oafa.pitt.edu

Campus/Community Involvement

Alpha Epsilon Delta Pre-Medical Honor Society

This organization offers students interested in a career in medicine the opportunity to learn more about medical school and the medical profession by hosting guest speakers and lecturers, organizing operation viewings, and holding frequent meetings. Students must have taken 45 credits and maintained a 3.0 grade point average to join.

Pre-Medical Organization of Minority Students (POMS)

This group was formed to provide assistance to students from minority groups that are under-represented in the health professions. POMS helps pre-med students with issues such as recruitment, financial aid, motivation, and completion of their course work as they progress toward medical school.

Medical Crossroads

This program helps minority undergraduate students prepare for and apply to medical school by hosting informational workshops by current medical students, the Office of Admissions and Financial Aid, and guest speakers.

Summer Pre-Medical Academic Enrichment Programs

Minority students who have an interest in medicine and will be college freshmen or sophomores in the coming fall can take this intense summer program at the University of Pittsburgh to get an in-depth understanding of the pre-medical sciences. The seven-week program consists of a medical biology course that focuses on biology, chemistry, and diseases that concern minority populations (such as hypertension, AIDS, sickle-cell anemia, and diabetes) and a written and spoken communication course that teaches students how to discuss and write about health-related topics. Students attend lectures, conduct laboratory exercises, observe surgery, attend live births, visit the Allegheny County morgue, and participate in a community service project. Participants come from across the country and receive room, board, transportation, and a stipend for the duration of the program.

Volunteering

Pre-med students are encouraged to volunteer at local medical institutions to explore and confirm their interest in medicine and caretaking. Gaining clinical experience also demonstrates your commitment to pursuing a medical education. Local hospitals and clinics accept volunteers in a variety of locations, including the anesthesia work room, emergency department, operating room, pulmonary department, recovery room, pharmacy, and laboratories. Other possibilities include assisting in sports medicine therapy, audiology, or speech pathology; working as a hospice volunteer; and assisting in the University day care center. Facilities where you can volunteer as an undergraduate include:

Center for Sports Medicine
Magee-Womens Hospital
UPMC Presbyterian

Children's Hospital of Pittsburgh of UPMC
University of Pittsburgh Cancer Institute
Western Psychiatric Institute and Clinic

Eye & Ear Institute
UPMC Montefiore

Community Service

Participating in community service helps pre-med students get hands-on experience helping people in a variety of ways. Programs you can get involved with include tutoring University and middle-school students, helping out at a local nursing home, and building homes for low-income families with Habitat for Humanity.

Undergraduate Research

Students interested in biomedical research can assist in research labs in a variety of settings, including the Departments of Biological Sciences, Chemistry, or Neuroscience; the School of Medicine; the Graduate School of Public Health; UPMC hospitals; the University of Pittsburgh Cancer Institute; and Western Psychiatric Institute and Clinic. You can perform undergraduate research for academic credit or a salary in your junior or senior year, or during the summer as part of the summer research training program. While medical schools view laboratory experience as valuable, it is only required by MD/PhD programs, and the decision to pursue it should be based entirely on your interest.

Study Abroad

Studying abroad is an exciting way to add an international perspective to your undergraduate education and strengthen your credentials as a graduate. The University of Pittsburgh encourages you to take advantage of this opportunity (almost 5 percent of Pitt students study abroad compared with 1.3 percent, nationally). Study abroad will not only distinguish you when you enter the job market or pursue graduate study, but also help broaden your experience of the world beyond your own country's borders, giving you an appreciation of other cultures and peoples while allowing you to earn credits toward your degree. Scholarships are available, and financial aid is applicable.

If you're thinking about studying abroad in Europe, why not try a country where Europe is a little different—Denmark? In Denmark, you can experience the Old World in a new form while challenging yourself and your mind. Denmark is a safe, affluent, and small country where you will feel right at home in no time at all. During this program you can study topics from the humanities and sciences, international business, marine biology and ecology, arctic biology, architecture and design, and engineering. You will go to weekly field studies in most of your classes, guided by your professors, to Parliament, art museums, the Royal Ballet, maximum-security prisons, ecological farms, banks, industry, and many others. There are also study tours to Denmark outside Copenhagen, Stockholm, and Russia and Estonia. Don't worry about a language barrier—all classes are taught in English, and most Danes speak English.