

Pre-Medical Studies Certificate

What are Pre-Medical Studies?

Pre-medical studies follow the course of study you take to prepare for admission to medical school. This includes not just the necessary science but also courses in human behavior, ethics, and written and oral communication. This broad-based approach has been long-standing at UWM and prepares students for the upcoming changes to the Medical College Admission Test (MCAT) which will include a section on behavioral science beginning in 2015.

Pre-Medical Studies at UWM

While some universities offer pre-medical majors, it is the position of UWM that there are better alternatives for preparing students to become medical doctors. UWM students are encouraged to nurture whatever interest or passion motivates their academic pursuits; therefore, pre-medical students at UWM major in a wide range of disciplines. The Certificate in Pre-Medical Studies is founded on the belief that scientific knowledge alone does not prepare students to become effective physicians. Students need sensitivity and insight into the emotional, cultural, and environmental factors that motivate patient behavior. Combined with the right science courses to prepare for the medical school admission exam, pre-med students have majors including chemistry, philosophy, Spanish, history, psychology, and any number of other options.

As part of the certificate program, students also complete volunteer or paid work in a healthcare setting, participate in a mentorship program, and engage in an independent research project.



Are Pre-Medical Studies Right For Me?

Regardless of the type of medicine in which a student intends to specialize, everyone intending to enter medical school must have a strong and proven background in biochemistry, anatomy, physiology, and microbiology. Medical school entrance is highly competitive, and students who obtain this certificate must be diligent in their coursework. To enroll in this certificate program, students currently must be working towards a bachelor's degree or already hold a bachelor's degree in any discipline.

Career Opportunities

Most students use the knowledge gained from the certificate to gain entrance to medical school, which in itself leads to a world of possibilities. Many with a medical degree will practice medicine, treating patients in hospitals or clinics. Others go into research, public health administration, medical journalism, drug development, and medical device development.

Certificate programs are similar to minors. They are comprised of 15 to 26 credits in a specialized subject matter, and include coursework from different departments. Certificates can be combined with a degree program, or they are available as stand-alone options for individuals who already hold a bachelor's degree from any accredited college or university. Many certificates also will enroll individuals with a strong interest in the topic area but who do not have a degree.

The pre-med certificate also may serve as good preparation for other health-related professional schools or graduate programs in dentistry, veterinary medicine, physical therapy, or physician assistance.

Certificate Requirements

Students may enter the program as early as their freshman year but also may join later, even after having earned a bachelor's degree. A minimum GPA of 3.25 is required for the program, and this minimum must be maintained throughout the student's time in the program. If a student falls below a 3.25, he/she will be placed on a one semester probation and have the opportunity to rejoin the program by raising the GPA to the minimum level.

Students will complete between 70 and 74 credits for the certificate, approximately 21 credits beyond the minimum requirements for admission to medical school. The following courses are required to earn the certificate:

- Anthro 104 – Lifeways in Different Cultures: A Survey of World Societies (3 credits)
- BioSci 150/152 – Foundations of Biology 1 and 2 (8 credits)
- BioSci 325 – Genetics (3 credits)
- One of the following courses with its laboratory component:
 - » BioSci 315/316 – Cell Biology/Lab in Genetics and Cell Biology (5 credits)
 - » BioSci 370/372 – Animal Physiology/Lab in Animal Physiology and Neurobiology (4 credits)
 - » BioSci 383 – General Microbiology (4 credits)
 - » BioSci 401/402 – Immunology/Immunological Techniques (5 credits)
- Chem 102/104 – General Chemistry and Quantitative Analysis (10 credits)
- Chem 343/344/345 – Organic Chemistry (8 credits)
- Commun 103 – Public Speaking (3 credits)
- English composition at the 102 level or above
- English, any other course
- Hist 229 – History of Race, Science, and Medicine in the U.S. (3 credits)
- One of the following math options:
 - » Math 116/117 – Algebra/Trigonometry (5 credits)
 - » Math 211 – Survey In Calculus and Analytic Geometry (4 credits)

- » Math 221 – Honors Calculus I (5 credits)
- » Math 231 – Calculus & Analytical Geometry (4 credits)
- Psych 101 – Introduction to Psychology (3 credits)
- One of the following:
 - » Philos 241 – Introductory Ethics (3 credits)
 - » Philos 243 – Moral Problems (1 credit)
 - » Philos 244 – Ethical Issues in Health Care (3 credits)
- One of the following physics options:
 - » Physics 120/121/122/123 – General Physics I and II (Non-Calculus Treatment) (10 credits)
 - » Physics 209/210/214/215 – Physics I and II (Calculus Treatment) (10 credits)
- One of the following:
 - » Chem 501 – Introduction to Biochemistry (or a different advanced level biochemistry course) (3 credits)
 - » Physics 305 – Medical Physics (3 credits)
 - » Physics 306 – Biophysics (3 credits)

It is important to note that many of these courses have prerequisites. Students should plan their schedule carefully in consultation with their advisor to ensure they meet the prerequisites for each class.

Students also are required to complete an independent research project or independent study, participate in a mentorship program, and complete 112 hours of volunteer work or employment in a health care setting.

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