

# Pre-Medical Studies



Department of Natural Sciences  
College of Arts, Sciences, and Letters

## The Program

Although the University of Michigan-Dearborn does not have a formal degree program in “premedical studies,” the Department of Natural Sciences offers, on a regular basis, all of the science courses normally required for admission to a post baccalaureate program in one of the health professions. These courses are required by virtually every medical school in the country and serve as prerequisites for most of the majors in the Natural Sciences Department. These courses also constitute a solid background for the MCAT (Medical College Admissions Test). Of course, specific admission requirements will vary from program to program so the prospective applicant is well advised to familiarize him/herself with the admissions policies of individual programs.

## Required Courses

Chemistry 134 (or 144)	General Chemistry I
Chemistry 136 (or 146)	General Chemistry II
Biology 130	Environmental and Organismal Biology
Biology 140	Cellular and Molecular Biology
Chemistry 225	Organic Chemistry I
Chemistry 226	Organic Chemistry II
Chemistry 227	Organic Laboratory
Physics 125	General Physics I
Physics 126	General Physics II

The courses listed above should be completed within the student’s first three years and prior to application to a specific program. Successful completion of these courses will provide solid preparation for the MCAT or other standardized exams. In addition, most medical schools require a year of English, often satisfied by Composition 105, 106. College level math is normally *not* required for admission to medical school, but may be a prerequisite for one’s major.

## Recommended Courses

Although the above-mentioned courses nominally meet medical school requirements, the serious premedical student should also elect several upper-level courses in the area of the life sciences. These would include, but are not limited to,

Biochemistry 370 (or Biochemistry 470/471)	Principles of Biochemistry Biochemistry I/II
Microbiology 385	Microbiology
Biology 301	Cell Biology
Biology 303	Comparative Animal Physiology
Biology 306	General Genetics
Biology 310	Histology
Biology 312	Comparative Anatomy of Vertebrates

In addition, courses in the humanities or social sciences with a heavy reading/writing component are strongly recommended. Courses in the Health Policy Studies program would provide important insight into medicine from the perspective of public policy.

## Choice of Major

Many medical schools are looking for students with diverse undergraduate backgrounds, so no single academic major will guarantee admission to medical school. At UM-Dearborn students with pre-professional aspirations often major in one of the scientific fields and, indeed, this *may* be beneficial to one’s future plans. Students who select a major outside of the sciences are strongly encouraged to supplement their academic program with upper-level coursework in the life sciences. Likewise, science majors are encouraged to explore areas outside of the sciences. In the long run, a solid liberal arts background is the best preparation for medical school.

Of the majors offered by the Department of Natural Sciences the requirements of the biochemistry program incorporate the greatest number of courses listed above. *It should be pointed out however that majoring in one of the natural sciences provides no assurance of admission to a professional program in the health sciences.* Ultimately acceptance into a professional program will depend on the quality of the student’s overall academic and extracurricular record, and results on standardized tests.

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## Medical Sciences Certificate

New for Fall 2009, the Medical Sciences Certificate complements existing bachelor degrees and acknowledges a student's educational interest in human medical sciences.

Students are eligible to pursue the certificate if they are pursuing a bachelor degree from UM-Dearborn or have completed a bachelor degree from an accredited university. It is a non-degree credential.

The Medical Sciences Certificate is focused on the science of the human organism requires five courses:

Two core courses:

- Anatomy (BIOL 103)
- Physiology (BIOL 105)

One elective course from three areas:

- Biochemistry
- Medical Applications
- Medicine and Society

Most Biology majors pursuing a certificate will take 11 credits over a B.S. degree (3 classes). For transfer students, a maximum of two courses may be transferred into a certificate.

Upon completion of a bachelor's degree and the additional coursework, the Medical Sciences Certificate is added to a student's transcript and indicates that a student has completed the additional coursework in human medical science.

## Other Requirements

In the admission process medical school admissions committees are looking for evidence that the applicant will be successful in medical school. The most reliable indicators of the applicant's potential for success are the GPA and MCAT scores, but other criteria are considered as well. Admissions committees carefully review letters of recommendation from faculty to gain insight into the applicant's academic ability and character; they look at extracurricular activities as an indication of the candidate's interests and values. Admissions committees also look favorably upon research experience or completion of a thesis as an indication of one's commitment to scholarship. Finally, it is expected that the applicant will have had experience in a health-care setting and will demonstrate a familiarity with issues facing medicine today.

## About the MCAT

To obtain more information about the Medical College Admissions Test (MCAT); the American Medical College Application Service (AMCAS); the Medical School Admission Requirements; and medical school data:

Association of American Medical Colleges (AAMC)  
<http://www.aamc.org>

## Other Health Professions

There are many other health professions in addition to allopathic medicine. These professions include osteopathic medicine, dentistry, veterinary medicine, podiatric medicine, chiropractic medicine, and a variety of lesser known specialties. There are also fields such as nursing, physician's assistant, or pharmacy that require fewer years of professional training. The serious premedical student is well advised to explore other areas in the event that the application to medical school is unsuccessful.

## UM-Dearborn Graduates in the Health Professions

Graduates of the University of Michigan-Dearborn are currently matriculated in a variety of professional programs.

These include:

The University of Michigan Medical School  
Wayne State University School of Medicine  
Michigan State University College of Human Medicine  
Michigan State University College of Osteopathic Medicine  
Medical College of Ohio  
Case Western Reserve School of Medicine  
St. Louis School of Medicine  
University of Michigan School of Dentistry  
University of Detroit Mercy School of Dentistry

## For More Information

For more information about pre-medical studies:  
Dr. Mark DeCamp  
(academic advising and course planning for pre-med students)  
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4901 Evergreen Road  
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[mdecamp@umd.umich.edu](mailto:mdecamp@umd.umich.edu)

To request an application or obtain more information about admission to the University:  
Office of Admissions and Orientation  
University of Michigan-Dearborn  
4901 Evergreen Road  
Dearborn, MI 48128-2406  
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