

University of Wisconsin-La Crosse (UWL) Pre-Medicine Committee Information

This document should provide much of the information that both prospective and current students need to know to begin and continue their pre-med career. The document includes information about the UWL Pre-Medicine Committee, UWL Pre-Medicine curriculum, MCAT basics, UWL Pre-Med Club contact information, and other advising tips.

After reviewing the information in this document, feel free to contact any of the advisors listed below if you need more information. To speak with a current student, contact a pre-medicine club officer through MyOrgs or visit the COVE in the Union.

Advising

An undergraduate student at UWL can choose to complete the pre-med curriculum in addition to their primary major. Typical majors of pre-meds include biology, microbiology, biochemistry, chemistry, or physics, but some students choose majors outside the sciences. As long as prerequisite courses required by medical schools and covered on the MCAT are completed with strong performance, any major will do. If you declare “Pre-Med” as a “Second Major” you should be assigned an advisor that has some experience with the pre-medicine path.

The contact information for your advisor can be obtained from WINGS. Be sure to meet with your advisor at least once a semester, preferably before you register. Be advised that it is ultimately your responsibility to be sure you have completed the correct prerequisite courses as required for the medical school(s) you want to attend. UWL’s advisors know most about Wisconsin and Minnesota schools; however, they can assist you with researching other schools as well.

The Pre-Medicine Committee

The Pre-Medicine Committee at UWL is composed of faculty advisors and representatives from the Pre-Health Center and Career Services. It is the

responsibility of the committee to guide their own advisees and help major advisors guide pre-med students regarding the content, sequence, and timing of specific coursework, the MCAT, and the application process.

The current committee is composed of the following:

- Margaret (Peg) Maher (Biology Dept.) (mmaher@uwlax.edu)
- Anne Galbraith (Biology Dept.) (agalbraith@uwlax.edu)
- William Schwan (Microbiology Dept.)
- Curtis Czerwinski (Chemistry and Biochemistry Dept.)
- Steven Verrall (Physics Dept.)
- Kevin Zabel (Psychology Dept.)
- Sierra Colavito (Biology Dept.)
- Kelly Gorres (Chemistry and Biochemistry Dept.)
- Katy Kortenkamp (Psychology Dept.)
- Dan Grilley (Chemistry and Biochemistry Dept.)
- Josh Bench (Consultant, Pre-Health Center)
- Travis Hendrickson (Consultant, Advising and Pre-Health Centers)

There are several more pre-med advisors in addition to the advisors above who are *not* members of this pre-medical committee. Our UWL pre-med advisors are most familiar with universities in Wisconsin and Minnesota. If you would like to view the admissions requirements for other universities, you may access most allopathic US medical school homepages (then find the admissions link), listed alphabetically by state, by using this link: <https://www.aamc.org/students/applying/requirements/msar/>

Program

Before considering the information on this webpage, please keep in mind that being pre-med is an intention, not a major. Students who choose to complete the pre-med curriculum are required to complete an additional degree program, with the most popular options being majors in the

sciences. However, according to the AAMC (Association of American Medical Colleges), students who major in the Humanities and Social Sciences subject areas are admitted at a statistically higher rate. Nevertheless, students with science-related majors still typically represent over half of admitted students. Excellent performance on the Medical College Admissions Test (MCAT) is required for all students applying to medical school. Students typically take the MCAT in the spring of their junior year so they can apply the following summer/fall. A regimented study program is necessary and taking formal practice examinations is helpful to do well on the MCAT. For more information regarding the MCAT, or to register to take the MCAT, please use the following link: <https://students-residents.aamc.org/applying-medical-school/taking-mcat-exam/>. You should begin considering registering for the exam six months before the test date. Many exam days fill up quickly.

Pre-Medical Curriculum at UW-La Crosse:

Below are the typical course requirements for medical schools but it is YOUR RESPONSIBILITY to be sure that you are completing the correct coursework for the medical school(s) you would like to attend.

The starred () courses, at minimum, should be taken *prior* to taking the MCAT exam.** The number in parentheses following the course title is the number of course credits at UWL.

Biology (BIO):

**105 General Biology (4) **306 Genetics (4) and/or 315 Cell Biology (4) **312 Human Anatomy & Physiology I (4) **313 Human Anatomy & Physiology II (4)

Chemistry (CHM):

**103 General Chemistry I (5) **104 General Chemistry II (5) **303 Organic Chemistry Theory I (3) **304 Organic Chemistry Theory II (3) and **305 Organic Chemistry Lab (2) OR **300 Survey of Organic Chemistry (5) (MOST MEDICAL SCHOOLS WILL ACCEPT, NOT

ALL) **325 Fundamental Biochemistry (4) OR **417 Biochemistry I (3) AND 418 Biochemistry II (3) (MOST MEDICAL SCHOOLS REQUIRE, NOT ALL) NOTE: Students **must have** completed MTH 150 (College Algebra) or have tested out of MTH 150 (College Algebra) to be eligible to take CHM 103 (General Chemistry I).

Mathematics (MTH): VARIES, but generally STAT 145 and/or MTH 151 will meet requirements

MTH 207 Calculus I (5) is not required by most medical schools, but is recommended

Please note you may be eligible to test out of MTH 150 College Algebra (4) during your first semester at the University of Wisconsin – La Crosse.

Physics (PHY):

**103 Fundamental Physics I (4) AND **104 Fundamental Physics II (4)

NOTE: If you have taken calculus, strongly consider taking PHY 203 General Physics I (4) and PHY 204 General Physics II (4) in place of PHY 103 and PHY 104.

Other:

ENG 110 College Writing I (3) **PSY 100 General Psychology (3) **SOC 110 The Social World (3) Some schools require an additional humanities or social sciences upper-level course with an intensive writing requirement. It is each student's responsibility to explore which UWL humanities courses will fulfill this requirement with humanities courses instructors or humanities department chairs.

Be advised that although you may earn AP/IB/CLEP credits, many medical schools will not accept them as a replacement for actual coursework taken at the collegiate level. Be sure to check with individual medical schools to be sure of their policies.

Again it is YOUR RESPONSIBILITY to be sure that you are completing the correct coursework for the medical school you would like to attend! The easiest way to do this is to visit the websites of those schools.

Student Responsibilities Your responsibilities as a pre-med student

1. There are important deadlines during the pre-med process. Make sure you know what these are. Your advisor can help, but you have to ask!
2. Get to know your professors so they can get to know you. This is important so that they can write meaningful letters of recommendation for you when you apply to medical school.
3. Realize that all U.S. medical schools require general chemistry, organic chemistry, physics and biology courses.
4. Realize that all medical schools require that you take the Medical College Admissions Test (MCAT). This is a computer-based test that covers biology, general chemistry, physics, verbal reasoning and behavioral sciences.
5. Realize that it will be of benefit for you to take other, more specific courses in addition to the ones that are required by all medical schools prior to taking the MCAT.
6. Take time to carefully tentatively plan your schedule to incorporate all of these courses. Realize that you will need to take at least two science courses most semesters. Meet with your academic advisor at least once a semester to help you with this.
7. Know that there are two options for medical education: allopathic(M.D.) schools and osteopathic (D.O) schools. Learn about

the differences and similarities between them and determine which one you want to pursue.

8. Know that, in most cases, you are going to need a GPA of at least a 3.5 to get into medical school for both your cumulative GPA and your BCPM (biology, chemistry, physics and math) GPA.
9. Know that some medical schools require additional courses other than those required by all medical schools. Examples of courses required for some, but not all, medical schools include calculus, biochemistry, psychology and humanities. For details about specific medical schools please view their respective webpages.
10. Realize that good grades are not all that is necessary to get into medical school. You should also seek the following:
 - Hands-on patient care experiences
 - One to three job shadowing opportunities
 - Opportunities to learn about and experience cultures other than your own
 - Opportunities to be involved with scientific research
 - Worthwhile volunteer opportunities (UWL Leadership and Involvement Center: <https://www.uwlax.edu/university-centers/get-involved/the-cove/lic>)

Your advisor is available to help you with any of the above. Please always feel free to contact them with questions!

Requesting a Committee Letter of Recommendation

Students may choose to request a Pre-medicine Committee letter from any faculty member (not consultants) on the committee listed above. We recommend you choose the faculty member that knows you best and preferably has had you in at least one class.

Once a letter has been requested of the Pre-medicine Committee and all

necessary documents (electronic copy of application, MCAT scores, etc.) have been supplied **by the student**, the primary author completes the letter form and submits it to the rest of the committee for editing and feedback. After an appropriate comment period (usually one week) for feedback has passed, the primary author submits the edited letter. The policy of the Pre-medicine Committee is that the **strengths** and **weaknesses** of each candidate are portrayed respectfully to the best of our knowledge. The Pre-medicine Committee requires that the candidate waive his or her right to see the letter. If the candidate does not wish to waive his or her right to see the letter, he or she should seek a letter from a different source (see below). In a case where a medical school prefers or requires that a ranking form be submitted instead of our form, the Pre-medicine Committee reserves the right to decline to submit rankings.

Students are not required to use the Pre-medicine Committee to author a recommendation letter. However, many medical schools prefer a committee letter and are used to seeing them from UWL. If you do not use a committee letter, you may ask any faculty member you know well to write an academic letter. However, you may need more than one such academic letter.

Regardless of whether you choose to have a committee letter or single academic letters, be prepared to provide the following items to the author ***at the time of request:***

- A copy of your AMCAS and/or ACOMAS application
- An unofficial transcript
- Dates and scores of all MCATs attempted
- A list of the addresses of the schools to which you want a letter sent OR the information for the letter service (such as Interfolio®) you are using.

Electronic copies of the items above are preferred. Note: The letter writing process may take up to a month from the time the primary author receives

the above materials to the time the letter is sent, so plan ahead.

The Application Process

Most American and Canadian medical schools use an application service to handle prospective students. The student arranges for official transcripts and MCAT scores to be sent to the service and completes an application containing additional information. The service then distributes these materials (for a fee) to the medical schools designated by the student. The medical schools then send out "secondary" applications, seeking more information from students they deem qualified. (Note that filling out secondary applications is quite time-consuming so be prepared!). In most cases, recommendations will also be submitted by letter writers to the application services, but some medical schools may direct students to have letter writers submit their letters directly to their admissions offices. It is your responsibility to inform yourself of the application service and medical school admissions processes for the schools to which you are applying.

Traditional students typically complete primary applications the summer before their senior year for entry to medical school the fall semester following graduation. Because of rolling admissions policies, it is to your benefit to apply as early as possible. Many students apply to several medical schools (8-10). You may access the electronic applications at the following links:

Allopathic Medicine (MD)

<http://www.aamc.org>

Osteopathic Medicine (DO)

<http://www.aacom.org>

Podiatric Medicine (DPM)

<http://www.aacpm.org>

In addition to grades and MCAT performance, medical school admissions committees pay close attention to extracurricular activities and recommendation letters. Some things that are also taken into consideration are:

- GPA (grade trends, course difficulty, etc.)
- MCAT score(s)
- Essay writing skills
- Motivation(s) for entering medicine
- Job shadowing of health professionals and other health care experience
- Personal attributes
- Personal interview (Career Services can help with this)
- Volunteer Experience
- Extracurricular activities including sports or hobbies
- Medical experience (e.g., CNA (Certified Nursing Assistant) or EMT (Emergency Medical Technician) experience)
- Work experience
- Research Experience (at UWL, industry or medical school summer research fellowships)
- Letters of recommendation
 - Be sure your professors know you well so they can write positive and credible letters of recommendation on your behalf.
- State of residency (especially for public schools) --- About 50% of an incoming class will be Wisconsin residents for the Medical College of Wisconsin. The University of Wisconsin School of Medicine and Public Health tends to have a much higher percentage of Wisconsin residents.

Becoming a Physician (M.D. or D.O.)

The typical physician completes a 4-year undergraduate degree including prerequisite courses. The undergraduate degree is followed by four years of either medical or osteopathic school, followed by a minimum of 3 years of residency training. This is equal to a minimum of 11 years after high school. Medical school is expensive and most medical schools will help you to explore financial aid opportunities.

D.O. vs M.D.

There are two ways in which one can acquire the education necessary to become a physician and practice medicine in the United States. The most common “Allopathic” route is to obtain an M.D. (Doctorate of Medicine). The less common “Osteopathic” alternative is to obtain a D.O. (Doctorate of Osteopathic Medicine). In general, the educational requirements and the length of training are the same. There may be variations in opportunities for specializations, job scope, job availability, and salaries, but there is definitely overlap in these paths and outcomes as well. Hospitals and clinics typically employ both M.D. and D.O. physicians and use them interchangeably. The rights and responsibilities of a physician will ultimately depend on licensure requirements of the physician’s state of practice. The difference between the two doctorate degrees is that the D.O. degree includes exposure to spinal manipulation and tissue palpation as a means of diagnosis and treatment. The overall emphasis in osteopathic schools is slightly different, as well. Osteopathic education emphasizes how a disease affects the entire person/body, a “holistic emphasis.” For this reason, many osteopathic physicians pursue primary care practice options.

How do UWL students do?

Many UWL alumni report that throughout medical school they are as or better prepared than their peers who attended larger universities. This is largely due to the fact that UW-L is a comprehensive university. Students from UWL have many opportunities to work closely with faculty to develop professional skills.

M.D./Ph.D. Programs

Some medical schools offer joint programs where a student can simultaneously earn an M.D. and Ph.D. These training programs include significant research and prepare students for research and teaching careers to complement their clinical careers in medicine. Graduates of these programs are often employed in medical schools, research facilities, and pharmaceutical companies.

Plan 'B' through 'Z'

As you may know, every year more students apply to medical school than there are seats available. Moreover, becoming a physician is not an easy or quick task. Many students who begin their undergraduate careers with a pre-med intention later decide to pursue other careers options. This section will explore alternative options if you decided to change your major or do not get accepted into medical school the first time. We will explore two options: (1) I still want to be a physician, and (2) I want to stay in health care, but maybe becoming a physician is not for me.

1. I still want to become a physician. Just because you are not accepted into medical school the first year you apply that does not mean that you are not a candidate for future admission. With this being said, taking time off between the end of the undergraduate year and the beginning of medical school is becoming greater with time. If you are not accepted, and want to apply again, it is to your advantage to contact the admissions office with regard to how you can improve your application. Many schools will gladly speak with you about this. Remember to be polite, as they may remember you the next time you apply. To improve your application, there are two options. One is to work independently on improving your application, and the other is to enter a post- baccalaureate pre-med program.

If you chose to work at a University without a specific program you should consider the following:

1. Research opportunities

2. Advising opportunities

3. Access to professors

Others may choose to enter a university with a post-baccalaureate program. There are several kinds of programs that fall into a plethora of categories:

- Enhancement Programs: These programs try to make your overall application better. Many of them are extremely competitive especially if they are at a large university. Other universities have smaller programs that are open to anyone.
- Master Programs: You may want to consider earning a master's degree. Some universities have special programs that relate directly to clinical medicine for pre-medical students.
- Minority/Disadvantaged Programs: There are many programs that are available for students who come from a diverse background. These are typically competitive and involve interactions with others in a supportive atmosphere.

If you have stellar grades, and a great application but you didn't get into the school of your choice, you may want to consider taking a year off and traveling or working. Reapplying will show maturity and your wish to enter that program.

2. Another “Plan B”: I want to stay in health care, but Pre-Med is not for me.

Students who are interested in becoming a physician and know they want to work in the health care field, but aren't sure that they would like to be a physician, may want to consider an undergraduate major or masters degree in other health professions. These programs provide the opportunity for students to become licensed health care practitioners in various areas of health care working with physicians. Other students may be interested in working in a “behind the scenes” field by working in a lab. This can be

accomplished by completing a bachelor's degree. Contact the UWL Pre-Health Center for more information about alternatives to pre-medicine.

UWL Pre-Med Club

The American Medical Student Association (AMSA) is a student-governed, student-led national organization representing the concerns of future physicians. Part of AMSA's mission is to "promote active improvement in medical education, assist in the improvement and understanding of world health problems, contribute to the welfare of medical students, premedical students, interns, residents and post-MD/DO trainees; and advance the profession of medicine."

The Pre-Med Club has a charter with the Student Osteopathic Medical Association (SOMA). SOMA's mission is "to promote osteopathic ideals and unity within the profession, to educate future osteopathic physicians, and to establish and to maintain lines of communication among healthcare professionals in an ongoing effort to improve the quality of healthcare."

For further information, please contact a UWL Pre-Health advisor, or any of the personnel listed in the Contacts section.