

# Pre-professional Programs

Students at the University of Missouri-St. Louis may develop pre-professional study programs in either law or the health professions. With early and careful advising, students may develop an appropriate program to prepare for the intended professional study.

Students should seek pre-professional advisors in their interest area early in their academic careers to ensure development of sound, comprehensive study programs that fulfill the admission requirements of the professional program to which they wish to apply.

The following information on pre-professional study at UMSL is provided to give students minimal guidelines and assistance in planning a program.

For advisement and information, contact the Office of Undergraduate Student Affairs in the College of Arts and Sciences, 303 Lucas Hall, 314-516-5501

## Pre-Law

Pre-law students at UMSL come from a variety of majors, including Art History, Criminal Justice, Economics, English, History, Philosophy, Political Science, and many more. Many of these majors offer pre-law tracks or minors, and you can identify yourself as a pre-law student at any time during your career at UMSL. The Pre-Law Committee of the American Bar Association (ABA) advises that a wide range of undergraduate majors can serve as a path to law school:

The ABA does not recommend any undergraduate majors or group of courses to prepare for a legal education. Students are admitted to law school from almost every academic discipline. You may choose to major in subjects that are considered to be traditional preparation for law school, such as history, English, philosophy, political science, economics or business, or you may focus your undergraduate studies in areas as diverse as art, music, science and mathematics, computer science, engineering, nursing or education. Whatever major you select, you are encouraged to pursue an area of study that interests and challenges you, while taking advantage of opportunities to develop your research and writing skills. Taking a broad range of difficult courses from demanding instructors is excellent preparation for legal education. (Source: the American Bar Association ([http://www.americanbar.org/groups/legal\\_education/resources/pre\\_law.html](http://www.americanbar.org/groups/legal_education/resources/pre_law.html)))

After graduating from UMSL, students have gone on to attend law school locally at Saint Louis University, Washington University in St Louis, as well as at the University of Missouri-Columbia and University of Missouri-Kansas City. Graduates attend prestigious law schools outside the St Louis area as well.

There are hundreds of UMSL graduates who have gone to law school and now work as lawyers, judges, or in other careers in the legal profession. Many of them remain in the St Louis area, and the pre-law program at UMSL regularly brings them to campus to interact and share advice with students. By declaring yourself to be pre-law, you will receive updates about upcoming events and opportunities to meet and connect with alumni in the legal profession.

The pre-law advisor can assist you in selecting courses that will best meet your interests while also allowing you to develop the skills that are

important for a successful law school application. For more information, please refer to the UMSL pre-law advising website (<http://www.umsl.edu/divisions/artscience/Advising%20and%20Student%20Resources/prelaw.html>).

## Pre-Health Sciences

The University of Missouri - St. Louis provides advising for students planning to continue their studies to become healthcare professionals. While there are no pre-health majors, the prerequisite classes necessary for entry into health professions schools are offered in both the Fall and Spring Semesters with some being offered in the Summer as well. This allows students to choose any major offered by UMSL to be completed while pursuing their desired pre-health track. While some professional programs might not require a baccalaureate degree, it is strongly recommended to complete one in order to be as competitive as possible when applying.

There are no requirements to declaring a pre-health track, but students that have attended UMSL for two semesters and whose GPA is below a 2.7 will no longer be considered on a pre-health track. Students are able to appeal to be reinstated on a pre-health track after one semester.

Programs that are covered by UMSL's pre-health advising include but are not limited to: medicine, dentistry, optometry, pharmacy, veterinary science, physician assistant, occupational therapy, physical therapy, chiropractic, and clinical lab science. For pre-health advising please contact 314-516-5501 for an appointment.

In addition to the courses listed below, students should actively seek out extracurricular opportunities. Such activities can include volunteering, shadowing, research, and organizational leadership. Students are encouraged to join some of the many on-campus organizations including one of the pre-health societies. Information about student organizations can be found at the Office of Student Life (<http://www.umsl.edu/studentlife/osl>).

Since admission requirements may vary between schools, students should consult the catalogs<sup>1</sup> of the programs to which they intend to apply. Updated information may be found on the pre-health website: [www.umsl.edu/prehealth](http://www.umsl.edu/prehealth).

## Suggested Courses

Many health professions schools require or recommend the following undergraduate courses<sup>2</sup>:

### Biology

BIOL 1831	Introductory Biology: From Molecules To Organisms	5
BIOL 1821	Introductory Biology: Organisms And The Environment	5
BIOL 2012	Genetics	3
BIOL 2482	Microbiology	3
BIOL 3622	Cell Biology	3
BIOL 1131	Human Physiology And Anatomy I	4
BIOL 1141	Human Physiology And Anatomy II	4

### Chemistry

CHEM 1111	Introductory Chemistry I	5
CHEM 1121	Introductory Chemistry II	5

CHEM 2612	Organic Chemistry I	3
CHEM 2622	Organic Chemistry II	3
CHEM 2633	Organic Chemistry Laboratory	2
CHEM 4712	Biochemistry	3

**Mathematics**

Select courses at least through calculus, as appropriate for the major degree.<sup>2</sup>

MATH 1100	Basic Calculus	3-5
	or MATH 1800 Analytic Geometry And Calculus I	
MATH 1320	Introduction to Probability and Statistics	3

**Physics**

As appropriate for the degree chosen:<sup>2</sup> 8-10

PHYSICS 1011	Basic Physics I	8
& PHYSICS 1012	and Basic Physics II	

or

PHYSICS 2111	Physics: Mechanics and Heat	10
& PHYSICS 2112	and Physics: Electricity, Magnetism, and Optics	

<sup>1</sup> The campus health professions advisor has copies of these catalogs. Call 314-516-5501 for an appointment.

<sup>2</sup> Consult with the health professions advisor to determine the appropriate course(s).

Since students are not confirmed for admission to professional schools until the science requirements for admission are fulfilled, students should meet the science requirements before the end of the junior year. To complete these requirements in time, BIOL 1831 and BIOL 1821, Introductory Biology I and II as well as CHEM 1111 and CHEM 1121, Introductory Chemistry I and II should be taken during their first three semesters.

Successful completion of these recommended courses also helps students prepare for required standardized exams.

Students should take the required national standardized examination early in their junior year as is appropriate for the exam: The Medical College Admission Test (MCAT) for Pre-Med students; the Dental Aptitude Test (DAT) for Pre-Dental students; the Optometry Admission Test (OAT) for Pre-Optometry students; and the Pharmacy College Admission Test (PCAT), (if required) for Pre-Pharmacy students; and the Graduate Record Exam (GRE) is generally sufficient for other professional healthcare school. (Students should consult with their intended professional school for appropriate test information.)

Each year the number of applicants to health profession schools exceeds the number of available places. Students should meet with Career Services (<http://www.umsl.edu/depts/career>) and the various campus advising resources are available to students to explore alternative plans should they not be accepted.

**Pre-Optometry**

The University of Missouri-St. Louis offers a four-year program of study leading to the Doctor of Optometry degree; this professional degree is administered by the College of Optometry. It is one of only 20 schools or colleges of optometry in the United States and the only one in the state of Missouri. This program, as a result, makes UMSL an ideal institution for Pre-Optometry education. Various programs are available for Pre-Optometry students as noted below.

Students may pursue a traditional 4 + 4 program, which is a bachelor's degree followed by the four-year graduate optometry program. In this case, students may pursue any bachelor's degree, as long as the pre-optometry requirements are met in biology, chemistry, math, physics, psychology and English.

Alternatively, the College of Arts & Sciences sponsors a 3+4 program in which the undergraduate degree is granted when the student satisfactorily completes the first semester of the professional program and has met all of the conditions for the specific undergraduate degree for which the student has applied. Most commonly, the degree awarded will be a Bachelors of Interdisciplinary Studies or a B.S. in Biology.

Students interested in this program must apply with the campus pre-health advisor and maintain a G.P.A. of 3.2. Some summer classes may be expected, and the student should be prepared to take the OAT by the end of their sophomore year.

For more information on admission requirements for the College of Optometry, please refer to the Optometry section of this Bulletin.

The recommend course schedule can be found below, any changes would need to be approved of by both the Pre-Health Advisor, and the College of Optometry:

**Freshman**

Fall	Hours Spring	Hours Summer	Hours
ENGL 1100	3 CHEM 1111	5 BIOL 1131	4
MATH 1030	3 BIOL 1821	5 BIOL 1141	4
MATH 1035	2 MATH 1800	5	
PSYCH 1003	3		
General Education: Humanities	3		
INTDSC 1003	1		
	15	15	8

**Sophomore**

Fall	Hours Spring	Hours Summer	Hours
PHYSICS 1011	4 PHYSICS 1012	4 Take the OAT	
BIOL 1831	5 CHEM 2612	3 Apply through OptomCAS	
CHEM 1121	5 PSYCH 2201	4	
American History or Government Requirement	3 General Education: Cultural Diversity/ Humanities	3	
	17	14	0

**Junior**

Fall	Hours Spring	Hours Summer	Hours
CHEM 2633	2 BIOL 4712	3 BIOL 3622	3
BIOL 2012	3 BIOL 2482	3 PHIL 2256	3
PSYCH 2211	3 BIOL 2483	2	
ENGL 3100 (Or Equivalent)	3 BIOL 4602 <sup>2</sup>	3	
PSYCH 3390 (Must be Neuroscience Related) <sup>1</sup>	3 General Education: Social and Behavioral Sciences	3	
	14	14	6

**Senior**

Fall	Hours
OPTOM 8010	4
OPTOM 8020	4
OPTOM 8030	1
OPTOM 8040	4
OPTOM 8060	2
OPTOM 8090	1

OPTOM 8350	2
	18

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Total Hours: 121

<sup>1</sup> May also be BIOL 4905 or CHEM 3905.

<sup>2</sup> May be any Biology 4000 level lecture.