

# PRE-MED

Students pursuing a career in medicine, whether allopathic (M.D.) or osteopathic (D.O.), should take special care to prepare. While every medical school requires the completion of a four-year degree from an accredited institution, the premedical coursework requirements vary from school to school. Every medical school has unique requirements which may include coursework, laboratory, volunteer, and healthcare experiences. Each school determines their own list of required and recommended premedical coursework; some require successful completion of specific classes while others have progressed to competency-based admissions and some accept AP, online, and community college courses while others do not. Students are encouraged to review curriculum outlines for years 1 and 2 of the professional programs to which they intend to apply and are encouraged to enroll in coursework that provides foundational knowledge to support their success when planning electives to complete their academic plan.

## Common Required Courses:

Common requirements for most medical schools include the courses listed below. UMKC Courses that will universally fulfill the requirements are listed along with alternative options. It is the students responsibility to ensure that any alternative options selected are acceptable for satisfaction of the requirements for the schools to which they intend to apply.

Code	Title	Credits
<b>One Year of Biology (select from):</b>		
BIOLOGY 108 & 108L	General Biology I and General Biology I Laboratory	4
and		
BIOLOGY 109 & 109L	General Biology II and General Biology II Laboratory	4
Alternative courses may include (NOTE: most schools require biology courses to be completed with a lab):		
BIOLOGY 202	Cell Biology	3
BIOLOGY 206	Genetics	3
BIOLOGY 218	Introductory Anatomy	3
NURSE/HLSC 120	Anatomy & Physiology I	4
NURSE/HLSC 160	Anatomy and Physiology II	4

Code	Title	Credits
<b>One Year of English:</b>		
ENGLISH 110 & ENGLISH 225	Introduction to Academic Prose and English II: Intermediate Academic Prose	6
Alternative courses may include:		
English Composition I		3
Any Writing Intensive Course		3

Code	Title	Credits
<b>Two Years of Chemistry (through Organic Chemistry):</b>		
NOTE: Most schools require chemistry courses to be completed with a lab.		
CHEM 211 & 211L	General Chemistry I and Experimental General Chemistry I	5
CHEM 212R & CHEM 212LR	General Chemistry II and Experimental General Chemistry II	5
CHEM 321 & 321L	Organic Chemistry I and Organic Chemistry Laboratory I	4
CHEM 322R & CHEM 322L	Organic Chemistry II and Organic Chemistry Laboratory II	4

Code	Title	Credits
<b>One Year of Physics:</b>		
PHYSICS 210 & PHYSICS 220	General Physics I and General Physics II	8
or		
PHYSICS 240 & PHYSICS 250	Physics For Scientists and Engineers I and Physics For Scientists and Engineers II	10

## Common Recommended Courses:

Students are encouraged to engage in academic or laboratory research opportunities as part of their preparation for medical school and related professions. Early exposure to scientific inquiry demonstrates interest and involvement in the creation of knowledge, improves critical thinking, and assists with writing and communication skills. Visit Undergraduate Research @ UMKC (<https://www.umkc.edu/searchsite/>) for more information.

The following courses are commonly recommended to students to ensure they have foundational knowledge in subjects that comprise curriculum in the first two years of the professional medical curriculum.

Code	Title	Credits
<b>Science</b>		
BIOLOGY 202	Cell Biology	3
BIOLOGY 206	Genetics	3
BIOLOGY 218	Introductory Anatomy	3
BIOLOGY 306	From Bench to Bedside: Translational Research	3
BIOLOGY 313	Microbiology	3
BIOLOGY 316	Principles of Physiology	3
BIOLOGY 319	Global Health: New and Emerging Infectious Diseases	3
BIOLOGY 328	Histology	2
BIOLOGY 409	Developmental Biology	3
BIOLOGY 435	Immunology	3
BIOLOGY 441	Biochemistry	3
HLSC/NURSE 120	Anatomy & Physiology I	4
HLSC 125	Medical Terminology	1
HLSC/NURSE 160	Anatomy and Physiology II	4
HLSC 410	Epidemiology	3
<b>Social Sciences</b>		
ANTHRO 103	Introduction To Cultural Anthropology	3
HLSC 252	Human Growth and Development	3
HLSC 300	Diversity in Health	3
PSYCH 210	General Psychology	3
PSYCH 222	Child Psychology	3
PSYCH 433	Psychological Disorders	3
SOCIOL 201	Introduction To Social Psychology	3
HLSC 404	Introduction to Social Justice	1
PBHL 158	Public Health Principles	3
PBHL 335	Historical and Contemporary Issues in Public Health	3
PBHL 358	Environmental Public Health	3
<b>Humanities</b>		
ART-HIST 110	Introduction to the History of Art: Pyramids to Picasso	3
COMM-ST 277	Interpersonal Communication	3
COMM-ST 344	Organizational Communication	3
ENGLISH 304WI	Professional and Technical Writing	3
ENGLISH 306WI	Advanced Composition	3
PHILOS 210	Introduction to Philosophy	3
PHILOS 221	Contemporary Moral Issues	3
PHILOS 321	Ethics	3

Students can learn more about preparing for a career in medicine, including lists of U.S. and Canadian medical schools and their requirements through the Association of American Medical Colleges (AAMC) for allopathic programs and the American Association of Colleges of Osteopathic Medicine (AACOM) for osteopathic programs.

AAMC: <https://www.aamc.org/>

AACOM: <https://www.aacom.org/>

In addition to specific admission requirements, most medical schools require students to take either the Medical College Admission Test (MCAT) or the Graduate Record Exam (GRE) as a requirement for admission. Students can find more information about these exams, including subject components, scoring, and resources for preparation using the links below. Components of the MCAT may include subjects not included in required coursework for admission, including biochemistry, statistics, psychology and sociology. Students planning to take the MCAT are encouraged to complete coursework in the subject components to ensure they have a foundational understanding of the material for successful completion of the exam.

MCAT: <https://students-residents.aamc.org/>

GRE: <https://www.ets.org/gre> (<https://www.ets.org/gre/>)

Students applying for professional schools of medicine do so through a centralized application service. Three such services are utilized for schools in the U.S. and Canada; the American Medical College Application Service (AMCAS), the American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS), and for students applying to allopathic medical school in the state of Texas, the Texas Medical and Dental School Application Service (TMDSAS). Students can learn more about the centralized application services including requirements for personal statements, letters of evaluation, timelines and fee assistance programs through the links below.

AMCAS: <https://students-residents.aamc.org/applying-medical-school/applying-medical-school-process/applying-medical-school-amcas/>

AACOMAS: <https://www.aacom.org/become-a-doctor/how-to-apply-to-osteopathic-medical-college> (<https://www.aacom.org/become-a-doctor/how-to-apply-to-osteopathic-medical-college/>)

TMDSAS: <https://www.tmdsas.com/>

Students can utilize PlanMyDegree (<https://planmydegree.umkc.edu/>) to plan common admission course requirements and can find helpful information regarding the timeline for applying from the AAMC at: <https://students-residents.aamc.org/applying-medical-school/article/timeline-application-and-admission-medical-school/>