

PRE-MEDICINE

JMU Pre-professional Health Programs



GENERAL OVERVIEW

Allopathic (MD) and osteopathic (DO) physicians are health professionals who diagnose illness, prescribe and administer treatment, and advise patients on disease prevention and management. Physicians practice in diverse settings including small private practice, group practice, managed care system, clinic, hospital, laboratory, industry, military, academic medicine, or government. Medicine offers diverse career options and physicians often practice in two or more settings. MD and DO programs require four years of medical education followed by residency training of three to eight years. Residency programs (graduate medical education) in family practice, general internal medicine, and pediatrics take three years to complete; general surgery requires five years and subspecialty training in fields like plastic or neurological surgery may require an additional two to three years.

CHOOSING A MAJOR

Pre-medical students typically obtain a Bachelor of Science (B.S.) or Bachelor of Arts (B.A.) degree while completing the requirements for admission to medical school. **Medical schools do not require or prefer a particular undergraduate major.** Admissions committees welcome students whose intellectual curiosity leads them to a wide variety of disciplines. Medical schools recognize the importance of a strong foundation in the natural sciences, social sciences, critical thinking, and the humanities. Applicants must complete course requirements and demonstrate proficiency in diverse disciplines as evidenced by the science GPA, overall GPA, and performance on the MCAT.

PREREQUISITES

Admissions requirements for allopathic medical schools in the US and Canada are listed in the *Medical School Admission Requirements (MSAR)* which is updated annually by the Association of American Medical Colleges (www.aamc.org). Admissions requirements for osteopathic medical schools are provided in the *Osteopathic Medical College Information Book* published annually by the American Association of Colleges of Osteopathic Medicine (www.aacom.org). Because there is variability among medical schools regarding required and recommended coursework, pre-med students should incorporate school-specific information into their coursework planning.

Minimum requirements for admission to medical school can be met at JMU by completing the following courses:

BIO 114 Organisms (4 credit hours)	CHEM 131/132 General Chemistry I & II (8 credit hours; including laboratory 131L-132L)
BIO 214 Cell & Molecular Biology (4 credit hours)	CHEM 241/242 Organic Chemistry I & II (8 credit hours; including laboratory 242L)
PHYS 140/150 College Physics I & II (8 credit hours; including laboratory 140L-150L)	

To prepare for the MCAT²⁰¹⁵, students are **strongly encouraged** to take a course in **critical thinking** (GPHIL 120), **psychology** (PSYC 101), **sociology** (GSOCI 110), and **biochemistry** (CHEM 361). Students are **strongly encouraged** to take **upper-level biology** in a variety of areas including genetics, microbiology, and physiology. Additional behavioral and social science coursework is recommended (*eg.* GPSYC 160, PSYC 308, GSOCI 140, SOCI 375, SOCI 385, ANTH 360).

We strongly recommend you complete a minimum of **6 credit hours of Mathematics (calculus and statistics)** and **6 credit hours of English (composition and literature: ENG, GENG, GHUM200 or GWRTC)**. Not all medical schools accept AP credit in English or the sciences. A small number of medical schools have specific mathematics requirements.

ADMISSIONS CRITERIA & ACADEMIC RECORD

Admissions committees assess biographical and academic information provided by the applicant and by the undergraduate school(s) attended. Of particular importance are grade point averages (GPA), scores on the Medical College Admission Test (MCAT), medical-related experiences and service activities, letters of evaluation, and interviews. Admissions committees assess academic performance in light of cumulative and science GPAs, subjects and credit hours completed, rigor of the baccalaureate program, and trends in performance. For example: a weak first-year followed by strong performance in advanced coursework is preferred over variable or declining performance. A competitive academic record is expected as evidence of excellent ability and motivation!

STANDARDIZED TEST

The Medical College Admission Test (*MCAT*) is required for admission to US medical schools. The MCAT is a multiple-choice exam administered multiple times (~25 dates) from late January through early September at test sites in the US,

Canada, and around the world. Many schools do not accept MCAT exam scores that are more than three years old. Extensive information and preparation resources can be found at www.aamc.org/students/applying/mcat. The MCAT is an extremely important factor. “Competitive” MCAT scores vary among schools and with applicant populations so it is important to consult the *MSAR* for up-to-date school-specific information.

PREPARATION TIMELINE

Candidates for the MCAT should have completed pre-requisite courses in biology, general chemistry, organic chemistry, biochemistry, physics, psychology, and sociology. The application process requires 12-15 months. Thus, if a student’s goal is to obtain a baccalaureate degree after four years and matriculate in medical school upon graduation (“direct-entry” applicant), then the *MCAT* and the *AMCAS* and/or *AACOMAS* application(s) need to be completed during the summer following the third year. A pre-med student who chooses to pursue this timeline will experience a very highly structured and demanding program. Many students choose to expand their preparation timeline so as to strengthen all elements of their application.

EXPERIENCE

Students are strongly encouraged to seek volunteer and/or employment opportunities. Examples include shadowing physicians, volunteering at a clinic or hospital, providing community service, or completing an internship or prehealth enrichment program. In addition to providing a valuable service to the community, experience demonstrates motivation and commitment to the profession. While often not stated as a prerequisite, admissions committees expect a candidate to have experience in a variety of healthcare settings. Experience demonstrates that you have actively tested your career choice and that your interests have been reinforced.

Undergraduate research experience also plays a significant role in clarifying interests! Because physicians regularly use critical judgment when reviewing clinical research literature, applicants must be proficient in their understanding and application of scientific inquiry and reasoning skills. Some pre-med students even decide to apply to dual-degree programs (MD or DO with PhD, JD, MPH, or MBA; www.aamc.org/students/considering/exploring_medical/research/mdphd/).

EVALUATIONS/RECOMMENDATIONS

All medical schools require submission of letters of evaluation as part of the application. JMU students and alumni are encouraged to utilize the PPH Evaluation Service to assemble an evaluation letter packet that will fulfill the requirements of all U.S. medical schools.

PPH ADVISING RESOURCES

The Institute for Innovation in Health and Human Services (IIHHS) and its staff of dedicated coordinators function to assist pre-professional health students in their career planning and to help them realize their aspirations by providing the specific information, advice, and assistance that is critical to their success. **Dr. Sharon Babcock** is the **Pre-medicine Program Coordinator** (babcocks@jmu.edu, Bioscience 3005, (540) 568-6652).

The JMU Pre-medical Association and Pre-med Chapter of AMSA welcome students to their meetings and encourage students to become members. Pre-professional student organizations provide health career information that is invaluable to the pre-professional student. Active involvement and leadership in student organizations is evidence of students’ desire to enhance their undergraduate experience.

Note: Students planning professional health careers are encouraged to discuss their goals with pre-professional health advisors. It is important to begin the planning process when students’ studies are initiated and imperative that students plan career options. The admissions information presented above should be used only as a guide when planning a pre-professional health curriculum. Students should not interpret these guidelines as definitive statements regarding the admissions requirements or policies of the individual schools and colleges of professional health. Since each institution specifies its own requirements and procedures, it is essential that students become familiar with these requirements and make appropriate course selections in consultation with their pre-professional health and academic advisors. Admissions requirements are necessarily limited to provide flexibility in the undergraduate program. The course requirements for most professional health programs are similar and usually specify minimum credits in natural and behavioral or social science disciplines. Schools of professional health recognize the desirability of students having a variety of interests and diverse backgrounds. Applicants are urged to explore diverse cultures and disciplines in the humanities and sciences.

Institute for Innovation in Health and Human Services
Pre-professional Health Programs
Bioscience Building — Room 3005
E-mail: p-ph@jmu.edu
Phone: (540) 568-6652