



Pre-Medicine Prerequisites Guide

This guide contains course prerequisites and other requirements for medical school as well as recommended courses for [MCAT](#) preparation*. Because admissions requirements vary among medical schools, you should consult with the MSAR ([Medical School Admission Requirements](#)) and medical school websites to ensure proper coursework and that all other requirements are met or exceeded.

Course Prerequisites at WSU

Anatomy and Physiology

- Human Anatomy with lab
 - BIOL 315 – Gross and Microanatomy
- Human Physiology with lab (select one course)
 - BIOL 353 – Advanced Human Physiology
 - NEUROSCI 325 and 326 – Foundations of Medical Physiology

Biology

- General Biology with lab
 - BIOL 106 – Introductory Biology: Organismal Biology*
 - BIOL 107 – Introductory Biology: Cell Biology and Genetics *

Molecular Biosciences/Microbiology

- Genetics and Molecular Biology
 - BIOL 301/MBIOS 301 – General Genetics*
 - BIOL 352 – Cells **OR** MBIOS 401 – Cell Biology
 - MBIOS 304 – Microbiology and Molecular Biology laboratory
- Microbiology
 - MBIOS 305 – General Microbiology

Chemistry

- General Chemistry with lab
 - CHEM 105 - Principles of Chemistry I*
 - CHEM 106 - Principles of Chemistry II*
- Organic Chemistry
 - CHEM 345 – Organic Chemistry I*
 - CHEM 348 – Organic Chemistry II



- Biochemistry
 - MBIOS 303 – Introductory Biochemistry *

Math

- Calculus (select one course)
 - MATH 140 – Calculus for Life Scientists
 - MATH 171 – Calculus I
- Introductory Statistics (select one course)
 - STAT 212 – Introduction to Statistical Methods*
 - PSYCH 311 - Statistics in Psychology*

Physics

- Introductory Physics with lab (select one series)
 - General Physics series
 - PHYS 101/111*
 - PHYS 102/112*
 - Physics for Scientists series
 - PHYS 201/211
 - PHYS 202/212

Additional Science Courses (recommended, not required)

- Health Careers
 - BIOL 221 – Exploring Health Careers
 - BIOL 394 – Medicine as a Career
- Health and Disease
 - BIOL 370 – Ecology of Health and Disease
 - BIOL 395 – Evolutionary Medicine
 - MBIOS 405 – Cell Biology of Disease
 - MBIOS 440 - Immunology

Social Sciences

- Psychology
 - PSYCH 105 – Introductory Psychology*
 - PSYCH 320 – Health Psychology (recommended, not required)
- Sociology
 - SOC 101 - Introduction to Sociology*
 - SOC 334 – Medical Sociology (recommended, not required)



- Other Social Sciences (recommended, not required)
 - PUBHLTH 110 – Social/Environmental Determinants of Health
 - ECONS 324 – Economics of Health Care
 - PHIL 365 – Biomedical Ethics
 - H_D 384 – Prevention and Intervention in Human Development

Language

- English - Introductory Writing (select one)
 - ENGLISH 101 – College Composition
 - ENGLISH 298 – Writing and Research (Honor's students only)
- Spanish or other Foreign Language (recommended, not required)

Other Common Program Requirements

In addition to the prerequisite courses listed above, most medical schools require additional requirements for applying to their programs. Most programs use holistic admissions, where more than GPA and MCAT scores are used to determine admissions. It is important to check the institution's website for specifics on their program requirements and to ensure you meet or exceed these requirements.

For most medical schools, the following requirements are used to holistically determine admissions:

- Completion of prerequisite courses
 - Minimum required grades (see specific program for minimum grades)
 - Some programs allow AP/IB/CLEP/DANTES/DSS courses but check to determine if programs allow these test credits to count for prerequisites
 - Most programs do not allow pass/fail or credit/no credit but check with each program to determine if these are acceptable
 - Online course acceptance
 - Timeframe for completion (e.g. within the past 5-7 years)
- Cumulative GPA and Science GPA requirements
- MCAT scores and sub-scores
- PREview Exam, Casper, or other situational judgement tests (SJTs) scores
- Experiences
 - Work, volunteer, and job shadowing experiences
 - Academic research including presentations, posters, and conference attendance



- Teaching and tutoring experiences
- Non-academic pursuits: hobbies, special interests, athletics, leadership, advocacy, etc.
- Letters of recommendation (check with each program for number of letters needed and list of acceptable letter writers)
- Personal Essay/Statement
- Secondary application for admissions
- Personal interview
 - Understand the formats used by different medical schools prior to interviewing with each program

Pre-med Competencies for Entering Medical Students

Medical students must possess a broad range of competencies to successfully learn and develop in medical school and become effective physicians. The premed competency model serves as a guide for students as they prepare for medical school.

Medical schools will use the following competencies to evaluate an applicant's readiness for medical school:

Professional

- Commitment to learning and growth
- Cultural Awareness
- Cultural Humility
- Empathy and Compassion
- Ethical responsibility to self and others
- Interpersonal skills
- Oral Communication
- Reliability and dependability
- Service orientation
- Teamwork and collaboration

Science

- Human Behavior
- Living systems

Thinking and Reasoning

- Critical Thinking
- Quantitative Reasoning
- Scientific Inquiry
- Written Communication