

Materials Science in Engineering Pre-Health Planning Guide

Please refer to Health Professions Advising Center [website](#) for additional pre-health information.

Medical School Requirement	Possible Degree Application
Biology (8 credits)	Advisor Approved Elective* (with permission of faculty advisor) - BIOMG 1350, and BIOG 1440 or 1445, and BIOG 1500 recommended.
Biochemistry (3/4 credits)	Advisor Approved Elective* (with permission of faculty advisor) or Outside Technical Elective+ - BIOMG 3310 and 3320 or BIOMG 3300 recommended
Upper-level Biology (3/4 credits)	Advisor Approved Elective* (with permission of faculty advisor) or Outside Technical Elective+ <ul style="list-style-type: none"> Although not required, students find that taking upper level biology courses useful in understanding advanced concepts and providing greater depth of preparation for MCAT exams
General Chemistry (8 credits)	CHEM 2090 - Engineering Common Curriculum Requirement CHEM 2080 or CHEM 2150 - Advisor Approved Elective* (with permission of faculty advisor) or Outside Technical Elective+.
Organic Chemistry (8 credits)	Advisor Approved Elective* (with permission of faculty advisor) or Outside Technical Elective+ - CHEM 3570, CHEM 3580, and CHEM 2510 recommended.
English (writing intensive) (6 credits)	Engineering Common Curriculum Requirement (FWS) <ul style="list-style-type: none"> Most medical schools will accept First-Year Writing Seminars (FWS) in fulfillment of their writing requirement; however, writing-intensive courses from other disciplines may also be acceptable. Students are encouraged to check the requirements of specific medical schools as the English requirement varies.
Math	Calculus: MATH 1910 - Engineering Common Curriculum Requirement Statistics: ENGRD 2700 – can count as second ENGRD course and satisfy Advanced Math requirement
General Physics (8 credits)	PHYS 1110, 1112 and 2213 - Engineering Common Curriculum Requirement <ul style="list-style-type: none"> Students complete the 8 credits of Physics requirements by completing PHYS 1112, and PHYS 2213 lectures and PHYS 1110 lab. Information covered in PHYS 2214 is recommended for the MCAT. If a student chooses not to take PHYS 2214, it is strongly encouraged that the student self-studies information covered in the course. Some medical schools may require two semesters of Physics lab. If another semester of lab is necessary a student must complete PHYS 2214.
Social Science	Liberal Studies Requirement or Advisor Approved Elective* (with permission of faculty advisor) <ul style="list-style-type: none"> The “Psychological, Social, and Biological Foundations of Behavior” section of the MCAT covers topics taught in social sciences. Taking courses in Sociology, Psychology, Human Development, and Developmental Sociology can prepare students.

*Materials Science and Engineering requires 6 credits of advisor approved electives.

+Only one of these classes can count towards an Outside Technical Elective (PHYS 2214 will automatically be accepted).

These guides are based on the 2022-2023 degree requirements.

For the most up to date information, consult with Engineering Advising, major departments, or the current [Engineering Undergraduate Handbook](#)