

# Threading a path through pre-medical expectations

08/20/2021

Vanderbilt University Health Professions Advisory Office (HPAO) - <http://as.vanderbilt.edu/hpao/>

The below courses are **RECOMMENDATIONS** for students on the pre-med track and preparing to take the MCAT. Although these courses may meet many of the medical schools' prerequisites, each medical school has its own set of **REQUIRED** courses. Students must familiarize themselves with the required prerequisite courses for their particular medical schools of interest. The schedules listed below are possible options with some flexibility. Students should consult with their school-based adviser and the Health Professions Advisory Office to develop a plan that suits their own strengths, interests, and background.

Option 1: Fresh Start	*Option 2: Keep AP Calculus credits	*Option 3: Keep AP Chemistry & AP Calculus
1 <sup>st</sup> year: General Chemistry & lab (two semesters) □ CHEM 1601 & 1601L □ CHEM 1602 & 1602L	1 <sup>st</sup> year: General Chemistry & lab (two semesters) □ CHEM 1601 & 1601L □ CHEM 1602 & 1602L	
2 <sup>nd</sup> year: Organic Chemistry & lab (two semesters) □ CHEM 2221 & 2221L □ CHEM 2222 & 2222L	2 <sup>nd</sup> year: Organic Chemistry & lab (two semesters) □ CHEM 2221 & 2221L □ CHEM 2222 & 2222L	1 <sup>st</sup> year: Organic Chemistry & lab (two semesters) □ CHEM 2211 & 2221L □ CHEM 2212 & 2222L
2 <sup>nd</sup> year: Calculus (one semester - AP credit Accepted) □ MATH 1100, 1200, 1201, 1300, 1301, 2200, 2300	2 <sup>nd</sup> year: Statistics (one semester) □ MATH 1011, 2810 [Engr], BSCI 3270, ECON 1500, PSY 2100, PSY-PC 2110, 2120, SOC 2100, BME 2400	2 <sup>nd</sup> year: Statistics (one semester) □ MATH 1011, 2810 [Engr], BSCI 3270, ECON 1500, PSY 2100, PSY-PC 2110, 2120, SOC 2100, BME 2400
2 <sup>nd</sup> year: Biology & lab (two semesters) □ BSCI 1510 & 1510L □ BSCI 1511 & 1511L or 1511 & 1512L	2 <sup>nd</sup> year: Biology & lab (two semesters) □ BSCI 1510 & 1510L □ BSCI 1511 & 1511L or 1511 & 1512L	2 <sup>nd</sup> year: Biology & lab (two semesters) □ BSCI 1510 & 1510L □ BSCI 1511 & 1511L or 1511 & 1512L
3 <sup>rd</sup> year: Biochemistry (one semester) □ BSCI 2520	3 <sup>rd</sup> year: Biochemistry (one semester) □ BSCI 2520	3 <sup>rd</sup> year: Biochemistry (one semester) □ BSCI 2520
3 <sup>rd</sup> year: Physics & lab (two semesters) □ PHYS 1501 & 1601L and 1502 & 1602L (Life Sci) OR □ PHYS 1601 & 1601L and 1602 & 1602L (Engin) OR □ PHYS 1911 & 1912 (Physics Major)	3 <sup>rd</sup> year: Physics & lab (two semesters) □ PHYS 1501 & 1601L and 1502 & 1602L (Life Sci) OR □ PHYS 1601 & 1601L and 1602 & 1602L (Engin) OR □ PHYS 1911 & 1912 (Physics Major)	3 <sup>rd</sup> year: Physics & lab (two semesters) □ PHYS 1501 & 1601L and 1502 & 1602L (Life Sci) OR □ PHYS 1601 & 1601L and 1602 & 1602L (Engin) OR □ PHYS 1911 & 1912 (Physics Major)
Social & Behavioral Sciences (two semesters) □ PSY 1200 & SOC 1010, 1020, 3301, 3303, or 3304	Social & Behavioral Sciences (two semesters) □ PSY 1200 & SOC 1010, 1020, 3301, 3303, or 3304	Social & Behavioral Sciences (two semesters) □ PSY 1200 & SOC 1010, 1020, 3301, 3303, or 3304
Statistics (one semester) □ MATH 1011, 2810 [Engr], BSCI 3270, ECON 1500, PSY 2100, PSY-PC 2110, 2120, SOC 2100, BME 2400		<i>Recommended: an additional upper-level science course(s)</i>
English and/or writing courses (2 semesters) (W courses not in labs, foreign language or technical writing)	English and/or writing courses (2 semesters) (W courses not in labs, foreign language or technical writing)	English and/or writing courses (2 semesters) (W courses not in labs, foreign language or technical writing)

*Note: As a general rule, the University recommends that a first-year student take a range of courses rather than loading up on pre-medical coursework. A writing course or work in the student's major or anticipated major will complement any pre-med work in that first year.*

\* If a medical school does not accept AP credit, upper division courses may be needed to meet requirements. AP Calculus credit on VU transcript is accepted by medical schools

## Pre-Medical Preparation

In 2015, the new MCAT (Medical College Admissions Test) was introduced to reflect the changing nature of medical education. The Writing Sample was eliminated and the previous 3 sections of Verbal Reasoning, Physical Sciences, and Biological Sciences were changed to 4:

- Biological and Biochemical Foundations of Living Systems
- Chemical and Physical Foundations of Biological Systems
- Psychological, Social and Biological Foundations of Behavior
- Critical Analysis and Reasoning Skills.

In order to be adequately prepared for the new MCAT students will, in addition to the basic sciences of General Chemistry, Organic Chemistry, Physics and Biology, need to be knowledgeable in Biochemistry, introductory psychology and sociology concepts, and introductory biology concepts that relate to mental processes and behavior. Although specific knowledge of ethics, philosophy, cross-cultural studies and population health is not required, these areas will be tested through the analysis, evaluation and application of information provided by passages from a wide range of social sciences and humanities disciplines.

It is strongly recommended that students who plan to apply to medical school take one semester of Biochemistry and one semester of statistics as part of their curriculum. Additionally, through course work and/or self-directed study, students will need to be knowledgeable in basic concepts of psychology, sociology and bioethics.

Many courses that count toward core requirements (e.g. AXLE) and/or major requirements are also relevant to these new emphases for premedical preparation.

Students who plan to take the MCAT in 2015 or later should consult their faculty advisers and the Health Professions Advisory Office (HPAO, <http://as.vanderbilt.edu/hpao/>) about how to incorporate appropriate courses in these areas in their plans.

**Gap Year:** Under the new MCAT guidelines, some students might consider taking the MCAT later than the junior year. Student who opt for a gap year should bring a clear explanation of how what they do during that year will contribute to their futures as doctors. Lab research, global outreach, pursuit of educational opportunities, or a relevant job are all good explanations. A non-medical gap year can also be appropriate, e.g. work to help pay off student loans, save for medical school, etc.

**The Importance of Advising:** The information provided here is not a substitute for conversations with your adviser. Consult both your school-based adviser and the Health Professions Advisory Office to develop a plan that suits your own strengths, interests, and background.