Since most Dartmouth pre-health students apply to medical school, we provide below a detailed outline of courses that will satisfy admissions requirements for nearly all medical schools and at the same time they prepare students to excel on the MCAT. These pre-requisites are the same for Osteopathic (DO) Medical schools, Dental schools, and Veterinary schools (which actually add a couple). Reach out to your pre-health advisors regarding relevant prerequisites and for help in planning your pre-health academic journey.

**English/Writing**

Medical School Requirement= 2 terms

At Dartmouth

- **Writing 5 (or Writing 2-3) AND First Year Seminar**
  - Though more courses that emphasize strong reading, synthesis, writing, and analytical skills are highly valued.

**Mathematics**

Medical School Requirement= 2 terms (1 term Calculus AND 1 term Statistics)

At Dartmouth

- **Calculus: MATH 3 (or MATH 1&3 sequence) or exemption***
  - Calculus is a prerequisite for courses in biology, chemistry, and physics at Dartmouth
  - If invited to a higher-level math course, it is your prerogative to take it only if you love math or need it to fulfill major/minor requirements. BUT a higher level calculus is not a pre-health requirement.
  - *If you have credit for calculus from the Entrance Placement exam, you should still take at least one math course at the college level (statistics would suffice).
- **Statistics:** Any statistics course numbered 10 (PSYCH 10, SOCY 10, ECON 10, GOV 10, MATH 10) or BIO 29 (Biostatistics) or Social Sciences 15 (Intro to Data Analysis) are acceptable.

**Biology**

Medical School Requirement= 2 terms of Biology Foundation courses w/labs (minimum)

Many Dartmouth students take three, if they can, for their preparation.

At Dartmouth

To help students determine if they are sufficiently prepared to enter a foundation course directly, the Biology department has established an online self-assessment exam for students. For the members of the Class of 2020 the Biology Placement/Advisory Test is available in Canvas under "Courses."
Every student should have a conversation with a pre-health advisor as to the desirability of taking either BIOL 11, or BIOL 2, before enrolling in the foundation courses. Some will elect Biology 11 or Biology 2 and then proceed to a foundation course. These courses have no labs, and focus on problem-solving in Biology and prepare students to take the required laboratory-based courses.

- **BIOL 11** or **BIOL 2** (non-lab courses)
  - Both are excellent entry points into biology depending on the student's previous background, but are not considered foundation courses (these courses are outlined below)
  - **BIOL 11** (Introduction to Biology—various topics—check ORC)
    - This course focuses on problem-solving in biology and prepares students to take the required lab-based foundation courses
    - ***Bio majors: If taken before any foundation courses, BIOL 11 WILL count towards major. If taken after any foundation course, BIOL 11 WILL NOT count towards major
  - **BIOL 2** (Human Biology)
    - This is a perfect course for:
      - Students with little human biology background or who wish to refresh their human bio background
      - Students who wish to get good preparation for how to approach Dartmouth biology courses
      - Students on the fence about medicine (it's taught through a medical lens)
      - Students who might choose it in lieu of BIOL 14 (Human Physiology w/lab) and does not elect BIOL 14 as one of the two required foundation courses or cannot fit a third BIOL course but would like physiology preparation for the MCAT

- The **Foundation Lab courses: BIOL 12, 13, 14, 15, 16**
  - While any foundation course would "count" as a medical school pre-req, for best preparation for the MCAT and medical/dental/veterinary school, we highly recommend taking BIOL 12, BIOL 13, AND BIOL 14 in particular, even though taking two foundations fulfills the pre-requisite. Dartmouth's biology foundation courses can be taken in **ANY** order.
    - **BIOL 12** (Cell Structure and Function)
    - **BIOL 13** (Gene Expression and Inheritance)
    - **BIOL 14** (Human Physiology (can be substituted with BIO 2 which does not have a lab component))
    - **BIOL 15** (Gene Variation and Evolution)
    - **BIOL 16** (Ecology)

- **Other courses in Biology**
  - *Microbiology is an additional requirement for Vet School*
  - Upper-level courses in biology can strengthen one's foundation and an application but are not a requirement (discuss with advisor)

**General Chemistry**

Medical School Requirement= 2 terms w/labs

**At Dartmouth**

- **CHEM 5 AND 6**
With a more advanced background, one might exempt out of one or both classes (through Entrance Placement Exam). However, one MUST still take at least one chemistry course at the college level (CHEM 10 is an option).

- MATH 3 (or MATH 1&3) is a pre-req.
- While many students take Chem 5/6 in their first year, some students will take it sophomore year if they need more time to build their foundation, or more time to decide if this is a path they wish to undertake. Work with an advisor to personalize how to fit the courses into your D-Plan. In addition, please review what the Application Timeline actually looks like, and what it means to 'go straight through'. Most Dartmouth pre-health students do not go "straight through" but have one or more "gap" years. Please discuss this with a Pre-Health advisor to help develop a working strategy.

**Organic Chemistry**

Medical School Requirement= 2 terms w/labs

**At Dartmouth**

- **CHEM 51 AND 52**
  - Students who have more advanced knowledge in chemistry or intend to major in chemistry can consider Honors Orgo (CHEM 57 AND 58)
  - CHEM 5 and 6 are pre-reqs

**Biochemistry**

Medical School Requirement (most schools)= 1 term (lab is optional)

**At Dartmouth**

- **BIOL 40 (w/out lab) OR CHEM 41 w/lab**
  - BIOL 40 requires BIO 12 and CHEM 51&52 as pre-reqs and is taught through the Biology Department
  - CHEM 41 requires CHEM 51&52 or 57&58 as pre-reqs and is taught through the Chemistry Department
  - Neither course is more rigorous than the other, although both are challenging. Speak to an HPP advisor to consider which option is best for you

**Physics**

Medical School Requirement= 2 terms of general physics w/ labs

**At Dartmouth**

- **PHYS 3 AND 4**
  - This is the typical sequence for most pre-health students. However, if considering a major in physics, chemistry, engineering or just really like physics, consider taking PHYS 13 AND 14
  - With a more advanced background one might exempt out of one or both classes. However, one MUST still take at least one physics course at the college level
  - Calculus (MATH 3 or exemption) is a pre-req for PHYS 3&4
Additional Courses

Although psychology and sociology are not required courses for entrance to medical school, many medical schools value your exposure to the social sciences. In addition, the MCAT contains a Psychological, Social, and Biological Foundations of Behavior section that makes up 25% of the total score. Therefore, it is important to familiarize yourself with these materials by either taking the courses below or having a plan to study them on your own.

Psychology

At Dartmouth

- **PSYCH 1**-Recommended by PSYCH dept as closest match to material on MCAT
- **PSYCH 6**
  - Neuro majors that have taken PSYCH 6 (Intro to Neuroscience) do not necessarily have to take PSYCH 1 as well. PSYCH 6 provides some useful material and should be complemented with self-study on psychology materials (less neurobiology) for MCAT preparation.

Sociology

At Dartmouth

- **SOCY 1 or 2**, or one of the several health related SOCY courses.
  - SOCY 1 has the closest match to competencies on the MCAT but any of the other health related SOCY courses will offer a strong sociological context that self-study can compliment.