

# Pre-Med/Pre-Health Information

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Pre-Med/pre-health is not a major or minor at UC Berkeley, but rather a pre-professional path that students choose when preparing for a career in graduate-level health professions. Our pre-med/pre-health students come from a variety of backgrounds and majors — from biology to English — and should ultimately choose an academic path that they will enjoy and one in which they will excel. Although the majority of medical school applicants have majored in the biological sciences, there is no preference or competitive advantage for any majors over others in the admissions process. Regardless of major, all students are expected to complete the prerequisite courses required by their chosen health profession.

Applicants from UC Berkeley have a strong track record (<https://career.berkeley.edu/MedStats/MedStats/>) of entry into medical schools and other health professional schools, including dental, nursing, optometry, pharmacy, physical therapy, physician assistant, and veterinary programs. Successful pre-med/pre-health students at UC Berkeley maintain strong GPAs while balancing a rigorous course load with activities such as community service and research. Health professional schools seek well-rounded applicants who demonstrate an investigation of their chosen profession and an interest in helping others across a variety of settings. Students are advised to follow their passions and maintain their interests and hobbies while pursuing pre-med/pre-health at Berkeley.

UC Berkeley has a large and active pre-med/pre-health student community. The campus offers broad learning and research opportunities (both clinical and wet lab) to take courses and conduct research with faculty at the top of their fields, as well as ample opportunity to gain clinical, service, and leadership experience through over 50 health-related student organizations and a diverse range of health care settings near campus.

## General Guidelines

Requirements for entry vary by health profession, and often by individual institution. Students pursuing a pre-med/pre-health path at UC Berkeley are advised to consult the prerequisite coursework recommended for their health profession(s) of interest. All health professional graduate programs require some lower-division coursework in math and science, including biology and chemistry. Some programs require some upper-division science coursework, as well as some coursework in the humanities and/or social sciences. Students entering UC Berkeley with an interest in a pre-med/pre-health path are encouraged to complete their prerequisites at UC Berkeley, while also maintaining progress toward their degree.

Students are encouraged to focus on developing a strong academic foundation from their first semester at UC Berkeley, including through the use of educational support resources such as the Student Learning Center (<http://slc.berkeley.edu/>), Educational Opportunity Program (<http://eop.berkeley.edu/>), and student organizations (<https://callink.berkeley.edu/organizations/>).

## Pre-Med Prerequisites

The following list indicates courses commonly required by medical schools, as well as UC Berkeley courses commonly used to satisfy these requirements:

- Chemistry (4 semesters with lab): CHEM 1A (<http://guide.berkeley.edu/search/?P=CHEM%201A>) & CHEM 1AL (<http://guide.berkeley.edu/search/?P=CHEM%201AL>), CHEM 3A (<http://guide.berkeley.edu/search/?P=CHEM%203A>) & CHEM 3AL (<http://guide.berkeley.edu/search/?P=CHEM%203AL>), CHEM 3B (<http://guide.berkeley.edu/search/?P=CHEM%203B>) & CHEM 3BL (<http://guide.berkeley.edu/search/?P=CHEM%203BL>), MCELLBI 102 (<http://guide.berkeley.edu/search/?P=MCELLBI%20102>)
- Biology (3 semesters with lab): BIOLOGY 1A (<http://guide.berkeley.edu/search/?P=BIOLOGY%201A>)/BIOLOGY 1AL, (<http://guide.berkeley.edu/search/?P=BIOLOGY%201AL>) Biology 1B, One upper-division biology course (recommended)
- Physics (2 semesters with lab): PHYSICS 8A (<http://guide.berkeley.edu/search/?P=PHYSICS%208A>) & PHYSICS 8B (<http://guide.berkeley.edu/search/?P=PHYSICS%208B>)
- Mathematics & Statistics (2 semesters): Most often fulfilled by the two-semester series of MATH 10A (<http://guide.berkeley.edu/search/?P=MATH%2010A>) & MATH 10B (<http://guide.berkeley.edu/search/?P=MATH%2010B>), or by one semester of calculus (MATH 1A (<http://guide.berkeley.edu/search/?P=MATH%201A>), MATH 1B (<http://guide.berkeley.edu/search/?P=MATH%201B>), MATH 16A (<http://guide.berkeley.edu/search/?P=MATH%2016A>), MATH 16B (<http://guide.berkeley.edu/search/?P=MATH%2016B>)) and one semester of statistics (PB HLTH 142 (<http://guide.berkeley.edu/search/?P=PB%20HLTH%20142>), STAT 2 (<http://guide.berkeley.edu/search/?P=STAT%202>), STAT 20 (<http://guide.berkeley.edu/search/?P=STAT%2020>), STAT 131A (<http://guide.berkeley.edu/search/?P=STAT%20131A>)).
- English (2 semesters): Reading and Composition (R&C) courses (<http://guide.berkeley.edu/undergraduate/colleges-schools/letters-science/reading-composition-requirement/>) recommended, regardless of AP credit. May also consider coursework in departments such as English, Comparative Literature, Rhetoric, or upper-division College Writing Program.
- Social & Behavioral Sciences: Although not required, recommended primarily for MCAT preparation; may include General Psychology and/or Intro to Sociology, or other coursework in the social and behavioral sciences (<http://guide.berkeley.edu/undergraduate/colleges-schools/letters-science/breadth-requirement-social-behavioral-sciences/>).

For more detailed information about pre-med prerequisites at UC Berkeley, please visit the Career Center web page on Medical School Prerequisites (<https://career.berkeley.edu/Medical/PrePrereq/>).

## Pre-Health Prerequisites

Outside of medical school, other health professional schools often require additional prerequisites, such as anatomy, physiology, and microbiology with their associated labs. Health professional schools also vary in their chemistry prerequisites, many requiring two semesters of general chemistry instead of the one required for most medical schools.

For detailed information about prerequisites for other pre-health areas, please visit the Career Center web page on Health Professional Schools (<https://career.berkeley.edu/Health/Health/>).

## Clinical Experience

Medical/health professional schools look for evidence that applicants have investigated their chosen field, which can be demonstrated through a range of experiences such as volunteering in a clinical setting or community service work. Shadowing is also helpful. Experiences like these can also assist students in making a more informed decision about entering a field.

Pre-med/pre-health students at UC Berkeley are engaged in a wide range of clinical and volunteer opportunities, including through nearby free clinics, hospitals, nonprofit organizations, and student organizations (<https://callink.berkeley.edu/organizations/>) dedicated to service and outreach in the local community. Students may also explore their interests through a diverse range of student-facilitated courses (DeCals (<https://decal.berkeley.edu/>)). For more information, including a listing of common clinical experiences among UC Berkeley pre-med/pre-health students, please visit the Career Center web page on Clinical Experience (<http://career.berkeley.edu/Medical/PrepExper/>).

Although medical schools do not require a minimum number of hours or specific types of experiences, other health professions, such as dentistry and optometry, often require documentation of shadowing. Physician's Assistant Programs and veterinary medicine require a certain amount of volunteer hours. Bear in mind also that medical/health professional schools value altruistic work of any kind, not solely in a clinical setting. Students are advised to consult with pre-health advisors to identify opportunities aligned with their backgrounds, interests, and goals.

## Research Experience

As a top research institution, UC Berkeley offers many opportunities to get involved in research as an undergraduate. Although medical/health professional schools do not explicitly require research, a large majority of UC Berkeley applicants accepted to medical/health professional schools have been engaged at some level in research before applying. In particular, students considering applying to more research-intensive medical schools or to MD/PhD programs are strongly advised to consider research early in their undergraduate careers.

Students may participate in research through structured programs (such as URAP (<http://research.berkeley.edu/urap/>) and SPUR (<https://nature.berkeley.edu/undergraduate-research/spur/>)), through their major (such as a capstone project or Honors Thesis), and/or through other independent study options and research in faculty laboratories/research groups. To learn more about getting started in research at UC Berkeley, please visit the Office of Undergraduate Research & Scholarships (OURS) (<http://research.berkeley.edu/>), which offers online resources as well as in-person workshops.

UC Berkeley's location also offers proximity to other research opportunities, including through the Children's Hospital Oakland Research Institute (CHORI) and UCSF, where both basic science and clinical research are conducted. Medical/health professional schools value research of any kind, not only basic science and clinical research but also interdisciplinary and social science research. Undergraduate research is an opportunity to demonstrate your intellectual curiosity and learn skills to equip you to be an informed consumer of research as a future health care professional.

## Admissions Tests

Entry to health professional school requires completion of a standardized admissions test, including the MCAT for medical school and podiatric

medical school, DAT for dental school, OAT for optometry school, PCAT for pharmacy school, and GRE for many other programs, including veterinary, physician assistant, physical therapy, and nursing. Because these tests play a significant role in the admissions process, students are strongly advised to plan to take the test once, when they are most prepared to do their best.

It is important to understand which prerequisite coursework is required as preparation for the appropriate admissions test. For the MCAT, students should have completed their lower division prerequisites in biology, chemistry, and physics, in addition to their upper-division course in biochemistry, the subject which accounts for a significant portion of questions on the MCAT.

Students should also consider when they will be able to devote a substantial amount of time and energy to studying for the MCAT, given their other commitments and the times of year the MCAT is administered. Students are encouraged to consult with pre-health advisors to discuss their MCAT timeline, which will be dependent upon a variety of individual factors and considerations, including when they plan to apply.

## Application Process

Applicants submit their medical/health professional school application over a year in advance of when they would matriculate. For example, those who submit a medical school application in June 2022 are applying to start medical school in Fall 2023. The timeline for applying to medical/health professional school is very different from applying to college. Depending on the health profession, applications can be submitted starting in late spring or early summer, and are processed and reviewed on a rolling basis. For this reason, admissions data support that it is critical to apply early in the application cycle.

Students who wish to enter medical school directly after graduating from UC Berkeley apply around June 1, immediately following their junior year. Nationally, and at UC Berkeley, most applicants now apply to medical school at the end of their senior year, having completed their prerequisites, taken the MCAT, gained meaningful experience, and developed relationships (for letters of recommendation) over their full four years at UC Berkeley. Because of the application timeline, these applicants have one "application year" between graduating from UC Berkeley in May and starting medical school the following fall. Some medical school applicants will take more than one year. Often, these applicants have accepted a research position that sought a two-year commitment or have participated in other meaningful educational or employment opportunities, such as Teach for America, Peace Corp, or fellowship programs.

Medical/health professional school admissions are competitive, and the application process is both cost and time-intensive. Students (and alumni) are advised to apply when their application is at its strongest. Pre-health advisors are available to meet with students throughout their undergraduate career at UC Berkeley (and one year beyond), to explore future application timing, assess readiness for an upcoming application cycle, and seek feedback on application materials.

## Pre-Health Advisors

UC Berkeley has two dedicated pre-health advisors who are located within the Career Center on campus. Pre-health advisors offer one-on-one professional advising through 30-minute advising appointments and weekly drop-in advising hours. In addition to one-on-one advising, they coordinate programming throughout the year, including advisor-led workshops, panels of successful students and alumni, visits from medical

schools, and an annual 'bootcamp' for students getting ready to apply to medical school.

Pre-health advisors are available to meet with freshmen through alumni, to address questions and engage in discussion around a career in the health professions. Students are encouraged to meet with advisors at any stage of the process, from exploration to preparation to application. Topics may range from how to explore different career paths and find research or clinical experience, to how to select schools to apply to and prepare for interviews.

In addition to advising and programming, pre-health advisors manage online resources and communication for pre-med/pre-health students at UC Berkeley, including a web page of Pre-Med FAQs (<https://career.berkeley.edu/Medical/PrepPros/>) and a weekly email newsletter (Pre-Health Career Mail) highlighting relevant events, news, and opportunities. Pre-health advisors also invite students to email their questions ([prehealth@berkeley.edu](mailto:prehealth@berkeley.edu)) and to follow the Pre-Health Advising Facebook page (facebook.com/calprehealth (<https://www.facebook.com/calprehealth/>)).

To learn more about Pre-Health Advising at UC Berkeley, visit the Career Center web page on Pre-Health Advising (<https://career.berkeley.edu/Info/PreHealthAppt/>).