



Information for Sophomores

An Overview

www.brown.edu/go/healthcareers

YOUR CAREER EXPLORATION AND PREPARATION- COMPETENCIES, COURSES, ACTIVITIES

Allopathic (M.D.) medical schools have articulated 9 inter- and intra-personal competencies that help students to explore their interests in the health professions, amass a strong record to apply to medical school and be successful in the profession. These personal competencies complement the 6 science, thinking and reasoning competencies typically associated with learning in an academic context through course work, research, teaching or other means of developing and applying scholarly knowledge. These 15 competencies give detail and clarity to help you reflect, engage with learning, service and leadership, and prepare. Medical schools are progressively including these competencies in their application evaluation processes. This is great news for students and future applicants. It ensures that admission committees examine applicants holistically, not only based on grades and test scores. The MCAT, revised in 2015, takes an integrative approach to the sciences and incorporates knowledge from the social and behavioral sciences to reflect the same holistic approach. Osteopathic (D.O.) medical and other health professions schools look similarly at personal, scholastic and analytical qualities but do not explicitly call them competencies. However, whether you wish to pursue education and a career in Allopathic, Osteopathic, Dental, Veterinary medicine or another clinical health profession, these competencies offer an informative framework in which to place your academic and experiential learning activities as an undergraduate student. The competencies are listed below and detailed on our website's **HEALTH PROFESSIONS COMPETENCIES** page. Also included is information about the evolution of the reform to competency-based medical education. The competencies are: **INTERPERSONAL COMPETENCIES: *Service Orientation, Social Skills, Cultural Competence, Teamwork, and Oral Communication.*** **INTRAPERSONAL COMPETENCIES: *Ethical Responsibility to Self and Others, Reliability and Dependability, Resilience and Adaptability, and Capacity for Improvement.*** **THINKING AND REASONING COMPETENCIES: *Critical Thinking, Quantitative Reasoning, Scientific Inquiry, and Written Communication.*** **SCIENCE COMPETENCIES: *Living Systems, and Human Behavior.***

When choosing courses, concentration(s), depth and breadth of academic exploration within and outside your major area(s) of study, keep the science, thinking and reasoning competencies in mind to inform your selection. While medical and other health professions schools have a set of required or expected courses, there is a degree to which you can customize your course work. In looking for research, teaching and other ways to gain and apply knowledge, these competencies can also help you develop a better sense of the connection between learning in the classroom, in the laboratory or in another setting.

When choosing co-curricular activities, select ones through which you develop skills in line with these personal competencies which also enable you to:

- Learn about clinical practice in your intended profession as well as pertinent issues in healthcare as a whole
- Test your personal and altruistic motivation for education and a career in the health professions
- Develop your awareness of and sensitivity toward socioeconomic, racial, gender, and other dimensions of diversity in connecting with individuals and communities.

You can develop these competencies through a wide range of activities on campus and in the broader community. They also overlap with many courses and research opportunities at Brown and beyond. As with your concentration choice, select activities that you find rewarding and educationally meaningful. While this gives you great flexibility, you will definitely want to engage with clinical activities (for example, volunteering at a hospital, hospice, community health organization, serving as an EMT, shadowing clinicians, etc.).

YOUR HEALTH CAREERS PORTFOLIO IN ASK

The field of health and medicine is continually evolving. To help guide you better, we designed the **Health Careers Portfolio in ASK**. The portfolio is designed to promote self-reflection and to track your coursework and co-curricular

activities relevant to the health careers. Every year early in the fall semester, complete the portfolio questionnaire for your college year that will help you plan and reflect on your preparation for the study and practice of your chosen health profession. Articulating your passions and interests can sometimes be difficult. Your portfolio enables you to do just that by helping you identify your interests, evaluate your accomplishments, and plan your own growth. You will be able to look back at your questionnaires from previous years and assess the areas in which you need to improve. Your answers will help you be better prepared to apply to medical or other health professions programs. They will also help us get to know you better so we can provide you with more targeted guidance during your time at Brown. The Health Careers Portfolio is described in detail on our website and is discussed during Orientation and information sessions throughout the year. We look forward to getting to know you better through your Portfolio.

THE CONCENTRATION-WHAT MATTERS?

Medical schools and other health profession training programs **do not require or prefer any particular concentration**. You should feel free to choose a concentration based on your interests. Similarly, multiple concentrations are not a significant factor in admission decisions. What does matter is your ability to cogently articulate what you learned from your academic choices in admission essays, interviews, etc. Sophomore year is, therefore, a good time to consider your options in terms of your educational goals rather than what may “look good” to admission committees.

THE BACHELOR OF SCIENCE VS. THE BACHELOR OF ARTS

Completing a Bachelor of Science or Bachelor of Arts degree is not as relevant as pursuing your interests. You want to be able to express your enthusiasm for the academic choices you have made to admissions committees. Your thoughtfulness about your choices will ultimately reward you in the admission process and add to your own sense of satisfaction with your undergraduate education!

ADDITIONAL COURSE WORK

- Most health professions programs require four semesters of chemistry with laboratory (2 general/inorganic and 2 organic). Biochemistry is necessary for the MCAT, required by many schools and expected by the rest. Brown students take BIOL 0280 in lieu of a second semester general chemistry with laboratory. The most common course sequence at Brown is CHEM 0330, CHEM 0350, CHEM 0360, BIOL 0280. Students who start with CHEM 0100 complete CHEM 0100, CHEM 0330, CHEM 0350, CHEM 0360, BIOL 0280. Note that some medical schools require a five-course sequence in chemistry (2 general/inorganic, 2 organic and 1 biochemistry). If you plan to apply to such schools and started with CHEM 0330, you would need to take an additional general chemistry course with lab. CHEM 0400 (if offered) or CHEM 0500 would meet this requirement. If you started with CHEM 0100 and completed a total of 5 courses, your course work should be sufficient. A list of these schools is available on the Health Careers Advising website. It is **your responsibility** to ensure you have fulfilled the requirements for the schools to which you apply.
- **Non-science concentrators are strongly encouraged to take additional biology or neuroscience courses beyond the minimum 2 required for admission. The additional courses do not need to have labs.**
- *Pre-vet students* may need to take either CHEM 0400 (if offered) or CHEM 0500 in addition to CHEM 0330, 0350, 0360, and BIOL 0280. Vet schools have more variable requirements than other health professions schools. We advise you to consult *Veterinary Medical School Admission Requirements (VMSAR)* before choosing courses for the remainder of your undergraduate career. Copies of the VMSAR and other health professions requirements books are available for consultation in the Health Careers Advising office. Much information can be found online at aavmc.org. Individual health professions schools may have other specific requirements. Be certain to learn early during your undergraduate studies what these requirements are.

IS RESEARCH REQUIRED?

Most health professions schools do not specifically require research for admission but they expect demonstrated facility with science throughout your studies to be evident in your application. Most competitive applicants would have had some research experience (whether basic science or clinical). Successful health practitioners must be intellectually curious and have the ability to keep up with the changing science that underlies their practice. The Science, Thinking and Reasoning Competencies are developed not only in course work, but also in the process of scholarly inquiry- one more aspect to consider when thinking about research opportunities. Additionally, one of Brown’s liberal learning goals is to “experience scientific inquiry.” For both of these reasons, undergraduate research in any field can be of great educational value to you. Not only could you have the opportunity to develop your own project, but you will also build relations with one or more faculty members while gaining methodological skills that will benefit you in your future career. You may also want to

explore the possibility of becoming involved in academic medicine. Undergraduate research is a great way to try this out. The Research at Brown web site is the best resource to start exploring research opportunities- <http://research.brown.edu/>. The Undergraduate Teaching and Research Awards (UTRA) provide students with the opportunity to work closely with faculty on a research or course development project during the summer or academic year. http://www.brown.edu/Administration/Dean_of_the_College/utra/ The LINK program, coordinated by CareerLAB, supports un- or low-paid projects that further your educational or career goals. BrownConnect's and the job and internship board in Handshake list a range of opportunities of potential interest and the Biology Department's BURO web portal is also a great resource. Explore <https://brownconnect.brown.edu/> and <https://apps.biomed.brown.edu/buro/> <https://brown.joinhandshake.com/login>

Importantly, a number of summer programs held at a range of universities across the country aim to provide an immersive research and mentorship experience for students from groups under-represented in the health professions. Programs such as SHPEP, SURF, SURP, BEST, PREP and others provide funding and housing to make this a meaningful and accessible opportunity for first-year and sophomore students. Applications open in the winter. A comprehensive list is posted to our website under Resources.

<https://www.brown.edu/academics/college/advising/health-careers/resources>

TAKING A YEAR (OR MORE) OFF

Two-thirds of Brown applicants to health profession schools take a year or more off before beginning their professional studies. Nationally, 63% of applicants admitted to MD programs apply upon or after college graduation. The immediate benefit of taking a year or more off is that you have more flexibility in planning your undergraduate studies and gaining more time to amass a strong record to apply. You can, for example, spread your required pre-health/pre-med professions course work over four years. Following a "four-year plan" makes it easier to study abroad and also allows you to show admissions committees all four years of your academic and co-curricular record at Brown as opposed to just three. Without a year off, you would have to have all of your required coursework done and have a lot of clinical, service, research and other co-curricular experience by the end of your junior year. This can pose challenges, prevent you from doing well and from fully exploring your interests. Admission committees will want to see grades for all of your pre-health/pre-med courses, and you will want to complete all of these courses before taking the MCAT (or DAT, GRE, etc.) no later than the end of your Junior year if you follow a "three-year plan". Health professions schools will look for the breadth and depth of your clinical, research, volunteer and other activities the same way if you apply after junior year or later which means you would be expected to be as accomplished as someone else who has taken more time.

STUDY ABROAD

With careful planning, students interested in the health professions can study abroad. If you hope to apply for admission directly after graduating from Brown, we recommend that you study abroad in the first semester of your junior year. If you will not apply to health profession schools until the end of your senior year, you can study abroad at any point in your junior year. **Do not take pre-health/pre-med requirement courses while studying abroad** as health professions schools will not accept foreign course work. But do not let this deter you. There are many good reasons for studying abroad and many options available to you. Consult the web site and meet with an advisor at the Office of International Programs (OIP). <http://www.brown.edu/Administration/OIP/>

THE MCAT, DAT, OR OTHER EXAM—WHEN SHOULD I TAKE IT?

Most importantly, you should take the exam only after you have completed the necessary courses successfully and have given yourself ample time to prepare. Most students and alumni take the exam in the year prior to their application (which starts every June). As noted above two-thirds of Brown students and alumni apply to medical school upon or a year after graduation. Thus, most Brown applicants to medical school would take the exam during or following senior year. For example, applicants for fall 2021 admission take the MCAT in the winter or spring of 2020. This time frame is the same for students taking other entrance exams such as the DAT, GRE, or OAT. Your academic preparation should include a biochemistry course, as well as foundational courses in the behavioral and social sciences. After you complete these courses 3-4 months of intensive, dedicated study is typical. Both self-study and preparation courses can be effective though each has pros and cons. Detailed information is available on our website's **Standardized Tests (MCAT, DAT, GRE) pages**. The following MCAT resources can be most useful: <https://students-residents.aamc.org/applying-medical-school/taking-mcat-exam/>

USE THE COURSE PLANNING TEMPLATES ON THE FOLLOWING PAGE TO HELP YOU MAP YOUR STUDIES TOGETHER WITH THE "SAMPLE TIME LINE FOR HEALTH CAREERS OR PRE-MED STUDIES"

FOUR YEAR PLANNING TEMPLATE (majority of Brown students and alumni)

YEAR	FALL	SPRING	SUMMER
Year 1			
Year 2			
Year 3			
Year 4		Committee Letter Process MCAT, DAT, GRE, other test	Applications
Gap Year	Interviews	Interviews and Decisions	Decisions (if on wait lists)

THREE YEAR PLANNING TEMPLATE

YEAR	FALL	SPRING	SUMMER
Year 1			
Year 2			
Year 3		Committee Letter Process MCAT, DAT, GRE, other test	Applications
Year 4	Interviews	Interviews and Decisions	Decisions (if on wait lists)

** Use the "SAMPLE TIME LINE FOR HEALTH CAREERS OR PRE-MED STUDIES" on our website as a framework to plan your studies. Keep in mind that requirements are not always uniform from school to school. If you need to complete additional requirements, we suggest doing so during senior year or a "gap" year. The majority of applicants follow the Four Year Plan.*

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