Many students who are committed to a career in the health professions seek additional academic experience after graduating from Princeton. There are numerous options to consider—undergraduate vs. graduate programs, full-time vs. part-time, location, type of coursework, cost. Students considering their best route to demonstrate academic readiness for medical school should weigh their options carefully and speak to both Princeton HPA and program staff prior to applying.

**Advanced Undergraduate Science Coursework as a Non-Degree Seeking Student**
A student who graduated with a cumulative undergraduate GPA well below a 3.0 would benefit by demonstrating the ability to perform well in upper-level science courses at the undergraduate level, then considering graduate work before applying to medical schools. Many medical schools will not accept candidates into their programs with an undergraduate GPA far below a 3.0. In order to demonstrate your ability, take a minimum of three courses per semester for a full year at a strong, four-year institution, and earn at minimum a 3.6 GPA, taking the MCAT (or other standardized exam) after gaining this more solid foundation.

If successful, it may be possible to realistically move on to a graduate program to further advance your qualifications, or it may be appropriate to apply to medical school directly after increasing your GPA and MCAT score. It is not recommended that you apply and then take courses during the year after you have applied: schools will need to see these grades on your application upfront. It follows that medical school may be a number of years away if GPA repair to this extent is necessary; students at this level (and all levels) of preparation must decide whether the time it takes to become competitive for medical school admission is a better choice for them than exploring alternate career paths.

**Regular Graduate Program in the Sciences**
There are two types of students for whom this option is particularly well-suited.

First, students with a cumulative undergraduate GPA performance below a 3.0 may find success in gaining admission to a graduate bioscience program where they would be less competitive for a special master’s postbac program (described below). Look for programs whose courses are scientifically rigorous and know, to be a successful applicant to medical school, your GPA must remain high. It may still be helpful to enroll in enough undergraduate-level courses to bring your GPA in Biology, Chemistry, Physics, and Math courses (BCPM GPA) above a 3.0.

Second, students who strongly favor the sciences but are undecided on their career path with regard to practicing medicine versus conducting scientific research are well-suited to this option. If this is your situation, you may do well to enroll in a thesis-based Master of Science program in a discipline of personal interest, (e.g. biochemistry, physiology, neuroscience). While in the program, if you discover that research is the better fit for you, then you could decide to continue on for a Ph.D. or join the workforce with the master’s degree. If you decide that you would prefer clinical medicine, you could apply to medical schools while completing the master’s. Students taking this route are encouraged to continue to stay engaged in medically-relevant activities (e.g., volunteering in hospitals or other care facilities, working as Certified Nurse Assistants or EMTs, scribing).

Non-bioscience based programs, including most public health programs resulting in a master’s degree, would be less likely to enhance your candidacy, since performance in the sciences is most critical to success in medical school. However, a MPH degree is a fine preparation for careers in health care within the field of public health, which will allow you to serve the community in other ways; they are also fine for students with strong science credentials who want to gain more expertise in this area prior to medical school.

Note that acceptance to a medical school is usually contingent upon the completion of their graduate degree. This is sometimes problematic for the applicant since research results and thesis writing may not follow the anticipated time course. In this case, it may be best to wait until the research is completed before applying to medical schools.
Postbaccalaureate Record Enhancer Programs

There are over 150 postbaccalaureate (postbac) programs specifically developed for students who wish to enhance their academic preparation prior to health professions school admission. The AAMC postbac database (apps.aamc.org/postbac) is the best directory for such programs in the U.S. It can be searched by state, school, degree type (undergraduate or graduate), or type of program (career changer, academic enhancement, or for economically/educationally disadvantaged students or those from groups under-represented in medicine.

Non-Degree Undergraduate Postbac Program

A student with a cumulative and science undergraduate GPA in the upper 2s or low 3s could benefit from a strong science based postbac program. By taking advanced undergraduate courses, your GPA as an applicant will reflect your work at Princeton and in these programs in a cumulative undergraduate GPA. Similar work could also done as a non-degree student by enrolling in classes at a local school, but the benefits to a formal program include access to advising, a more structured environment, priority enrollment in courses, access to loans, and sometimes some preference to postbac students in certain schools’ admissions processes through linkage agreements. These programs may also offer shadowing/volunteer opportunities, MCAT review, or other premed/health-relevant offerings. It is better to participate in these programs and apply after your grades have been posted than to apply and take these courses in the application year; you will be a more competitive candidate if schools see your grades in your initial application.

Example programs:

- U Penn Pre-Health Specialized Studies: www.sas.upenn.edu/lps/postbac/pre-health/specialized
- Harvard Extension Program: www.extension.harvard.edu/academics/premedical-program
- American University Post-Bac Premed Certificate Program: www.american.edu/cas/premed/index.cfm
- Lake Erie College of Osteopathic Medicine. LECOM.edu/Admissions/Entrance-Requirements/Health-Sciences-Post-baccalaureate-Entrance-Requirements/
- Washington Univ. of St. Louis: UCollege.WUSTL.edu/Programs/Postbaccalaureate/Premed
- UC Berkeley Extension Program: extension.berkeley.edu/spos/premed.html

Special Master’s Postbac Programs

Students with cumulative undergraduate GPAs near or above 3.0 and average MCAT scores could consider a special master’s program. In many of these programs, students they take medical school courses and are graded in relation to the University’s own medical school class. These programs give you a chance to prove your capacity to do well in a rigorous medical school program. Seats are often held at that institution’s medical school for students who have done well in the postbac program. For some students, it may be feasible to apply to health professions schools prior to beginning a special master’s program: consult with postbac program staff and HPA. Your graduate GPA will be reported separately from your undergraduate GPA when you apply to health professions schools.

Example programs:

- Drexel University College of Medicine Interdepartmental Medical Science (IMS) offered in Sacramento and Philadelphia. Attend med school courses simulcast, take same exams as med students: Drexelmed.edu/Home/AcademicPrograms/ProfessionalStudiesintheHealthSciences/PreMedicalPrograms/InterdepartmentalMedicalScienceIMSProgram.aspx
- Georgetown University Special Master’s program in Physiology. SMP students take six of their ten classes with Georgetown's first-year medical students. SMP.Georgetown.edu/
- Boston University Master of Medical Sciences program. Candidates are required to complete a research-based thesis. www.bumc.bu.edu/gms/mams
- Mount Sinai Masters in Biomedical Sciences. This program combines rigorous course work and an intense research experience in a supportive environment, with an emphasis on individual advising. Icahn.MSSM.edu/Education/Masters/Biomedical-Sciences
- University of Cincinnati Master’s program in Physiology. med.uc.edu/msinphysiology
- Rutgers Robert Wood Johnson Medical School Masters of Biomedical Sciences. rwjms.rutgers.edu/gsbs/mbio.html
- Temple University School of Medicine Advanced Core in Medical Sciences. medicine.temple.edu/education/postbac-program
- Tufts University School of Medicine Master of Science in Biomedical Sciences. publichealth.tufts.edu/graduate-programs/master-science-biomedical-sciences
Special programs for students from underrepresented groups

Individuals of ethnic and racial minority backgrounds, including African-Americans, Mexican Americans, and American Indians, represent about 25% of the U.S. population, but account for less than 8% of practicing physicians. Those from economically disadvantaged areas and backgrounds are also underrepresented in the career. The minimal number of practicing physicians within these groups has a negative impact on health care delivery and health outcomes. In order to address this imbalance, numerous programs have been developed that assist students who identify themselves as members of such groups in gaining acceptance to medical school.

Programs exist both for postbaccalaureate students prior to application, and for students who have applied and been accepted to health professional schools. The Health Careers Opportunity Program (HCOP) is one initiative that supports the prehealth preparation of students from disadvantaged or under-represented minority backgrounds, offering opportunities to strengthen their academic and clinical readiness for the challenges of medical school. These programs can be an excellent launching pad for physicians who have the cultural awareness and desire to serve minority patients in particular, and to expand the diversity of our physician population in general. Currently, more than 80 programs for economically and educational-disadvantaged students are listed on the AAMC website, and over 100 are specifically tailored for students from racial/ethnic backgrounds historically underrepresented in medicine (URM). Some medical schools accept students but require them to participate in a summer enrichment program to facilitate the transition into medical school. In some instances student performance may dictate that they be placed in a decelerated program (first year of medical school taken over a two-year period).

Evaluating Postbac Options

No single program is the best for everyone. It’s important to know what’s most important for you in finding a post-bac program, and asking questions that will help you weigh pros and cons of each. Factors that are significant to many students include: location, cost, size of program, size of classes, support resources offered, guarantee of seats in required courses, community among post-bac students, linkage agreements. We caution against concerning yourself too much with the “success rate” (e.g., how many postbacs are accepted to medical school)—this tends to be more a reflection of how well the student fit with the program than the quality of the program itself. Much of what you gain from your program will depend on how much you put in. Many post-bac programs will have program participants who you can contact to ask additional questions about their level of satisfaction. This can be more useful than statistics. In addition to doing web research, it may also be helpful to sit in on a class, or meet with an adviser.

Questions to Ask

- Is there a linkage program? How many students have successfully linked to the medical school(s) in recent years?
- What MCAT support is available? How well do postbacs fare on the MCAT?
- How often do you meet with an adviser? How available and supportive are the program staff?
- How much flexibility is there in course selection?
- How would you describe the class environment? What do faculty think of postbac students?
- How would you describe the post-bac student culture (e.g., independent, community-oriented, competitive, collaborative, etc)?
- What academic support is available if I’m struggling in a class?
- Do you have contact information for program participants or recent graduates who I can talk with?
- What are the qualifications I have to have to have a committee letter prepared on my behalf? How many students in a given year qualify for a committee letter?
- If postbac students aren’t accepted to health professions school, what other career avenues are they prepared for?
- What’s the cost of the program? How do students usually pay for it?
- What kinds of students tend to be successful in your program?
- What’s the timeline to apply? Is it best to apply early, or is it okay to apply at the deadline?
- Can you go over the timeline – how long will it take to complete the program, apply to, and start health professions school?
Applying for Postbac Programs

Begin research into programs in the summer/fall in the year before you wish to start. Programs will vary significantly in terms of minimum GPA, test scores needed (SAT/ACT, GRE, MCAT), letters of recommendation, and other requirements. Most are on a rolling admissions timeline, which means applying early may give you a better chance for admission. Most deadlines are between January and summer. Our recommended timeline for major components of the applications would be:

<table>
<thead>
<tr>
<th>Summer/Fall</th>
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<tr>
<td>• Research programs and deadlines.</td>
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<td>• Reach out to programs if you have questions about requirements, other logistics.</td>
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<tr>
<td>• Create list of programs and share with HPA for feedback.</td>
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<tr>
<td>• Gain additional clinical experience (if needed).</td>
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<tr>
<td>• Take standardized test (if needed).</td>
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<tr>
<td>2 months before application submission</td>
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<tr>
<td>• Draft personal statement, share with Writing Center or HPA for feedback.</td>
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<td>• Update resume.</td>
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<tr>
<td>1 month before application submission (minimum)</td>
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<tr>
<td>• Ask for letters of recommendation. Provide writers with details on how to submit letters and deadline. Follow up as needed.</td>
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