

## Advice for Students Interested in Pursuing PhD Degrees

Getting a PhD means a career in science. You can go the academic route and climb that tenure ladder, or work as a scientist in industry. In any case, getting a graduate degree makes you much more marketable than working in a job right after you graduate from Yale. The last statement generally does not apply to engineering majors or computer science majors, where getting a Masters or a PhD is not usually as important as those in the biological or physical sciences. The Office of Career Strategy <https://ocs.yale.edu/> is the place to get started if you are considering graduate school. For a typical PhD track, it's 5 years in a PhD program, followed by 4 years as a postgraduate doctorate (a postdoc) before you apply for an academic position. Doing a postdoc might not be as important if you are going into industry. STEM PhD programs are tuition-free and you get a stipend of ~\$40,000 a year to live on. Getting paid to do science is great if you love doing it!

All Yale STEM departments do a great job preparing their majors academically to succeed in graduate school. In general, undergrads should do the BS track, and take the hardest classes offered by that major. Below are some of the things Dean Chang looks for when he looks at applications for Yale's PhD graduate program in the biological sciences.

**1. How good is the letter of recommendation from the research mentor(s)?** This is the first thing he looks at. An outstanding mentor's letter is absolutely essential to get into a top grad school. So make sure you know your mentor well, both on a scientific and a personal level. Talk to him/her about their career as a scientist, and why you want to go that route.

**2. How much independent research did the candidate accomplish?** Going into grad school means that you must love doing research for many years. It helps if you have done significant bench work as an undergraduate, demonstrate that you truly love science and are good at it. So get into a lab summer after first year and every summer after that, and also during your junior and senior years.

**3. Did the candidate publish?** It helps tremendously if you can get an authorship on a publication before you apply to grad school. It often pays to do a "postbac" in your lab after graduating from Yale to get that publication. Talk to your research mentor about this opportunity a year before you need the position.

**4. Good grades matter.** A lot of students assume that grades don't matter as much for getting into grad school vs. med school. While there's some truth to that, good grades are still important to get into the best graduate schools. So do the best you can, especially in your STEM classes. The same goes for the GRE, but Yale students shouldn't have any problems doing well in it.

**5. Can the candidate describe his/her research in detail?** Here's where the interview is important. There are plenty of applicants who look great on paper but can't talk about their research, or only have a superficial grasp on what it is that they tried to accomplish. Don't be that person. You need to know your research inside and out.