What is graduate school?

Graduate school is study beyond the bachelors degree, generally a Masters degree (MS) or a Doctor of Philosophy (PhD). It is different from clinical professional school (MD or DPT) in that it is more science and research focused. An MS degree can be non-thesis (with more course work) or with a thesis, which is based on a research project, and typically takes between 1 and 3 years. A PhD is research-based with a dissertation (not always requiring a MS first), and typically takes between 4 and 6 years. Unlike clinical and professional schools, most PhD programs, and some MS, provide funding for tuition, a monthly stipend, and health insurance.

What can you do with a graduate degree?

After graduating with an MS degree, the most common course is to proceed with a PhD degree. However, MS graduates do also go on to clinical professional schools, research technician, scientific consulting, start-up companies, product technical support and sales, and many other occupations.

PhD graduates often stay in research within industry or academia. They may go on to teach at the college level, continue with post-doctoral research, or do a combination of the two with a tenure-line college faculty position. PhD graduates may also go on to senior level positions in the industry careers listed above.

A graduate degree often translates into a higher starting salary, increased responsibility, increased independence to research in your interest area, and greater opportunity to work with innovative technology on the front of research trends.

Why a biomechanics graduate degree?

Biomechanics bridges biology and mechanical physics, typically at the tissue level or higher. Degrees like bioengineering or biophysics typically are at smaller levels, but there are certainly many researchers whose interests cross over these disciplines. If you have passions and/or abilities in math and physics, and want to apply those to study human or animal movement, biomechanics may be right for you.

So you have decided to attend biomechanics grad school. What now...
Identify biomechanics graduate programs with faculty members you want to work with:

While some schools offer degrees that are specifically in Biomechanics, this interdisciplinary field is often housed in different departments depending on the school and faculty’s expertise. Biomechanics related degrees can be in bioengineering, biomedical engineering, mechanical engineering, industrial engineering, kinesiology, physical therapy, sport and exercise science, rehabilitation and movement science, integrative physiology, orthopaedics, ergonomics and human factors, biology, and more. Your graduate degree does not need to be in the same discipline as your undergraduate major, but be sure to check the entry requirements for different programs. Go online and check out the interactive map of different programs across the country (website shown above). It’s important to find a school and location you are excited about (it will be your home for several years!), but most importantly you want to find an advisor who’s research and mentorship is the best fit for you.

If you have two years left before graduating with a bachelors:

Decide in what area you want to study. Pick your area of interest. There are many under the umbrella of biomechanics. Next, find research faculty doing the type of work that interests you. Look at their publications, the conferences they attend, their research facilities, and who hires their students. If possible, volunteer in their lab, or work as a summer intern in their lab. Also, talk to or email the other graduate students in the lab to learn more about the lab, the school and the interactions between students and their advisor.

If you plan to graduate with your bachelors this year:

If you have not already, take those GREs. You can retake them as many times as you want, so start early. You should have also started to think about your current faculty that can best provide you a letter of recommendation. Most schools will require three. Work on your résumé. Determine what faculty members you want to work with at the institution to which you are applying. You should have already started communicating with faculty member so that they can advocate for your admission to the program. **THIS IS DIFFERENT FROM A LOT OF OTHER DISCIPLINES** where you will typically just apply to a program and eventually be assigned a faculty advisor. Some schools give you the option to rotate between labs before matching with an advisor, so you can identify and communicate with multiple faculty members you might be interested in working with as you apply.

Admissions officers at the school will be looking to make sure you meet the program’s general entrance requirements (GPA, GRE scores, letters of recommendation). Your potential faculty advisor will be concerned with your level of motivation, demonstrating your ability to work independently and as part of a team, and your fit in their lab. If you start working with them early, they can help you through the application process.

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