

Notes for aspiring PhD students

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1 Why read this document?

If you are a prospective student who is unsure if a PhD is the right fit for you, this document may provide some clarity. Sections 4 and 5 are relevant if you are specifically looking to be supervised by me.

2 Should you pursue a PhD?

Maybe. If you are curious about a specific phenomenon/problem, have the unrelenting drive to dig deep into that problem and have the patience to continue being curious about the problem despite several failed attempts at solving it, and if you enjoy this whole process, a PhD may be a good fit for you. The focus of a PhD is to make an academic contribution, usually to improve the understanding of a specific topic. Sometimes, this improved understanding may also lead to developing better tools/techniques for solving specific problems.

2.1 Researcher vs PhD student

What is the difference between working as a researcher vs doing a PhD? Both involve doing research. But a PhD:

- is necessarily focused and coherent. Simply publishing x papers does not automatically warrant a PhD. The research must be a concerted effort at solving a specific problem/understanding a specific phenomenon.
- is a time bound (usually 3-5 years), long term project where a student has the opportunity to study a problem they are curious about. In contrast to this, a researcher may just be executing ideas told to them by their supervisors. The projects may not be self-driven, and the type of problems worked on in a similar 3-5 year time frame may be very different from each other.
- is a research program to train you to do independent research. Apart from technical skills, this includes skills such as reviewing literature, finding and formulating new research problems, communicating one's research ideas (both verbally and in written form) to a wide audience, etc.,

2.2 Do grades matter?

For doing research, no. But the university may have minimum grade requirements to justify admission into a PhD program. Certain scholarships may also have minimum grade requirements.

3 What should you expect during your PhD?

- Hopefully, excitement and enthusiasm for having the chance to work on a problem that interests you!
- To drive your own research. Your supervisor will only guide you towards/away from certain topics, based on the knowledge they have. Also, they won't always tell you what to do (why would they? It is your PhD after all. Their role is to just guide you through the jungles of academia!). So expect the expectation to be proactive. Don't expect to be spoon-fed.
- Being busy trying to solve (or find) the problem of your choice - Research is hard. It takes time and is sometimes frustrating. Expect to put in patient effort to see progress.
- Imposter syndrome - It is common to feel that you are not suited to do research. Usually, this is just a result of slow research progress, or comparing your progress with that of your peers (next point).
- There will be a tendency to compare your progress with that of your peers. Usually, this is not a productive or sensible exercise. Each PhD topic has its own unique challenges - one project might take a long time to get started with, while another may be easy to start with, but difficult to make progress in.
- A feeling that your supervisor has it easy - they most likely do not.
- A feeling that your supervisor knows a lot about everything - they do not. They are specialists, but probably know a little bit about many related things, which can give the impression of being deeply knowledgeable about many things.
- A feeling that your supervisor doesn't know much - Probably true with regards to the intricacies of your project, especially towards the end of your PhD. You are (or should be) the expert at this stage.

4 What you can expect from me:

My:

- guidance for scanning research literature.

- guidance for finding/identifying a suitable project that is difficult enough to be considered worth solving, but easy enough to finish within the time frame of your scholarship.
- guidance for writing papers.
- guidance for presenting research work.
- full support for your post-PhD career choices, whatever they may be.
- support for making you an independent academic, including connecting you with others in the field, providing you with reviewing and other academic responsibilities (if interested).
- general guidance for navigating the academic world.
- empathy and understanding, as much as I can reasonably allow myself.

5 What I expect from a PhD student:

- Taking ownership/Being proactive about your research.
- Good and open communication.
- Integrity.
- Effort and resilience.