My advising style

What should you expect if you want to become my PhD student? First of all, I would not accept you as my PhD student unless I think I know you pretty well. Remember all candidates have good grades and some good projects under their belt, so that’s not enough to single you out. I want to see you and talk with you face to face. Typically, I will also require you to take one of my classes so that I can see how you learn and interact with other students.

My advising is primarily based on one-to-one conversations. Each week, I’d like for you to stop by and explain to me about a research paper you have read and found interesting in some way. I’d also like to hear about your latest ideas for a PhD area and project. Based on that, I can make suggestions of what more to read, to think about, and possibly experiments to run. I will not give you a thesis topic. My PhD advisor, David Wheeler, explained to me “One difference between a PhD and a Master’s is that if I have to tell you what to do it’s a Master’s.” That’s a sound point of view. It would be very helpful for all involved if your project was closely aligned with something I like to work about, but it is essential that it is your project.

I like projects that have a chance of making some impact in the world, but a PhD project is not a development project. Assume that the immediate problems you see will have been solved by others by the time you finish writing up your thesis. Look a bit further ahead. Your job is “to add to the sum of human knowledge.” That’s an ambitious and noble goal. There are many advantages to a PhD, but if money is the main aim of your career, you’ll be better off with a Master’s. A PhD requires some idealism. It also requires trying out a lot of ideas with small experiments and projects – do not just spend years reading the research literature waiting for the perfect idea to pop into your head. Good ideas often emerge from seeing what doesn’t work or what is unreasonably hard to do.

I place a high value on the ability to communicate ideas verbally and in writing, so expect to be required to give presentations to me, other students, and other professors and to write up results. You’ll find the effort and the resulting feedback helpful.

Bjarne Stroustrup

PS Some of what I said above also applies to a good Master’s by thesis.