

These are just some things I came into grad school believing or noticed along the way. They may seem obvious, but following my own advice can be difficult, so I think it helps to reiterate. Hope it helps you.

Impress and inspire yourself first, then others. Let this theme define your priorities. Impressing/pleasing others is important, but with every little action you take, ask why *you* care. There may actually be really good reasons for really annoying things, and no good reason for something that ostensibly seems very important. It's easy to get trapped trying to please others (e.g. peers, reviewers, advisors, people who you haven't even clearly defined yet!) and avoid visualizing your own ambitions. This frame of mind also keeps you responsible since you know why you're motivated to do everything you do and frees you to do the deep thinking you need to do to great research.

Treat it like a real job. It helps to develop an idea early on about why you're here so you keep treating it like a job (e.g. desire to do 'real science', become a badass research professor/scientist, hone in critical thinking skills and other skills for entrepreneurship or a future in the industry). You're investing in yourself and the doors the degree will open for you down the line. It's not an upgraded undergrad, and don't let yourself or others put you in that mindset. Sometimes taking classes, TAing, constantly being surrounded by campus events and activities, free food, and flexible work schedules may make you think you're closer to a traditional student than a person already in the workforce. Your advisor is your manager. Don't be afraid to speak your mind, communicate your ambitions, and set clear expectations so that you don't confuse expectations with favors. This can be difficult to do because we are tempted just to talk about 'real work': our plots and results and scientific difficulties along the way. Keep a constant flow of communication. You both will feel like you are making progress this way.

Don't make big events the only events (e.g. finals, public presentations, paper submissions, proposal, defense) and don't put other important professional things off for them. Set additional deadlines on your own, stick to to them, and reward yourself for the completion of those. Some will totally private, while others are public. It's easy to get in the mindset that the world should stop until one of these big events is complete and *then* you will handle other important things. I just don't think this approach scales well when you have more and more professional commitments.

Get comfortable with planning but not too comfortable. Often times planning doesn't seem like work to those of us who feel like actually writing code, being in the lab, testing hypotheses, making plots, etc. is 'real work'. But you can spend literally hours laying out strategy and vision and that's OK. This can save valuable time downstream. But hours shouldn't turn into days and you probably should be doing all the things that seem like real work.

Other, smaller tips:

Headphones are a great way to concentrate. This creates an audibly isolated but visually accessible environment, and there's supposedly research to show that this kind of environment is good for productivity in the office.

Whether you're meeting with your advisor, other professors, or other students, be mindful that you are asking for their time and try to come prepared with a mental or real list of specific things to talk about and specific next steps. I'm trying, more and more, to send emails where the first sentence is a result almost as it would be in a paper followed by supporting details. The book "Getting Things Done" encourages detailing the next steps sometimes to the point of what you will physically do next so that they don't seem too overwhelming. An attempt at clearly communicating work you've already done is better than diminishing returns on a 'perfect' draft.

Geet Duggal (September, 2014)