Advice to New Grad Students

A fool learns from their mistakes, but a wise person learns from the mistakes of others.

Developing Your Projects

1. Track idea development on paper
    a. Whose idea was it? When?
    b. What was the specific thing said that was relevant?
2. Think about your project aloud
    a. At conferences, talks, 1-on-1 with committee
    b. During downtime, while reading papers
3. 5 hardest skills:
    a. Time estimation (weekly log)
    b. Focus on 1 project (a submitted publication is worth 2 draft publications)
    c. Experimental design (the main reason my thesis projects failed was they weren't good ideas to begin with)
    d. Predicting what will fail (50% of my thesis projects failed)
    e. Big picture (why did we do this project again? Does it ask the right questions? Use strong, appropriate methods?)
4. Have a wake for your dead projects & move on
    a. Don't wait until they stink to bury them
    b. Develop your nose

Organization

1. Make an organization system early, iterate if needed by keep updated
    a. Files, projects, notebook, calendar, slides/brains/cells/antibodies, talks, data, images, code, todo, meeting notes
2. Quality is key
    a. Animal care, documentation, method details, figure legends
    b. Don't fall for "good enough" syndrome
    c. Learn to own your work & mistakes (if someone asked "whose mess is this? Whose plates? Whose lab notebook? Whose mice? Whose files?" would you be ashamed?)
    d. But you also need to triage

Planning Your Training

1. Take time for professional development early
    a. You are paying tuition for this
    b. Apply for every fellowship – it always pays off!
2. Plan 2 years ahead
    a. Establish expectations from your mentors/committee/program early
3. Protect your time (personal, professional development, actually finishing a project before starting another one)
    a. Go somewhere else
    b. Learn to say no
    c. Offer an alternative

Interpersonal

1. Be friends with everyone
    a. Smile in the halls, make the coffee, offer cookies, stop by the office instead of emailing, chat outside the lab at happy hour
    b. Reward: everyone quickly helps, free food, save time by getting advice you didn't know they had
2. Communication karate – motivation, trigger points, style
    a. To work with someone effectively over a long period of time, it helps to identify their:
        i. Motivation – what do they want?
        ii. Trigger points – what will make them unhappy?
        iii. Style – how do they like to communicate, for better or worse?
    b. E.g. myself:
        i. (motivation) do the best science & get training
        ii. (triggers) perceived disrespect (eg being late, email tone)
        iii. (style) thinking out loud, taking a while to get to the point

Survival

1. You can't stop the waves, but you can learn to surf
    a. Cultivate your own positive feedback (eg outreach, peer network, compliment jar)
    b. Remind yourself your work is important (don't get disillusioned)
    c. Resilience – don't let things get to you
    d. Don't get critical feedback take you by surprise – ask for it early
    e. Give yourself permission to fail
    f. Power poses
    g. You cannot pour from an empty cup (taking a week off isn't going to delay graduation)
2. Speak up
    a. Not everything your advisor asks for will fit your training needs. It's okay to say no.
    b. It's the PIs job to say no to purchase requests if they don't have funding, not you. Don't be afraid to ask for the things you need.
    c. Ask questions at seminars to impress the speaker/audience
    d. Ask forgiveness, not permission, once you're established enough to make your own calls
    e. Take credit for your own work & toot your own horn