Expectations and Goals for Research Rotations in the Boettcher Group  
Shannon Boettcher  
3/7/21

The purpose of this document is to provide some uniform information to all PhD students performing a research rotation in the Boettcher group. More detailed information on the group philosophy is in a separate document that rotation students should also read. It is useful to keep forefront what the big-picture goals of a research rotation are (1) for each PhD student to determine if they enjoy the research and research environment of a particular group, and (2) for each faculty member to assess whether they would like to commit to working with and supporting financially a given PhD student for the next four years. The research rotation is an essential piece to making a good match.

What Prof. Boettcher will pay attention to:

(1) **Evidence for a “growth mindset” in research and career.** This is the most important aspect I look for. This means that students enjoy and seek out opportunities to improve as scientists, communicators, educators, and innovators. This means students seek out honest *constructive criticism from me and others* (and be prepared to receive this honest criticism despite how difficult it may be to hear). It means that students constantly seek to get better by acting on the feedback. This means discussing your research within the group and with others constantly, with your advisor (me) often (at least every other week) – I am always open for meetings to be schedule and I don’t mind at all when folks drop in my office.

(2) **Evidence for commitment to research and a high level of work ethic.** This does not mean that rotation students are expected to work unreasonable hours. First-year students have a large number of commitments to classes, teaching, etc. Typically ~20 h per week of work effort, on average, is reasonable, but this can vary depending on the courses and the individual situation of each student.

(3) **How the rotation student drives their project.** While significant research progress is certainly nice, progress is *always* highly variable depending on the project. New projects will be much more difficult than ongoing ones. Each project will present its unique challenges, and often unexpected roadblocks emerge. What is most important is how the student works through these roadblocks and takes *intellectual ownership of their project*.

(4) **How each rotation student interacts with the existing research group.** I value a positive, supportive, industrious, and innovative group culture. *I will always get feedback from the research group on how interactions were prior to making a decision on whether to accept a particular PhD student.* If you can, also contribute to helping others in the group succeed – your efforts won’t go unnoticed.

I strive to take all the students that want join our group each year, but sometimes it isn’t possible or it seems the fit is not ideal. In addition to the above, I will also consider interactions and performance in courses. While academics and innate “intelligence” (if there is such a thing!) are important, **much more important are the four points above. I want students in my group that very much want to be there, get better at what they do, and are willing to put in the time and energy to succeed at a high level.**