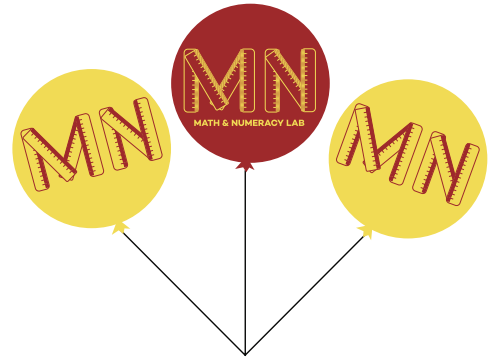


Math and Numeracy Lab General Graduate Student Guidelines and Expectations

The Math and Numeracy Lab is comprised of postdoctoral, graduate, and undergraduate research assistants and full time research staff. This document is intended to give postdoctoral fellows and graduate students guidelines and expectations for their roles in the lab. (Policies for undergraduate RAs are described in a separate document.) For ICD doctoral students, this document supplements rather than replaces the departmental guidelines for advisors and doctoral students.



Lab Research Focus

Members of the lab share an interest in *numerical cognition* and its *development* and *function*. This interest is broadly relevant to basic studies of cognitive development, applied studies of mathematical thinking or education, and educational studies focused on mathematics learning. Given the range of individual differences in numerical cognition that persist throughout the lifespan, our research includes studies of preschoolers, school age children, and adults (although our predominant focus is in early childhood). Although our emphasis is on contributing to basic science, the overarching goals of our research program are to provide information useful to parents and educators. We strive to narrow the gap from research to practice.

The lab is funded by diverse organizations, including federal agencies (e.g., the National Science Foundation) that support experimental and applied studies and private foundations that support applied research and programmatic functions, such as community outreach.

Lab members have diverse research interests and training backgrounds. Graduate research assistants (GRAs) include doctoral students in ICD, and doctoral students in other departments (Educational Psychology, Quantitative Methods and Evaluation, Psychology, and Family Social Sciences, for example). I welcome students who have other primary advisors to join us on a short- or long-term basis, provided that the other advisors support their involvement in this lab. Prospective students and postdocs, as well as new and established postdoctoral fellows or graduate students in any program, are welcome to contact me about short or long term opportunities to join the lab.

Work Ethics - We are a productive team that enjoys our work and camaraderie, and we take pride in our accomplishments. We value the integrity of our work, prioritize *precision* over speed, *inquiry* over rote tasks, honesty in all communication, and careful record keeping. In addition to participating in lab discussion on ethics and adhering to ethical practices, graduate students should be familiar with the American Psychological Association ethical codes for research and publication

(<http://www.apa.org/ethics/code/>) and with the University of Minnesota Code of Conduct for Students (https://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf).

Goals and expectations for your involvement in the lab - Your growth as an independent scientist is a goal that you and I share. Our lab is very interactive, which affords opportunities to collaborate with and learn from others at different stages of their development as a scientist. Your ideas, opinions and contributions are significant. Throughout your tenure in the lab, you will benefit from my mentoring and the mentoring of more advanced students and postdocs and from the opportunities you will have to mentor undergraduate RAs and research staff.

Your involvement in the lab supports ongoing research, the development of new research studies (including student-initiated research) and your development as a scientist. Measurable goals for your involvement include meeting doctoral program requirements, attending and participating in lab meetings and other departmental seminars, submitting and delivering conference presentations, and taking full advantage of opportunities to co-author or lead author publications.

My general expectations are that graduate students and postdocs in the lab will:

- be self-motivated, independent, and curious individuals who are eager to make contributions to their and others' work in the lab,
- value scientific and personal integrity,
- maintain honest and regular communication with me and with others in the lab,
- take responsibility for meeting your program deadlines and for being prepared for our regular meetings (full lab meetings, and individual meetings with me)
- depending upon your year in the program, strive to achieve the capacity for independence in research design, implementation, data analysis, and dissemination skills.
- Honor the time and effort commitment associated with the level of GRA support you receive.
- develop as an independent researcher
- learn how to communicate about science to a wide range of audiences, and
- respect lab policies outlined in this and other documents.

My expectations for measurable outcomes for graduate students and postdocs are that you will:

- create and update a personal expectations and goals plan at the beginning of each term to review with me (or Project Goals for short term GRAs)
- establish and meet the timelines of those expectations as they apply to your program requirements (first year paper, etc.) and other lab commitments (e.g., manuscript preparation).
- create and maintain a lab logbook to monitor your progress and research processes
- regularly attend and participate in weekly lab meetings
- contribute to dissemination activities by presenting at conferences (about once per year) and writing manuscripts, and complete graduate school or your postdoctoral fellowship with several

first authored publications and additional co-authored manuscripts or chapters [these might not all originate in my lab if you are also involved in other professors' research labs].

- establish a network of colleagues forged by interactions at conferences, network meetings, and other scholarly activities.
- engage in service to the community and/or university

My general expectations for myself are that I will:

- explain, review, and follow lab policies outlined in this and other documents
- review your *personal expectations and goals* plan at the beginning of each term
- support your efforts for meeting program deadlines
- value your contributions to the lab
- provide multiple opportunities for scholarly and professional growth
- model, value, and communicate principles of ethical practices and professionalism
- maintain honest and regular communication with you centered on your contributions to the lab and your professional growth
- provide timely feedback on your work and progress
- meet with you regularly (typically weekly or biweekly), in person or remotely, to achieve the above-stated goals

Time commitments and time management

In order to be successful in the lab, you should expect that your time commitment will be significant, and that you will manage your schedule. My expectation is that your work in the lab will be of significant interest to you, such that you will view it as an opportunity to be immersed in doing something you love. I view GRAs as junior colleagues who I mentor. However, there are explicit work expectations associated with earning GRA support or research credit, and as your supervisor I will be involved in some decisions about how your time is spent. It is imperative that you meet expectations for the responsibilities associated with grant funded support.

The amount of time and the specific hours you devote to lab research will vary depending on the nature of your role on a given project (e.g., whether it is the basis of your FYP or doctoral studies or short term independent study) and the phase of the research project itself (e.g., data collection vs. data analysis) and specific project goals at a given time (e.g., meeting a conference submission deadline). We will discuss time commitments and demands during our meetings.

I also expect you have a life outside the lab, and that being part of a lab will provide you with opportunities to practice prioritizing competing interests and commitments. It is likely that, on occasion, we will work long hours and on weekends to achieve explicit mutual goals (such as meeting a conference submission or grant proposal deadline), but the normal expectation will be that you and I do not have regular communication with each other on weekends.