Our program faculty members span a wide range of research approaches. Nevertheless, we are all psychological and educational scientists committed to training the next generation of leaders in the field. We do so by adopting an apprenticeship model. Although the details of this model look different for undergraduate and graduate students, the end goal is the same: to produce independent thinkers capable of pushing science forward as a theoretical and empirical enterprise, and also as a force for improving educational outcomes for all students.

**Undergraduate Students**

Our goal in mentoring undergraduates is to identify the researchers of tomorrow and to put them on the path to a career in psychological and educational science. We pursue this goal in three ways.

First, we extend the apprenticeship model into the classroom. Our undergraduate courses are largely lab- and project-based. Students learn about seminal theories and the experiments that support them; they recreate these experiments and collect, analyze, and write-up data; and they complete large papers and projects where they apply psychological science to address educational problems.

Second, we run laboratories that employ undergraduate research assistants. These students help with data collection and coding, working alongside faculty and graduate students. Their activities span contexts, from the laboratory to the classroom to the community. These students have gone on to MA and PhD programs at major research universities.

Third, we provide intensive mentorship to individual undergraduates seeking richer and more independent research experiences. We serve as advisors or committee members for multiple honors students. We advise numerous students who have participated in the Undergraduate Research Opportunities Program (UROP), and also multiple McNair Scholars. We have worked with students with self-designed majors who seek our multidisciplinary expertise.

Our mentorship of undergraduate students is a success by three important metrics. First, these students are disproportionately successful in winning UROP awards, which are highly competitive. Second, these students participate in research to an extent that they earn authorship on conference presentations and posters, which is important for launching them into prestigious graduate programs. Third, based on their accomplishments, these students are disproportionately successful in winning places in selective training programs, such as AERA’s Undergraduate Student Education Research Training Workshop.

**Graduate Students**

**Admissions.** We seek to attract graduate students from diverse backgrounds who have a record of academic success as evidenced by their prior academic performance and standardized test scores. Equally important is their demonstrated experience and research interests. The best candidates have engaged in psychological research and have been successful as evidenced by their CVs and letters of recommendation.
Research. Our faculty work with graduate students to conceptualize, execute, and write-up projects tailored to everyone’s mutual research interests. We strongly guide students early in their careers, and fade this guidance as they grow as independent researchers. At this point, students should be able to develop their own research topic within the discipline of educational psychology. The research should align with their advisor’s expertise and interests to the extent needed for the advisor to be able to provide substantive support to the student.

Publication. Publishing is essential for most career paths. Science is not a solitary effort, and scientists have a responsibility to communicate their results to their peers. In this way, knowledge advances and scientists can build on the work of others. We therefore expect graduate students to write up the results of their research projects and submit these works to conferences. Successful projects should ultimately be written up for submission to high-impact journals. By the time students graduate, they should have multiple publications in the publication pipeline (published, in press, in revision, under review, in preparation).

Authorship. Authorship marks not just an individual’s contributions to a research project or manuscript, but also their responsibility for the soundness and reproducibility of its results. To earn authorship on a paper, students must contribute substantial effort to “the work” of the research and to the writing of the resulting manuscript. There is no set of rules for determining the order of authorship on a manuscript. In some subfields, authors are listed in descending order of contribution. In other subfields, the primary student author is listed first, the senior author (i.e., mentor) is listed last, and other contributors are listed in between these poles. In general, students will increasingly appear in the first-author position as the independence of their contributions increases over their time in graduate school. Advisors will continue to have significant involvement (i.e., in developing the original idea, collecting data, analyzing data, and/or writing a portion of the manuscript), and will generally be listed as an author. Importantly, advisors do not generally fund research projects and read drafts of manuscripts unless they will also be authors on the manuscript. The roles and authorship should be determined at the first sign that an activity will result in a publication. This decision can be altered by mutual agreement at a later date if roles have changed.

Conferences. Developing a professional network is essential, regardless of career path. Faculty members expect graduate students to attend national (and possibly international) meetings and to report on their research at those meetings. The faculty will do their best to find funding to make this possible but obtaining support for meeting attendance should be a joint effort. There are multiple mechanisms to pay for conference travel, lodging, and registration costs, including funds written into grants, funds made available by the program and department to each student each year, and grants from university organizations such as the Council of Graduate Students (COGS).

Research meetings. Students are expected to attend a number of regular meetings. These meetings are dictated in part by the mentoring styles of faculty members, which vary. All faculty members schedule regular meetings with their individual students—the frequency of which is determined by the student’s stage in the program and individual needs. These meetings are essential for ensuring that students make progress on their research projects, and do not flounder without guidance. Many faculty also schedule a regular lab meeting which all of their students attend. These are particularly useful for ensuring that larger projects continue to move forward. They are also supportive environments where students learn to present the incremental results of their research and receive feedback from others. Finally, some faculty schedule regular reading groups or writing groups. More generally, faculty must communicate to students their meeting expectations.
**Other meetings.** Students are expected to participate in the intellectual life of the university. Within the program, they are expected to attend the brown bag, which is a bimonthly meeting where students, faculty members, and outside speakers present their research and ask and answer questions. This is critical for building your ability to communicate your research to other scientists according to the norms of the community. Beyond the program, other units within the university offer regular brown bag programs (e.g., the Center for Cognitive Science, the Institute for Child Development). It is important for students to attend those talks that interest them. This is an important source of new research ideas and can also spark new collaborations.

**Stipends and tuition.** In collaboration with the graduate program, the program generally guarantees funding for four years for all doctoral students who make timely and satisfactory progress.\(^1\) The nature of that funding (TA, RA, Fellowship) is often unpredictable but there will be funding. Nevertheless, we expect students to write and submit fellowship proposals where possible. Writing such proposals is excellent experience and receiving such fellowships increases a student’s competitiveness on the job market. In particular, students should consider applying for an NSF Graduate Student Research Fellowship during their first and second years. This effort can be supported by the fellowship-writing course offered by ICD. All students are expected to apply for a Doctoral Dissertation Fellowship to fund their fifth year in the program, when they should be working on their dissertations.

**Research funding.** Funding student research projects is a joint responsibility. Faculty will work with students to find the necessary funding.

**Coursework.** Students are expected to complete the coursework of the program in a timely fashion. The expectation is that students will get nearly all As in their courses. If a student’s GPA falls below 3.75, then this will be cause for concern. Students are expected to take courses inside and outside the program and department, to broaden their knowledge base and bring new ideas and methods to their research.

**Reviewing.** An important part of being a scientist is peer-review. Students should gain experience as reviewers through the available opportunities. This includes reviewing for conferences in their field. As their research is published, they may be invited to review for journals. These opportunities should be vetted by their advisors, who will support them in learning the demands of the genre.

**Reading the literature.** Regardless of career path, a current knowledge of the literature is essential. We expect students to spend significant hours each week reading papers in their field. This expectation is on top of the reading students do for their classes. A good (if ambitious) rule of thumb is to read one paper each day. Faculty members will direct students to the most important and relevant papers, and teach them to use electronic tools to find other, related papers.

**Teaching.** Teaching is a tremendous way to learn to communicate complex concepts to a non-specialist audience. It is also an essential component of CVs that are strong enough to land faculty positions down the road. Most students will be involved in teaching at some point during their graduate training. TAing is demanding of students’ time but this diversity of experiences is

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\(^1\) Satisfactory progress by a doctoral student is determined by several factors: (1) performance in coursework, (2) rate of progress through the program (e.g., normal course load each term, relative absence of incompletes), (3) performance as a teaching or research assistant, (4) preliminary exam performance, and (5) progress toward completion of a dissertation.
excellent training for the heavier and more diverse course loads of faculty at primarily teaching colleges.

**Professionalism.** This document makes it clear that a lot is expected of students. The less time efficient a person is, the more hours/week it will take to meet those expectations. We therefore expect students to learn and to practice good time management.

Good time management also means keeping one’s commitments. There are times when research demands peak and meetings must be canceled and other work deferred. But they are rare. Students must honor their commitments. When they cannot, they must pre-emptively explain why, and must formulate a revised schedule. If a student needs input to move forward, it is their responsibility to seek out their advisor or schedule a meeting. By the time they leave the university, students are expected to be able to function as independent scientists.

**Esprit de corps.** A lot of what students learn they learn from other students and from postdocs. Students are expected to develop great professional relationships with other people in their lab and in the graduate program more generally. These relationships should be supportive, not competitive.

**Career paths.** Many of our graduate students aim to secure post-doctoral fellowships – and ultimately tenure-track faculty positions – at research universities. However, we realize that students might have other career paths in mind. We can’t properly advise students if we do not know what career is desired. Students should inform their advisors of the range of career paths in which they are interested at the earliest possible date. Advisors will in turn help students obtain the experiences and skills needed to succeed in those various careers.

**HISTORY**

v1 (3/20/2019) Created by Sashank Varma. Some of the text pertaining to graduate students was taken from Scott Lanyon’s, Vice Provost and Dean of Graduate Education, advising statement, which has been broadly circulated at UMN. Feedback on prior drafts was provided by:

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