University at Buffalo
Department of Psychology
College of Arts and Sciences

Behavioral Neuroscience Program Guidelines

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Diversity Mission Statement

The faculty of the Behavioral Neuroscience Program and the Department of Psychology as a whole is committed to creating a supportive and inclusive environment for all people and a community where people respect and trust each other enough to have difficult conversations. We promote diversity because every individual has inherent worth, and diversity, equity, and inclusion are intrinsic to this core belief. We expect members of our department to strive towards these same goals by being courteous to others, by being willing to listen to differing viewpoints and opinions, and by recognizing the essential value in all human beings.

Goals and Description of the Program

The goal of the Behavioral Neuroscience Program is to provide the student with both a broad and deep knowledge of the physiological and biological factors that control and affect behavior. Through a close and personalized student mentor relationship, we try to instill in the student an appreciation for programmatic, problem-oriented research. We seek to produce sophisticated, versatile teachers and scientists. The Behavioral Neuroscience Program provides training toward the PhD for approximately 20 students at a time. Faculty in the area represent a wide range of interests in Behavioral Neuroscience, making our program a particularly rich and diverse intellectual environment. A number of adjunct faculty add to this intellectual breadth by participating in some program activities and serving on some student committees.

Although there are no special requirements for admission to the program, preference will be given to students with a master's or bachelor's degree in psychology, biology or neuroscience, who have been involved in research and who have a course background in these fields.

Specific Goals and Program Learning Outcomes for PhD Students in Behavioral Neuroscience

Goal 1: Students will acquire and demonstrate broad knowledge of psychology, and demonstrate ability to integrate these areas with behavior neuroscience.
Goal 2: Students will acquire broad and in-depth knowledge of the literature and sub-disciplines within Behavioral Neuroscience.
Goal 3: Students will acquire knowledge and technical proficiency of methods used to answer behavioral neuroscience research questions.
Goal 4: Students will acquire the necessary skills and knowledge to design, execute and analyze meaningful experiments as part of focused program of research.
Goal 5: Students will acquire the necessary skills and knowledge to effectively communicate results of their research in written and oral form.
Goal 6: Students will acquire the necessary skills and knowledge to be effective college-level instructors.

Goal 7: Students will exhibit competence in statistical methods as measured by their performance in their coursework, (PSY 607 and PSY 608), and in their ability to prepare rigorous analysis of experimental data for publication.

Relationship With Behavioral Neuroscience Faculty

Our program uses a mentorship model to train students. Students are accepted into the program with an identified faculty advisor. Continuation of the relationship with that mentor is arranged by mutual consent, in the sense that both the student and the faculty member must agree that the relationship will be mutually productive. Students are required to have a major advisor at all times, and to work closely with the mentor in developing their professional training. They are expected to meet regularly with him or her to discuss progress, problems and educational plans. In addition, students are required to submit annual Progress Reports to the Area Head, which are then discussed by all area faculty at the yearly graduate student evaluation meeting. Although no formal basis for lab rotation training exists, students are encouraged to develop intellectual and collaborative relationships with other faculty members, as well as with students from other laboratories in the Behavioral Neuroscience Program.

Teaching Responsibilities

All state-funded students in the Psychology Department are required to serve as a teaching assistant (TA) in each of their first 6 semesters (subject to change), as well as to proctor exams each semester for various departmental faculty. The Behavioral Neuroscience Program strongly recommends that one of the TA requirements be for assistance with PSY351 (Biopsychology). If a formal TA position for PSY351 is not available, students (whether state-funded or not) are expected to volunteer their time as a TA for this course in preparation for later teaching requirements.

Requirements for the PhD Degree

Coursework: A minimum of 72 credit hours, including departmental breadth requirements, core behavioral neuroscience coursework, and electives. For details on coursework, please see the UB Catalog (UB Course Catalog→ Graduate Catalog→ Department/Program→ Psychology: Behavioral Neuroscience PhD).

Preliminary exam description: By the end of their third semester, students are expected to form a preliminary exam committee consisting of their primary mentor and three faculty members, two of which must be from the Behavioral Neuroscience Area. Then, during the students' fourth semester, they are expected to prepare for and take preliminary exams. Students will take a 3-credit course (PSY774: Seminar in Behavioral Neuroscience), which, upon passing, will meet the requirements for the preliminary exam. Students should register for the section listed under their mentor's name. The format of the course will be independent study, with three written exams (one every two weeks for the first half of the course) and a grant proposal in the student's area of expertise (to be completed during the second half of the course). The final exam will consist of the oral defense of the students' exam answers and research proposal. Beyond this description, the precise format is ultimately at the discretion of the committee. Three outcomes are possible: (a) the student passes; (b) the student fails but can retake prelims during the following semester; or (c) the student fails and is not offered an opportunity to retake prelims (the student is dismissed from the program and may qualify for a Master's degree). Students are ***highly recommended*** to submit their final proposal as an application to a major funding agency (NRSA, NSF, etc.).

Dissertation Proposal and Thesis: The student will generate and defend a dissertation proposal, and ultimately complete and defend the dissertation. The PhD committee will consist of a

minimum of two full-time faculty members from the Behavioral Neuroscience area, and two other Psychology faculty, one of whom must be from another area of Psychology. Students may have as many additional members on their committee as seems appropriate to that student/mentor combination. Committee composition should be cleared, in advance, with the Area Head.

Dissertation Proposal Defense: The student will defend his or her dissertation proposal by the end of the first month of the student's sixth semester (in most cases this will be February). The proposal defense is designed to allow the committee members to provide conceptual and practical input into the design and theoretical nature of the proposed experiments. The proposal meeting is closed to the public.

Dissertation thesis defense: Students are expected to deliver their thesis to their committee 4 weeks prior to their oral defense. At least two weeks before the oral defense, students must file their intention-to-defend form with the Department so that a room may be scheduled. They must have gotten approval for the defense from all the committee members, after the members have read the penultimate draft. The defense includes an open format (attendance by other students and faculty is encouraged), and a private format during which committee members probe more detailed portions of the dissertation. If approved, the penultimate draft will be converted to the final draft, incorporating the comments of the committee members.

Progress through the program

The program is designed with a five-year time frame in mind, but students may require more time to finish the program requirements.

Year 1: Students begin conducting research in the laboratory of their mentor and start taking required courses.

Year 2**:** Students continue to develop their research programs, and often complete most or all of the required coursework by the end of the second year. The students must have assembled a preliminary exam committee by the end of the fall semester (third semester overall) and have scheduled the oral component of the preliminary exam for the end of the spring semester (fourth semester overall).

Year 3: The third year is also a time of more intense focus on the dissertation proposal. Students should assemble a dissertation committee at the beginning of the fall semester (fifth semester overall) and schedule their proposal defense for the end of the semester. As such, the students will be able to begin work on their dissertation experiments beginning in the sixth semester. Submission of an NRSA or other mentored training grant at this point is highly recommended.

Year 4 and beyond: The student should have begun work on their dissertation project, with the goal of having completed the project by the end of the 5th year.

Evaluation process

Whereas progress through the program is primarily evaluated by each student's mentor, the Behavioral Neuroscience area also provides input into the overall record of each student through the following mechanisms:

Bi-Annual Progress Reports - each semester, students will receive a request for a summary of the progress they have made toward the degree during the past calendar

year. This report will become a part of their permanent record and will be available for perusal by all faculty members in the area.

Evaluation Meeting and Notification Letter - At the end of each semester the area faculty will meet to evaluate the performance of each graduate student in the program. The students will be evaluated based upon comments made by their mentor regarding their performance in the lab, grades received for courses they completed during that year, and the content of their Progress Report. Areas in need of improvement will be identified at this time. The overall conclusions of the evaluation will be communicated to the student in a letter shortly after the evaluation meeting, and a copy will also be sent to the mentor. This evaluation will also become a part of the student's permanent record.

Second mentor program

This optional program involves each student meeting with another faculty member who is not their primary mentor biannually, to talk about how the student's relationship with their primary mentor is going, how their research projects are going, career-related topics, etc. It is not required to participate, and the meetings can be short or as long as they need to be. The idea is to expose the students to other perspectives on scientific research and careers that they might not be exposed to by interacting with Behavioral Neuroscience faculty.

Selecting a Second Mentor: For students with primary mentors that are core BNS faculty, the second mentor could be selected from any other department, a faculty member at another University is also a possibility. Students with primary mentors that are adjunct faculty, this second mentor should be chosen from the core Behavioral Neuroscience faculty, so that the student has a mentor familiar with BNS requirements. The student will choose the second mentor themselves or, if they prefer, be assigned one by the Area Head. In either case the Area Head would reach out to the second mentor to make sure that they agree to participate in the program.