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DIRECTORY

Office: 204 Washtenaw Ave., Suite 4137 USB/2215
734-763-9638 office
734-647-0717 fax
www.umich.edu/~neurosci/
neuroscience.program@umich.edu

Program Director: Carol Elias
204 Washtenaw Ave., Suite 4137A
734-647-6272 USB office
cfelias@umich.edu

Program Advisor: Audrey Seasholtz
aseashol@umich.edu

Associate Directors: Victoria Booth Keith Duncan
Director of Academic Affairs Director of DEI
vbooth@umich.edu rkduncan@umich.edu

Shelly Flagel
Director of Admissions
sflagel@umich.edu

Program Manager: Valerie Smith
204 Washtenaw Ave., Suite 4137B
734-615-1783 office
734-647-0717 fax
vssj@umich.edu

Student Services Administrator: Rachel Harbach
204 Washtenaw Ave., Suite 4137C
734-763-9638 office
734-647-0717 fax
rachelfk@umich.edu

Finance and Data Administrator: Vicky Martin
204 Washtenaw Ave., Suite 4137B
734-647-5476 office
734-647-0717 fax
vrickman@umich.edu

OGPS and PIBS Office: Graduate and Postdoctoral Studies
Program in Biomedical Sciences
2960 Taubman Health Science Library
1500 W. Medical Center Dr.
734-647-7005 office
PIBS@umich.edu
**GENERAL INFORMATION AND TIMETABLE**

The Neuroscience Graduate Program (NGP) at the University of Michigan is a university-wide, interdisciplinary degree-granting Program. The NGP provides broad-based training in research and teaching that allows students to address scientific questions in neuroscience from multiple perspectives and levels of analysis through formal coursework and laboratory research. This guide outlines the steps necessary to complete the requirements for the Doctor of Philosophy (Ph.D.) degree in the NGP. A provisional timetable for completion of the training program is provided, although each student is guided through the program individually. Students can enter the NGP either through direct admission or through the Program in Biomedical Sciences (PIBS).

**TIMETABLE:**

**Milestone**

**First Year:**
- Molecular Neurobiology Lecture/Lab Course (NS623)
- Research Responsibility and Ethics (NS503/PIBS 503)
- Principles of Neuroscience I (NEUROSCI 611, 612, 613)
- Human Neuroanatomy & Lab (NEUROSCI 570/571 lab)
- Principles of Neuroscience II (NEUROSCI 614, 615, 616)
- Advanced Elective or Statistics Course (at least 3 credits)
- Rigor and Reproducibility in Biomed Research (PIBS 504)
- Student Seminar (NEUROSCI 700)
- Lab Rotations (NEUROSCI 800/801; at least 3) (PIBS students register as PIBS 600)
- Selection of thesis advisor
- Complete pre-candidacy graded course work (> 28 credits)
- Preliminary exam
- Advance to Candidacy

**To be Completed by:**
- Fall term (pre-term)
- Fall term
- Fall term
- Fall term (571 optional, both optional for MSTP)
- Winter term
- Winter term
- Winter term (but may be offered in NS623)
- Fall and Winter terms
- Preferably by the end of Winter term
- End of Winter Term
- Administered at the conclusion of Year 1
- Beginning of Fall term Year 2

**Second Year:**
- Student Seminar (NEUROSCI 700)
- Thesis Research (NEUROSCI 990 or 995)
- Graduate Student Instructor (GSI, one term) *
- Advanced Elective Course or Statistics (at least 3 credits) *

* Exemptions must be approved by NGP director or Executive Committee

**To be Completed by:**
- Fall and Winter term (present seminar in 1 term)
- Fall and Winter terms
- Fall or Winter term
- Fall or Winter term

**After achieving candidacy:**
- Dissertation Research (NEUROSCI 995)
- Form Thesis Committee
- Submit Project “Specific Aims” to Thesis Committee
- Present and Defend Thesis Research (F31 format)
- Student Seminar Attendance (NEUROSCI 700)
- Student Seminar Journal Club Presentation (NS 700)
- Student Seminar Thesis Research Presentation (NS 700)
- Research Responsibility and Ethics (PIBS 503 or substitute)
- Thesis Committee Meetings
- Individual Development Plan (IDP) submission

**Completion of Degree Requirements**
- Throughout (Fall and Winter terms)
- November of Year 2
- January/February Year 2
- June Year 2
- Fall and Winter terms (recommended throughout)
- Year 2
- Year 4
- Year 5
- Every 6-8 months
- Yearly
- Within 5 years of candidacy
Students are required to register as a full-time student for each Fall and Winter term. Please feel free to discuss any aspect of these requirements with the NGP Director at any time. The Director and Executive Committee consider petitions to alter requirements of the training program outlined here to meet the needs of individual students.

**PROGRAM ORGANIZATION**

The Neuroscience Graduate Program (NGP) is a Rackham Interdisciplinary Graduate Program composed of over 160 faculty and ~80 graduate students who are housed in several units on campus including: Medical School, College of Literature, Arts and Science (LSA), College of Engineering, School of Dentistry, School of Kinesiology, and School of Nursing. The Program was established in 1971 and it is the longest standing Neuroscience graduate training program in the United States.

Neuroscience graduate students and faculty form a cohesive group, making the NGP the nexus of the neuroscience community at the University of Michigan. Graduates receive a Doctor of Philosophy (Ph.D.) in Neuroscience, which provides tremendous flexibility in choosing one’s career path. There are more than 270 alumni of the Program, and these graduates work in a broad range of fields including academia, industrial research and development, medicine, biotechnology, policy, and scientific writing and communication.

The NGP reports to the Rackham School of Graduate Studies and the Office of Student Programs in the Medical School. The Program is administered by a director (a faculty member appointed by the Medical School) and 3 Associate Directors (faculty members appointed by the Director) along with an appointed Executive Committee (EC). Staff support includes a full-time Program Administrator, full-time Student Services Administrator, and a part-time Finance & Data Manager. The NGP does not have faculty lines; faculty members from relevant departments affiliate with the program and contribute service and teaching to the Program.

The Executive Committee (EC) consists of the Director, the Associate Directors, four at-large faculty members, and a student member. Appointments of faculty members to the EC are made by the Director in consultation with the EC and consist of three-year terms. Faculty members are appointed from all research areas/colleges/schools represented by the program. In addition to the faculty members, a candidate level neuroscience graduate student is selected each year by the students to serve on the EC. The EC is responsible for a variety of Program business including reviewing and approving requests from faculty to affiliate with the Program, recommending students for advancement to candidacy, reviewing and approving student dissertation committees and prospectuses, annual reviews of graduate student progress, reviewing nominations for graduate fellowships and various Program and Rackham awards, and reviewing and approving changes or additions to Program policies.
STUDENT FUNDING

The NGP provides financial support for students prior to candidacy. The financial support package includes an annual stipend, health care (GradCare; student, dependents, and other qualified adult), and funds for travel to the annual Society for Neuroscience meeting during the first year. Students participating in the preterm lecture & laboratory course (NS 623) receive a partial stipend payment prior to the start of the Fall term covering their time in the course.

Financial support as a pre-candidate comes from a variety of sources including Rackham fellowships (e.g., Regents or Rackham Merit Fellowships), PIBS, NIH training grants, and Graduate Student Instructor (GSI) positions. Because student funding comes from multiple sources, each student’s paycheck often looks different, and funds may be disbursed on different schedules. Nonetheless, all students ultimately receive at least the guaranteed base stipend set each year by the medical school. A description of these sources of support is found below.

REGENTS FELLOWSHIP (1/year): Admitted students judged to have an outstanding academic record are awarded the prestigious Regents Fellowship. The fellowship (stipend, tuition, and health care) provides partial support for three-years (pre-candidacy support and some post-candidate support). Shortfalls in the stipend, tuition and health care are covered by the program in the pre-candidate terms and by the Faculty Mentor in the post-candidate terms.

RACKHAM SCIENCE AWARD: Each year the Program nominates several students for consideration of the Rackham Science Award through the Rackham Merit Fellowship (RMF) program. These fellowships are designed to encourage and support a diverse student body. The fellowships (stipend, tuition, and health care) provide partial support for three years (pre-candidacy support and some post-candidate support). Shortfalls in the stipend, tuition, and health care are covered by the program in the first year and by the faculty mentor in terms thereafter. Students that receive a RMF may be supported on a training grant for the pre-candidate terms not covered by the fellowship.

TRAINING GRANTS: Appointments on federal training grants are made for one to two years. Training faculty in the NGP are affiliated with several different training grants awarded by the National Institutes of Health (NIH). NGP faculty are affiliated with the Program training grant (Early-Stage Training in Neuroscience, NINDS) which is a core source of support for pre-candidate students. The grant has four slots that are dedicated to supporting students in early career neuroscience training. Depending on their research interests, students may also be eligible for appointment on training grants in drug addiction (NIDA), hearing and chemical senses (NIDCD), vision (NEI), and reproductive biology (NICHD). All training grants provide a stipend, some tuition and health care. Shortfalls in the stipend and tuition for pre-candidate students are covered by the Program and/or Rackham, and shortfalls for candidate level students are covered by their faculty mentor. Appointment to any of these training grants serves as “Neuroscience Program support” in the pre-candidate years (i.e., students cannot bank support from the Program by securing a training grant appointment).

GRADUATE STUDENT INSTRUCTOR (GSI): Students are required to teach one term (the equivalent of a 50% appointment) typically in the Fall or Winter term of their second year (exceptions can be approved by the NGP Director). While serving as a GSI, salary support, tuition, and health care are provided by the appointing unit (typically LSA, but occasionally the Medical School). Because the source of GradCare support switches from the Neuroscience Graduate Program to the GSI-appointing department, students will receive an email from the Benefits Office (by the 3rd week in the term) informing them of available insurance options. Students must enroll within
30 days of receiving the e-mail from the Benefits Office for coverage to take effect. As a GSI, students have additional benefit options. Any time there is a change in benefit eligibility the Benefits Office will send the student an email with details for any required action. Any benefit elections above the standard GradCare and option 1 dental are the financial responsibility of the student.

After advancing to candidacy, student financial support is the responsibility of the faculty dissertation chair. Support can come from the faculty dissertation chair’s research grants, student grants or fellowships, and/or GSI positions. The NGP does not have funds to support candidate level students. It is required that a faculty dissertation chair will support students at the current Program/Medical School rate.

ACADEMIC ADVISING

The Director and Associate Directors are the primary academic advisors for all NGP students. Each pre-candidate student meets individually with the Director or Associate Directors at least once a year, to discuss course work, research rotations, student seminars, preliminary/qualifying exam preparations and performance. The flexibility and individualized nature of NGP training allows for optimal course selection and research training to suit each student’s needs. Senior students are also available to discuss course selection and scheduling from a student perspective.

NGP students who have achieved candidacy meet individually with the Director or Associate Directors at least once each year. The candidate student’s progress on their dissertation research, grant writing, teaching, professional development, and additional coursework will be reviewed.

Every 12 months (starting in Spring of Year 1), all students are required to submit the NGP Individual Development Plan (IDP). The IDP submission happens electronically. They are also required to upload their CV and thesis committee meeting reports. The Director, Associate Directors and NGP Staff have access to the IDPs to review the progress of each student and obtain information for the training grant or program data. Information from the IDP may be used in annual reports for the NGP Executive Committee regarding student progress towards completing their Ph.D., their status relative to academic standing, and if they are receiving guidance on professional development.

PROGRAM REQUIREMENTS

COURSEWORK

Course offerings and staffing of courses are coordinated by the Associate Director for Academic Affairs (Curriculum Committee). Courses are selected by each student in consultation with the Director or the Associate Directors. To provide each trainee with common background, the NGP requires coursework in multiple areas of neuroscience, research responsibility and ethics, and statistics. Most of the required coursework in these areas is completed during the first year. Elective courses provide further preparation in various areas according to each student’s research specialization. In addition, NGP students complete at least three research rotations and participate in the weekly neuroscience seminars.

Prior to achieving candidacy, each student must enroll for a minimum of 9 units (formal coursework plus research credits) in each of the Fall and Winter terms. Students should consult the Director or Associate Directors to determine the maximum number of units for which they should enroll in each term. All candidate level students are
required to register for 8 credits of research and have the option of an additional 4 credits of coursework in Fall and Winter terms.

**GRADING POLICY:**

In the Neuroscience core courses (611, 612, 613, 614, 615, 616, 623, 700, 570), students are required to earn a “B” or better to successfully pass the course. **If a student receives a grade lower than a “B” (“B-” or lower), they will be required to retake the course.** Proficiency in the program’s core coursework ensures that students are prepared for advanced coursework and research and is required before the preliminary exam.

**REQUIRED COURSEWORK:**

1. **NEUROSCI 623:** (3 credits) Introduction to Neurobiology and Neurophysiology Lecture and Laboratory. Offered in a 2 or 3-week session before the Fall term. An intensive lecture and laboratory course that brings new students together to learn about new technologies and methods in Neuroscience.

2. **NEUROSCI 611, 612 and 613 (formerly 601) and 614, 615 and 616 (formerly 602):** One credit per module. Fall and Winter terms. The order of the modules may change year to year.

- **Neurosci 611 Neuropharmacology**
  Neuropharmacology covers the basic pharmacology principles related to nervous function. This includes neurotransmitter biosynthesis, receptors, signal transduction, agonist/antagonists, neurotransmitter receptor binding relationships, and pharmacodynamics. Neuropeptides and neuromodulators are also addressed.

- **Neurosci 612 Neural Development**
  Neural development covers neurogenesis, neuronal activity and critical periods, axon growth, degeneration and regeneration, synaptogenesis, neurotropic factors, and other topics.

- **Neurosci 613 Neurophysiology, Circuits, and Computational Neuroscience**
  This course covers basic neurophysiology and neuronal activity within specific circuits. Students implement computational methods to understand and analyze neuronal and circuit function using neural simulation packages and Matlab.

- **Neurosci 614 Sensory Systems**
  Sensory Systems covers common principles related to sensory transduction of various sensory modalities. Specifically highlighted are visual, auditory, and vestibular systems.

- **Neurosci 615 Behavioral and Cognitive Neuroscience**
  This course uses an interdisciplinary approach to introduce relevant topics and animal models used in the field. Topics vary year to year but have included addiction, motivation, learning and memory, fear conditioning, gut-brain axis (microbiome), rhythms, and sex differences; these are often discussed with respect to psychiatric illness.
Neurosci 616  Translational and Clinical Neuroscience
This course introduces neurologic and neuropsychiatric diseases, with an emphasis on disease-based mechanisms and current efforts into therapeutic development. Topics vary from year to year but have included Amyotrophic Lateral Sclerosis, Alzheimer’s and Dementia, Movement Disorders, Bipolar Disorder, Depression, Epilepsy, Multiple Sclerosis, and Brain Tumors.

3. NEUROSCI 570/571: Human Neuroanatomy (570-3 credits required, 571-1 credit optional). Fall term. This course (NEUROSCI 570) and the accompanying lab (NEUROSCI 571) cover functional anatomy of the nervous system with focus on major pathways, organization, and histology. The course studies both peripheral and central features of sensory and motor systems. It also relates anatomical organization to functions and processing. Students dissect the brain, study microscopic brain sections, and discuss clinical cases to gain a comprehensive knowledge of the human nervous system. These courses are offered in the Fall Term.

4. NEUROSCI 700: Student Seminar (1 credit). Attendance is required throughout PhD training. All pre-candidate students are required to register for Fall and Winter terms. Second year students work in a small group with a faculty mentor to prepare a 30-min presentation on a neuroscience research topic. Candidate students (in fourth year) prepare a one-hour presentation on their own research. Students and faculty participate in discussion. Training in presentation skills is built into preparation and presentation of seminars (more information and guidelines below).

5. PIBS 503: Responsibility in Research (1 credit) PIBS 503 is offered in the Fall term each year. Training in Research Responsibility is required of every NGP student (more information below). This course covers a number of topics related to the responsible conduct in research. Research responsibility and scientific ethics are explored through a mix of podcasts and small group discussions focused on case studies.

6. PIBS 504: Rigor and Reproducibility in Biomedical Research (1 credit) is usually offered in the winter of each year. This course will consider best practices to ensure rigor, reproducibility, and transparency in the conduct of biomedical research. This course content is required for all NGP students.

7. Statistics course (3 credits): Statistics and the scientific method; observational study versus designed experiment; visualization; introduction to probability; statistical inference; confidence intervals; one-sample tests of hypothesis; two-sample problems; analysis of variance (ANOVA); blocked designs; tests for association and independence (chi-square tests); regression and correlation; and non-parametric tests.

All NGP students are required to demonstrate proficiency in statistics. The statistics requirement may be waived by coursework taken as an undergraduate. To request a waiver a student must have successfully completed (B or above) a 300 level or above undergraduate statistics course. Written requests for waiving the statistics requirement based on previously completed coursework should be addressed to the NGP Director in the fall term of year one. Common courses taken at UM to fulfill this requirement include: Stat 400, Applied Statistics; Stats 405, Introduction to Statistics; Psych 613, Advanced Statistical Methods; BioStats 503, Introduction to Biostatistics; Biostats 553, Applied Biostatistics. Students may request permission to take an alternative statistics class from the Program Director.

REQUIRED COGNATE ELECTIVE: Rackham requires three credits of cognate coursework in approved graduate level courses with a grade of B- or better prior to advancement to candidacy. Cognate courses include those associated with Medical School graduate programs outside of the NGP. Biopsychology courses also fulfill this requirement. Other courses are also allowed, provided they complement the research and career training of the
student and are approved by the Director. In addition, the NGP will allow only a single credit toward fulfillment of the cognate requirement by registration and completion of journal clubs. Journal club taken to meet the elective credits should be from programs or departments outside the NGP, or if within the NGP be cross listed as a course in another Department/Program.

Note: The Rackham Graduate School requires students to complete 18 hours of graded coursework in residence on the Ann Arbor campus to advance to candidacy. The NGP requires students to pass all their core Neuroscience coursework with a B or above before the preliminary exam. The cognate elective must be completed before candidacy.

**COURSEWORK FOR MSTP STUDENTS:** MSTP students advance to candidacy after their first year in the Neuroscience Program. MSTP students receive 18 credit hours for medical school coursework. Human neuroanatomy (NEUROSCI 570/571) is optional for MSTP students. Additional requirements are the same as other NGP students.

**NEUROSCIENCE SEMINAR (NEUROSCI 700):** The Neuroscience Seminar meets in the Fall and Winter terms and consists of faculty and student seminars at 4-5 PM on Mondays. These seminars bring the Program together each week. All NGP students, including candidates, and NGP faculty, participate in and contribute to the student seminars. NGP students in academic year 1 are required to register for the course; and students give a formal presentation in their second and fourth years. All NGP students are expected to attend (whether or not they enroll for credit). Second year students meet with and work with a NGP identified Faculty Advisor (see below) on their presentations. Fourth year students will work with their Dissertation mentor and lab group to prepare their research presentation. The seminar date for each student is indicated on a schedule prepared by the NGP office in the Summer.

In Neuroscience 700, second year students (groups of 2) select and meet with a faculty mentor, previously approved by the NGP Director, to discuss over a 6-week period a selected topic area in neuroscience. Each student in the group selects a specific research subtopic within the general topic area on which to present a cutting-edge neuroscience research seminar to the entire NGP. The presentation is in the form of a 20-25 min lecture. Students receive extensive help from the faculty mentor in preparing their talk. Feedback to the 2nd year students on the formal presentation is provided by the faculty members who direct the 2nd year groups together with the NGP Director and Neurosci700 course director. This is to identify and relate strengths of the oral presentation, as well as to provide mentoring on areas of weakness. (see Appendix 8 for 2nd year seminar presentation guidelines)

Attendance (i.e., participation) is a large part of the grade for non-presenting students. Participation of students also requires that computers and cell phones be used ONLY for note taking on the seminar topic and that active participation be represented by the asking of questions following the seminar. Each student is expected to be in attendance and sign in on the provided sheet. Students can have 2 excused absences from seminar provided they email the Director before the Monday seminar to receive permission to miss. In this email the student should provide the information as to why they are missing the scheduled class session. In the past, excused absences have included items such as travel to or from an approved conference, participation in outreach events with FEMMES or Girls Who Code, illness of the student or death in the family. Please keep in mind that after each unexcused absence your grade in the course will be lowered from an A to A- to B+ etc. Students need to ensure their evaluation is uploaded to the course canvas site.
RESEARCH RESPONSIBILITY AND ETHICS (PIBS 503)

On entering the NGP, all students are required to sign a document entitled Commitments of UM Neuroscience Graduate Students. This document outlines the basic responsibilities all students have to ethical conduct. Students are also encouraged to be familiar with the Rackham Student Policies [http://www.rackham.umich.edu/policies/] and Research Integrity documents [https://research-compliance.umich.edu/research-integrity]. Students are encouraged to use these sites as resources throughout their tenure at the University of Michigan.

During the first year, graduate students attend a discussion series on “Research Responsibilities and Ethics” prepared and presented through PIBS (PIBS 503), which includes NGP faculty members. This course, specifically designed for graduate students in biomedical sciences, includes lecture material and discussion of sample cases covering each of the broad major areas: data handling, protection of creative rights (authorship, attribution, confidentiality), sharing of results and materials, and conflicts of interest. In preparation, the students read “On Being a Scientist: Responsible Conduct in Research”, published by the National Academy of Science, and study Podcasts and reading materials related to specific topics covered in the course. Problem cases are discussed in small groups. Students may be asked to provide answers to many of the problems both before and after they are discussed.

Topics covered in the PIBS 503 course include: Data Storage & Ownership and Peer Review; Animal Use and Care; Human Subjects Research and IRBs; Fraud, Fabrication and Plagiarism; Conflict of Interest; Research in the Global Workplace; and Dual Use Issues

Note: There is a requirement that Research Responsibility and Ethics certifications must be completed every 5 years, so all NGP students are required to repeat this course (or an approved replacement) in their 5th year.

RIGOR AND REPRODUCIBILITY IN BIOMEDICAL RESEARCH (PIBS 504)

This one credit course will consider best practices to ensure transparency and rigor in the conduct of biomedical research. The format will be a mixture of lecture and small group discussions (with faculty facilitators) on issues related to experimental design, blinding and randomization, data analyses, statistics, validation of reagents, consideration of a sex as biological variable and data presentation. If this material is covered in bootcamp, students will register for PIBS 504, but receive credit for completing it within the Neuroscience curriculum.

LABORATORY ROTATIONS

During the first year, each student participates in research by completing at least three rotations in laboratories of affiliated NGP faculty. Students in PIBS interested in the NGP must complete at least one rotation under the supervision of a NGP faculty member (“Faculty Advisor”). The duration of laboratory rotation is half term (8 weeks). If justified, students can request a full-term rotation. The authorization for full term rotation will be given by the PIBS director (PIBS students) or the NGP director (Neuroscience direct admissions). Summer rotations before the start of the first year are often arranged but do not replace the requirement for the Fall/Winter term rotations. The student receives academic credit for each rotation during the Fall/Winter term by enrolling in NEUROSCI 800/801 or PIBS 600 depending on route of admission for a number of hours arranged in consultation with the sponsoring faculty member. Typically, students in their first year are registering for 3-4 credits of research. The three laboratory rotations should be completed during the first 10 months of enrollment and must be completed prior to the selection of a dissertation mentor. Students may choose to do additional rotations in the spring and/or summer after their first year before selecting a mentor; these would need to be in line with the published dates for Spring or Summer half terms and need to be pre-approved by the NGP Director. All rotating students must submit a beginning lab rotation form and ending lab rotation form with a summary of the research progress. These forms are required for advancement to candidacy.
New students are urged to become acquainted with research interests of the NGP faculty. These are detailed on the NGP website. Many new faculty members present their research throughout the year at various opportunities such as the Annual NGP retreat, Department Seminars, MNI data blitz, etc. Students learn about NGP faculty research in discussions with faculty members, public seminars, and research presentations.

**SELECTION OF DISSERTATION CHAIR AND THESIS LABORATORY**
After at least three rotations, each student selects a dissertation mentor from the NGP faculty members to guide his or her dissertation research. The Director must approve this selection. As soon as possible after completion of laboratory rotations, the student should submit her/his choice of mentor to NGP office. The selection of the dissertation mentor should generally occur by the end of the first academic year of study (and no later than Aug 30th). Once a student selects a lab, NGP research credits are elected each term (NEUROSCI 995 for candidates).

**PRELIMINARY EXAMINATION (for classes that matriculated in August 2022 and before)**
The NGP students must pass the preliminary examination before achieving candidacy for the PhD degree.

The purpose of the preliminary exam is to confirm that a student presented with novel information that was not explicitly covered in the required first year neuroscience classes, possesses the ability to read and understand neuroscientific literature, develop hypotheses, and propose experiments to test them. They should also be informed on issues of scientific ethics, rigor, transparency, and reproducibility. Satisfactory completion of this exam is one major criterion the NGP Executive Committee uses to determine that a student is ready to begin PhD dissertation research. The preliminary exam is administered at the end of the first year. Preparing students and administering the preliminary exam is the joint responsibility of the Preliminary Exam Advisory and Evaluative (PEAE) Committee and the faculty members teaching Neuroscience 570, 611, 612, 613, 614, 615 and 616.

To take the preliminary exam, students must have successfully completed all required Neuroscience classes with a grade of B or better. Exam questions are prepared on 6 journal articles, based on the 611-616 modules. All 6 papers are distributed one week before the exams. On each of the 3 exam days, students answer questions on 1 of the 2 papers selected for that day. Students know the schedule of papers before the exams. On each exam day (Monday/Wed/Fri) students answer 1 set of questions designed to take 2-2.5 hours. Students have 8 hours to submit their answers. Answers are blinded and faculty from the PEAE committee and module directors grade answers as satisfactory or unsatisfactory. If students obtain 3/3 or 2/3 satisfactory answers, they have passed the preliminary exam. If students have 2 or more unsatisfactory answers, they will meet with the faculty graders for an oral discussion of the answer to assess the students understanding. If a student fails the exam, they cannot advance to candidacy at that time, but can request to take the exam again the next time it is administered.

A student’s failure on the second exam attempt will immediately place the student in poor academic standing. The Executive Committee will then address the parameters underlying the student’s academic standing and the student will be invited to present their case to the Executive Committee. The Executive Committee will then decide on moving forward with dismissal of the student from the Neuroscience Graduate Program or present an appropriate explanation to Rackham Graduate School that temporarily maintains the student at pre-candidate status within the NGP to permit a third and final re-examination.

Additional details on this preliminary exam are included in Appendix 7.
ADVANCEMENT TO CANDIDACY
The final approval for advancing to candidacy will be made by the NGP Executive Committee. The decision to advance to candidacy incorporates the totality of the student’s record, and the requirements set forth by the Program and Rackham Graduate School. The prelim exam outcome, together with information from the student’s file relating to performance in courses, research rotations and dissertation work will be included. Once the Executive Committee decides to advance the student to candidacy, the NGP Student Services Administrator will process the candidacy with Rackham. Students must register for every fall and winter semester after advancing to candidacy. Students must be registered for 8 credits during the term in which they defend their thesis.

APPLICATION FOR FELLOWSHIPS and AWARDS
NSF Graduate Research Fellowships: All NGP students are required to apply for a National Science Foundation Graduate Research Fellowship during their first or second year in the program if they are eligible. Informational sessions on these fellowships are held and help to guide the students in their essay preparation. Faculty and senior NGP students that have received NSF fellowships provide feedback and mentoring during the preparation and submission process. Our program has an excellent success rate with over 20% of eligible students receiving a funded award.

NIH NRSA and other external fellowships: The NGP strongly supports and encourages our students in all applications for external funding. Our students have obtained multiple outside fellowships including the Department of Defense, Ford Foundation, American Psychological Association, etc. We also strongly encourage our students to prepare research fellowship applications for both NIH and private funding sources. Many (about 35%) of our students have received competitive NIH NRSA predoctoral fellowships and NIH D-SPAN awards for their thesis research.

Internal Fellowships and Awards: The NGP highly encourages students to apply for awards within the University of Michigan. All students should apply for the Rackham research grant (available once as a pre-candidate and once as a candidate) awards and Rackham Travel grants when presenting at meetings both domestically and internationally. In addition, we encourage all students to consider applying for the Rackham Pre-Doctoral Fellowship as well as other Rackham and University Awards http://www.rackham.umich.edu/funding

TEACHING
All NGP students are required to serve as a GSI for one term (equivalent of 50% appt. or 20 hours/week) typically during the second year. Deferring teaching to the third year requires a conversation and approval from the NGP Director. Most neuroscience students teach courses for the NGP or in the Departments of Psychology or Molecular, Cellular, and Developmental Biology. Limited teaching opportunities are also available in the Medical School. Applications for teaching positions in the Dept. of Psychology and Molecular, Cellular and Developmental Biology are required to be completed online by the student. Pre-candidate students are required to notify the NGP Student Services Administrator of their GSI application and the courses for which they have requested a GSI position. The NGP Director, Associate Directors and the Student Services Administrator may help act as liaisons with the contributing departments. Students are expected to attend lectures, prepare material to present in a formal class context (review session or lecture), and to participate in student evaluation (exams). The teaching requirement must be fulfilled prior to completion of the degree. Once a teaching position is arranged, the student submits to the NGP office the name of the course, course number and the course director.
DISSERTATION COMMITTEE SELECTION (usually by November 1, year 2)
The dissertation committee guides, advises, and reviews the research progress and project of the student. The dissertation thesis research advisor co-chairs the Dissertation Committee, which includes at least 4 additional members, each of whom must be affiliated with a Ph.D. program. At least two members of the committee in addition to the chair must be members of the NGP. The dissertation committee must not be comprised of members from a single academic Department. All students are required to name one of the 4 additional members as a Dissertation Committee Co-Chair (please see Appendix 6 for additional guidelines - How to Form a Thesis Committee).

Students are required to submit the names of their proposed dissertation committee members and a short paragraph (2-4 sentences) describing the proposed project for approval by the Executive Committee by November 1st for those who advanced to candidacy in Fall term or March 1st for those who advanced in the Winter term. Any concerns or suggested changes to the thesis committee that are recommended by the Executive Committee will be communicated to the student and mentor within 2 weeks of the meeting. Thesis committees approved by the Executive Committee are submitted to Rackham by the NGP Student Service Representative.

DISSERTATION THESIS RESEARCH AND THESIS COMMITTEE MEETINGS (including preparation of thesis prospectus (Specific Aims) and NIH NRSA F31 proposal on thesis research)

Thesis Prospectus (Specific Aims) (by January 30, Year 2)
All NGP students will write a thesis prospectus to be discussed at their first thesis committee meeting (to be held before February 28 for Fall term candidacy or June 30 for Winter term candidacy). The thesis prospectus will consist of a Specific Aims page that will eventually form the basis of the student’s dissertation proposal (see below). The Specific Aims should be submitted to their thesis committee by January 30. The student presents the specific aims to their committee to get feedback on their thesis project and proposal before preparing the full proposal. A special committee meeting form is provided for this first committee meeting.

Full Thesis Research Proposal (in form of an NIH NRSA F31 proposal) (by June 1, Year 2)
After receiving feedback from the committee at their first meeting, the student prepares and submits the full thesis proposal (in the form of an NIH NRSA F31research proposal) to their committee by no later than one month after the end of their second semester as a candidate (June 1 for students achieving candidacy in the Fall term, or by October 1 for students achieving candidacy in the Winter term). All students must hold a committee meeting within one month of the date of completion of their dissertation proposal. Because scheduling faculty can be challenging, this meeting should be arranged prior to the expected completion date of the dissertation proposal. These dates represent the latest dates for students to remain in good academic standing without prior approval from the Program Director. Additional guidelines for preparation of the Thesis Research Proposal and Presentation to the Committee is included in Appendix 9. The appendix also includes instructions on evaluation of the proposal; a special committee meeting form is provided for this thesis research presentation.

EXPECTATIONS TOWARDS DEGREE IN THE THIRD YEAR AND BEYOND (includes thesis committee meeting guidelines)
Per NGP policy, students should be having dissertation committee meetings every 6 months throughout their candidacy. Students are required to provide the completed NGP Thesis Committee Meeting Form to the NGP office within 2 weeks of each committee meeting with required signatures. Dissertation committee meeting summaries are used by the Program Director and EC to determine progress to degree and eligibility for various
fellowships and awards. *Students that have not held a meeting with their dissertation committee within a 12-month period are required to submit a justification to the NGP director otherwise, they will no longer be considered in good academic standing in the program.*

Upon approval by the dissertation committee, the student writes a scholarly dissertation formatted according to the Rackham guidelines. Research comprising published manuscripts as well as additional unpublished material are often included as chapters in the thesis. Although the quantity of work in the dissertation varies, it is typically expected that the dissertation contains at least two “data” chapters that each represent a published or to-be-published journal article. In addition, a scholarly introduction and discussion must be included to provide an integrated dissertation.

**At least one primary authored manuscript consisting of Ph.D. dissertation research must be submitted for publication prior to scheduling of the dissertation defense.**

The thesis is defended at a public seminar followed by a meeting with the dissertation committee. Students must be registered for the semester in which the dissertation is defended (see Rackham’s web site for dissertation defense deadlines and enrollment schedule for degree conferral).

**FOURTH YEAR STUDENT RESEARCH PRESENTATIONS**

NGP students in their 4th year are required to present a research presentation related to their dissertation research. Generally, this presentation is scheduled during the date/times open in the NS700 course schedule. Students receive guidance from their thesis research mentor for this presentation, and students should personally invite their thesis committee members to attend.

**ANNUAL REVIEW OF STUDENT PROGRESS**

Each year, every NGP student is required to complete/update and submit an Individual Development Plan (IDP) that is available electronically. A template of the document is available to all students in their individual folder. IDPs provide a path for professional development and attainment of career objectives. They provide a means to organize and document academic and scientific progression for administrative purposes of the NGP, while also providing guidance to students as they reflect on career goals and productive career mentoring relationships. IDP’s can also help in identifying resources as one begins to advance toward specific career objectives. The IDP encourages a discussion between the student and thesis mentor, requiring comments from the mentor in Part II. This conversation is necessary to maintain a dialogue between students and their dissertation chairs about performance benchmarks, professional development, and PhD degree completion requirements.

Both graduate students and faculty benefit when these individual development plans are discussed and developed. Our expectation is that these IDP’s will enhance a student’s satisfaction on research productivity, attendance/presentation at professional meetings, publications, and achievement of the PhD degree. Faculty will benefit by satisfaction of student achievement leading to advancement and success of their research program. IDP discussions are not to replace the required PhD dissertation committee meetings for candidate level students.

The outcome of the evaluation of each student’s progress is discussed during their annual meeting with the NGP Director or Associate Director. A summary of the evaluation is then communicated to each student. Finally, progress towards degree for all students is reviewed yearly with the Executive Committee, so that any deficiencies can be identified and remediated in a timely fashion.
NEUROSCIENCE GRADUATE PROGRAM EVENTS

ANNUAL WELCOME PICNIC: A centerpiece of the Neuroscience Graduate Program is the Annual Welcome Picnic at the start of each academic year. The picnic is an opportunity to introduce new faculty and students, recognize student and faculty contributions to the program, and convene the neuroscience community in a friendly gathering at the start of a new academic year. All students are strongly encouraged to attend.

ANNUAL STUDENT AND FACULTY RETREAT: Neuroscience Graduate Program faculty and students are spread across campus in several departments and buildings. Although the community convenes for neuroscience seminars and students’ defenses, the opportunity to gather off campus has proved to be an important time to bring everyone together for informal scientific discussions and fun. The retreat has been held at a variety of locations including the Ronora Lodge (Watervliet, MI), the Kellogg Biological Station (Kalamazoo, MI), Skyline Retreat Center (Almont, MI), Maumee Bay State Park (Maumee, OH) as well as the more urban Belle Isle (Detroit, MI). These locations are all within a 2-hour drive from campus making them close enough to be accessible and convenient, yet far enough away to create a reprieve from the campus atmosphere. All students are required to attend the retreat as a means of developing community. The retreat speakers and activities are determined by a committee composed of NGP graduate students (ideally one from each cohort), and a NGP faculty representative. The proposed schedule and theme of the retreat is submitted to the Director/Associate Directors of the NGP for approval. All students are strongly encouraged to attend.

ANNUAL NEUROSCIENCE CONFERENCE: Starting in 2022, the NGP has combined efforts with the MNI and Kavli Neuroscience Innovators to host the Michigan Neuroscience Conference. This conference provides an opportunity to gather the entire UM neuroscience community in a collegial and productive two-day event. Students serve on the organizing committee, propose names for a student-invited keynote speaker, and serve as hosts.

NATIONAL MEETINGS: The Neuroscience Graduate Program encourages students to present their work at local, regional, and national meetings. The Program provides a contribution to expenses for first year student travel to scientific meetings, such as the annual Society for Neuroscience meeting. First Year students presenting at the meeting may also qualify for Rackham Travel Awards. See Appendix 10 for policy details.

Summary of Program Events:

<table>
<thead>
<tr>
<th>Month</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>August</td>
<td>New student orientation</td>
</tr>
<tr>
<td>August</td>
<td>Welcome BBQ</td>
</tr>
<tr>
<td>September/October</td>
<td>Neuroscience Retreat</td>
</tr>
<tr>
<td>October/November</td>
<td>Society for Neuroscience Conference</td>
</tr>
<tr>
<td>May-June</td>
<td>Michigan Neuroscience Conference</td>
</tr>
</tbody>
</table>

STUDENT EMPLOYMENT, VACATIONS, LEAVES AND ABSENCES

Participation in the NGP, without regard to the source of financial support, is a full-time (12 months/year) endeavor. The NGP follows NIH policy that students may not be employed outside their training program. Full-time participation in graduate training includes regularly scheduled Program events and registration in the graduate school for relevant course work, directed research and dissertation research. Detached study or other off-campus
course work may be taken with the Director’s approval in consultation with the Faculty Advisor. Personal vacations, leaves and absences are considered below.

VACATIONS: Precandidate students are entitled to the standard vacation periods of all students, including UM-designated holidays, Winter and Spring breaks. Additionally, subject to the discretion and explicit approval of the Faculty Advisor, pre-candidate students may take up to two weeks of vacation in the Summer when they are supported by NGP funds. During candidacy and full-time dissertation research, vacation time includes UM-designated holidays for faculty and staff and up to two weeks of additional time, at the discretion of the mentor. Total vacation time should not exceed 4 weeks per year, including all UM breaks and advisor-approved vacations. Any further vacation time should have the additional approval of the mentor and the NGP Director.

LEAVES: All requests for official Leaves of Absence need to be submitted to the Rackham Graduate School. Please see the Rackham website for the most up to date guidelines. [https://www.rackham.umich.edu/current-students/policies/doctoral/phd-students/leave-of-absence](https://www.rackham.umich.edu/current-students/policies/doctoral/phd-students/leave-of-absence).

A student should contact the NGP Director at least 6 weeks prior to the start of the term in which they intend to re-enroll. At this time, they will finalize their re-entry plan with the Director and will discuss the next steps they need to complete with Rackham Graduate School.

ABSENCES: Unapproved absences are not allowed. Students who are not engaged in full-time work will not be considered in good standing in the Program and will be subject to dismissal. Vacation taken in excess of that allowed or without the approval of the PI and/or NGP director will be considered an unexcused absence.

COMMITTEES

NGP Executive Committee ([https://neuroscience.med.umich.edu/neuroscience-program-administration](https://neuroscience.med.umich.edu/neuroscience-program-administration)):
Carol Elias, NGP Director (MIP); Michal Zochowski (BioPhysics); Jack Parent (Neurology); Gideon Rothschild (Psychology); Josie Clowney (MCDB); Audrey Seasholtz, Program Advisor (BioChem); Victoria Booth, Associate Director for Academic Affairs (Math); Shelly Flagel, Associate Director of Admissions (Psychiatry/Psychology); Keith Duncan, Associate Director for DEI (Oto); Jennifer Jaime, NGP student representative; and Valerie Smith and Rachel Harbach, staff representatives.

Curriculum Committee ([https://neuroscience.med.umich.edu/neuroscience-program-administration](https://neuroscience.med.umich.edu/neuroscience-program-administration)):
Victoria Booth, Chair (Math); Dinesh Pal (Anesthesiology); Audrey Seasholtz (BioChem); Carol Elias (MIP); Katie Furman, Amanda Gibson and Alvin Chiu, NGP student representatives; Valerie Smith and Rachel Harbach, staff representatives

Diversity, Equity and Inclusion Committee ([https://neuroscience.med.umich.edu/neuroscience-program-administration](https://neuroscience.med.umich.edu/neuroscience-program-administration)):
Keith Duncan, Chair (Oto); Rick Altschuler (Oto); Sami Barmada (Neurology); Shelly Flagel (Psychiatry/Psychology); Audrey Seasholtz (BioChem); Lois Weisman (CDB); Amanda Gregolynskyj, NGP student representative; and Valerie Smith, staff representative

Preliminary Exam Advisory and Evaluative Committee: Victoria Booth, Co-Chair (Math); Matthias Truttmann, Co-Chair (MIP); Anuska Andjelkovic-Zochowska (Pathology); Pierre Apostolides (Oto); Sami Barmada (Neurology); Christian Burgess (MIP); Ada Eban-Rothschild (Psychology); Patrice Fort (Optho); Jillian
Hardee (Psychiatry/Psychology); Jonathan Morrow (Psychiatry); Joerg Waldhaus (Oto); and Tom Sanderson (Emergency Med)

Recruitment & Admissions Committee (https://neuroscience.med.umich.edu/admission): Shelly Flagel, Chair (Psychiatry/Psychology); Anuska Andjelkovic-Zochowska (Pathology); Steve Broglio (Kinesiology); Kamran Diba (Anesthesiology); Ada Eban-Rothschild (Psychology); Carol Elias (MIP); Patrice Fort (Optho); Jillian Hardee (Psychiatry); Peter Hitchcock (Optho); Ken Kwan (Genetics); Sam Kwon (MCDB); Zhongming Liu (BioMed Engineering); Joanna Mattis (Neurology); Jonathan Morrow (Psychiatry); Mike Sutton (MIP); Matthias Truttmann (MIP); Giancarlo Vanini (Anesthesiology); Wenjing Wang (Chem); and Frankie Czesak and Jenn Jaime, NGP student representatives

PRIOR NGP DIRECTORS

Audrey Seasholtz, PhD/Arun Anantharam, PhD, Co-Interim Directors, 2020-2021, Biological Chemistry/MN and Pharmacology (MED)

Les Satin, PhD, Interim Director, 2019-2020, Pharmacology

Audrey Seasholtz, PhD, Interim Director, 2018-2019, Department of Biological Chemistry and MBNI (MED)

Ed Stuenkel, PhD, 2012-2018, Dept. of Molecular and Integrative Physiology (MED)

Stephen Maren, PhD, 2007-2012 (excepting 2010-2011), Dept. of Psychology (LSA)

Jill Becker, PhD, Acting Director, 2010-2011, Dept. of Psychology (LSA)

Peter Hitchcock, PhD, 2003-2007, Dept. of Ophthalmology and Visual Sciences (MED)

Richard Hume, PhD, 1998-2003, Dept. of Molecular, Cellular, and Developmental Biology (LSA)

Michael Uhler, PhD, 1995-1998, Dept. of Biological Chemistry and MBNI (now MBNI) (MED)

Huda Akil, PhD, 1993-1995, Dept. of Psychiatry and MHRI (now MBNI) (MED)

Pamela Raymond, PhD, 1989-1993, Dept. of Cell and Developmental Biology (MED)

Terry Robinson, PhD, Acting Director, 1988-1989, Dept. of Psychology (LSA)

Daniel Green, PhD, Acting Director, 1988, Dept. of Ophthalmology and Visual Sciences (MED)

Stephen Easter, PhD, 1984-1988, Dept. of Molecular, Cellular and Developmental Biology (LSA)

Lester Rutledge, PhD, 1971-1984, Dept. of Physiology (MED)
APPENDIX 1: NGP CODE OF CONDUCT AND REPORTING MECHANISMS

Introduction
This Code of Conduct for the Neuroscience Graduate Program was originally developed by our community in 2021-2022. While our core values are enduring, their expression and the policies they guide will be refined continuously as a living document. This Code is aligned with the core values at the University of Michigan-Michigan Medicine (1) and is meant to complement the university’s broader statements on ethics and integrity (2,3), prohibition of discrimination (4), and student rights and responsibilities (5). Your feedback is always welcome.

Part I: NGP Norms and Values

Be Caring and Respectful
_I will treat everyone with dignity, kindness, and respect, while maintaining personal well-being and the well-being of others._

We are each responsible for treating one another with dignity, kindness, and respect and have a right to expect this in return. An environment where people feel safe, cared for, and respected is a productive and creative working space. However, in the face of aggression, bias, or harassment, caring for self or other targets of oppression is paramount. To meet this core value, we will:

- Listen to understand before seeking to be understood.
- Give space to other viewpoints while bravely sharing your own.
- Disagree in conflict without being disrespectful.
- Be kind, affirm others, and choose your words carefully.
- Own the impact of your words; harm can be caused even without malicious intent.
- Care for self and stand up for others when facing or observing harassment.

Foster Inclusion
_I will foster an environment where every individual has a sense of belonging, a voice that is heard, and the opportunity to achieve and thrive._

We welcome and support people of all backgrounds and identities. Inclusivity is a priority of our community and should therefore extend to all NGP-affiliated laboratories, events, and programming. We will work to ensure fair treatment and equal opportunities for everyone. To meet this core value, we prohibit discrimination based on:

- Sexual orientation
- Sex, gender identity & expression
- Race, ethnicity, & culture
- National origin & immigration status
- Socioeconomic status & education level
- Family status & age
- Size
- Political belief & religion
- Mental health status
- Physical ability
Work with Integrity

*I will adhere to the highest ethical standards, demonstrating courage, truth, and transparency in my words and actions.*

We value honesty and transparency. Whether in our academics or personal interactions, we will conduct our work with integrity and humility. To propel our science forward and to provide the best training possible, we will:

- Perform our research with rigor
- Foster research environments that value honesty and integrity
- Provide honest critical feedback with empathy
- Own the impact and consequences of our actions

Promote Teamwork

*I will work with my teams with a shared purpose rooted in equity and fairness where diversity is celebrated, respected, and valued.*

We thrive best within a culture of creativity that affirms the inextricable link between innovation and diversity. We will promote a culture that inspires new ideas and diverse ways of thinking, behaving, and improving the world. To meet this core value, we will:

- Work to deconstruct the systemic barriers to diversity
- Promote holistic recruiting, admissions, and hiring practices
- Understand how one’s own cultural identity shapes the perception of others
- Continuously learn about other cultures and seek to work effectively with them

Act and Speak Up

*I will take action to build an inclusive and supportive community, to understand and own the impact of my actions, and to confidently intervene to support others.*

Conflicts will inevitably arise. In minor disagreements, listen, learn, and explore differing views. In larger disagreements that threaten our values, report concerns and seek mediation when possible. As power structures often prevent victims from reporting, program leaders and faculty should take ownership in creating equitable learning and research environments and intervene when our values are threatened. Harassment and exclusionary behavior are not acceptable, whether in public arenas or in private interactions involving members of the NGP. This includes, but is not limited to:

- Threats of violence
- Unwelcome sexual attention
- Sharing sexually explicit or violent material via electronic devices or other means
- Discriminatory jokes and language
- Personal insults, especially those using racist, sexist, or ableist terms
- Advocating for, or encouraging, any of the above behavior
Part II: NGP Reporting Process and Actions

Violations of our collective Norms and Values negatively impacts the NGP climate and can do real harm to individuals in our community. As such, discussing and reporting these behaviors is an essential part of our Norms and Values. Below, we provide a clear path to reporting inappropriate behavior and information about the responses you can expect. Some key terms (bolded) within this guide include:

- **DISCUSSION**: An initial conversation, within or outside NGP, to raise concerns, identify available resources, and/or seek clarity about a potentially reportable situation.
- **REPORT**: Any informal or formal complaint of suspected inappropriate behavior, whether policy concern, prohibited conduct, or workplace conflict.
- **INFORMAL COMPLAINT**: An anonymous or identifying complaint about policy concern, prohibited conduct, or workplace conflict, intermediate to filing a formal, signed grievance.
- **FORMAL COMPLAINT**: Signed grievances documenting suspected prohibited conduct submitted through reporting mechanisms that may lead to investigational hearings, resolution processes, and/or disciplinary actions.
- **COMPLAINANT**: Refers to any student or employee affiliated with the Neuroscience Graduate Program who is reporting suspected prohibited conduct or workplace conflict.
- **RESPONDENT**: Refers to any individual who is reported to have engaged in prohibited conduct or workplace conflict.
- **POLICY CONCERNS**: Policy and procedure concerns, unrelated to discriminatory practices (prohibited conduct), that create a negative learning environment, such as grading and matriculation policies, general climate concerns, lack of clarity in program expectations.
- **WORKPLACE CONFLICT**: Actual or perceived discord between two or more people due to a clash between different needs or values, including instances of indifference, disrespect, and harm that is inconsistent with the NGP Norms and Values.
- **PROHIBITED CONDUCT**: Misconduct, or suspected misconduct, related to discrimination and harassment outlined in SPG 201.89, including sexual and gender-based misconduct consistent outlined in SPG 601.89 as well as non-discriminatory misconduct such as breaches of research integrity (SPG 303.03).

The following sections outline each phase of a reporting process, which is also depicted in the quick reference guides. These processes cannot provide definitive answers to all questions and concerns, so we welcome your feedback and suggestions for improvement.

Outline

- **The Basics**
  - Step 1: Beginning the Conversation
  - Step 2: Reporting
- **Step 3: Post-Reporting Responses**
  - Quick Reference Guides
  - Glossary
## The Basics

<table>
<thead>
<tr>
<th><strong>Why discuss and report?</strong></th>
<th><strong>Who can report?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting suspected misconduct can be distressing but is critical to ensuring a positive learning environment and the health and safety of each person in our community. The NGP leadership commits to considering all informal and formal complaints, supporting those negatively impacted, and preventing retaliation.</td>
<td>Anyone working, training, volunteering, or collaborating with NGP affiliated faculty, staff, or students can report policy concerns or suspected inappropriate behavior.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>What can I report?</strong></th>
<th><strong>How can I report?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Policy concerns</strong> address programmatic aspects leading to a negative NGP learning environment, such as unfair grading practices, poor communication methods, etc..</td>
<td><strong>STEP 1:</strong> DISCUSSION with your supervisor or NGP Leadership is often the first and best step. However, it is important to recognize that each of these are <strong>Individuals with Reporting Obligations</strong> involving issues specifically related to sexual and gender-based misconduct. Confidential resources without reporting obligations are also available outside NGP (Table 1).</td>
</tr>
<tr>
<td><strong>Workplace conflicts</strong> that violate our Norms and Values raise tension within the community. Whether between peers or across power differences, they need not fester.</td>
<td><strong>STEP 2:</strong> <strong>Informal</strong> and signed <strong>formal complaints</strong> go beyond the initial discussion, articulating a specific incident and typically requiring a response and follow-up. These are made through many avenues inside and outside the NGP, such as ● NGP B.I.G. Suggestion Box ● Equity, Civil Rights, &amp; Title IX Office ● Graduate Employees’ Organization ● Compliance Office ● Division of Public Safety &amp; Security</td>
</tr>
<tr>
<td><strong>Policy concerns</strong> or <strong>workplace conflict</strong> that involve potential discriminatory practices are considered <strong>prohibited conduct</strong>.</td>
<td></td>
</tr>
<tr>
<td><strong>Prohibited conduct</strong> may include, but is not limited to, discrimination and harassment related to sex &amp; sexual orientation, gender identity, race/ethnicity, age, marital status, (dis)ability, religion, height, weight, or veteran status (SPG 201.35 and SPG 601.89) as well as non-discriminatory behaviors such as breaches of research integrity related to data fabrication &amp; falsification, plagiarism, authorship, and confidentiality (SPG 303.03).</td>
<td>Are you ready to report an informal or formal complaint?</td>
</tr>
</tbody>
</table>
Step 1: Discussion - Beginning the Conversation with Confidential Resources and Non-Confidential Resources

A. Discussions within NGP
   • There are many people within NGP available for conversations about climate or suspected misconduct. Whenever possible, we hope to form dialogues in the midst of conflict so that we can better understand the situation, provide the necessary support, and follow-up appropriately.
   • Unless they are involved in the conflict, consider first talking with your faculty mentor or members of your thesis committee, the NGP Director or Associate Directors, or NGP program staff. The Rackham Faculty Ally and Associate Director for Diversity, Equity, and Inclusion is readily available to discuss any concern. For an up-to-date list of program administration, see our website.
   • Be aware, however, that these conversations with NGP affiliates may be private but non-confidential. In almost every case, these are Individuals with Reporting Obligations (IROs). IROs are required to report misconduct related to sexual and gender-based behaviors, which is governed by Title IX rules and implemented by the Equity, Civil Rights, and Title IX Office (ECRT). You may always speak with an IRO about non-Title IX issues or you may choose to speak in hypotheticals or generalities. Even if the IRO chooses to file a report, they will first notify you. How you choose to engage with ECRT is always up to you.

B. Discussions with Confidential Resources outside NGP
   • If you want to maintain confidentiality, want to speak with someone outside of NGP, or are uncertain you want to file a report, you may first want to contact confidential resources without reporting obligations (see Table 1).

Table 1: Confidential Resources

This list includes UM resources that do not have reporting obligations, but can assist if you want to report.

<table>
<thead>
<tr>
<th>Name/Unit</th>
<th>Information</th>
<th>Contact</th>
<th>For Faculty, Postdocs, Staff, Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseling &amp; Psychological Services (CAPS)</td>
<td>Free, confidential services for U-M students. <a href="#">Schedule a consultation.</a></td>
<td>24-hour line for Urgent Support: 734-764-8312. Rackham <a href="#">Embedded CAPS Counselor</a></td>
<td>Students</td>
</tr>
<tr>
<td>Faculty &amp; Staff Counseling and Consultation Office (FASCCO)</td>
<td>For staff, faculty and their immediate family members; provides short-term counseling, personalized coaching and educational presentations.</td>
<td>734-936-8660 or <a href="mailto:fascco@umich.edu">fascco@umich.edu</a></td>
<td>Faculty, Staff, Postdocs</td>
</tr>
<tr>
<td>Michigan Medicine</td>
<td>Provides 24-hour, no cost,</td>
<td>734-763-5409</td>
<td>Faculty, Staff,</td>
</tr>
</tbody>
</table>

23
<table>
<thead>
<tr>
<th>Office of Counseling &amp; Workplace Resilience (<a href="#">Website</a>)</th>
<th>confidential counseling, crisis intervention and referrals for Michigan Medicine faculty, staff and immediate family members.</th>
<th><a href="mailto:counseling@med.umich.edu">counseling@med.umich.edu</a></th>
<th>Postdocs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office of Graduate &amp; Postdoctoral Studies: Wellness (<a href="#">OGPS</a>)</td>
<td>Free, confidential support. Make an appointment.</td>
<td><a href="mailto:kate.hagadone@umich.edu">Kate Hagadone</a> or <a href="mailto:lanesha.murphy@umich.edu">LaNeisha Murphy</a></td>
<td>Postdocs, Students</td>
</tr>
<tr>
<td>Graduate Employees’ Organization 3550 Grievance Committee (<a href="#">Website</a>)</td>
<td>Designed to achieve informal resolution if possible; allows the employee to escalate all the way to binding third-party arbitration</td>
<td><a href="#">Grievance Form</a> or email <a href="mailto:grievancechair@geo3550.org">grievancechair@geo3550.org</a></td>
<td>Students</td>
</tr>
<tr>
<td>Rackham Graduate Student and Program Consultation Services</td>
<td>Free, confidential resolution services related to crisis, disputes, conduct</td>
<td>Request a meeting</td>
<td>Students, Faculty, and Staff</td>
</tr>
<tr>
<td>UM Psychiatric Emergency Service (<a href="#">PES</a>)</td>
<td>Provides psychiatric evaluation, referrals, crisis intervention, and mental health treatment.</td>
<td>24-hour crisis phone service: 734-936-5900 Text 4UMICH to 741741</td>
<td>All</td>
</tr>
<tr>
<td>Ombuds - Faculty</td>
<td>Provides confidential, independent, impartial, and informal problem solving services.</td>
<td>734-763-2707 or <a href="mailto:facultyombuds@umich.edu">facultyombuds@umich.edu</a></td>
<td>Faculty</td>
</tr>
<tr>
<td>Ombuds - Staff</td>
<td>Provides confidential, independent, impartial, and informal problem solving services.</td>
<td>Confidential intake form or 734-936-0600</td>
<td>Staff</td>
</tr>
<tr>
<td>Ombuds - Students</td>
<td>Free, confidential advice and resources.</td>
<td>734-763-3545 or , <a href="mailto:umstudentombuds@umich.edu">umstudentombuds@umich.edu</a></td>
<td>Students</td>
</tr>
<tr>
<td>Sexual Assault Prevention and Awareness Center (<a href="#">SAPAC</a>)</td>
<td>For U-M students, faculty and staff who are survivors of sexual assault, relationship violence, stalking and sexual harassment.</td>
<td>24-hour crisis line: 734-936-3333.</td>
<td>All</td>
</tr>
<tr>
<td>Disabilities via the Equity, Civil Rights &amp; Title IX Office</td>
<td>Free, confidential resource for disability disclosure, accommodations, and reporting discrimination.</td>
<td>ADA Coordinator</td>
<td>All</td>
</tr>
</tbody>
</table>
Step 2: Reporting

_A. Report via NGP Mechanisms_

a. **NGP Leadership.** Policy concerns, workplace conflict, or instances of non-discriminatory prohibited conduct can be reported to the NGP Director, Associate Directors, Faculty Ally, or Administrators. After initial discussions, the COMPLAINANT may be asked to help complete an intake form to record the incident and facilitate a record of follow-up and resolution.

b. **B.I.G. Suggestion Box.** We seek all types of input! Whenever possible, follow up your post with an idea of how to overcome your concern, promote your accolade, respond to your feedback, follow-up on your thoughts, or implement your Bright Idea. All responses are first submitted to NGP administrative staff and then forwarded to relevant leadership, which may include Director/Assoc Directors, NGP Committees, and NGP DEI Task Forces. All responses are anonymous unless you choose otherwise. If remaining anonymous, we recommend that you include a non-university email that does not include your name or other identifying information to provide a mechanism for direct follow-up.

B. **Report Interpersonal Conflicts and General University Concerns**

a. **Rackham Conflict Resolution** Policy and procedures enable students to address disagreements with faculty or staff over equity and fairness related to their academic standing and progress. Students may also request a meeting with Rackham Resolution Services to address other disputes and crisis situations.

b. The **Office of the Ombuds** offers a confidential space for students to share concerns and complaints about the functioning of the university.

c. The **Office of Student Conflict Resolution** (OSCR) focuses on a variety of restorative processes to address interpersonal disagreements involving faculty, staff, students, and even off campus conflicts. OSCR is the direct referral for student-to-student complaints.

d. The **Graduate Employees’ Organization** (GEO) sets the terms and conditions for GSIs and GSSAs. GEO can help resolve conflicts and concerns faced by graduate students in their capacity as GSIs and GSSAs in several ways, up to and including a formal grievance process, and serve as a conflict resolution resource for all graduate students (regardless of GSI/GSSA status).

C. **Report Ethical Dilemmas, Research Misconduct, or Illegal Conduct**

a. **Compliance Office.** For ethical dilemmas, integrity issues, or research misconduct, file an anonymous or self-identified incident report at the Compliance Hotline. A unique “Report Key” will be provided to obtain status updates and allow for follow-up questions, while maintaining anonymity.

b. **Division of Public Safety & Security** (DPSS). In the event of theft or other illegal conduct, call 911, email dpss-safety-security@umich.edu, or file an Incident
**Concerns or conduct involving potential discrimination or harassment (Flow Diagram 2)**

A. Report to [Equity, Civil Rights, and Title IX Office](#) (ECRT)
   a. The ECRT oversees, facilitates, and supports the University’s efforts to ensure opportunities for all in our community (see their [Nondiscrimination Statement](#) for protected groups). Examples of prohibited discrimination and descriptions of hostile work environments can be found [here](#). Units within this office consider:
      i. Sexual and gender-based discrimination or harassment and Title IX-related concerns
      ii. Race, age, marital status, (dis)ability, religion, height, weight, or veteran status, and/or ethnicity-related complaints
      iii. Disability-related harassment and discrimination and compliance with accommodations
   b. For concerns involving sexual or gender-based misconduct, ECRT reporting process and potential remedies are illustrated below:

   ![Flow Diagram](image)

B. Report to the [Division of Public Safety & Security](#) (DPSS).
a. Suspected prohibited conduct may be directly reported to DPSS, including but not limited to instances of hate crimes or assault and intimidation of persons from protected groups.

b. Reporting mechanisms include emergency calls to 911, email to dpss-safety-security@umich.edu, or completion of an Incident Report. A unique case number and case officer will be assigned and serve as a point of contact for status updates and follow-up.

C. NGP Response Team. Anyone filing a formal complaint can request to be assigned a NGP Response Team composed of one or more of the following: NGP Director or Associate Directors, NGP Faculty Ally, NGP Administrative Staff, or other NGP-affiliated faculty/staff. The goal of this team is to facilitate communication between the complainant, case managers, as well as others in Rackham, OGPS, or DPSS involved in the case. The NGP Response Team will play supportive roles, ensure that there is no retaliation arising from the report, pursue resolution wherever possible, and maintain confidential records for non-identifying summative incidence reporting. Note that any records will not be associated with formal student records within the Program.

Step 3: Post-Reporting Responses

Could I face retaliation?
The NGP will not tolerate retaliation on those lodging complaints. “Acts or threats of retaliation in response to good-faith reports of wrongful conduct violate [university] policy.” (SPG 601.90) All individuals in the University community are protected from retaliation according to SPG 201.89-1 Section H. Retaliation itself is a reportable offense.

What are the potential consequences for misconduct?
The consequences for misconduct may include but are not limited to: educational interventions, restorative measures, or additional service requirements; removal from the graduate program or probationary periods; referral to investigatory arms of the university or security services; removal from the university or other severe disciplinary actions. These consequences vary depending on the position of the respondent, situational circumstances, severity and frequency, and outcomes of any investigational process. In most cases, corrective actions from formal complaints of prohibited conduct will be determined and applied by the Office of Student Conflict Resolution (for students) and/or an employee’s supervisor in consultation with Human Resources. NGP Leadership and the Executive Committee will review any report and investigational outcomes to determine if additional action is required at the program level. Such review and actions may also extend to complainants or respondents who repeatedly violate Mutual Contact Restrictions or repeatedly fail to follow-through with mutually agreed upon Adaptable Resolutions, Educational Interventions, or Training Recommendations.
Quick Reference Guides (A PDF with active links available here)

FLOW DIAGRAM 1

POLICY CONCERNS, WORKPLACE CONFLICT, or PROHIBITED CONDUCT that is not, or may not be, discrimination or harassment

I want to begin the conversation

Discussion options

Discuss concerns with your supervisor, mentor, other faculty, or NGP leadership (all considered IROs)

Discuss with a non-IRO

See Confidential Resources in Flow Diagram 1
Non-IROs are not required to file a report regardless of if the situation is harassment or not. Speaking with a non-IRO can help students identify their situation and clarify the reporting tools at their disposal.

Report via NGP mechanisms
NGP Leadership or the B.I.G. Suggestion Box

If self-identified, the NGP will complete an intake form and follow up on the status of the issue until resolved.

Anonymous reports to the B.I.G. can be made using a non-identifying, non-university-related email address to enable follow-up. Otherwise, follow-up may be limited.

Support for Interpersonal Conflicts and General University Concerns

Rackham Conflict Resolution for formal and informal dispute resolution and referrals.

Office of the Ombuds for general student complaints and concerns about the university.

Office of Student Conflict Resolution for students in conflict with anyone else in the university community, offers numerous resolution pathways.

The Graduate Employees’ Organization (GEO) also has a formal grievance process for hearings and arbitration.

Ethical dilemma or suspect inappropriate or illegal conduct

Compliance Office
Division of Public Safety & Security
Anonymous or Self-Identified Report Hotline
Call 911, Email, File Incident Report

“Report Key” used for status updates and follow-up questions. May remain anonymous.

Case Number assigned for follow-up.
FLOW DIAGRAM 2
Suspected PROHIBITED CONDUCT that is a potential harassment or discrimination incident

I want to begin the conversation
Discussion options
- Speaking with Individuals with Reporting Obligations (IROs)
- Confidential resources (non-IROs)

Initiate a conversation with
- Mentor/supervisor
- These committee members
- Other NGP faculty
- NGP leadership

The complainant may determine how far they want to take the matter (i.e. filing a Formal Complaint or not)

Use these resources to clarify the situation and understand which resolution and reporting tools are available

I am ready to report
Reporting options
- Title IX-related, sexual harassment, and gender harassment complaints
- Race, culture, and/or ethnicity-related complaints
- ADA/accommodations-related harassment and discrimination
- Hate crime, assault, intimidation, suspicious behaviors

Equity, Civil Rights and Title IX Office (ECRT) (formerly Office for Institutional Equity)
Self-identified Reporting:
- Call 734-763-0235 (M-F 8am-5pm)
- Attend Remote Office Hours (M, W, F)
- Complete online form

Anonymous Complete online form using a non-university affiliated email address without identifying information.
ECRT will reach out within 24 hours of a report. Note: follow-up may be limited with anonymous forms of reporting. Further meetings or filing of a formal complaint is optional and always at the discretion of the Complainant.

Partnering with NGP:
- If a formal investigation is initiated, ECRT will inform NGP Leadership.
- If NGP Leadership is contacted by ECRT or Complainant at any point, the program will designate a Response Team for support and follow-up throughout the process.

Potential Remedies:
1. Mutual Contact Restriction (voluntary, no formal disciplinary action, 30 day timeline)
2. Acceptable Resolution (voluntary, no formal disciplinary action, seeks to repair harm, 90 day timeline)
3. Investigatory Resolution (evidence collection, hearing, potential disciplinary action, 180 day timeline)
4. Other options (educational interventions, training recommendations)
5. No Action (Complainants may request that ECRT take no action at all).

Division of Public Safety & Security (DPSS)
- Call 911 in emergency.
- Use an anonymous tip line (1-800-863-1355) or self-identified form.

Follow up: After reporting with identification, a case number will be generated and an officer assigned to the case with serve as the point of contact.
Glossary

**Discrimination**
Treating a community member or group less favorably than other similarly situated individuals based on membership in “protected groups” based on race, color, national origin, age, marital status, (dis)ability, religion, height, weight, military or veteran/s status, sex, sexual orientation, gender identity, gender expression, pregnancy, genetic information, or other legally protected characteristics.

**Harassment**
Any behavior that is based on an individual or group’s membership in a “protected group” that is unwelcome and creates a hostile learning and working environment including behaviors such as bullying, intentional or unintentional microaggressions, and intentional or unintentional disrespect for the dignity of others.

**Bullying**
Unwanted, recurring aggressiveness that causes psychological or physical harm, and creates a psychological power imbalance between the aggressor and target(s).

**Microaggressions**
Verbal, behavioral, or environmental indignities, whether intentional or unintentional, that perpetuate derogatory or negative stereotypes and/or contain hidden messaging that isolates and demeans marginalized individuals and groups. Some (possibly surprising) examples can be found [here](#).

**Disability**
Disability discrimination is governed by the [Americans with Disabilities Act of 1990](https://www.gpo.gov/fdsys/). This form of discrimination can occur whenever a qualified individual is denied the same opportunities as other students, faculty, and staff because of their disability status. Disability is defined as a person who has a physical or mental impairment that substantially limits one or more major life activities and has a record of such an impairment or is generally regarded as having such an impairment. To determine disability status and potential accommodations, contact the [NGP Leadership Team](#) or the [UM ADA Coordinator](#) or [UM Services for Students with Disabilities](#).

**Retaliation**
Retaliation is considered any intimidating, threatening, coercing, or harassing behavior that results in adverse actions or consequences against a person resulting from their report or complaint. Retaliation may occur in a single incident or as a series, and may be direct or indirect. Some examples include more negative performance evaluations or references than warranted, increased scrutiny due to the complaint, spreading of false rumors, erecting barriers to the reporter’s work, limiting access to work-related resources, exclusion from work-related social activities.
**Individuals with Reporting Obligations (IROs)**

Under the UM Policy on Sexual and Gender-Based Misconduct, people in certain roles are considered “**Individuals with Reporting Obligations**” (IROs) and are required to report information about sexual or gender-based misconduct to the Equity, Civil Rights & Title IX Office. In general, NGP faculty and staff that are supervisors of other UM employees or trainees or sponsors of student organizations are IROs. Moreover, as of 2021, if you are an IRO in one capacity, you are an IRO in all university-related activities. To learn if you are an IRO, faculty and staff can complete this [training module](#).

**Title IX**

Title IX is a federal civil rights law passed as part of the Education Amendments of 1972. This law protects people from discrimination based on sex in education programs or activities that receive Federal financial assistance. Title IX states: “No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance.” Prohibited conduct related to Title IX includes Sexual Assault, Sexual Exploitation, Sexual Harassment, Gender-Based Harassment, Sex and/or Gender-Based Stalking, Intimate Partner/Domestic Violence, Sex and Gender-Based Discrimination, Retaliation and Violation of Supportive Measures.
APPENDIX 2: COMMITMENTS OF NEUROSCIENCE GRADUATE STUDENTS

Taken from Compact Between Biomedical Graduate Students and their Research Advisors: A framework for aligning the graduate student mentor-mentee relationship (2107) AAMC (Association of American Medical Colleges) www.aamc.org/gradcompact

At the beginning of their tenure in the program all incoming students, regardless of route of entry are required to sign a document during orientation day stating the following items:

1. I acknowledge that I have the primary responsibility for the successful completion of my degree. I will be committed to my graduate education and will demonstrate this by my efforts in the classroom and the research laboratory. I will maintain a high level of professionalism, self-motivation, engagement, scientific curiosity, and ethical standards.

2. I will meet regularly with my rotation/thesis advisor and provide him/her with updates on the progress and results of my activities and experiments.

3. After joining a thesis lab I will work with my thesis advisor to develop a thesis project. This will include establishing a timeline for each phase of my work. I will strive to meet the established deadlines.

4. I will work with my thesis advisor to select a thesis committee according to Rackham guidelines. I will commit to meeting with this committee every 6 months. I will be responsive to the advice of and constructive criticism from my committee.

5. I will be knowledgeable of the policies and requirements of my graduate program, Rackham Graduate School, and the University of Michigan. I will commit to meeting these requirements, including teaching responsibilities.

6. I will attend and participate in laboratory meetings, seminars and journal clubs that are part of my educational program.

7. I will comply with all UMMS and Rackham Graduate School policies, including academic program milestones. I will comply with both the letter and spirit of all institutional safe laboratory practices and animal use and human-research policies at my institution.

8. I will participate in the UM Responsible Conduct of Research Training Program (PIBS 503) and practice those guidelines in conducting my thesis research.

9. I will be a good lab citizen. I will agree to take part in shared laboratory responsibilities and will use laboratory resources carefully and frugally. I will maintain a safe and clean laboratory space. I will be respectful of, tolerant of, and work collegially with all laboratory personnel.

10. I will maintain a detailed, organized, and accurate laboratory notebook. I am aware that my original notebooks and all tangible research data are the property of my institution but that I can take a copy of my notebooks with me after I complete my thesis.

11. I will discuss policies on work hours, sick leave and vacation with my rotation/thesis advisor. I will consult with my advisor and notify fellow lab members in advance of any planned absences. During my first year I will consult with the Neuroscience Director in advance of planned absences. If I am a PIBS student, this is in addition to consulting with the PIBS Director.
12. I will discuss policies on authorship and attendance at professional meetings with my research advisor. I will work with my advisor to submit all relevant research results that are ready for publication in a timely manner prior to my graduation.

13. I acknowledge that it is primarily my responsibility to develop my career following the completion of my doctoral degree. I will seek guidance from my research advisor, career counseling services, thesis/dissertation committee, other mentors, and any other resources available for advice on career plans.

Communications:
1) I will check my UMICH email account at least once every 24 hours.

2) I will respond to all Neuroscience email requests within 24 hours of receiving them or by the RSVP deadline. This covers all individual and administrative email sent by the Neuroscience Program, the Director, Associate Directors, and NGP Administrative staff.

I also understand that I am required to attend all mandatory events as a pre-candidate student as instructed by the Neuroscience Office. This includes the Fall Welcome Reception/Picnic, Fall Neuroscience Retreat, and Annual Neuroscience Conference, in addition to other events as notified. Failure to do so may result in disciplinary action.
APPENDIX 3: COMMITMENTS OF NEUROSCIENCE GRADUATE PROGRAM RESEARCH ADVISORS

Taken from Association of American Medical Colleges 2017 Compact Between Biomedical Graduate Students and Their Research Advisors www.aamc.org/gradcompact

Commitments of NGP Research Advisors:

1. Throughout the graduate student’s time in my laboratory, I will be supportive, equitable, accessible, encouraging, and respectful. I will foster the graduate student’s professional confidence and encourage intellectual development, critical thinking, curiosity, and creativity. I will continue my interest and involvement as the student moves forward into a career.

2. I will be committed to meeting one-on-one with the student on a regular basis. I will regularly review the student’s progress and provide timely feedback and goal-setting advice.

3. I will be committed to the graduate student’s research project. I will work with the student to help plan and guide the research project, set reasonable and attainable goals, and establish a timeline for completion of the project.

4. I will help the graduate student select a thesis/dissertation committee. I will assure that this committee meets at least annually (preferably every 6 months) to review and discuss the graduate student’s progress and future directions. I understand that the function of this committee is to help the student complete the doctoral research, and I will respect the ideas and suggestions of my colleagues on the committee.

5. I will provide an environment that is intellectually stimulating, emotionally supportive, safe, equitable, and free of harassment.

6. I will demonstrate respect for all graduate students as individuals without regard to gender, race, national origin, religion, disability, or sexual orientation, and I will cultivate a culture of tolerance among the entire laboratory.

7. I will be committed to providing financial resources, as appropriate and according to my institution’s guidelines, for the graduate student to conduct thesis/dissertation research. I will not require the graduate student to perform tasks that are unrelated to the training program and professional development.

8. I will expect the graduate student to share common laboratory responsibilities and use resources carefully and frugally. I will also regularly meet with the graduate student to review data management, storage, and record keeping. I will discuss with the student intellectual policy issues regarding disclosure, patent rights, and publishing research discoveries.

9. I will discuss with the graduate student authorship policies regarding papers. I will acknowledge the graduate student’s scientific contributions to the work in my laboratory, and I will provide assistance in getting the student’s work published in a timely manner.

10. I will be knowledgeable of and guide the graduate student through the requirements and deadlines of the graduate program and the institution, as well as teaching requirements, if any, and human resources guidelines.
11. I will encourage the graduate student to attend and present their research at scientific/professional meetings and make an effort to secure and facilitate funding for such activities. In addition, I will provide opportunities for the student to discuss science and their research findings with colleagues and fellow scientists within the institution and broader scientific community—for example, at lab meetings, research days, and seminars.

12. I will promote the training of the graduate student in professional skills needed for a successful career. These skills include but are not limited to oral and written communication, grant writing, management and leadership, collaborative research, responsible conduct of research, teaching, and mentoring. I will encourage the student to seek opportunities to develop skills in other areas, even if not specifically required by the student’s program. I will also encourage the graduate student to seek input from multiple mentors.

13. I will create an environment in which the student can discuss and explore career opportunities and paths that match their skills, values, and interests and be supportive of their career path choices. I will be accessible to give advice and feedback on career goals. I will work with the student on an individual development plan to help define career goals and identify training milestones. I will provide letters of recommendation for the student’s next phase of professional development.
APPENDIX 4: ACADEMIC STANDING POLICY

The NGP requires that all students adhere to Program, Rackham, and University policy while a student at the University of Michigan.

I. Academic Standing:

A. The Rackham Graduate School and the Neuroscience Graduate Program require a 3.00 cumulative GPA for good academic standing. Any student that falls below that threshold will be “below minimum academic requirements” and will be recommended to Executive Committee for academic probation. In addition, the NGP requires that all students obtain a B or better in all required Neuroscience courses. If a student receives a B- or lower in required courses, they are required to retake the course or undertake additional coursework. Failure to successfully remediate the coursework will prevent the student from taking the qualifying exams and advancing to candidacy (and may result in recommendation for academic probation). Students are strongly encouraged to seek assistance as soon as possible when facing academic issues, in order to take full advantage of the resources the NGP has available to assist students with academic difficulties.

B. The NGP has several other requirements for good academic standing during pre-candidacy. In addition to participation and successful completion of their courses (as specified above), NGP students are required to: 1) participate in laboratory research and make satisfactory progress in the laboratory (obtaining grade of B or better); 2) participate fully in the NGP NS700 seminar, professional development, Spring Symposium, Annual Retreat and other required NGP events; 3) complete an IDP every 6 months; 4) prepare for and then take the NGP qualifying exam; 5) identify a thesis research mentor. The NGP director can approve exceptions in attendance at required events.

C. Once a student has achieved candidacy, remaining in good academic standing in the NGP requires that students: 1) maintain a cumulative grade point average of B (3.0) or better; 2) participate in laboratory research on a full time basis and make satisfactory research progress (including obtaining a grade of Satisfactory in Neurosci995 each term); 3) prepare an NIH NRSA-style proposal on their Ph.D. thesis research during Year 2; 4) hold PhD thesis committee meetings at least once/year (it is recommended that a meeting is held every 6 months); 5) complete an IDP every 6 months (as above); 6) present a journal club presentation in Neurosci700 in Year 2; 7) present a research seminar in NS700 in Year 4; and 8) participate fully in NGP Professional Development, the Spring Symposium, Annual Retreat and other required NGP events. The NGP director can approve exceptions in attendance at required events.

II. Academic Probation and Dismissal

A. A student whose cumulative GPA falls below a B (3.0) or is deemed as not making satisfactory progress toward their degree in coursework and/or research (e.g. receives a Unsatisfactory for
Neurosci995) will automatically be recommended to the Executive Committee for academic probation.

B. Qualifying exam policy: Students must successfully complete (achieving B or better) all required first-year NGP courses in order to sit for the qualifying exam. Multiple options are possible after the qualifying exam, as follows:

1) If a student passes the exam (passing 2 out of 3 or 3 out of 3 sections) and has identified a thesis mentor, the Qualifying Exam Committee will then recommend the student advance to candidacy (requires approval by the Executive Committee).

2) If they pass only 1 out of 3 exam sections but are otherwise in good academic standing, they can then petition the Executive Committee to be granted permission to retake the exam at the end of the next academic term (Fall or Winter). Under certain circumstances, the Executive Committee may recommend that additional coursework be undertaken prior to retaking the Exam. Students in this category will not normally be placed on academic probation.

3) If a student fails all 3 sections of the first attempt of the Qualifying Exam or fails (passing only 1/3 or 0/3 parts) the second attempt at the exam, the Qualifying Exam Committee may recommend dismissal from the NGP. In this case, the Executive Committee will meet to discuss the student’s record and overall performance to decide whether or not to dismiss the student from the NGP. Students may provide a letter addressing any issues and/or a letter from their research mentor may be obtained prior to the meeting of the Executive Committee. If students are subsequently permitted to remain in the program for another attempt at the qualifying exam, they will be recommended to Executive Committee for academic probation. Appeal of the NGP dismissal policy is described in Section IV.

C. All decisions on academic probation and dismissal are made by the NGP Executive Committee. The NGP Director, NGP Associate Directors, or thesis advisor may recommend a student for academic probation based on academic performance, unsatisfactory progress in thesis research, failure of qualifying exams, or professional reasons. The Executive Committee will discuss the student’s progress towards degree and decide whether the student should be placed on academic probation. Students placed on academic probation will be notified in writing by the Director of the NGP. The notification will state the reasons for a decision of probation as well as the start/end dates of the probationary period. The student will then meet with the NGP Director/Associate Director and/or Executive Committee to discuss key issues and jointly develop a corrective plan to allow a return to good academic standing during the next term. The Executive Committee faculty members include the NGP Director, Associate Director(s), T32 NGP Early Stage Training Grant Director, and four NGP faculty members appointed from diverse research areas and departments within the program. The student representative on the Executive Committee will not vote on probation or dismissal recommendations per Rackham guidelines.
III. Period of Academic Probation.

A. Length of the Probationary Period. Academic probation normally has a duration of one term. If a student is placed on probation at the end of a term, they will then typically have the next term to return to good academic standing and be removed from probation. Summer probationary periods are allowed to enable remediation of unsatisfactory research progress. In these cases, the research mentor will be asked to provide an evaluation of the student’s research progress over the spring/summer term in order to determine whether the student will return to good academic standing at the end of the summer. If the student does not make satisfactory research progress during the term of probation, the student will be subject to automatic dismissal from the NGP. If the probation occurred due to failure of the Qualifying Exam (item C3 above), students will remain on probation until the end of the next Fall or Winter term, when the next qualifying exam will be administered. The Executive Committee will be responsible for determining when probation can end, and the student thus returned to good academic standing.

B. Funding for a student while on probation. A student’s funding (stipend, tuition and healthcare benefits) will be maintained during the probationary period. The funding source to be utilized will typically remain the same as that preceding the probationary period, which will usually be the primary research mentor. In some cases, training grants, outside fellowships or grants or RMF funds may be used to cover a student who has qualified for these awards.

IV. Appeal procedure in the case of academic probation or dismissal. The Program will notify the student of their option to appeal a decision of academic probation or dismissal. The student must appeal a recommendation of probation or dismissal for academic reasons within 2 weeks of the decision. Students should write a letter requesting a meeting with the Appeal Committee (consisting of the NGP Director and 3 other faculty who are not currently on the Executive Committee). The student can have a support person or legal counsel present, if they so choose. Students may use the Rackham Graduate School’s Academic Dispute Resolution process for procedural issues but not to appeal the academic reasons for the decision.

V. Reinstatement after probation. At the end of the defined probationary period, a student will either be returned to good academic standing or dismissed from the program as described above. A student wishing to be removed from academic probation must petition the Executive Committee to return to good academic standing. The NGP will notify Rackham of a recommendation to remove the student in question from academic probation or to dismiss the student from the NGP.

The NGP follows Rackham Guidelines and Policy in the case of all other non-academic reasons for dismissal. Students who fail to meet standards of academic or professional integrity or who have been found responsible for violations of other University standards of conduct may be dismissed in accordance with Rackham Academic and Professional Integrity Policy. Policy updates will be included in the NGP Student Handbook, which is provided to NGP students on DropBox/Google Drive and on the NGP website.
APPENDIX 5: RESPONSIBLE CONDUCT OF RESEARCH AND SCHOLARSHIP

The University of Michigan requires the highest level of research integrity from faculty, staff and students. Within the context of research integrity, mentorship of colleagues, staff and particularly students has been a cornerstone of preserving the ethical standards of scientific research. A large number of academic units on campus are responsible for educating the research community concerning standards of ethics and practices in research including the Office of Vice President for Research (OVPR), the Medical School Office of Research and Graduate Studies, the Program in Biomedical Sciences and the Rackham Graduate School. Publications, seminars, and programs developed by these units are supplemented by the Neuroscience Graduate Program to ensure that all of our students are mentored properly with respect to our expectations of research integrity.

Written Materials Provided to Neuroscience Graduate Students

1) All NGP faculty and students are required to read and adhere to the Guidelines for Responsible Conduct of Research and The Policy Statement on Integrity in Scholarship and Procedures for Investigating Allegations of Misconduct in the Pursuit of Scholarship and Research that are published by the Office of the Vice President for Research. Students are provided the following link http://research-compliance.umich.edu/ to read and follow. The Guidelines cover issues such as the obligations of a mentor, the ethics of authorship, the responsible collection and archiving of research data, and the practicalities of data analysis. The Policy Statement clearly defines fabrication of data, plagiarism, abuse of confidentiality, falsification in research, dishonesty in publication, deliberate violation of regulations, property violations, failure to report observed major offenses, and retaliation.

2) The Medical School publishes the Policy on Conflict of Interest for Research and Technology Activities, and this policy statement is distributed to faculty and students. http://research.umich.edu/conflict-of-interest/ It is also a legalistic document that defines University polices for conflict of interests with regard to the investigator's academic freedom and responsibilities.

3) In addition to these documents that are provided directly to students and faculty, a significant number of other resources are available to NGP students, which have been purchased by the program, distributed by seminar speakers, or donated by the faculty.

Instructional and Faculty/Student Interactive Activities

1) All Neuroscience Graduate Students are required to take PIBS 503, Research Responsibility and Ethics.

2) All Neuroscience Graduate Students are invited to Professional Development sessions offered by the Neuroscience Graduate Program which cover a multitude of topics in relation to biomedical ethics as well as sessions specific to ethics and research responsibility within Neuroscience. These sessions are offered during our weekly seminar course and at Program specific events, including our Annual Fall Retreat. These topics include Neuroscience educational outreach, publication of papers and the review process and the future of the biomedical workforce. In these focused discussions with faculty there are often discussions about ethics and research responsibility.

3) Faculty, students and staff are required to complete the PEERRS instruction as required per university, state, and federal regulations regarding responsible conduct of research (RCR). PEERRS certifications are
valid for three (3) years from the last completion date, at which point participants will be automatically reminded of the required renewal of their certification.

4) All Neuroscience students are required to turn in a bi-annual Individual Development Plan (IDP) and meet with the Neuroscience Graduate Program Director or Associate Director at least once a year. Candidate level students are required to meet with their dissertation committee every 6 months. The Director and Associate Directors of the Neuroscience Graduate Program are happy to set a time for students to come and speak with them and also have an open-door policy allowing students within the program to come and meet with them at any time a student feels the need to talk.

**Tracking of Requirement Completion**

The Neuroscience Graduate Program will track student completion of the required training in Responsible Conduct of Research and Scholarship by an annual review of each student’s progress. At the end of the first term a grade will be shown for PIBS 503, showing successful completion of the course. As students are already required to turn in an annual IDP, they answer questions regarding their meetings with their PI and thesis committee. A reminder will be added that if it has been more than 5 years since they have completed PIBS 503, they will need to participate in the discussion series a second time. This second completion supplies them with a certificate; a copy of the certificate must be provided to the program to update our records.

As stated by the Rackham Graduate School, all graduate students are expected to take personal responsibility for understanding and observing the standards of academic and professional behavior that safeguard the integrity of the academic mission of the University. Specific information related to University and Rackham Graduate School policy and expectations in regard to Responsible Conduct of Research are defined on the Rackham website and noted in the Neuroscience Student/Faculty Handbook. In addition, disciplinary actions imposed for serious violations of academic integrity are clearly defined by the Rackham Graduate School on the website.
APPENDIX 6: HOW TO FORM A THESIS COMMITTEE FAQ’s

1. How many people do I need on my thesis committee?
   The NGP requires 5 faculty to be on your committee. Three of those, including your dissertation thesis research mentor, MUST be NGP training faculty members. The other 2 members can be other graduate faculty members at University of Michigan; a single faculty member from another institution can be included.

2. How do I pick the people on my committee?
   The thesis committee should be your “personal science advisors,” being familiar with the research and techniques you are using for your thesis project and providing relevant expertise that your adviser may lack. They should review your research results regularly and assure that you are making adequate progress. Finally, they should also serve as advocates on your behalf, providing research guidance, career advice and providing letters of recommendation.

   It can be useful for the student and PI to independently prepare proposed faculty lists for the proposed committee. Typically then, the student and thesis mentor work together to form a cohesive committee that will meet the goals listed above. You are welcome to seek input and feedback from NGP administration or other mentors you may have. It is often useful to have both junior and senior faculty on the committee.

   You are required to have two co-chairs on your thesis committee. One co-chair will be your research PI. The second co-chair should also be a faculty member that is a personal scientific advisor/advocate for you. The Program Director and the Executive Committee make final approval decisions on all Thesis Committees and Co-Chairs.

3. Rackham says I need a cognate member, what does that mean?
   As an interdepartmental graduate program, the NGP does not require an officially designated cognate member, since your committee should be made up of faculty from a variety of departments across campus. For example, if you are working with a faculty member in Psychology, the NGP would require you to have at least one thesis committee member who does not hold an appointment in Psychology. This helps you as the student have a breadth of knowledge and expertise on your committee.

4. Who is eligible to be on my committee?
   To meet Rackham’s committee guidelines, you need to have committee members who are considered graduate faculty. This means that they are tenure or tenure-track faculty holding a regular appointment at the University of Michigan as a Professor, Associate Professor or Assistant Professor and must have an earned doctorate from an accredited institution. Rackham’s guidelines can be found here: [http://www.rackham.umich.edu/downloads/oard-dissertation-committee-guidelines.pdf](http://www.rackham.umich.edu/downloads/oard-dissertation-committee-guidelines.pdf)

5. What if my chair or a committee member is an NGP faculty member with a research track appointment?
   Research Professors (Research Professor and Research Associate Professor) who are affiliated with the NGP can serve as committee members and co-chairs, and with a single additional form for Rackham as a sole committee chair. Research Scientists (Research Scientists, Associate and Assistant Research Scientists, Research Assistant Professors and Research Investigators) who are affiliated with the NGP can serve on committees as a regular member, but not as a chair or co-chair.
6. I want to have a faculty member from another institution on my committee, what do I need to do? For a faculty member from another university to serve on your committee you will need to supply the NGP with their CV and a short statement from your PI stating why they are being included on your committee (collaboration, expertise in field and/or mentorship of you as a student). That information is used by the EC and Rackham to approve someone from outside of UM being on your thesis committee. It should be noted that NGP is not able to cover travel funds for faculty members from other institutions. We encourage their participation through Zoom, Blue Jeans etc., or attendance at thesis committee meetings while in Ann Arbor on other business.

7. When do I need to notify the NGP office of my committee choice? Your proposed thesis committee is submitted to the NGP office by November 1st of your second year in the program (if you advanced to candidacy in Fall term, year 2). We encourage you to contact the Director or Associate Directors if you need guidance from someone other than your PI concerning your committee make up. Once your proposed committee is received, it will be reviewed by NGP Administration and the Executive Committee to make sure it meets both NGP and Rackham guidelines. If you need to make any changes you will be contacted to do so with a timeline for getting changes back to the NGP. Upon approval of the Executive Committee, your committee is submitted by the NGP to Rackham for their final approval. You will receive communication from Rackham once it is final and official on your transcript.

8. What happens if I need to change my committee after it is approved? Your committee can be changed at any time; however, we suggest any changes be submitted to Rackham at least 6 months before your defense date. If you need to add, remove, or change a faculty member, you need to be in contact with the NGP Student Services Administrator and Director with the proposed change and rationale. If there are any concerns, the director will be back in contact with you; if there are no concerns, the program administration will submit the change to Rackham.

9. How often should I meet with my committee and how many committee members need to be present to hold a meeting? NGP policy states that students should have thesis committee meetings every 6 months, with an absolute minimum of once per year to remain in good standing. We recognize that it may be difficult to get the entire committee together that often. Hence, if you can get 4 out of 5 faculty together, you can still have the meeting, but we recommend that you meet individually with the other member when they are available, to keep them up to date on your progress. NGP students that do not have thesis committee meetings at least once per year will be considered as “not making adequate progress towards degree”. The NGP may also prevent students from doing rotations in laboratories where the NGP students are not having regular thesis committee meetings.
Appendix 7: Preliminary Examination (for Advancement to Candidacy for NGP Matriculating Class of 2022)

**Purpose:**
The purpose of the preliminary exam is to confirm that a student presented with novel information that was not explicitly covered in the required first year neuroscience classes, possesses the ability to read and understand neuroscientific literature, develop hypotheses, and propose experiments to test them. They should also be informed on issues of scientific ethics, rigor, transparency, and reproducibility. Satisfactory completion of this exam is one major criterion the NGP Executive Committee uses to determine that a student is ready to begin PhD dissertation research. The preliminary exam is administered at the end of the first year. Preparing students and administering the preliminary exam is the joint responsibility of the Preliminary Exam Advisory and Evaluative (PEAE) Committee and the faculty members teaching Neuroscience 570, 611, 612, 613, 614, 615 and 616.

The responsibilities of the PEAE Committee members are:

a) Meet with module directors to identify students that demonstrate unsatisfactory performance on written paper evaluations; generate plans to assist student in preparation.

b) Select the papers for the preliminary exam and develop questions that students should be able to answer using the knowledge gained in the core courses and active learning strategies related to the paper content.

c) Grade the candidacy exam and provide feedback to the NGP administrative office, and, if requested, to students.

The responsibilities of the Course Directors of the NGP core courses are:

a) Assign at least 1 research paper for critical analysis in each module, using a format similar to that utilized for the preliminary exam.

b) Assist the PEAE Committee members in selecting papers and preparing questions and answer keys, and grading the candidacy preliminary exam.

**Preparing students for the preliminary exam**
In each module (Neuroscience 611, 612, 613, 614, 615 and 616), one or more papers will be assigned for critical analysis. For at least one paper, the students will be provided with questions similar in content and difficulty to an actual preliminary exam. The students will receive guidance on how they should prepare and then complete the ‘practice exam’. After completion and submission of the exam, the faculty will grade all responses and provide feedback. In some cases, a group discussion with faculty and students may occur on best practices and common strengths and weaknesses noted in submitted answers.

**Eligibility**
Each student’s academic record and laboratory progress are reviewed by the Director at the end of Year 1. A student will be eligible to take the preliminary exam if the Academic record meets Rackham requirements (average of B or better), the required NGP coursework (Neurosci 570, Neurosci 611-616, Neurosci 700) has been accomplished with grades of B or better (if a grade is lower than B, the course will need to be repeated), and laboratory progress is considered satisfactory based on completion of rotations. If deficiencies are identified, the Director will recommend procedures for correcting the
deficiencies to bring the student to eligible status before that student is allowed to proceed with the Preliminary Exam.

Successful completion of Neuroscience classes requires participation in the Preliminary Exam practice exercises throughout the modules (611-616), with faculty feedback provided. These are relevant to individual module content.

Format of the Exam
Exam questions will be prepared on 6 journal articles, based on the 611-616 modules. On each exam day, students will answer questions for 1 of 2 of the papers. Students will know the schedule of papers beforehand and can choose which papers to take the exam on. All 6 papers will be distributed one week before the exam. Exam days will be Monday/Wednesday/Friday. Students answer one set of questions each day. Students have 8 hours to answer the questions, which are designed to take ~2 -2.5 hours. Questions are released at 8:00 am and answers must be submitted electronically by 4 pm to the NGP administrative team. This will meet time accommodations for all students. Students can take the exam remotely; NGP will reserve quiet rooms on campus for students desiring to take the exam on campus. During the exam period, students cannot use the internet for any searches or to access new additional information. They can use the paper and any information that they may have written or downloaded on their computers related to their coursework, research or understanding the paper.

Evaluation
All submissions for each exam are blinded by the administrative team and forwarded for grading to 2-3 faculty selected from among the faculty members on the PEAE committee; faculty grade all the responses for that question. Student responses to each set of questions will be designated as satisfactory or unsatisfactory. The percentile score that is set as the minimal satisfactory score for each question will be at the discretion of the grader. A student who receives a designation of satisfactory on 2 or 3 of the 3 question sets will be deemed to have passed the preliminary exam. If students have 2 or more unsatisfactory grades, they will meet with the faculty graders for an oral discussion of their answers to assess the student’s understanding. If after this discussion the student’s grades remain unchanged, they can request to take the exam again the next time it is administered.
APPENDIX 8: 2nd YEAR SEMINAR PRESENTATION GUIDELINES:

1. At the end of the first year, students are provided a listing of faculty mentors willing to lead a NS700 seminar group. Students will select a mentor/subject area from the listing for their NS700 presentation.

2. Several months prior to the presentation, each student group should begin preparations with the faculty mentor. They should discuss the topic, identify interesting papers, and the students should begin preparing the presentation with advice from the faculty member. In keeping with the broad approaches in NGP training, it is recommended that students select papers from the highest quality journals of broad interest rather than from specialty journals.

3. At least 3 weeks prior to the seminar, the student should provide the Neuroscience Program office the title of their presentation. This is distributed to faculty and students by e-mail prior to the presentation. An abstract should be provided at least 2 weeks before the presentation.

4. Students should schedule at least one formal practice with their NS700 mentor and group. The faculty and students in this group should attend this practice and provide comments. Students often practice with their thesis lab as well. In this way, the student has an opportunity to implement suggestions for the formal seminar.

5. The student presents the seminar to assembled NGP students, faculty and other interested individuals, and answers questions from the floor. The faculty mentor will provide a professional introduction to the speaker, prepare questions to lead off discussion during the seminar and serve as moderator during the discussions.
APPENDIX 9: DISSERTATION PROPOSAL GUIDELINES

Timeline

Thesis Committee Selection: by November 1, year 2
Students must have a proposed dissertation thesis committee submitted to the NGP for approval in the first term that they are a candidate. Students and faculty should consult the “How to Form a Thesis Committee FAQ document” for guidance on thesis committee selection. The deadlines are: November 1st for the Fall term (summer preliminary exams) and March 1st for the Winter term (December preliminary exams). Students should submit a brief 1-paragraph description of their thesis research area and the names of their proposed committee members to the NGP office by the date above for approval by the NGP executive committee. Any suggestions from the Executive Committee for changes to thesis committee are relayed back to the students for discussion or needed changes. Thesis committees approved by the Executive Committee are submitted to Rackham by the NGP Student Service Representative.

Thesis Prospectus (Specific Aims page) for First Thesis Committee Meeting: by Jan 30, Year 2
Students will write a thesis prospectus to be discussed at their first thesis committee meeting (to be held before February 28 for Fall term candidacy or June 30 for Winter term candidacy). The thesis prospectus will consist of a Specific Aims page that will eventually form the basis of the student’s dissertation proposal (see below). The student presents the specific aims to their committee to get feedback on their thesis project and proposal before preparing the full proposal. A special committee meeting form is provided for this first committee meeting.

Full Thesis Proposal (in form of an NIH NRSA F31 proposal): by June 1, Year 2
After receiving feedback from the committee at their first meeting, the student prepares and submits the full thesis proposal (in the form of an NIH NRSA research proposal) to their committee by no later than one month after the end of their second semester as a candidate (June 1 for students achieving candidacy in the Fall term, or by October 1 for students achieving candidacy in the Winter term). All students must hold a committee meeting within one month of the date of completion and submission of their dissertation proposal. Because scheduling faculty can be challenging, this meeting date should be arranged prior to the expected completion date of the dissertation proposal. These dates represent the latest dates for students to remain in good academic standing without prior approval from the Program Director.

Objectives of Thesis Proposal Preparation and Presentation to Thesis Committee (Step 2 of Qualifying Exams)
The dissertation proposal represents the formalization of the student’s proposed thesis project that will be evaluated by their thesis committee. Evaluation of the dissertation proposal by committee ensures that:

- the student is intellectually and technically prepared to undertake the thesis project
- the proposed thesis project is feasible and can be completed in a reasonable amount of time
- the student and research advisor (research PI or mentor) have overlapping expectations regarding the scope and timeline of the thesis project
- the student will receive all of the technical skills required to complete the project

The written document will also serve as the core of the student’s eventual NIH Predoctoral National Research Service Award (NRSA) Individual Fellowship submission (use link below for more details).

https://researchtraining.nih.gov/programs/fellowships
Format

*Font restrictions:* Text in the proposal must follow these minimum requirements:

1) Font size: Must be 11 points or larger. Smaller text in figures, graphs, diagrams and charts is acceptable, as long as it is legible when the page is viewed at 100%. Some PDF conversion software reduces font size. It is important to confirm that the final PDF document complies with the font requirements. Recommended fonts are:
   - Arial
   - Georgia
   - Helvetica
   - Palatino Linotype

2) Type density: Must be no more than 15 characters per linear inch (including characters and spaces).

3) Line spacing: Must be no more than six lines per vertical inch.

4) Text color: No restriction. Though not required, black or other high-contrast text colors are recommended since they print well and are legible to the largest audience.

**Page Formatting:**
Use standard paper size (8 ½” x 11). Use at least one-half inch margins (top, bottom, left, and right) for all pages.

**Content**
The dissertation proposal will contain many of the components required in the NRSA application. Portions of the description below are taken directly from PHS Fellowship Supplemental Form F430 (use link below for details).


The following components are required for the thesis proposal and should appear in the following order (page limits denoted in parentheses):

1) **Project Summary/Abstract** (30 lines of text)
   Describe succinctly every major aspect of the proposed project. It should contain a statement of objectives and methods to be employed.

2) **Research Proposal**
The student, in consultation with their research advisor, will select a research area of depth and breadth suitable for a Ph.D. thesis in Neuroscience. The student should exercise originality and independence in the preparation of the Research Proposal. The proposed experiments and experimental design must originate with the student. However, the student is encouraged to seek and receive critique of the developing proposal by the advisor, Thesis Committee Members and other faculty. Students can have others read their Proposal and provide general comments regarding the clarity of the writing and feasibility of the proposed experiments. Students are not allowed to include specific aims and experiments that are part of their research advisor’s grant proposals. The Research Proposal must contain the following elements:

   A) **Specific Aims** (1 Page)
State concisely the goals of the proposed research and summarize the expected outcome(s), including the impact that the results of the proposed research will have on the field of Neuroscience. List succinctly the specific objectives of the research proposed (e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm, address a critical barrier to progress in the field, or develop new technology).

B) Research Strategy (6 Page)

Significance
Explain the importance of the problem or critical barrier to progress that the proposed project addresses. Explain how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields. Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.

Approach
Describe the overall strategy (design), methodology and analyses to be used to accomplish the Specific Aims of the Research Proposal. Include sample size determination, describe how data will be collected, analyzed and interpreted. Discuss potential problems/alternative strategies/benchmarks for success; if the project is in the early stages of development, describe any strategy to establish feasibility and address the management of any high risk aspects of the proposed work. There should be sufficient detail provided such that the committee will be able to easily assess the appropriateness of the methodology, the likelihood of success and the relative impact of the project. Although not necessarily required, include any preliminary data that is directly relevant to the proposal. If a proposal has multiple Specific Aims, then it may address Significance and Approach for each Specific Aim individually or may address Significance and Approach for all of the Specific Aims collectively.

C) References (no limit) (not included in 6 pages)
Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations.

Evaluation
The Thesis Proposal will be evaluated by the full thesis committee. At the start of the meeting the student will be asked to leave the room and the advisor will brief the rest of the committee as to the student’s research performance to date and the committee will discuss the merits of the written proposal. The student will then be invited back into the room to orally defend the proposal. The defense will consist of a formal presentation by the student detailing the proposed thesis project which should last approximately 30 minutes. At the conclusion of the presentation the meeting will be opened for questions by the thesis committee members. The questioning will include areas directly related to the research proposal, including the background knowledge of the student as well as experimental design and interpretation of hypothetical results. Questioning should also test the student’s general knowledge of Neuroscience using the research proposal as a point of departure. After this questioning session, the student will be temporarily excused, and the student’s performance will be discussed, and a vote will be taken on the outcome. Two outcomes are possible: the thesis will be deemed acceptable or unacceptable. After consensus is reached, the student will be invited back into the room and the dissertation committee chair will notify the student of the committee’s decision. In cases where the thesis proposal is viewed as acceptable, the dissertation chair will notify the NGP office of outcome and provide the completed NGP Evaluation Form for this meeting. No additional action is required, but the committee is expected to provide any additional feedback that might aid in preparation of the final proposal. In cases where the thesis is deemed unacceptable, the committee will agree upon steps required (e.g. rework an Aim,
redesign an experiment, etc.) and a timeline for redress which may include a subsequent follow up in person meeting between the student and the committee. Immediately following the meeting, the dissertation chair will notify the NGP of the decision and will provide the NGP Evaluation Form for this meeting, including a written plan for remediation and a deadline for completion. If a student does not adequately address the concerns of the committee by the stated deadline, the Neuroscience Program will consider them to not be making adequate progress towards degree, and the student can be placed on academic probation with Rackham Graduate School. Additional untimely delays in remediation may result in a second unsatisfactory progress report, which can be means for dismissal from the NGP.

Submission
Once a dissertation proposal is acceptable to the dissertation committee the following will be completed:

1) If there is a NIH institute relevant to the proposed research that accepts individual predoctoral fellowships (F31 or F30 for MSTP), and the student is eligible to submit one, the dissertation proposal (possibly with further revisions) will usually be submitted at the next deadline. Deadlines for predoctoral NRSAs are: April 8, August 8, December 8.

2) If there is not a relevant NIH institute that accepts individual predoctoral fellowships, or if the student is ineligible to submit a fellowship to NIH, or if the student and advisor decide not to submit the proposal to NIH, the student must either:
   A) Submit the proposal to some other external funding source or
   B) Notify the NGP Director that the proposal will not be submitted for external review. In this case the Director will appoint an internal review panel consisting of two NGP faculty members who are not members of the dissertation committee to provide an independent critical review of the proposal, similar to the review study section members would provide.
APPENDIX 10: NEUROSCIENCE GRADUATE PROGRAM ELIGIBILITY FOR TRAVEL FUNDS

First Year (pre-candidate) Travel:

1) The Neuroscience Graduate Program (NGP) will cover up to $900 per year towards the cost of travel for scientific meetings during students’ first year. Most students attend the annual meeting of the Society for Neuroscience, although a few students go to smaller specialty meetings. If you wish to attend a meeting other than the Society for Neuroscience, please seek prior approval from the Program Director.

2) PIBS students are eligible for travel support if they demonstrate a strong likelihood of joining the Neuroscience Program. In general, this criterion is met by enrolling in Neuroscience 623, 611, 612, 613 and 570, but special circumstances will also be considered.

3) For students receiving Rackham Travel Grants for meetings in the contiguous US, travel funds from the NGP can be used towards attendance at another meeting within the first year with prior approval from the Director.

4) Travel funds are allocated according to the university fiscal year (July 1-June 30). If you do not use the travel funds allocated for you in one year, they do not carry over to the next year.

Travel for students in 2nd year and beyond:

1) In general, Neuroscience Program funds are not available for travel by students beyond their first year. We currently have a NIH R25 grant that provides some funding opportunities for students who meet eligibility criteria. Call for nominations takes place annually in the spring.

2) The most common source of travel funds for candidate level students is from the research grant of the mentor. Most outside fellowships also include travel funds.

3) Almost all training grants that support candidate level students have travel funds. You must request them from the director of the training grant on which you are appointed.

4) Rackham may provide funds to travel to one meeting per year (currently $900 for a meeting in the contiguous US or $1150-$1400 for a meeting in Alaska, Hawaii, Puerto Rico or international meeting) if a student is presenting at the meeting. Rackham funds are limited, so apply as soon as possible.
APPENDIX 11: PUBLICATIONS AND AFFILIATION

The "Neuroscience Graduate Program" is the institutional affiliation on student-authored publications.

Indicating the Neuroscience Program affiliation in addition to the home department/institute, increases the visibility of the program and appropriately affiliates the work of a neuroscience student with their degree-granting program (see below). MSTP students should list both MSTP and Neuroscience.

Example:


Lisa A Briand¹, Shelly B Flagel², M Julia Garcia-Fuster², Stanley J Watson ¹,², Huda Akil ¹,², Martin Sarter ¹,³ and Terry E Robinson ¹,³

¹Neuroscience Graduate Program, University of Michigan, Ann Arbor, MI, USA
²Molecular and Behavioral Neuroscience Institute, Ann Arbor, MI, USA
³Biopsychology Program, Department of Psychology, University of Michigan, Ann Arbor, MI, USA

If you have been supported by a T32 Training Grant or other external funding mechanism, please acknowledge this support.

Example:

Include at least: [Name or initials of student] was supported by NIH T-32-NS076401.

Some people also write out: [Name or initials of student] was supported by the NIH Early Stage Training in the Neurosciences Training Grant T32-NS076401.