Guidelines and Regulations for Doctoral Study in the CNUP Training Program

AY2026/27

TABLE OF CONTENTS

1. OVERALL OBJECTIVES OF THE GRADUATE PROGRAM 1

2. PURPOSE OF THIS DOCUMENT 1

3. ADVISORS 1
3.1. Co-Directors of the Graduate Program 2
3.2. Research Advisor 2
3.2.1 Workload and Vacation 2
3.2.2 Financial Support 3

4. GRADUATE PROGRAM 3
4.1. Overview of Requirements 3
4.2. Yearly Sequence of Requirements and Expectations 4
4.2.1. Entering Students 4
4.2.2. First Year 4
4.2.3. Second Year 5
4.2.4. Third Year 5
4.2.5. Subsequent Years 5
4.3. MD/PhD (MSTP) Students 6

5. COMPONENTS OF THE PLAN OF STUDY 6
5.1. Research Rotations 6
5.1.1. Rotation Report 7
5.2. Core Curriculum in Neuroscience 8
5.3. Electives and Tutorials 8
5.4. Statistics 8
5.5. Grant Writing 8
5.6. Journal Clubs 9
5.7. Seminar Series 9
5.8. Ethics and Professional Development 9
5.9. Annual CNUP Retreat 9

6. Training in Teaching Neuroscience 10

7. EVALUATION OF GRADUATE STUDENTS 10
7.1. Yearly Progress Reports 10
7.2. Annual Student Evaluations 11
7.3. Mid-year Evaluation of First-Year Students 11
7.4. Program Academic Notice 11
7.5. University Academic Notice 11
7.6. Dismissal of a Student from the Graduate Program 12

7.7. Terminal Master's Degree 12
7.8. Grievance Situations 13

8. SPECIAL STATUS 13
8.1. Leave of Absence 13
8.2. Parental Leave 13

9. EXAMINATIONS 13
9.1. First Year Preliminary Exam (Reprint Exam) 13
9.2. Second-Year Research Evaluation 14
9.3. Qualifying Examination 15
9.3.1. Committee membership 16
9.3.2. Initial Proposal and Meeting 16
9.3.3. Writing the Full Proposal 17
9.3.4. Oral Exam 18
9.3.5. Evaluation 18
9.4. Doctoral Dissertation 19
9.4.1. Dissertation Committee 19
9.4.2. Dissertation Proposal / Overview Meeting 20
9.4.3. Admission to Candidacy for the PhD Degree 21
9.4.4. Data Meetings 21
9.4.5. Dissertation 21
9.4.6. Application for Graduation 22
9.4.7. Announcement of Dissertation Defense 22
9.4.8. Final Oral Examination 22

10. ACADEMIC AND RESEARCH INTEGRITY 22
10.1 Academic Integrity Policy 22
10.2 Research Integrity Policy 22
10.3 Research Misconduct by CNUP Faculty and Students 23

11. DIVERSITY ISSUES AND PERSONAL INTEGRITY 24
11.1 Diversity, Equity, and Inclusion (DEI) 24
11.2 Mistreatment Policy 25
11.3 Guidelines for Reporting Mistreatment 25
11.3.1 Title IX Issues 25
11.3.2 Reporting 25
11.3.3 Non-Reporting Resources for Sexual Misconduct or Other Mistreatment 27
11.4 Guidelines for Response to Mistreatment 27

12. ADDITIONAL POLICIES & GENERAL RESOURCES 29
12.1 Financial Aid 29
12.2 External Support for Graduate Students 29
12.3 Tuition 29
12.4 University of Pittsburgh Code of Conduct 30
12.5 The Biomedical Graduate Student Association (BGSA) 30
12.6 Graduate Student Unionization 30

12.7 Drug and Alcohol Policies & Resources 30
12.9 University Resources 31

Calendar of Milestones and Deadlines for PhD Students 34
I. First Year 34
II. Second Year 34
III. Third Year 34
IV. Fourth Year 34
V. Years Four+ 34

Appendix A. qualifying exam overview and faq 35

Appendix B. Dissertation Committee Requirements by School 37

Appendix C. Policy on the Use of Generative AI Tools 38

1. OVERALL OBJECTIVES OF THE GRADUATE PROGRAM

The predoctoral training program of the Center for Neuroscience at the University of Pittsburgh (CNUP) has been designed to accomplish the following objectives:

- To develop competence in conducting laboratory research; to plan, execute, report, and defend original research in the field of neuroscience.

- To develop general excellence in neuroscience and specific expertise in one or more areas of neuroscience such as cognitive neuroscience, developmental neurobiology, homeostatic regulatory systems, membrane biophysics, modeling of neural circuits, molecular neurobiology, neuroanatomy, neurochemistry, neuroendocrinology, neuropharmacology, and neurophysiology.

- To develop a general professional excellence in oral and written expression, in the critical analysis of primary scientific articles, and in teaching.

- To develop fundamental skills in scientific reasoning required to define important research questions and to devise innovative strategies as a means for adapting to the continually evolving landscape of neuroscience and neuroscience research.

In formulating the graduate training program, the faculty has been guided by several principles. *First*, the program should aid each student in the development of an individualized training program based on the student's background and interests. *Second*, research experience should form the core of each student's training and as such should not be postponed by a lengthy period of time devoted exclusively to course work. *Third*, students should be able to complete the program in four to five years. *Fourth*, students should be evaluated in terms of those competencies that are important to a research scientist: designing, conducting, and evaluating research, both their own and that of others. Thus, the progress that a student makes in the program is considered primarily in terms of the student's performance as an investigator.

2. PURPOSE OF THIS DOCUMENT

"*Guidelines and Regulations for Doctoral Study in the CNUP Graduate Training Program*" is a document written by the CNUP graduate training faculty in consultation with the graduate students. The Guidelines are meant to supplement the ***Regulations Governing Graduate Study at the University of Pittsburgh*** and thereby provide a complete handbook for students that detail the Program's rules, expectations, and recommendations for each aspect of the graduate program. Questions regarding specific issues of the graduate program should be directed to the Co-Directors of the CNUP Graduate Program (see below).

During their progression through the Program, each student should refer to the *Guidelines* that were current when they entered the Program. A student may, however, opt to follow the most recent version of the Guidelines. That freedom becomes most important when a new version of the Guidelines implements major changes (e.g., in the structure of a milestone).

3. ADVISORS

To aid the student in satisfying the objectives outlined in this document, the faculty has created separate mechanisms for providing academic and research advice. Upon entering the Program, each student selects a research mentor to supervise their first laboratory rotation. Advice on academic issues and other issues relating to graduate education will be handled formally by the Co-Directors of the Graduate Program who will also serve as general advisors to the student during their first year. Students are also encouraged to establish an

informal research advisory committee consisting of their research mentor and other members of the CNUP training faculty. At the end of their first year, the student will identify a Dissertation Advisor who will serve as the student's chief mentor throughout the student's remaining years in the program.

3.1. Co-Directors of the Graduate Program

The Co-Directors of the CNUP Graduate Program (often referred to as "Program Co-directors"; currently, Drs. Jon Johnson and Rob Turner) have the primary responsibility for ensuring that the graduate program is running effectively and will serve as first-year advisors. Students who have questions related to required coursework, curriculum development, or completion of Program milestones should consult with either of the Co-Directors on these matters. The Co-Directors are responsible for approving student registration, approving the composition of student evaluation committees (i.e., Reprint Exam, Second-Year Research Evaluation, Qualifying Exam, and Dissertation committees), and may at their discretion approve minor modifications in Program academic requirements for students on an individual basis. When conflicts arise between a graduate student and the CNUP program or the student's mentor, the Program Co-Directors will serve as advocates for the student to ensure that the student is treated fairly, within the CNUP guidelines.

The Program Co-Directors are also responsible for the annual evaluation of each student (See Yearly Evaluations – Section 7) and they therefore serve as Co-Chairs of the CNUP Evaluations Committee. This committee consists of five members of the training faculty in addition to the Program Co-Directors. The major function of this committee is to facilitate the students' progress through the Program by providing them with thorough yearly evaluations and advice regarding their development. This committee also serves as an advisory committee for the Program Co-Directors.

The Program Co-Directors are assisted by the CNUP administrative staff. These staff, Patti Argenzio and Lainey Dworek (argenzio@pitt.edu and LMD196@pitt.edu, are responsible for maintaining student folders, notifying students of upcoming deadlines, scheduling exams and committee meetings, and monitoring the status of students.

Current CNUP Program Leadership Contact Information
Co-Directors of CNUP:
Dr. Stephen Meriney (meriney@pitt.edu) and Dr. Peter Strick (strickp@pitt.edu)
Co-Directors of CNUP Graduate Program:
Dr. Jon Johnson (jjohnson@pitt.edu) and Dr. Rob Turner (rturner@pitt.edu)

3.2. Research Advisor

At all times during their graduate training, students will be engaged in laboratory research. While a student is working within a faculty member's laboratory, that faculty member will serve as the student's research advisor. Thus, a student may have a series of research advisors during their tenure in the program (i.e., different research advisors for each of their research rotations and then their Thesis Advisor following lab selection). Research advisors are limited to CNUP training faculty members. Students seeking *specialized training* may work with graduate faculty members outside the CNUP only during the second and third rotation periods, provided they receive prior approval from a Program Co-Director.

Students and their research advisors should discuss the nature of their interactions so that each has a full understanding of what they should, and should not, expect from one another. The students should understand that different faculty members have different styles of interacting with students. New students are encouraged to consult with the Program Co-Directors and with senior students to obtain additional perspectives concerning the mentoring styles of different faculty members.

3.2.1 Workload and Vacation

CNUP graduate students are financially supported for full-time and year-round work, whether that support derives from institutional funds, faculty research grants, training grants, or individual student fellowships.

Upon selecting a thesis laboratory, students and mentors should discuss mutual expectations for daily and weekly student research time spent in the laboratory and time spent in other research-related tasks. Every project will have different requirements, and student progress will be intimately related to time and effort expended. Regarding vacation time and occasional days off, students are eligible for all faculty and staff university holidays. In addition, students are encouraged to take a somewhat longer vacation break (typically two weeks per year) after discussion with and approval by their laboratory research mentor.

3.2.2 Financial Support

The first year of financial support for PhD students will be provided by the CNUP. This support will include a stipend, institutional fees (tuition) and individual medical insurance. To retain the award, students must remain in good academic standing while taking a full-time course load (9-15 credits in the fall and spring terms; 3 credits in the summer term). While our program is committed to ensuring that all students receive full stipend support throughout their graduate career, it is the student's responsibility to select a CNUP-approved Dissertation Advisor who agrees to support the student's continued graduate training. Students may also be eligible for support in later years through training grants and other institutional programs. In addition, students are encouraged to apply for individual predoctoral fellowships (see 5.5 Grant Writing Course).

4. GRADUATE PROGRAM

The following sections outline the academic courses, the research experiences, and the oral and written examinations (herein referred to as "milestones") that the student must successfully complete prior to being awarded the doctoral degree. A calendar listing the deadlines associated with these milestones is included at the end of this document. These requirements are described in terms of the academic and research accomplishments expected during each year of the student's progress through the Program. Anticipated deviations from the outlined sequence and time schedule must be approved in advance by the Program Co-Directors.

4.1. Overview of Requirements

The PhD program in Neuroscience has a 23-credit course requirement covering fundamental material. This requirement is fulfilled by core courses in cellular and molecular biology, systems neuroscience, and by 9 credits of elective courses. Full-time registration requires between 9-15 credits in the fall and spring terms. In summer terms, PhD students may register for milestone study, full-time dissertation study, or a maximum of 3 credits.

Core Courses:

- **Cellular and Molecular Neurobiology 1 and 2** (8 credits, Fall Term, Year 1)
- **Systems Neurobiology** (6 credits, Spring Term, Year 1)

Elective Courses:

- **9 Credits of Elective Courses**. Consult the CNUP website for pre-approved electives (https://www.cnup.pitt.edu/training-programs/phd-graduate-training/curriculum).
- See https://catalog.upp.pitt.edu/index.php for the University's Schedule of Classes.

Additional Requirements:

- Obtain **Research Experience** during research rotations in at least two separate laboratories (Year 1)
- **Scientific Ethics and Professional Development I and II** (Fall and Spring Terms, Year 1)
- Attend **CNUP Journal Club** (1 credit, Fall and Spring Terms, Year 1)
- Completion of a *graduate level* course in **Statistics** (which may require completion of two graduate-level courses, the first being a less advanced introductory course)
- Completion of a **CNUP grant writing** course (3 credits, Year 2, *not required if student secures an independent fellowship by the end of the first year)

- Gain hands-one **Training in Teaching** neuroscience (1 credit, Fall or Spring terms Year 2)
- Attend **Research Seminars** on a regular basis each Fall and Spring Terms (1 credit, requires documentation)
- MSTP and PhD students registered in the School of Medicine must obtain 40 hours of **Dissertation Credit** after advancement to candidacy and prior to the date of their graduation.

Graduate students must receive a grade of at least a B to pass a course and must maintain a cumulative grade point average (QPA) of at least 3.0. If the cumulative GPA falls below 3.0, the student is not in Good Academic Standing and will be placed on Academic Notice for the next term of registration. A student on Academic Notice who does not make adequate progress towards Good Academic Standing will be subject to Academic Program Change or Academic Dismissal. (Explained in detail here: https://www.provost.pitt.edu/academic-standing-graduate-and-professional-students.)

A grade of B or higher is considered a passing grade in a core course: a B- is not considered a passing grade, even if the overall GPA is 3.0 or better. The program can require a student to retake a core course in which a grade below B is earned. Students who are allowed to re-take core courses will be placed on Academic Notice with guidance on how to return to good academic standing.

Students are expected to attend all sessions scheduled for each of the required CNUP courses (e.g. Cell and Molecular Neuroscience 1 and 2, Systems Neurobiology, Scientific Ethics and Professional Development I and II, Statistics, Grant Writing). Consideration will be given to students on individual cases related to attendance at scientific conferences or illness. Course Directors are to be notified prior to missing a scheduled class whenever possible.

Students are required to pass four milestones enroute to the doctoral degree: the Preliminary (Reprint) Exam, the Qualifying Exam, Admission to Candidacy, and successful defense of their dissertation.

The minimum credit requirement for the PhD degree is met by six terms of registration as a graduate student for 12 or more credits per term or the equivalent number of credits in a reduced load. A minimum of 32 course credits and 40 dissertation credits are required to earn a PhD degree.

No more than 30 credits from a master's degree awarded by another institution may be used to meet the minimum credit requirement. In recognition of graduate study beyond the master's degree successfully completed elsewhere, no more than 12 additional credits may be accepted at the time of admission to meet the minimum credit requirement.

Students should refer to the 2026-2027 Graduate & Professional Studies Catalog for additional details concerning University requirements.

4.2. Yearly Sequence of Requirements and Expectations

4.2.1. Entering Students

Entering students are expected to participate in a variety of orientation activities that are offered in the week prior to the first week of their first fall semester. A CNUP program orientation meeting will introduce students to the Program Co-Directors and Administrators and provide general information about the program with special emphasis on the first-year components of the program. In addition, students are welcome to schedule a one-on-one meeting with one of the Program Co-Directors to outline a plan of study for the first two years. The CNUP program Administrators will advise incoming students on what courses to register for during their first fall term's coursework. After their first term, CNUP staff will remove the advising hold placed by the Office of the University Registrar for each term, and then the student can proceed to self-register after consultation with their advisors/mentors. Students are required to be registered for each term by the designated registration deadline.

4.2.2. First Year

The major objectives of the first year are to select a laboratory for dissertation research, complete the core course curriculum, and obtain sufficient experience through courses and research to pass the preliminary or "Reprint" Exam. The CNUP Evaluations Committee will assess the student's progress at the end of fall and spring semesters and will provide written feedback to the student.

Students must participate in the following activities during the Fall and Spring terms of their first year: (a) laboratory research, typically consisting of semester or half-semester duration laboratory rotations in at least two different laboratories (see section 5.1 on Research Rotations), (b) two core courses in neuroscience (Cellular and Molecular Neurobiology 1 and 2, and Systems Neurobiology), (c) Scientific Ethics and Professional Development I and II, (d) First year Journal Club, and (e) research seminars. During the first year, students typically register for 3-6 research credits of Directed Study (MSNBIO 2690 or NROSCI 2902) per term. Living room

Following the spring term of the first year of study, each student takes the Preliminary (Reprint) Exam (see Section 9.1).

During the summer term at the end of the first year, students are expected to focus on research. In addition, students may choose to take a graduate-level statistics course during the summer to fulfill their statistics requirement (see Section 5.4).

DISSERTATION LAB SELECTION: Students must select a Dissertation Advisor by the end of the first year. This must be done by the end of August of the first year unless students receive special permission from the Program Co-Directors, in writing, to extend this for an additional rotation period.

4.2.3. Second Year

The major objective of the second year is to begin work towards a dissertation project.

During the Fall and Spring terms students will generally: (a) perform research (registering for 6-9 credits, MSNBIO 2690 or NROSCI 2990), (b) take the Grant Writing course, (c) take elective coursework, (d) complete their statistics requirement (see Section 5.4), and (e) attend research seminars.

Most students will complete the program's requirement for training in teaching neuroscience during their second year (see Section 6).

The Second-Year Research Evaluation (at the end of the second year) includes an oral and written research presentation by each student to a committee assembled for this purpose (see section 9.2).

Form a Qualifying Exam Committee by August 1st (see section 9.3.1).

4.2.4. Third Year

The Qualifying Exam (see section 9.3) must be completed by end of December of the third year. In addition, the dissertation committee must be approved and hold its initial meeting within 6 months after the student passes the Qualifying Exam.

In this and subsequent years, graduate students are expected to devote their primary effort to research, to participate in one or more topic-specific journal clubs, to attend research seminars, and to take additional courses as necessary.

4.2.5. Subsequent Years

The major objective of the remainder of a student's graduate program is to have their doctoral dissertation proposal approved, and to complete the doctoral dissertation (see Section 9.4). Students continue to attend research seminars during each Fall and Spring term they are enrolled in the program. Participation in topic-specific journal clubs is strongly encouraged. Please check with a CNUP Administrator regarding PhD credit requirements for the school you are enrolled in.

4.3. MD/PhD (MSTP) Students

MD/PhD students are expected to follow an accelerated schedule designed to aid the student in completing the PhD within 4 years. The requirements for MD/PhD students are similar to those of PhD students, except for the following: 1) MD/PhD students are **not** required to take the two core neuroscience courses (Cellular and Molecular Neurobiology 1 and 2 and Systems Neurobiology); 2) MD/PhD students must complete a minimum of 6, rather than 9, hours of elective coursework; 3) MD/PhD students will satisfy their grant writing and statistics course requirements through their medical school curriculum; and 4) training in teaching neuroscience is optional for MD/PhD students.

Research requirements for MD/PhD students are the same as those for PhD students. MD/PhD students complete their first laboratory rotation during the summer prior to beginning medical school, and their second laboratory rotation during the summer between the first and second year of medical school. MD/PhD students must select their Dissertation Advisor before entering the CNUP graduate program.

5. COMPONENTS OF THE PLAN OF STUDY

In developing a plan of study, students are expected to strike a balance between breadth in neuroscience and depth in their area of specialization. Students are encouraged to be innovative in designing their graduate training experience. Thus, courses are defined as any accredited interaction between a student and one or more faculty members. This includes formal lecture courses (usually but not always at the graduate level), seminars, or tutorials at the University of Pittsburgh, CMU, or at other universities, research institutes, or special study programs. Credit for coursework outside of the University of Pittsburgh is subject to the approval of the Program Co-Directors.

5.1. Research Rotations

Before beginning a research rotation, the student must:

- consult with a Program Co-director to discuss the student's overall plan for rotations
- submit a Research Rotation Request Form to the CNUP Administrator including signatures from the Program Co-director and the rotation advisor.

During fall and spring semesters, one 16-week (i.e., full-term) rotation or two 8-week rotations are allowed. Faculty are free to specify whether they will accept only 16-week rotations, only 8-week rotations, or either. If a student wants to arrange an 8-week rotation during a semester, they must arrange two consecutive 8-week rotations ahead of time (for the 1st and 2nd halves of the semester). This rule ensures that the student gains research experience continuously throughout the semester. Students must prepare rotation reports at the end of each of their first two rotations, regardless of whether the rotations are of 16-week or 8-week duration. During summer semesters, one rotation is allowed with a minimum duration of 8-weeks.

Research rotations are intended to give the student substantial, hands-on scientific research experiences, not just brief periods of observation. Students are required to complete at least one research rotation in a laboratory other than the laboratory in which they do their dissertation research. Both rotations are typically completed during the student's first year in the program. Students who do not rotate through a second lab in the first year and spend all of their research training in their dissertation laboratory must perform a 16- or 8-week rotation in another lab before they can graduate from the CNUP program. In a semester, rotations officially begin on the first day of classes (or at semester mid-point for an 8-week rotation) and end on the last day of classes (or at semester mid-point for an 8-week rotation; see the University calendar for specific dates.) Students are required to begin their first research rotation no later than the first day of the Fall Term but can begin earlier in the summer by mutual agreement with the research advisor. The first rotation must be with a member of the CNUP Graduate Training Faculty. This research rotation is set up by arrangement between the student and the specific training faculty member, who serves as the student's research advisor during that rotation period.

Students who recognize that their current rotation is a poor fit should contact the Program Co-Directors to explain the problem and gain assistance in transferring to a new laboratory. Potential reasons for transfer may include mistreatment (see Section 11), neglect, misunderstanding the nature of the research in that laboratory, a wish to not work directly with animals, etc. Faculty may also request student transfer from the lab when they consider their rotation performance to be suboptimal due to lack of attendance or lack of evidence of knowledge transfer. If a student simply realizes they are unlikely to choose a rotation lab for dissertation work, they should remain in the lab until the end of the rotation period, endeavoring to learn all they can from the experience. Students or faculty may ask at any time for assistance to resolve problems and discuss possible transfer of the student to another lab.

The student must submit a rotation report to their research advisor and to a CNUP office within one week of the end of each of their first two rotations (see description of the Rotation Report below, section 5.1.1.). The research advisor will submit an evaluation of the student's performance during the rotation. Rotations are graded satisfactory/unsatisfactory. Unsatisfactory rotations will not count toward the required two rotations and will result in the student being placed on Academic Notice.

At the end of the student's first rotation, the student will typically move to another laboratory to complete a second research rotation. At the end of the second research rotation, the student may elect to remain in the same laboratory, return to the initial laboratory, or move to a third laboratory for an additional research rotation. Rotation reports are required only for the first two rotation periods; if a student chooses to do a third rotation, a report is not required. It is expected that the rotations selected by each student will reflect a goal-directed effort to identify a suitable laboratory for doctoral dissertation research. It is also important to understand that some advisors may not be able to accommodate rotation requests. Students are therefore encouraged to take a proactive approach in planning rotations and to approach potential research advisors well in advance of the desired rotation period.

Students are expected to complete a minimum of two laboratory rotations prior to declaring a dissertation laboratory. In rare instances, a student may petition the Program Co-Directors for permission to take a 4th rotation. During that rotation the student will be placed on academic notice. By the 7-week point of that rotation, the rotation advisor will be asked to submit to the Program Co-Directors an evaluation of the rotation including a statement as to whether the student will be accepted for dissertation research in their laboratory. If the advisor's decision is to accept the student and the student has passed their Preliminary Exam, then program academic notice will be dropped and the student will be returned to the status of student in good standing. However, if the 4th rotation does not result in a successful match to a dissertation lab, the student's research rotation performance will be considered unsatisfactory and they will be subject to dismissal from the CNUP PhD training program as determined by decision of the CNUP Evaluations Committee.

5.1.1. Rotation Report

The main goal of the rotation report is to produce a scholarly account of the research activities undertaken by the student during that rotation period.

Performance in lab rotation will be evaluated based on effort in the lab, ability to think independently, communicate effectively with the advisor and lab members, good citizenship in the lab, and a broad understanding of ongoing research in the laboratory. A well-written rotation report summarizes the experiments performed, results obtained, as well as an explanation of the progress of the research participated in, and why it did or did not succeed. It is recognized that some rotation projects emphasize concepts and techniques rather than generating a large volume of data. Thus, considerable flexibility in the style and content of the report is possible. The main goal is to generate a written, scholarly account of the scientific principles, questions, and activities undertaken during the rotation period. In general, the report should include 5-8 pages of double-spaced text and any useful figures. It should utilize the standard format of scientific journals (i.e., Introduction, Methods, Results, Discussion). Even if experiments were not completed as planned or data were not obtained, the report should include discussion of how the rotation experience contributed to the student's pursuit of educational and technical training objectives.

Rotation advisors will read drafts, comment upon them, and recommend changes to the rotation report with the student. When finalized, copies of the rotation report must be sent to the rotation advisor and to the CNUP Administrator. The rotation advisor should take the student's written report into account when assigning a Satisfactory or Unsatisfactory grade for the student's overall performance during a rotation. The CNUP Administrator will request from the rotation advisor: (1) the assigned grade, (2) an evaluation of the student's performance during the rotation, and (3) a statement of the suitability of the student for dissertation research in the advisor's lab.

Rotation reports are due one week after the end of each of a student's first two rotations.

5.2. Core Curriculum in Neuroscience

The core curriculum consists of two courses designed to be taken during the first year. The first core course, Cellular & Molecular Neurobiology 1 and 2 (MSNBIO/NROSCI 2100/2101), deals with issues of cellular and molecular biology and is offered during the Fall term. The second core course is Systems Neurobiology (MSNBIO or NROSCI 2102). It focuses on the functional anatomy of the mammalian brain and is offered during the Spring term.

5.3. Electives and Tutorials

Students must complete 9 credits worth of graduate-level elective courses. The goal of this requirement is to deepen and broaden the student's expertise in neuroscience. A list of courses that have been preapproved by the CNUP Curriculum Committee to satisfy the elective requirement is available on the CNUP website.

A student may also earn elective credits for the completion of a non-preapproved graduate-level course, on the condition that the student requests and receives permission to consider the course an elective from the Program Co-Directors prior to the first meeting of that course. When determining whether a course qualifies as an elective, the Program Co-Directors will consider the relevance of the course to the individual student's dissertation research (as judged, e.g., from the course syllabus or other materials).

Students may also establish tutorials in specialized areas for which formal courses are not available. In such cases, a student (or group of students) identifies a faculty member willing to serve as a tutor and develops a syllabus, including a mechanism by which competency in the area will be assessed. The syllabus must be approved in advance by one of the Program Co-Directors, with potential additional input from the CNUP Curriculum Committee as deemed necessary. The subject matter of these tutorials usually will be "academic" in nature (i.e., with a focus on the reading of primary and secondary literature). It also may involve learning new laboratory techniques. Journal clubs cannot be used to satisfy the elective requirement.

5.4. Statistics

Students are required to obtain a background in statistical and quantitative analysis of data that is appropriate to their area of research and sufficient to enable critical evaluation of scientific literature. A list of preapproved courses is available from CNUP Administrators. We encourage all students to take additional higher-level statistics course for elective credit, but this is not required.

5.5. Grant Writing

Students must complete a grant-writing course during their second year in the program (the only exception being if the student secures an individual fellowship by the end of their first year in the program). The grant writing course gives students an opportunity to develop their scientific writing skills and, more importantly, to develop their ability to design a hypothesis-based research project. The grant writing course is one of several experiences (others including the Qualifying exam and the dissertation proposal) that are designed to help the student develop the writing skills necessary for success as an independent scientist.

It is expected that this requirement will be fulfilled by taking MSNBIO 2624 **Grant Writing**, a 3-credit course currently offered either Fall or Spring term. This course will provide students with invaluable

insights into the processes of grant writing and grant reviewing. Students will review grants previously submitted and will generate written and oral reviews of those grants. They will also write a 6-page NRSA predoctoral-style proposal based on a research project of their own design. For MSTP students, the grant writing course requirement is fulfilled by a similar course offered through the MSTP program.

5.6. Journal Clubs

First-year students are required to attend a weekly journal club sponsored by the program (MSNBIO 2650 or NROSCI 2007) during Fall and Spring terms. The goal of this experience is to provide students with a multidisciplinary perspective on the critical analysis of the neuroscience literature. Students will work with the course's faculty facilitators to learn how to critique a published scientific article. At the initial meeting each term, students will sign up for a week in which they will be responsible for selecting and presenting a journal article. The selected article must be a primary research article that reports original research results. Review articles and commentaries do not qualify. The presenting student may ask their research advisor or another "expert" faculty member attend their journal club presentation in order to provide particular expertise for the paper. Both students and faculty facilitators will critique presentations. Presentations that are not considered acceptable by the faculty facilitators must be repeated. In addition to presenting a paper once during the term, each student is required to read the selected paper each week and be prepared to discuss it. Weekly attendance and active participation in journal club is required.

Students in years 2+ are strongly encouraged to participate in one or more topic-specific journal clubs. Consult the CNUP website or a Program Co-director for a list of journal clubs that are offered as for-credit courses.

5.7. Seminar Series

The student is required to attend research seminars on a regular basis. Each Fall and Spring term that the student is enrolled in the graduate program, they must register for Seminar Series (MSNBIO 2660 or NROSCI 2106, pass/fail). This "course" requires that the student attend at least 10 relevant research seminars during the term. Students must send an e-mail message summarizing their attendance record to the Seminar Coordinator of the course for which they registered, typically once at the end of each term. Acceptable seminars are at least 45 min long and involve a formal presentation of data in one of the departmental seminar series. Journal clubs, dissertation defenses, or informal presentations of data in laboratory meetings or student-sponsored meetings (e.g., "Brain Bag") cannot be used to satisfy this requirement. Seminars presented at meetings off campus also do not count towards satisfying the requirement. Disallowed presentations include those at the annual CNUP and CNBC retreats, Society for Neuroscience meetings and off-campus workshops.

5.8. Ethics and Professional Development

All students are required to complete formal training in research and personal ethics during their first year in the program. It is expected that this requirement will be fulfilled by taking a 2-credit course in Scientific Ethics and Professional Development I and II. This course includes structured and semi-structured discussions on diversity training, ethical dilemmas scientists encounter in their professional lives, and presentations by individual faculty on their personal training histories (traditional and non-traditional), career challenges, positive influences, scientific thought processes, and research questions of deepest significance. MSTP students are required to participate in this class.

5.9. Annual CNUP Retreat

The yearly CNUP retreat occurs at the beginning of each Fall term, typically during the second weekend of September. The CNUP retreat is organized and implemented by a select committee made up of CNUP graduate students, faculty, and staff. The CNUP retreat includes an outstanding scientific program, entertaining recreational opportunities, and an environment that fosters both social and professional interactions. There is no charge for graduate students to attend this event. **All CNUP graduate students are strongly encouraged to attend**. In addition, graduate students are encouraged to present their research in poster format at the retreat poster session at least twice during their time in the graduate program. These can

be the same posters used for other scientific meetings occurring within the last 12 months (e.g. posters used for the Society for Neuroscience meeting), or they can be new.

6. TRAINING IN TEACHING NEUROSCIENCE

Teaching is an important component of the graduate training program. It provides hands-on practical experience in classroom instruction as well as an opportunity to obtain a broader perspective on neuroscience content and pedagogy. In general, second-year students enroll in the NROSCI 2150 **Teaching Practicum** course for one term. During the practicum, students are assigned as course support assistants in a neuroscience course.. The specific training experience differs between assignments, but students typically gain experience conducting recitation sections, teaching laboratory exercises, holding office hours to answer questions of class members, and helping to prepare, proctor, and grade exams.

Some students seek additional teaching experience. To facilitate this, certain faculty allow graduate students to give classroom lectures in their undergraduate courses. Students wishing to obtain this enriched teaching practicum experience should contact a CNUP Administrator. Some students gain additional training in teaching, including earning credentials in pedagogy, through the **University Center for Teaching and Learning**.

7. EVALUATION OF GRADUATE STUDENTS

7.1. Yearly Progress Reports

By June 15th of each year, students must submit an NIH-style biographical sketch and a progress report summarizing their activities during the past year and their plans for future study. Students who have a dissertation defense date scheduled on or before August 31st are exempt from submitting a progress report and from annual evaluation. The progress report will serve as the focal document for the annual student evaluation by the CNUP Evaluations Committee, although reports from the student's research advisors, committee chairpersons, course instructors, teaching mentors, etc. will also be incorporated into the evaluation. Therefore, the progress report should incorporate everything the student wishes the CNUP Evaluations Committee to know at the time of the evaluation. It should be organized as follows:

a) a statement of prior year's goals and the extent to which they have been achieved,
b) a description of research efforts including clearly stated scientific rationales and goals,
c) a list of Program "milestones" completed,
d) the date of the last or upcoming dissertation committee meeting, for students with an approved dissertation proposal
e) a list of any awards or honors attained,
f) a list of manuscripts and abstracts published or submitted,
g) a list of attendance and presentations at scientific conferences,
h) a statement of specific objectives for the coming academic year, and
i) emergency contact information (i.e., phone number and email of someone the student has designated to be contacted in case of an accident, sudden medical crisis, or unexpected situation).

The length of the progress report can vary from 2 to 10 pages (double-spaced). Detailed reports from first- and second-year students are particularly important, because the faculty generally know less about them than about more senior students.

These reports should be submitted to the CNUP Administrators (Patti Argenzio and Lainey Dworek, argenzio@pitt.edu and LMD196@pitt.edu) before June 15th. Failure to submit an annual progress report will result automatically in placement of the student on CNUP program academic notice.

7.2. Annual Student Evaluations

The progress of a student is discussed by the CNUP Evaluations Committee each summer. Results of these evaluations are reported to each student in a letter from the Program Co-Directors, typically before the end of August. This letter may be supplemented by a discussion between the student and a member of the committee to clarify the letter, if necessary, or to discuss additional aspects of the student's progress. Students are also encouraged to discuss this evaluation with their research advisor. In evaluating students, the committee considers performance in laboratory research, coursework, training in teaching, journal club, mastery of the relevant scientific literature, performance on any major milestones that have been taken during the past year, and contributions to the community at large. Copies of the yearly evaluation letter are sent to the student's Dissertation Advisor and become a part of the student's file.

The CNUP Evaluations Committee will reach one of three general recommendations: 1) the student may advance to the next academic year in good standing, 2) the student may advance conditionally, or 3) the student may be recommended for program academic notice for specified period, and, if the conditions of the program academic notice are not satisfied, dismissal from the program for poor academic performance. A conditional pass will be accompanied by specific recommendations from the Evaluation Committee concerning actions for the student to take to remediate the committee's concerns.

7.3. Mid-year Evaluation of First-Year Students

The progress of *first-year* students in laboratory research (including their first rotation report) and core coursework is reviewed by the CNUP Evaluations Committee in January or early February of their first year. The purpose of this mid-year evaluation is to provide early feedback to new students on their progress thus far, while also identifying any problems that might have arisen so they can be corrected promptly. Students will be given a written summary of the committee's perception of their progress following the committee meeting.

More senior students who have experienced difficulties during the previous year may also be re-evaluated at mid-year. As part of this evaluation, the student will be required to provide the Committee with a written report addressing problems areas.

7.4. Program Academic Notice

Students experiencing difficulties or delays in meeting program requirements (either academic or research-related) may be placed on *Program Academic Notice*. A student who fails one of the "milestone" examinations (see Section 9) is automatically placed on academic notice until the requirement is successfully completed. A student may also be placed on program academic notice for continued inadequate performance in the laboratory or failure to complete program milestones in a timely fashion. Students who begin a fourth research rotation before selecting their dissertation laboratory will be placed on automatic program academic notice. Students who are placed on program academic notice will be informed regarding what is necessary to be removed from academic notice and will remain on academic notice until they have satisfied those requirements and have been notified of this by the Program Co-directors. Note that CNUP "Program Academic Notice" is distinct from "University Academic Notice" (see-Section 7.5) in that it does not preclude financial support from the University.

7.5. University Academic Notice

The University requires that all graduate students maintain a minimum QPA of 3.0 or above to take the preliminary ("Reprint") exam, the Qualifying examination, to be admitted to candidacy for the PhD degree, and to graduate. Students whose QPA falls below 3.0 must be put on "Academic Notice" until they have re-established a QPA of 3.0 or higher. (See detailed explanation here: https://www.provost.pitt.edu/academic-standing-graduate-and-professional-students.)

7.6. Dismissal of a Student from the Graduate Program

Students may be dismissed from the Graduate Program for failure to pass two required core courses or one of these courses on two successive occasions, failure to pass the Reprint Exam, Qualifying Exam, or to advance an acceptable dissertation proposal, failure to make adequate progress in laboratory research (including unsatisfactory performance in the Second-Year Research Evaluation), or for breaches in ethical conduct such as plagiarism. Except for instances involving breaches in legal or ethical behavior, students will not be dismissed from the Program without first being notified in writing that they have been placed on program academic notice. This written communication will include a detailed description of the reason(s) for placing the student on program academic notice, and the goals that the student must accomplish to regain good standing in the Program. Students will typically have one term to resolve their problems and be removed from program academic notice; failure to do so will lead them to be dismissed from the Program.

When a student who is not on academic notice fails one of the major examinations listed above, the student will be placed on program academic notice and given a second opportunity to pass the examination. The student will receive a written communication from the committee that evaluated their exam performance, detailing the deficiencies and what must be accomplished to remove the deficiencies. The second examination must be taken within three months of the first examination, unless otherwise approved by the Program Co-Directors. Failure to resolve issues of concern on the second examination will result in dismissal from the Program. When a student who is already on program academic notice fails one of the major examinations, they may or may not be given a second opportunity to pass that examination, at the discretion of the CNUP Evaluations Committee.

When a student is informed that their laboratory research progress has been judged unsatisfactory, the student will be placed on program academic notice and given one term to improve laboratory skills and productivity before being reevaluated. A second determination that laboratory performance is substandard, at this time or during any subsequent evaluation, will result in the student's dismissal from the program.

In all cases, the dismissal of a student requires a decision by the CNUP Evaluations Committee and acceptance of a recommendation for dismissal by the Directors of the CNUP. Dismissal decisions cannot be made by an individual faculty member or examination committee. Dismissals are final.

7.7. Terminal Master's Degree

If students leave the program (voluntarily or otherwise) after having completed a set of minimum requirements (described below), they may petition the CNUP Evaluations Committee to receive a terminal Master's degree. Students wishing to receive such a degree must fill out an "Application for Graduation" form as mandated by the University. The requirements for a Master's degree include: passing the two required core neuroscience courses, passing at least one elective course, passing the Preliminary (Reprint) Exam, regularly attending Scientific Ethics and Professional Development I and II, completing two terms of CNUP graduate journal club, completing least two terms of research seminar, and completing at least four terms (including summers) of laboratory work.

Students wishing to earn a Terminal Master's must also submit and defend a Master's thesis and publicly present their Master's research. The student should assemble a Master's thesis committee consisting of at least three members of the CNUP training faculty, including the students' Thesis Advisor. The thesis committee must be approved by the Program Co-Directors. The nature and scope of the thesis must be approved during an initial meeting of the student with the committee. The student should anticipate this meeting by distributing a document that proposes the body of work that will form the basis for the Master's thesis. The thesis should be based on the research that has been the focus of the student's work in the training program and should represent at least one "publishable unit" that has been or could be submitted for publication in a neuroscience journal. See the University's on-line Style and Form Manual for the Master's thesis format.

Students who work under the direction of a faculty member in the Department of Neuroscience may obtain a Master's degree enroute to the PhD by applying for the degree through the School of Arts and

Sciences. The requirements for the degree are the same as stated above for a terminal Master's degree. Note that the Master's degree is not required before completing the PhD.

7.8. Grievance Situations

A student may appeal, in writing, within ten business days after notice of interim suspension or dismissal from the program, to the assistant dean, and the assistant dean or their designee(s) will review the matter and make a finding of resolution on behalf of the school. In the event the dean was consulted as part of the dismissal or suspension process, the appeal shall be forwarded to the Vice Provost for Graduate Studies and they or their designee(s) shall review the matter and make a final determination as to the resolution of the appeal.

8. SPECIAL STATUS

8.1. Leave of Absence

Students may request a leave of absence (LOA) from the Program. Such requests should be made in writing to the Program Co-directors. Requests should include the reason for the request and the duration of the requested leave. The student should describe how the LOA will be used to resolve issues leading up to it. If the student has already chosen their dissertation laboratory, the LOA request should confirm that the Dissertation Advisor agrees to allow the student to return to their laboratory at the end of the specified LOA, and the Dissertation Advisor should co-sign the letter. Leaves of absence are subject to the approval of the Associate Dean for Graduate Studies of the appropriate school (as determined by the affiliation of the student's Dissertation Advisor). Students considering taking a leave of absence should consult the Regulations Governing Graduate Study at the University of Pittsburgh regarding policies on leaves of absence, as well as discuss the matter with one of the Program Co-directors.

8.2. Parental Leave

The CNUP adheres to the University of Pittsburgh's Graduate and Professional Student Parental Accommodation. These regulations are designed to assist graduate students immediately following the birth or adoption of a young child. The goal of the guidelines is to make it possible for a student to maintain registered full-time student status, along with all the benefits of such status, while facilitating the return to full participation in courses, research, and training in teaching.

Eligibility: The Parental Accommodation Academic Regulations apply only to full-time students enrolled in graduate programs who are in good academic standing and who are making satisfactory progress toward completion of a graduate degree. These guidelines do not cover students in professional programs. Students must have completed at least one full-time semester of their degree program to become eligible for coverage under these guidelines. The guidelines cover the situation of students who experience a childbirth, who adopt a child who is unable to be enrolled in full-day public school due to age or other developmental reasons, or who is a partner of someone who has experienced a childbirth or an adoption for whom the student has parental responsibilities. These eligibility requirements cover all provisions of the guidelines.

9. EXAMINATIONS

Note: Specific forms are required in association with some of the milestone exams. The relevant forms and descriptions of their filing procedures are available on the CNUP website.

9.1. First Year Preliminary Exam (Reprint Exam)

During the first year, students are expected to obtain experience in the critical evaluation of original research reports. This training is provided by a program of supervised reading with their research rotation advisors. **Students are strongly encouraged to seek their research advisor's counsel in preparing for this exam**. It is required that the preliminary or "Reprint" Exam will be taken by May 31st of the first year. By May 1st, the student must submit the completed Reprint Examination Form identifying the proposed committee

members and the date on which the exam is scheduled. Students wishing to postpone this exam past May 31st of the first year must receive **prior approval** from the Program Co-Directors.

The Preliminary Exam primarily serves to set a standard of competency in the critical evaluation of research articles and in oral expression, a standard that students are expected to attain early in their graduate career. In addition, it helps the faculty to identify areas of weakness in these critical skills.

To begin the process, the student writes a brief description of the general area in which they would like to be examined and selects a Reprint Exam committee comprising three CNUP graduate training faculty members. A fourth member of the committee from outside the CNUP training faculty may be added for a particular area of expertise. Typically, the student's current or previous research rotation advisor serves as the chairperson of this committee. The composition of the committee must be approved by the Program Co-Directors. About three weeks in advance of the exam, the student will propose to their faculty committee three candidate papers (original research only) for their exam. At two-weeks in advance of the scheduled exam, the committee will inform the student which paper the committee chose for the student to present. The committee will consider the student's three suggestions, but the final selection is at the committee's discretion and may be a paper that was not proposed by the student.

At the examination, the student presents background material and discusses the paper's major points, analyzing the rigor of the prior research as defined by NIH (https://grants.nih.gov/policy-and-compliance/policy-topics/reproducibility/guidance), the methodology chosen, the validity of the evidence obtained, and the conclusions drawn from the analysis. **In addition, the student must address the following points:**

1) What is the stated or implied **hypothesis** that is being tested in the paper? If there is no apparent hypothesis why did the authors think that this series of experiments would advance the field?
2) If present, was the hypothesis tested conclusively? If not, what could the authors have done to test their hypothesis?
3) Did the experiments meet the standards of "Rigor and Reproducibility" as described by NIH. In particular, address the appropriateness of the statistics used, whether the number of samples was justified, whether the analysis was unbiased, and whether sex as a variable was assessed.

This presentation must be limited to **thirty minutes**. The student then is questioned on the presentation and other relevant issues. At the conclusion of the presentation, the committee selects one of two options: pass or fail. If the student fails, then the exam may be taken a second time provided that the student is not already on program academic notice. If the student is already on program academic notice, then failure may, at the discretion of the CNUP Evaluations Committee, result in dismissal of the student from the program. If a student fails this exam, the chair of the committee must submit a written report to both the student and the CNUP detailing the shortcomings of the student's performance. Failing the Reprint Exam, or any other program milestone, results in the student being placed on program academic notice. A failed Reprint Examination must be retaken within three months unless otherwise approved by the Program Co-Directors; the exam will follow the same procedure and format as the first exam except with a new article selected by the exam committee. Typically, the exam committee remains the same though students may petition the Program Co-Directors to request changes to the committee.

9.2. Second-Year Research Evaluation

A formal evaluation of research progress is conducted by a committee of CNUP faculty at the end of the second year as **part of the Annual Progress Report to be submitted by June 15 to the CNUP Administrators.** The committee of faculty for this milestone consists of the student's Dissertation Advisor, who will serve as committee chair, and two additional CNUP faculty members. The composition of the committee must be approved by the Program Co-Directors prior to the Research Evaluation Meeting.

The student will prepare an Annual Progress Report similar in format to that of the standard yearly progress report (including the eight required sections listed in Guidelines Section 7.1). The additional component required for the Second-Year Progress Report is an expanded Section "i" in which the student describes their research goals for the next 6-12 months. In this document, the student need not describe every

experiment they have completed in their first two years. Rather, the student should highlight aspects of their recent research that influences their next steps in research training.

A cover page to the Second-Year Progress Report should provide: a descriptive title, the names of faculty on the Second-Year Research Committee and the date of the Research Evaluation Meeting. The Second-Year report should be approximately 8-10 double-spaced pages of text, plus figures and tables. It is the student's responsibility to circulate this progress report to the committee a minimum of one week prior to the meeting. The meeting must be held before July 31st. **NOTE: no extensions will be granted for this deadline** because of the importance of the committee's report for the annual review by the CNUP Evaluations Committee, which typically occurs the following week (see section 7.2).

At the Second-Year Research Evaluation Meeting, the student will present a 20 to 30-minute oral overview of their research, current and planned, and answer questions pertaining to their research project. The student is expected to be knowledgeable about the general discipline they are working in and to be able to defend specific aspects of their research project.

The Second-Year Research Committee will determine whether the student is making adequate research progress based on the student's written report and the oral exam. The committee chair will provide a written evaluation of the student's progress (i.e., either acceptable or unacceptable) to Patti Argenzio or Lainey Dworek (argenzio@pitt.edu or lmd196@pitt.edu). If the student's research progress is viewed as unacceptable, they will be given one term to improve research progress to an acceptable level. In this instance the student will be provided with a written evaluation identifying the areas of concern and stipulating what must be accomplished to resolve concerns. If a student is already on program academic notice, they may be dismissed from the Program. Dismissal would be contingent upon a review of the issues by the CNUP Evaluations Committee and acceptance of a recommendation for dismissal by the Directors of the CNUP.

9.3. Qualifying Examination

The Qualifying Examination is the major milestone that a student must pass before being admitted to candidacy for the doctoral degree. This exam provides the student with an opportunity to prepare, present, and defend a research fellowship funding proposal. The exam requires that the student master a literature and design a compelling experimental plan relevant to their research interests, which are competencies essential to success in science. For additional information on the Qualifying exam and FAQs, please see Appendix A.

NOTE: The Qualifying Examination milestone is often referred to, within the CNUP and across the University, as the "Comprehensive Exam." Changes to the structure of this milestone (implemented in 2026) make the term "qualifying" a more accurate descriptor of the aim of the milestone than the term "comprehensive."

Also, as with all other updates to CNUP Guidelines, students in years 2+ may, if they wish, choose to follow the updated Guidelines rather than the version of the Guidelines from their year of entry into the program.

Goals

- Demonstrate mastery of core concepts and experimental approaches related to the chosen grant proposal area.
- Identify key unanswered questions and critical knowledge gaps within the relevant neuroscience domain.
- Formulate clear, mechanistically grounded, and testable hypotheses.
- Design rigorous and feasible experimental approaches using appropriate methodologies.
- Develop a competitive NIH-style research proposal emphasizing scientific significance, innovation, and methodological rigor.
- Articulate in both oral and written formats a focused and coherent research plan that can serve as the foundation for the doctoral dissertation.

Topic Selection

- The exam topic may focus on, or substantially overlap with, the student's research interests and anticipated dissertation goals. Complete overlap with the student's document from the Grant Writing Course is also allowed. Students are expected to work with their Dissertation Advisor to develop the specific research topic and questions.

Originality Requirements

The written portion of the Exam must be original work produced by the student.

While working on the Exam document, it is appropriate for students to discuss their ideas with their committee members as well as with other faculty and students. However, such interactions should be restricted to seeking technical information or information on the strengths and weaknesses of experimental approaches (i.e., information that could be obtained from the literature and/or online with the proper search terms) and should not include a discussion of the feasibility of specific proposed experiments.

The proposal must include clear statements identifying and addressing any overlap (if present) with pre-existing research proposals of the Dissertation Advisor's or others. The proposal also must include clear statements and descriptions of any use of generative AI in the preparation of the proposal (see Appendix C, CNUP Policy on the Use of Generative AI Tools).

Academic Integrity

All work submitted for the Qualifying Examination must comply with Pitt's academic integrity policies. Students are expected to produce independent, original work and to appropriately acknowledge intellectual contributions from others. Plagiarism, including the use of unattributed text or materials from published works, grant applications, or other unpublished documents, is strictly prohibited and may result in disciplinary action in accordance with university and graduate school regulations.

Timeline and Deadlines

- Committee Approval: Prior to the start of Year 3 (fall semester), the student must obtain approval of their Qualifying Exam Committee from the CNUP Directors of Graduate Studies (Program Co-director). The student must also provide a tentative Exam date at this time.
- Specific Aims: **Seven weeks before the Exam**, the student submits one proposed Specific Aims page to the Committee.
- Initial Meeting: **Six weeks before the Exam**, the student meets with the Committee to discuss and gain approval of Specific Aims.
- Full proposal preparation/submission: The student is given **five weeks** to prepare a full research proposal based on the approved Specific Aims. **One week prior to the Oral Exam** the full proposal is submitted to the Committee.
- Announcement: At least **one week** before the Oral Exam, the student provides the title, time, and location of their presentation to the CNUP Administrator for public distribution.
- Exam Completion: The Exam must be completed **no later than the end of December** of Year 3.
- Extensions: Students experiencing extenuating circumstances (e.g., a change in dissertation lab) may petition for an extension to the Program Co-directors. Petitions must include a supporting letter from the current or future Dissertation Advisor**.** Petitions must be submitted **by the end of December** of year 3.

Some flexibility is allowed in the timeline specified above (+/- 5 days) to accommodate committee scheduling constraints.

9.3.1. Committee membership

The Qualifying Exam committee is selected by the student but **must be approved by a Program Co-director**. The committee consists of four or more members, four of whom must be CNUP graduate training faculty. The Dissertation Advisor is a member of the committee but cannot serve as chair. Prior to its first meeting the student should select a chair and notify the CNUP Administrators (currently Patti Argenzio and Lainey Dworek). Questions regarding faculty eligibility should be directed to a Program Co-director.

9.3.2. Initial Proposal and Meeting

One week before the first committee meeting, the student submits to their committee an NIH-style Specific Aims page (1 page).

The proposed Specific Aims page should:

- Reflect an informed analysis of the relevant literature.
- Be supported by essential citations referenced in a bibliography (attached as an additional page).
- Include one or two paragraphs of relevant literature review and rationale.
- Clearly state the hypotheses to be tested.
- Briefly indicate proposed experimental approaches (e.g., a few sentences or bullet points).

The student, the Chair of the committee, and at least one other committee member (typically the Dissertation Advisor) must attend the initial committee meeting in person. Other members of the committee may attend in-person or virtually. At the Initial meeting, the student will give an oral presentation summarizing the proposed Specific Aims. The oral presentation should be brief, taking no longer than 30 minutes. By the end of the Initial meeting, or after subsequent follow-up meeting(s) (in-person, online, or via email), the committee will approve the student's Specific Aims. The committee may recommend modifications to the Specific Aims and request other revisions to the Aims document. In that case, the student will be given a specified time for returning revised Aims to the committee. If a student is unable to gain committee approval of their Specific Aims after 3 rounds of revision and committee review, the student will be considered to have failed the Qualifying Exam.

9.3.3. Writing the Full Proposal

After receiving approval of their Specific Aims, the student has five weeks to write a fellowship application based on those Aims. The proposal should be a realistic program for **3 years** of research.

The document should follow the basic form of an **NIH F31** application and follow the directions contained in the most recent version of the NIH SF424 application package (https://grants.nih.gov/grants/how-to-apply-application-guide/forms-i/fellowship-forms-i.pdf). It will include the following sections:

Title Page: State proposal title, exam date and time, student name, Dissertation Advisor's name, committee members with chair designation (**1 page**).

Project Summary/Abstract: State the long-term research objectives, specific aims, a concise description of the experimental design and methods, expected outcomes, and the broader impact of the project **(30 lines of text max)**.

Project Narrative: State the public health relevance of the proposed research. Must be written in plain, jargon-free language so it is easily understood by the general public (**three-sentence maximum**).

Specific Aims: This section will include a statement of the hypotheses to be tested and the goal or objectives of the proposal (**1 page**). Students must obtain committee approval for any significant revisions to their approved Specific Aims, whereas modified hypotheses or experimental approaches do not require such approval. Modifications to the Specific Aims will not extend the five-week writing period.

Research Strategy: The Research Strategy **(6 pages total)** is the main portion of the application. It will contain two sections: a) **Scientific Foundation and Rationale** and b) **Approach**

The **Scientific Foundation and Rationale** section will explain the importance of the proposed work and should outline how it will move the field forward. You can also use this section to outline the potential of your studies for advancing the objectives of NIH (e.g., curing cancer). This section should:

- Detail the published and unpublished findings that serve as a foundation for your project.
- Critically evaluate the strengths and weaknesses of the prior research supporting your project.
- Explain why this specific area of research is important and what unaddressed gaps it fills.
- Clarify how achieving these research goals will enhance your training.

The **Approach** section will comprise most of the application. NIH is purposely vague on the exact format for this portion of the application. Different investigators use different formats tailored to their research program. Students are encouraged to look at actual fellowship applications submitted by classmates to get a sense of what is included in this portion of the application.

What follows is a suggested **Approach** format that can be used or modified to suit the student's needs:

- Divide your **Approach** into separate sections for each of your Specific Aims.
- For each Specific Aim it is typical to begin with a **Rationale** section that briefly restates the hypothesis to be tested, and background information placing this hypothesis in the context of the field and why these experiments are being performed.
- That is usually followed by a **Research Design** section, where the experiments to be conducted are outlined and described. It is sufficient to cite published work for all but the most novel methods or parameters that are specific to your study.
- Under each aim, dedicate specific sub-sections or paragraphs describing: - *Plans for minimizing bias* (e.g., blinding, randomization). - *Consideration of relevant biological variables* (e.g., sex as a biological variable in animal or tissue models). - *Statistical methods* (e.g., power analyses to justify sample size).
- At the end of each Aim it is customary to include an **Interpretation of Results/Potential Pitfalls** section. This is the section where you discuss potential outcomes and how they will advance your Specific Aims. You can also use this section to discuss potential problems and how you will deal with them. But if you cannot convince reviewers of the significance, dealing with potential pitfalls is less important. Thus, it is recommended that more time and space is spent putting your potential results in the context of the field, than considering everything that can go wrong.
- In addition, a brief "**Preliminary Data**" component may be included if it would help convince a reviewer that your proposed studies are feasible and likely to generate interpretable results. For this purpose, you may briefly describe (in words) the feasible data, based on relevant literature, that would be important to have in hand as a basis for pursuing the proposed research. You may include real data (from your work, or that of others with proper acknowledgement) when appropriate. Some investigators place all Preliminary Data at the beginning of the Approach section, while others make it a separate section for each Aim. The use of scientific illustrations, diagrams, data figures, charts, and tables is encouraged. However, they should be of adequate size such that axis labels (6 pt font) and legends (8-10 pt font) are legible. **DO NOT** fabricate data (e.g., create a plot showing predicted results).

Bibliography and References Cited. This will contain full citations of all referenced literature and will be included at the end of your Research Strategy. *Neuron* or *Nature* reference formats are recommended **(no page limit)**.

9.3.4. Oral Exam

Approximately **one week** after the student submits the written Exam to their committee, the Oral Exam will begin with a public presentation of the proposal (lasting ~ 45 minutes + 10-15 minutes public Q&A) followed by private oral questioning administered by the committee. During questioning, the student will be expected to defend their hypotheses and to address questions concerning all background information relevant to the topic, significance, design and methodologic approach of the proposed experiments. The entire Oral Exam (presentation and defense) should last 2-3 hours.

9.3.5. Evaluation

At the end of the Oral Exam, the student will be excused from the room and the committee will evaluate the student's performance on the written and oral portions of the Exam. The student will then be informed immediately of the decision of the committee. The possible outcomes are pass, partial pass, or fail. The committee chair must report the outcome and summarize the committee's deliberations to the CNUP Administrators (Patti Argenzio and Lainey Dworek).

A student may receive a "partial pass" if they are deficient in some but not most of the areas on which they were examined. If the committee decides on a partial pass, the committee must clearly communicate to

the student the areas that were deficient and provide specific criteria that must be met for the student to pass. For example, the committee might decide that experimental descriptions were poor throughout the written portion of the exam, and thus the student must submit revised descriptions of the proposed experiments. As another example, the committee might decide that some of the student's oral answers were unacceptable, and thus the student must retake the private oral questioning of the exam. Whatever the reason for the partial pass, the committee must present the student with a detailed written description of what needs to be done to complete the exam satisfactorily. Partial passes must be remedied within three weeks of the initial oral exam, or the student will be considered to have failed the exam.

If in the unanimous opinion of the evaluating faculty the student has demonstrated significant and pervasive deficiencies that cannot be rectified by limited improvements to the written and/or oral portions of the Exam, then the outcome will be "fail." In cases where the decision of the examining committee is not unanimous, a written report of the committee's evaluation is referred to the Program Co-directors for further consideration. Students who fail the Qualifying Exam (including failure due to an inability to advance an approved set of Specific Aims, see section 9.3.2) will be allowed to take the exam a second time provided they are not already on academic notice. The second exam must be initiated (i.e., new Specific Aims advanced) **within three months of the initial failure**.

The Qualifying Exam must be passed before a student can schedule their Dissertation Proposal milestone meeting and apply for admission to candidacy for the PhD.

9.4. Doctoral Dissertation

The dissertation is the culmination of the student's graduate training. The dissertation is intended to embody an extended original investigation of a problem of significance in the field of neuroscience. It must add to the general store of knowledge and to understanding in this field. The dissertation project may be, but is not required to be, closely related to research that the student proposed as part of the Grant Writing course and/or the Qualifying Exam. The dissertation project must also demonstrate each of the competencies described at the outset of these guidelines (see Section 1).

9.4.1. Dissertation Committee

The student and their Dissertation Advisor must seek **pre-approval** of a doctoral committee from one of the Program Co-Directors before the committee's first meeting. The doctoral committee should be assembled no later than August 31st (i.e., the end) of the student's third year. The committee consists of at least 5 members. All committee members must be members of the Graduate Faculty at either the University of Pittsburgh or Carnegie Mellon University. Graduate Faculty status "signifies that a faculty member possesses the expertise in research and the experience in supervising graduate students to be qualified to direct doctoral dissertations and serve as a member of doctoral candidates' examining committees." The Graduate Faculty status of faculty at Pitt can be checked via this website: https://www.gradstudies.pitt.edu/graduate-faculty-dashboard. It may be possible for faculty not listed on the site to gain that status in time to serve on the student's committee. Check with the Program Co-directors about this. At least 4 members (including the Dissertation Advisor) must be members of the CNUP Graduate Training Faculty. According to University Regulations, the Dissertation Advisor must be a member of the Dissertation committee. Within the CNUP, however, while the Dissertation Advisor retains their status as an advisor to the student and their committee, the Dissertation Advisor does not chair the committee's meetings. The student should select one of the other committee members who are CNUP Faculty to serve as the chairperson.

One member of the committee must be CNUP Training Faculty but "external" to the Dissertation Advisor's home department (i.e., they may not have a primary, secondary, or joint appointment in that department). Please designate which member is to be considered "external." The external member is not to be confused with the "Outside Examiner," the latter being a faculty member from a different institution who is invited to participate in the dissertation defense (see below). **Appendix B** contains additional requirements for the dissertation committee that must be followed. Please check these carefully and consult with a Program Co-director if questions arise. *Remember*: the committee membership must then be pre-approved by the Program Co-directors *before* any meetings of the Dissertation Committee.

For the final dissertation defense, an **Outside Examiner** who is not a faculty member at the University of Pittsburgh or Carnegie Mellon University must be added to the original 5-member committee. The Outside Examiner should be an expert in the research area of the dissertation but have no connection to the project itself and no collaborations with the student's Dissertation Advisor. After the student selects a candidate Outside Examiner, in consultation with the committee, the student should seek approval of the Outside Examiner from one of the Program Co-directors. Scheduling senior scientists can often be difficult, so it is best to make the selection as early as possible. An invitation is extended to the Outside Examiner by the student's Dissertation Advisor. An invitation to present a public seminar during the visit should also be extended. It is the responsibility of the Dissertation Advisor's home department to make travel arrangements for the Outside Examiner and to schedule the seminar and any individual meetings with interested Pitt faculty.

9.4.2. Dissertation Proposal / Overview Meeting

A dissertation proposal/overview meeting is required by University regulations (this meeting is also sometimes referred to, interchangeably, as a Dissertation Proposal or Prospectus meeting). The function of this meeting is *not* in any way analogous to an examination. Instead, this meeting provides an opportunity for the student to organize their thoughts concerning their anticipated dissertation, to obtain advice from a committee of faculty concerning these thoughts, and ultimately to receive assurance that the broad outlines of the research planned will be acceptable as a doctoral dissertation to the faculty committee. Thus, the proposal should ***not*** be prepared and distributed only when the research is nearing completion. Rather, this meeting should be held at a much earlier stage.

The student's dissertation committee must be approved and hold its initial meeting within six months following successful completion of the Qualifying examination (i.e., by August 31st at the end of the student's third year). The initial function of the committee will vary according to the needs of the student. Thus, readiness to present a mature dissertation proposal is *not* a prerequisite to forming a committee and having the initial meeting. For example, in cases in which the student is still collecting proof-of-principle data essential for documenting the feasibility of proposed experiments, the initial meeting will provide a way for the committee to give the student counsel and critical feedback regarding ways to move the project forward. In such cases, it is the responsibility of the student in consultation with the Dissertation Advisor to respond to the advice of the committee in a timely manner. In cases like this, one or more meetings with the dissertation committee may be needed before the student is ready to present at an official dissertation proposal meeting. In other cases, for students whose dissertation research is more mature, the dissertation committee may be ready to pass judgment at their initial meeting on the feasibility and scope of the proposed dissertation project and the readiness of the student to advance to candidacy. In any case, including situations intermediate between the two extremes described above, the student must work diligently with their dissertation committee to obtain approval of their dissertation research plan. Ideally, approval of a dissertation proposal and advancement to candidacy should be obtained by Dec. 31 of the student's *fourth* year in the program.

Delaying a dissertation proposal beyond December 31st of the *fourth* year requires written permission from the Program Co-Directors. The student must understand that delaying the dissertation proposal past this date will necessarily extend their graduate training beyond five years. Students may revise their original proposal or submit an entirely new proposal when subsequent events warrant it. However, such revisions must be reviewed and approved by their dissertation committee.

The research plan that makes up the student's dissertation proposal may overlap closely with what the student prepared for their Qualifying Exam, but such overlap is not required.

The dissertation proposal is comprised of written and oral portions. The written portion should be in the format of one Specific Aims page of an NIH R01 application (1 page, single spaced, ½ inch margins on all sides). No additional written materials are required. The written portion of the proposal should be sent to the dissertation committee at least one week prior to the committee meeting and oral presentation.

The oral presentation should include the background/rationale for the proposed studies (including preliminary data if warranted), an outline of the experimental design and a plan for interpretation of results (including statistics to be used). Also be sure to address the issues of "Rigor and Reproducibility" as outlined

in NIH guidelines). The oral presentation should last no longer than 60 minutes. Following the oral presentation, the dissertation committee will discuss with the student the proposed research design to determine if the proposed body of research is feasible and whether it is novel to the degree that it will make a significant contribution to the student's field of research.

If both the written and oral portions of the dissertation proposal are determined to be adequate (by unanimous vote of the dissertation committee), this outcome will be reported to the Associate Dean for Graduate Studies. A brief written summary of this meeting will be prepared by the committee's chairperson and provided to a CNUP Administrator.

If the committee does not approve the student's proposal (written and/or oral portion), they will identify the deficiencies and provide this critique to the student in writing. This critique will also be sent to the CNUP Administrator. The student will then be given a fixed amount of time (determined by the committee) to submit and defend a revised proposal. Failure to obtain approval by the committee a second time will be reviewed by both Program Co-Directors who will determine the best course of action. This could include mediation by the Program Co-Directors with the student and the dissertation committee, placing the student on program academic notice with the option of a third attempt at developing an acceptable proposal or dismissal from the CNUP graduate program.

9.4.3. Admission to Candidacy for the PhD Degree

After the student's dissertation proposal is approved, the student will receive an application for admission to candidacy form. This application must be approved by the Co-Directors of the CNUP Graduate Program and the Associate Dean for Graduate Studies of the school in which the student's Dissertation Advisor is appointed. It is a University requirement that this application be filed at least eight months prior to the dissertation defense.

9.4.4. Data Meetings

Students should schedule periodic meetings with their dissertation committee to discuss the progress of experiments and to review new data. Specifically, students are strongly encouraged to *meet with their committee at least twice each year*. At a minimum, the student must meet with their committee **at least once each year**. The chair of the student's committee is responsible for preparing a brief synopsis of the meeting and submitting it to a CNUP Administrator so that it can be added to their file.

9.4.5. Dissertation

The format for the written dissertation is specified in Electronic Theses & Dissertation Format Guidelines. In addition to meeting these requirements, the student is encouraged to use a document format that approximates the guidelines for authors for the journal or journals in which the research results are to be published. The exceptions to this rule are (a) the introduction to the dissertation should include a more thorough review of the literature than usually is the case for a research article, (b) the methods section should include all necessary information concerning the methods used in the research, including procedural information already published, (c) the student may wish to include within the results section (or in an appendix) some data which, because they are confirmatory or incomplete, will not be published, and (d) there must be a general discussion section that is more broad than a discussion section associated with a single manuscript.

Manuscripts (including articles in any state of the publication process, e.g., published, submitted for publication, or completed but not yet submitted) authored or co-authored by the student and based on research conducted for the dissertation study may be included in the dissertation. To logically integrate this work into a dissertation, the student is required to write extensive introduction and discussion sections that give an overview of the objective or objectives of the research and draw general conclusions from the assembled data. If a manuscript is co-authored, the contributions of the student must be delineated clearly in the preface so that the committee can ascertain that the student's own work satisfies the requirements of a dissertation. The University's Style and Form Manual gives instructions on incorporating manuscripts into the dissertation.

A completed dissertation must be submitted to all committee members **at least two weeks** prior to the defense. The student can expect their Dissertation Advisor to read the dissertation prior to its submission,

and submission of the dissertation implies that the student's Dissertation Advisor has approved the dissertation as ready for distribution to the committee.

9.4.6. Application for Graduation

Candidates for graduation must file an official application for graduation in the Office of the Associate Dean for Graduate Studies in the first month of the term in which graduation is expected.

9.4.7. Announcement of Dissertation Defense

One month before the final examination, the student provides the CNUP Administrator with the title of the dissertation, the time and place for its defense, and a zoom link for hybrid defenses. This information is to be published in the *University Times* and *The Neurotransmitter* and is sent to all appropriate departments of the University.

9.4.8. Final Oral Examination

The chairperson of the doctoral committee will oversee the examination. The student begins by making a public presentation of the research project. Approximately 45 minutes are allotted for this presentation. After a brief period for questions and discussion from the public, the candidate, the doctoral committee, and any faculty who wish to attend move to a conference room to complete the oral examination. The Dissertation Advisor does not participate in this examination and must remain silent throughout the process. When the questioning is complete, the candidate leaves the room while the committee evaluates the dissertation and its defense. The Dissertation Advisor (and other faculty members in attendance who are not members of the examining committee) may be asked to leave for a portion of the committee's deliberation. The committee selects one of the following three options: (1) pass, (2) revision of the written document and/or additional oral questioning at a later time or (3) fail. If the committee requires revision of the written document and/or additional oral questioning, these requirements must be completed within a 3-month period. If the student fails the dissertation defense, the student may take the exam again within 3 months. Failure to pass the dissertation defense on a second occasion may result in the student being dismissed from the program. At the conclusion of the defense, the student is provided with a verbal summary of the committee's deliberations. In addition, a report signed by all members of the doctoral committee, including the research advisor, is sent to the Associate Dean for Graduate Studies. When the decision of the committee is not unanimous, the matter is resolved by the Dean.

10. ACADEMIC AND RESEARCH INTEGRITY

10.1 Academic Integrity Policy

Students have the right to be treated by faculty in a fair and conscientious manner in accordance with the ethical standards generally recognized within the academic community and the profession. Students have the responsibility to be honest and to conduct themselves in an ethical manner while pursuing academic studies. Faculty have the responsibility to be honest and to conduct themselves in an ethical manner while training students engaged in laboratory research or classroom activities. Should a student be accused of a breach of academic integrity or have questions regarding faculty responsibilities, procedural safeguards including provisions of due process have been designed to protect student rights. These general procedures can be found in Guidelines on Academic Integrity at https://www.provost.pitt.edu/academic-integrity-guidelines. Individual schools have their own academic integrity policies that may supersede those of the CNUP. Students should review these school-specific guidelines.

10.2 Research Integrity Policy

The University of Pittsburgh seeks excellence in the discovery and dissemination of knowledge. Excellence in scholarship requires all members of the University community to adhere strictly to the highest standards of integrity regarding research, instruction, and evaluation. Research misconduct carries potential for serious harm to the University community, to advancement of scientific knowledge, and to society. The University's Research Integrity Policy is available online at https://www.responsibleresearch.pitt.edu/research-integrity.

10.3 Research Misconduct by CNUP Faculty and Students

Research integrity is the foundation of scientific investigation and therefore, research misconduct is taken very seriously by the CNUP. The guidelines presented here pertain to research misconduct by CNUP faculty or students. Misconduct by postdocs or technicians is addressed under the purview of the appropriate school (e.g. School of Medicine, Dietrich School of Arts and Sciences) or through the Office of Research Integrity in the University's Office of Research Protections (https://www.orp.pitt.edu/research-integrity). Below is an outline of procedures that will be followed in the case of a CNUP research misconduct report. The methods that will be used to evaluate the extent of the misconduct (if any) and how remedies addressing the misconduct will be determined are also described.

Research Misconduct by CNUP Students

1) Suspicion or evidence of research misconduct by students can be reported to the CNUP Center Directors or the Program Co-Directors. Conversations with the Center Directors or Program Co-Directors will be confidential and can be used to determine if the misconduct rises to the level that requires a formal assessment by the CNUP (below) and/or the Office of Research Integrity at the University of Pittsburgh.
2) Alternatively, research misconduct can be directly communicated to the University of Pittsburgh Office of Research Integrity (ORI; https://www.orp.pitt.edu/people/research-integrity). ORI will determine the need for further investigation, whether notification of the funding organization supporting the research (intramural and/or extramural) is required, and the range of potential sanctions and remedies for each case. The CNUP retains the right to investigate any report of misconduct regardless of the finding of the ORI.
3) If reported misconduct involves a CNUP graduate student and the CNUP determines that further investigation is warranted, the CNUP will:
    a. Assemble an ad hoc Review Committee that includes the CNUP Center Directors, the Program Co-Directors, and two senior graduate students chosen by the committee. The committee will be chaired by the CNUP Director that is not from the same school (SOM or A&S) as the student that is being investigated. Any committee member that has a reasonable conflict of interest (social or professional) regarding the student in question will be excused from the committee. Any faculty member that steps down due to a conflict of interest will be replaced by a senior faculty member from the same school (e.g., SOM or A&S).
    b. If the Office of Research Integrity is involved, the committee will review any pertinent documents provided by this office.
    c. The committee will meet with the student under investigation to obtain information pertaining to the reported research misconduct. This may be followed by an interview with the student's mentor(s) and separately, with graduate students, staff, and postdocs that might have been affected by the alleged misconduct. The student under investigation, the mentor(s) or affected students and postdocs may decline to be interviewed by the committee.
    d. Based on the information gathered, the committee will make recommendations in writing for further actions (if needed). These will be the basis for a final decision by the Center Directors. Recommendations may include, but are not limited to, placing the student on academic notice, removal from the dissertation laboratory, or dismissal from the CNUP graduate program.
    e. If the student is allowed to remain in the program and sanctions are imposed, a plan will be formulated for follow-up monitoring to ensure that the sanctions are followed and that the student is receiving appropriate supervision to prevent additional instances of research misconduct.
    f. The Center Directors will notify the student and the mentor of the final decision in writing. The mentor can share this decision with the affected CNUP students in their laboratory or request that the Center Directors communicate directly with those affected. It will be up to the mentor to notify affected technicians or postdocs in their laboratory.
    g. All communication between the CNUP Review Committee and the parties involved (students, staff, mentor(s), and postdocs) will remain confidential as required by University of Pittsburgh guidelines.

Final decisions can be appealed to the appropriate Associate Dean of Graduate Studies (School of Medicine or Dietrich School of Arts and Sciences) and/or the Vice Provost for Graduate Studies. Students enrolled in

the Dietrich School are also encouraged to contact their Graduate Student Ombudsman (https://www.asgraduate.pitt.edu/student-life/ombudsperson).

Research Misconduct by CNUP Faculty

1) Suspicions or evidence of research misconduct by CNUP Training Faculty can be reported to the CNUP Center Directors or the Co-Directors of the Graduate Program. Conversations with the Center Directors or Co-Directors of the Graduate Program will be confidential and can be used to determine if the misconduct rises to the level that requires a formal assessment by the CNUP (below) and/or the ORI at the University of Pittsburgh (http://rcco.pitt.edu/rcco-offices/research-integrity).
2) Alternatively, research misconduct can be directly communicated to the ORI (http://rcco.pitt.edu/rcco-offices/research-integrity). This office will determine the need for further investigation, whether notification of the funding organization supporting the research (intramural and/or extramural) is required, and the range of potential sanctions and remedies for each case. The CNUP retains the right to investigate any report of misconduct regardless of the finding of the ORI.
3) If the reported misconduct involves a CNUP Training Faculty Member and the CNUP determines that further investigation is warranted, the CNUP will:
    a. Assemble an ad hoc Review Committee that includes the Directors of the CNUP, the Co-directors of the CNUP Graduate Program, and two senior training faculty members chosen by the committee. The committee will be chaired by the CNUP Director that is not from the same school (SOM or A&S) as the faculty member that is being investigated. Any committee member that has a reasonable conflict of interest (social or professional) regarding the faculty in question will be excused from the committee. Any faculty member that steps down due to a conflict of interest will be replaced by a senior faculty member from the same school (e.g., SOM or A&S). One of the Directors of the CNUP will notify the faculty member's chair of the pending investigation.
    b. If the ORI is involved, the committee will review any pertinent documents provided by this office.
    c. The committee will meet with the faculty member under investigation to obtain information pertaining to the reported research misconduct. This may be followed by interviews with other faculty and students that the committee deems essential to understanding what infraction may have occurred.
    d. Based on the information gathered, the Review Committee will make recommendations in writing for further action (if needed) and these will be the basis for a final decision by the Center Directors. Recommendations may include, but are not limited to, faculty oversight of their activities related to the CNUP, prohibition of individually mentoring students for some period of time, exclusion from certain CNUP activities, or removal from the CNUP Training Faculty.
    e. If the faculty member is allowed to remain in the CNUP and sanctions are imposed, a plan will be formulated for follow-up monitoring to ensure that sanctions are followed and that the faculty member is receiving appropriate supervision to prevent additional instances of research misconduct.
    f. The Center Directors will notify the faculty member and their chair, in writing, regarding any actions taken. The Center Directors will also notify any CNUP students that are allowed to remain under the mentorship of that faculty member of any actions that are taken or will provide temporary support to allow students to move to another dissertation laboratory if that is their choice.
    g. All communications between the Review Committee and the parties involved (faculty, students, staff, and postdocs) will remain confidential as required by University of Pittsburgh guidelines.

11. DIVERSITY ISSUES AND PERSONAL INTEGRITY

11.1 Diversity, Equity, and Inclusion (DEI)

The CNUP adheres to DEI principles comparable to those established by the University of Pittsburgh. As such, we value equality of opportunity, human dignity, and racial, ethnic, and cultural diversity. Accordingly, the CNUP prohibits and will not engage in discrimination or harassment based on race, color, religion, national origin, political affiliation, ancestry, sex, age, marital status, familial status, sexual orientation, gender identity and expression, genetic information, disability, or status as a veteran. The CNUP also prohibits and will not engage in retaliation against any person who makes a claim of discrimination or harassment on DEI issues and who provides substantiating information in a subsequent investigation. The CNUP will endeavor always to hire and advance the participation of individuals from diverse backgrounds within our faculty, trainees, and

staff. Finally, the CNUP will continue to take affirmative steps to support and advance these values consistent with our research and educational missions.

11.2 Mistreatment Policy

Excellence in research discovery and the scholarly dissemination of knowledge can only be achieved within an environment that embraces inclusion of all groups and mutual respect between engaged parties. Such excellence requires members of the CNUP community to adhere strictly to the highest standards of academic and personal integrity in research, instruction, training, and evaluation. Mistreatment of graduate students by faculty, postdoctoral researchers, staff, or other students seriously challenges students' mental well-being, may harm their career potential, and could violate their civil rights. Likewise, mistreatment committed by students harms the well-being of other CNUP community members, including undergraduate students working in CNUP labs. Incidents of mistreatment may include, but are not limited to, Title IX infringements (see section 11.3.1), assault, any discrimination violating civil rights, public humiliation, threatening behavior, psychological cruelty, bullying, verbal abuse, providing lower evaluations because of factors other than performance, denial of disability accommodations, ethical misconduct, experimental sabotage, or slander. The CNUP prohibits such mistreatment, and leadership will take corrective actions upon receipt of internal mistreatment reports or those adjudicated by University offices. CNUP leadership strongly encourages all community members to report instances of mistreatment they experience or witness. The CNUP prohibits and will not engage in retaliation against any person who reports mistreatment, and reports may also be made anonymously. Failure to report mistreatment prevents corrective actions from being taken and may enable further acts of mistreatment by the same individuals. Those who experience or observe mistreatment but decide not to report it should exercise caution when talking about it with others and should request confidentiality. Those receiving such information second hand should keep it private. Maintaining confidentiality in such situations promotes CNUP's efforts to cultivate a community of mutual respect, in which civil rights are protected and due process is preserved.

11.3 Guidelines for Reporting Mistreatment

11.3.1 Title IX Issues

The Title IX landmark federal civil rights legislation prohibits sex discrimination in education. Examples of **Title IX infractions** include, but are not limited to, sexual violence, sexual harassment, gender discrimination, creating a hostile environment based on sex or gender, and retaliation. The Office of Civil Rights and Title IX Compliance protects all members of the community: students, staff, and faculty from such infractions. For more information about Title IX issues, please visit: https://www.ole.pitt.edu/incidents/civil-rights.

Anyone in the CNUP community who experiences a Title IX infraction has the right to report it. Reports can be made in several ways, but before speaking with someone, complainants should understand that all university faculty and staff, except for specific counselors and medical professionals, are designated as "responsible employees." They are legally mandated to report incidents of sexual misconduct disclosed to them to The Office of Civil Rights and Title IX Compliance, and those reports may lead to an investigation. See policy under **Responsible Employee Program and Reporting.** Complainants should report to university employees they trust and feel comfortable with. They should also understand that most of these people must report any Title IX issue in addition to providing aid to the complainant.

11.3.2 Reporting

11.3.2.1 Students may wish to discuss any incidents or concerns of mistreatment with their **primary mentor**, i.e., the **lab primary investigator (PI)**. Mentors should address specific problems that may be occurring within the lab, facilitate contact with the Program Co-Directors, and/or help students understand their institutional reporting options. Students may also consult with any other faculty member.

11.3.2.2 Students may wish to consult the **Program Co-directors** and/or Center Co-Directors when they encounter bias or harassment. Program Co-directors can especially assist when problems involve PI mentors or are not resolved satisfactorily by discussions with mentors. Program Co-directors are prepared to provide advice, serve as mediators between involved parties, and provide guidance on institutional reporting options.

Importantly, they will also help students who require adjustments to their graduate school path (e.g. changing labs, altering courses, ending rotations early, etc.) due to bias or harassment.

11.3.2.3 Institutional Reporting resources are available to all CNUP community members when experiencing or witnessing instances of mistreatment. They can serve as the first place to report or represent the next stage in reporting beyond mentors or Program Co-Directors. They can especially assist when problems involve research mentors or Program Co-Directors or are not resolved satisfactorily by discussions with those individuals. Institutional reporting is also important when incidents involve persons outside the CNUP and/or should be officially documented for permanent records or disciplinary actions.

Pitt Concern Connection (PCC) is an "all in one" reporting hub for any type of mistreatment incident or concern: https://www.report.pitt.edu. It includes an online report form, a question form, and phone and text lines.

Reports and questions can be submitted anonymously. If reports are anonymous, University officials will be limited in their ability to follow-up and respond appropriately. Anonymous reporting, however, still provides important documentation that may bolster future claims of a cumulative nature.

Specific University of Pittsburgh Offices: Direct contact with the University offices handling specific types of complaints is often advocated, especially for time-sensitive situations. Identifying information will be important, and these are the offices most PCC reports will be directed to.

- The **Title IX Office** covers sex- and gender-based discrimination and sexual harassment or assault. The same office also handles harassment or discrimination claims that violate **civil rights**. Contact the titleixcoordinator@pitt.edu or 412-648-7860 or file a report online.
  https://www.wellbeing.pitt.edu/civil-rights-title-ix

- The **Office for Inclusion and Belonging** covers many forms of mistreatment and violations of civil rights. Contact an OEDI staff member or file a report online.
  https://www.studentaffairs.pitt.edu/inclusion-and-belonging

- **Disability Resources and Services** provides disability accommodations and handles discrimination complaints. You may contact DRS directly or file a report online.
  https://www.diversity.pitt.edu/disability-access/disability-resources-and-services

- The **Office of the Learning Environment (OLE)** in the School of Medicine (SOM) serves graduate students in SOM departments and medical students. The OLE can assist with any incident in which at least one party is a member of the SOM. Reports, which may be anonymous, can be filed through the Pitt Med **Professionalism Accolade and Incident Reporting (PAIR) system** or by contacting the OLE. https://www.ole.pitt.edu/pair

- A **SOM Ombuds Office** is available to graduate students registered in the SOM.
  https://www.medschool.pitt.edu/ombuds-office

- An **Ombudsperson for the Dietrich School of Arts and Sciences (A&S) Graduate Studies** serves graduate students in A&S departments or can assist with any incident in which one party is a member of A&S. https://www.asgraduate.pitt.edu/student-life/ombudsperson

- Should mistreatment incidents involve members of **Carnegie Mellon University (CMU)**, official reports can be filed through one of two CMU offices.
  Title IX issues https://www.cmu.edu/title-ix/
  Carnegie Mellon University Ethics Reporting Hotline Call toll free 1-877-700-7050 or report via the Internet: www.reportit.net (Username: tartans; Password: plaid)

As most CMU members of the CNUP join through A&S, it would be beneficial to also alert the A&S Ombudsperson. Program Co-directors should also be notified to assist students with changing labs, rotations, course schedules, equipment access, etc., and to communicate with CMU personnel.

- Should mistreatment be caused by an undergraduate student working in a CNUP lab, their behavior should be reported to the Office of Student Conduct, 412-648-7910. https://www.studentaffairs.pitt.edu/conduct

11.3.3 Non-Reporting Resources for Sexual Misconduct or Other Mistreatment

Although the CNUP encourages all members of the community to report instances of mistreatment, it is understood this is an individual decision that may be difficult for some. Resources are available regardless of what choice a person makes about reporting. The following are free, confidential resources available through campus or community organizations. University of Pittsburgh mental health counselors are not mandated to file reports under Title IX, and so students may seek their assistance without triggering an official investigation. Counselors can also support students who have chosen to initiate official proceedings.

Free to CNUP students in the SOM

- SOM Mental Health Team https://www.medstudentaffairs.pitt.edu/contact-us/mental-health-team

Free to all CNUP students

- The University Counseling Center offers free mental health resources to all CNUP students https://www.studentaffairs.pitt.edu/cc/
- An extensive list of other Campus and Community Resources can be found at this website https://www.studentaffairs.pitt.edu/care-and-resources/care-resources

11.4 Guidelines for Response to Mistreatment

For reports submitted to one of the University offices listed above, remediation will be determined by the relevant office, possibly in consultation with CNUP Co-Directors, departmental chairs, or other members of the CNUP community, as each case requires. The severity of remedies will depend on the degree and/or frequency of the misconduct. Below are outlined procedures to be followed when reports of mistreatment are submitted internally within the CNUP and do not require adjudication by one of the above offices. All conversations regarding reporting of mistreatment and subsequent investigations will be held in the strictest confidence. Remedies will also be held in confidence to the greatest extent possible.

For **Title IX infractions** reported to The Office of Civil Rights and Title IX Compliance, investigations are handled with such all-encompassing confidentiality that even parties directly involved in the incident are often unaware of ongoing proceedings. Likewise, CNUP leadership may be unaware of ongoing proceedings. In this case, absence of evidence is not evidence of absence. CNUP community members with specific information about a Title IX infraction should provide their information directly to the Title IX office and then keep this information private. Those who have secondhand information should likewise keep this information private. If they do choose to talk about it with others, they should exercise extreme caution and request complete confidentiality to the extent possible (see section 11.3.1). Maintaining confidentiality in the case of unadjudicated Title IX issues promotes CNUP's efforts to cultivate a community of mutual respect, in which civil rights are protected and due process is preserved.

11.4.1 Acts of mistreatment committed by faculty against CNUP graduate students will be investigated by the Program Co-Directors to obtain relevant information from the accused faculty, the aggrieved student, other parties involved, and any witnesses. Any individual may decline to be interviewed.

Program Co-Directors will make recommendations for **appropriate remedial actions** to the CNUP Co-Directors (currently Drs. Meriney and Strick). Recommendations will depend on the severity and frequency of the mistreatment and may include, but are not limited to, verbal or written warning, oversight of the accused's activities related to the CNUP, prohibition from individually mentoring students for some period, exclusion from certain CNUP activities, or removal from the CNUP Training Faculty for some period or permanently. The agreed upon remediation will be communicated to the accused faculty in writing (unless a

verbal warning is chosen) by the Center Co-Director from the same school as the faculty member, with copies to the department chair of the accused in cases when the chair is not a Center Co-Director. Center and Program Co-Directors will share the decision about remediation with the reporting student and any other CNUP students allowed to remain under the mentorship of the accused faculty. Temporary support will be provided to students requesting removal to another dissertation laboratory. CNUP Co-Directors may share the decision with other affected community members within their domains, although discretion will be exercised, such that information is limited to those needing to know. All else will remain confidential as required by University of Pittsburgh guidelines.

For faculty members under caution or sanction, a plan will be formulated for **follow-up monitoring** to ensure that sanctions are followed and that the faculty member is receiving appropriate supervision to prevent additional instances of student mistreatment.

Accused faculty have the **right to appeal** decisions to the relevant Dean of their school.

11.4.2 Acts of mistreatment committed by staff or postdoctoral researchers against CNUP graduate students will be **investigated** by the responsible PI mentors for laboratory incidents. Incidents outside laboratories will be **investigated** by the relevant departmental chair at the written request of the Center Co-Director from the same school. Program Co-Directors will assist in the investigation to provide advocacy for students. Information will be obtained from the accused, the aggrieved student, other parties involved, and any witnesses. Any individual may decline to be interviewed.

Lab PIs and/or departmental chairs will consult with the relevant Human Resources office or CNUP Co-Directors to determine appropriate **remedial actions**. These may include, but are not limited to, verbal or written warnings, placement of the accused on a performance improvement plan, suspension for a specified period, or termination of position. Remediation will be communicated in writing (unless a verbal warning is chosen) to the accused with copies to Human Resources and other individuals engaged in investigating. Lab PIs and departmental chairs may share the decision about remediation with affected community members within their domains, although discretion will be exercised, such that information is limited to those needing to know. All else shall remain confidential as required by University of Pittsburgh guidelines.

Staff or postdoctoral researchers remaining in their position under sanction will be monitored via a **follow-up plan** formulated to confirm sanctions are followed and no further acts of mistreatment are committed.

Accused staff have the **right to appeal** decisions to the relevant Human Resources office. Accused postdoctoral researchers have the right to appeal decisions to the offices located in their respective schools.

- Center for Postdoctoral Affairs in the Health Sciences within the Office of Academic Career Development https://www.oacd.health.pitt.edu/about-center-postdoctoral-affairs
- University of Pittsburgh Postdoctoral Association https://www.uppda.pitt.edu/about-us

11.4.3 Acts of mistreatment committed by CNUP graduate students will be investigated by the Program Co-Directors. Lab PI mentors and course instructors may be asked to assist but should not handle complaints independently. The CNUP Graduate Training Program and not individual faculty has ultimate responsibility for graduate students. **Investigations** will be conducted to obtain relevant information from the accused student, the aggrieved party, and any witnesses. Any individual may decline to be interviewed.

The Program Co-Directors will make **recommendations for remedial actions** to the CNUP Co-Directors. Once remediation is agreed to, it will be communicated in writing (unless a verbal warning is the chosen remedy) to the accused student by the CNUP Co-Directors, with copies to course instructors or lab PI mentors as the incident requires. Recommendations may include, but are not limited to, verbal or written warnings, removing the student from a course with an incomplete grade, removing the student from their rotation or dissertation laboratory, placing the student on program or University Academic Notice, or dismissal from the CNUP graduate program. CNUP Co-Directors, course instructors, or lab PI mentors may share the decision about remediation with affected community members within their domains, although

discretion will be exercised, such that information is limited to those needing to know. All else will remain confidential as required by University of Pittsburgh guidelines.

Students allowed to remain in the program under sanction will be monitored via a **follow-up plan** formulated to confirm sanctions are followed and no further acts of mistreatment are committed.

Accused students have the **right to appeal** decisions to the appropriate Associate Dean for Graduate Studies, who will consider them in coordination with the Dean of the respective school.
A&S https://www.asgraduate.pitt.edu/about/staff-directory
SOM https://somgrad.pitt.edu/people

12. ADDITIONAL POLICIES & GENERAL RESOURCES

12.1 Financial Aid

Graduate students are eligible and permitted to receive student loans. To apply for a student loan, students must complete a Free Application for Federal Student Aid (FAFSA), obtainable from the Office of Financial Aid located in Alumni Hall. The FAFSA does not serve as the actual application for a loan or scholarship; however, it is required in order to be eligible for a loan. All information regarding student loans is handled by the Office of Financial Aid, 1st floor Alumni Hall, 624-7488. https://oafa.pitt.edu/financialaid/applying-for-aid/aid-eligibility-requirements/.

Graduate students who are enrolled half-time minimally are generally eligible for the Federal Direct Unsubsidized Loan (graduate students are not eligible for Direct Subsidized funds), the Federal Direct Graduate Plus Loan, and/or the Private Educational Loan. Emergency student loans of up to $300 are available for educational purposes to students who are registered for 6 or more credits from the Student Organization Resource Center (SORC), room 119 William Pitt Union. https://www.studentaffairs.pitt.edu/student-organization-resource-center/services

12.2 External Support for Graduate Students

PhD students are encouraged to apply for support through individual fellowships and institutional training grants. Specific advice on such opportunities can be obtained through individual dissertation mentors, graduate program directors, and the Associate Dean. In general, when support through these mechanisms originates from the US government, the recipient must be a citizen or permanent resident of the United States. Fellowships through non-governmental organizations (e.g. American Heart Association) often do not have a citizenship requirement.

12.3 Tuition

Tuition rates, fees, and other charges paid by graduate students are established by the Board of Trustees in cooperation with the University Administration. Graduate students who register for 9 to 15 credits in the fall or spring term are full-time students and are assessed the current tuition rate for their school. Students who register for fewer than 9 credits are part-time students and billed on a per-credit basis. Payment options and due dates are available on the Student Payment Center website – https://www.payments.pitt.edu

For PhD students- Each term of registration will generate a tuition invoice. As a student with an eligible academic appointment, you will receive full tuition remission which includes the tuition, Student Health Service, Security & Transportation, and Network Service fees. However, you are responsible for the Student Activity Fee and any fees resulting from late registration or late payment of the activity fee.

Each semester, the Graduate Office automatically pre-pays your tuition and fees. It is the students' responsibility to check and make sure the tuition has been paid in a timely fashion.

12.4 University of Pittsburgh Code of Conduct

The faculty and students of CNUP recognize the importance of personal integrity and honor. To achieve this end, each student accepting an offer of admission will accept the obligations of the Honor Code/Code of Conduct and will expect to apply the code to all aspects of their professional life regardless of the level of training. Students and faculty of the CNUP shall be honor-bound to enforce the Honor Code/Code of Conduct and to report violations of it. The Honor Code/Code of Conduct emphasizes the individual's involvement in and responsibility for the corporate well-being of the community of the CNUP. In keeping with the latter, it is incumbent upon every member of the community to promote the climate which this code seeks to establish. This involves not only counseling with fellow members of the school concerning their actions, but also bringing the sanctions of CNUP's disciplinary procedures to bear upon those whose conduct is in violation of the Code.

The mission of Student Conduct is to process violations of the Student Code of Conduct. By processing these violations, we seek to provide a safe learning environment and opportunities for students to learn from their own behavior and the behavior of others. Student Conduct supports this mission, the values identified in the Pitt Promise, and the educational mission of the University of Pittsburgh by: developing, disseminating, and enforcing campus regulations, providing a fair and consistent conduct process, assessment as normative practice, mentoring students through meaningful interactions, educating students about the effects of their behavior on themselves and those around them, promoting healthy decisions, fostering safe and inclusive communities both on and off campus, connecting students with support services in order to encourage their personal, social, and academic growth, collaborating with faculty, staff, students, and the campus community to manage and address conduct matters.

The website of the Office of Student Affairs addresses all issues regarding student conduct. The link to the University of Pittsburgh Student Code of Conduct and Judicial Procedures (revised August 1, 2024): https://www.studentaffairs.pitt.edu/conduct

12.5 The Biomedical Graduate Student Association (BGSA)

The BGSA is an organization which represents all graduate students in the biomedical sciences. Its purpose is to foster academic and social interactions among graduate students within training programs and with other members of the University community. It functions as a support network for all biomedical graduate students, and facilitates communication between students, faculty, and administration. Please go to our website for up-to-date information and a calendar of events

12.6 Graduate Student Unionization

Updates on the new graduate student unionization at the University of Pittsburgh can be found here: https://www.gradstudentunionization.pitt.edu

12.7 Drug and Alcohol Policies & Resources

The University of Pittsburgh prohibits the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance on University property or as part of any University activity. Faculty, staff, and students of the University must also comply with the laws of the Commonwealth of PA on the possession and consumption of alcohol.

Violation of this policy will result in disciplinary action, including, but not limited to a warning, written reprimand, suspension (with or without pay), dismissal, expulsion, and/or mandatory participation and successful completion of a drug abuse assistance or rehabilitation program approved by an appropriate health or law enforcement agency. Any University employee paid from federally funded grants or contracts, or any student participating in any federally funded or guaranteed Student Loan Program, must notify the University of any criminal drug statute conviction for a violation occurring at the University while engaged in University activities.

An important step in overcoming any problem is to know where to turn for assistance. Information, counseling, and treatment for alcohol and/or drug problems is available through resources in the community and costs may be covered by health care benefits. Confidential support services are available for those with abuse problems who individually pursue treatment and counseling. Some of those resources include:

University of Pittsburgh Student Health Service
Wellness Center
Nordenberg Hall
119 University Place
Pittsburgh, PA 15260
412-383-1800
https://www.studentaffairs.pitt.edu/student-health-services

University of Pittsburgh Counseling Center
Wellness Center
Nordenberg Hall
119 University Place
Pittsburgh, PA 15260
412-648-7930
https://www.studentaffairs.pitt.edu/counseling

Gateway Rehabilitation Center
19 locations in southwest Pennsylvania
800-472-1177

Mercy Behavioral Health Center
264 South 9th Street
Pittsburgh, PA 15203-1263
877-637-2924

Western Psychiatric Institute & Clinic
3811 O'Hara Street
Pittsburgh, PA 15213
412-624-2100

Allegheny County Crisis Emergency Center: 1-888-424-2287

AA (Alcoholics Anonymous): 24 hour hotline (412-471-7472); both crisis and long-term help for individuals with alcohol problems
NA (Narcotics Anonymous): 24 hour hotline (412-391-5247); both crisis and long-term help and support for individuals with problems resulting from drug abuse other than alcohol

12.8 Building Emergency or Inclement Weather Policy for Students

Only the Chancellor may officially close the Pittsburgh campus of the University.

The University will remain open in all but the most extreme circumstances. However, University employees and students are urged to use their own discretion in deciding whether they can safely commute to work.

When a State of Emergency is declared by the Governor or other local governing official, school personnel are expected to abide by those directives and there will be no classes.

12.9 University Resources

Graduate Student Resources – https://www.gradstudies.pitt.edu

Health Sciences Library System – https://www.hsls.pitt.edu

Office of Academic Career Development (OACD), Health Sciences – The OACD is dedicated to providing professionals in the schools of the health sciences with the tools, resources, and support they need to achieve their full potential as leaders in biomedical research, education, and clinical practice. The OACD supports graduate and medical students, postdoctoral fellows, residents, clinical fellows, and faculty, potentiating career excellence at all levels – https://oacd.health.pitt.edu

Panther Central – https://www.pc.pitt.edu

Pitt's Information Technology – https://www.technology.pitt.edu - Accounts are automatically created for students. You can activate your University Computing Accounts through an online account activation tool at my.pitt.edu. Account usernames are used as University email addresses. A University username with the @pitt.edu designation is the official email address for University students and employees. All students, faculty, and staff have unlimited cloud storage space through pitt.box.com (in My Pitt). Students are able to print documents by various means. See the info page on the IT website.

Parking – https://www.pts.pitt.edu
City parking permits may be obtained by city residents from the Parking Authority located at 232 Boulevard of the Allies. Permits cost $20 per annum (check or money order) and you must supply your driver's license, vehicle registration, and proof of residency (utility bill with name and city address). Information regarding daily parking and monthly permits is available on the University, Parking, Transportation & Services website. Parking permits for the UPMC Towerview Garage may be available for a monthly fee. Apply in person at the UPMC Parking Operations Office.

Pittsburgh Regional Transit (PRT)- https://www.rideprt.org/schedule-finder/
All University of Pittsburgh students, staff and faculty may ride all Pittsburgh Regional Transit buses, trolleys, and inclines within Allegheny County FARE-FREE 24 hours a day, seven days a week, 365 days a year using the Port Authority ready2ride app (https://www.pc.pitt.edu/prt-launches-ready2ride-app)

University Shuttle Services – https://www.pts.pitt.edu/mobility/shuttle-services
Ride Systems GPS (http://pittshuttles.com/routes) provides transit riders with next bus times by smartphone applications. Find stops and scheduled arrival times for your desired route.

SafeRider- https://www.pts.pitt.edu/mobility/shuttle-services/saferider
This service provides complimentary transportation from 9:00pm to 3:00am when special non-emergency needs arise for Pitt students, faculty, and staff. You can request SafeRider from your phone with the TransLoc app or call 412-648-2255.

Shuttle Service for Passengers with Disabilities- Call 412-648-7890 to make transportation arrangements for passengers with disabilities. A van with wheelchair/cart lift and standard passenger seating operates between 8:30am and 7:00pm, Monday through Sunday when classes are in session. The On-Call shuttle is also equipped with the wheelchair/cart lift service and is available after 7:00pm.

Bike Registration and Racks – register your bike for free through Pitt's BikeIndex. Registering your bike deters theft, provides proof of ownership, and could help you recover your bike if retrieved from a theft – https://www.pts.pitt.edu/mobility/biking/register-your-bike . From outdoor racks and lockers to indoor bike rooms, there are plenty of safe and secure bike parking options available to you. Explore bike parking maps and learn how to register for a bike locker or bike room – https://www.pts.pitt.edu/mobility/biking/bike-parking-storage.

POGOH – https://pogoh.com

POGOH is the latest mode of transit in Pittsburgh. With 50 stations and 500 bikes to rent, located throughout the city, POGOH provides affordable active transportation options for all! POGOH takes advantage of the latest advances in technology and policy in order to create a system that is convenient, affordable, and fun.

Allegheny County Health Department – https://www.alleghenycounty.us/Services/Health-Department
Free health-related screenings and immunizations are offered at the Allegheny County Health Department

The Mental Health Program at the School of Medicine (SOM only) -
https://www.medstudentaffairs.pitt.edu/contact-us/upsom-mental-health-team-medical-and-graduate-students-school-medicine
The Mental Health Program at the School of Medicine offers medical students and SOM graduate students evaluation, treatment, and referral for a wide range of psychological needs. The program is dedicated to maintaining healthy and confident students and is both free of charge and highly confidential. No insurance is billed for services. Students can see providers for individual psychotherapy, medication management, or both. Virtual appointments are available as well as in-person. Meetings are by appointment only.

CALENDAR OF MILESTONES AND DEADLINES FOR PHD STUDENTS

(Note: for MD/PhD student, the requirements and timelines are somewhat different)

I. First Year

• Select research rotation and initiate research	Upon entering program
• Submit Rotation Form	First week of Fall term
• Design a Two-Year Program of Study	By end of Fall term
• Submit first Rotation Report	End of Fall term
• CNUP Evaluations Committee Reviews student progress	Beginning of Spring term
• Submit second Rotation Form	First week of Spring term
• Submit second Rotation Report	End of Spring term
• Submit Reprint Examination Form	May 1st
• Complete Reprint Examination	May 31st
• Submit Progress Report	June 15th
• Annual Review by CNUP Evaluations Committee	Late July to Early August
• Select Dissertation Mentor & Advisory Committee	End of Spring or Summer Term

II. Second Year

• Complete Training in Teaching (flexible)	Fall or Spring Term
• Submit Annual Progress Report	June 15th
• Second-Year Research Evaluation Meeting	July 31st latest
• Annual Review by CNUP Evaluations Committee	Late July to Early August
• Establish Qualifying Exam Committee	August 31st (end of Year 2)

III. Third Year

• Complete Qualifying Exam	December 31st
• Submit Annual Progress Report	June 15th
• Annual Review by CNUP Evaluations Committee	Late July to Early August
• Approval of Dissertation Committee and First Meeting	August 31st (end of Year 3)

IV. Fourth Year

• Submit Dissertation Proposal	December 31st
• File for Admission to Candidacy	Upon proposal approval

V. Years Four+

• Submit Annual Progress Report	June 15th of each year
• Annual Review by CNUP Evaluations Committee	Late July to Early August
• Data Meetings with Dissertation Committee	One each year required; two ideal
• Application for Graduation	Term of graduation
• Announcement of Dissertation Defense	One month prior to defense

APPENDIX A. QUALIFYING EXAM OVERVIEW AND FAQ

Goals of the Qualifying Exam are to test the student's ability to:

- independently evaluate and critique a body of neuroscience literature,
- integrate the acquired information into broad conceptual schemes,
- develop testable hypotheses,
- devise experimental approaches to evaluate these hypotheses,
- demonstrate the communication skills required to present and defend scientific ideas in oral and written formats.

What is the form of the written exam?

The written portion of the exam should look like an NIH F31 with enough proposed work to last for 3 years. See the CNUP guidelines for further details, page limits and suggested format (Section 9.3).

What is the first step?

By the end of their second year, the student must form a Qualifying exam committee composed of qualified faculty (see Guidelines for definition) and receive approval of that committee from the Co-Directors of the Graduate Program.

What should the student present to the committee one week prior to the initial proposal meeting?

The student should submit a one-page Specific Aims page with an introduction and, typically, two or three Specific Aims similar to the Specific Aims page of an NIH F31 NRSA fellowship application. Citations to supporting literature should be included in line with the Specific Aims text and a bibliography should be attached as a second page.

Does the proposed project need to be different from the student's previous work?

No. The project proposed in the Qualifying Exam document may overlap completely with previous work. That may include the proposal the student developed as part of the Grant Writing course and the project the student is planning to pursue as their dissertation project. Complete overlap with the student's previous proposals is not required, however. It is common for the specifics of a student's project to evolve over the course of their tenure in the program.

How much flexibility does the Qualifying exam committee have in molding the final approved Specific Aims the student will use for the basis of the exam?

1) The committee may suggest changes to the Specific Aims and approve the revised aims for the exam.
2) The committee may deem the proposed Specific Aims to be inadequate. In that case, the committee must provide the student with a clear description of the identified deficiencies and a specified time period for returning to the committee with a revised set of Specific Aims. The committee will then meet to evaluate the revised Specific Aims.
3) If, after three attempts, the committee cannot approve the Specific Aims proposed, the student will be considered to have failed the Qualifying exam.

What are the faculty options with respect to passing or failing a student who has presented both the written and oral portion of the exam?

1) Full pass with no need for revisions.
2) Significant problems associated with either the written or oral portion of the exam may result in a "partial pass." In these cases, the committee must present the student and the CNUP program with a detailed written description of the additional requirements the student must satisfy to pass the exam. The student then must satisfy the committee's requirements within 3 weeks of the initial exam. If the student's attempt to satisfy the committee's requirements is considered inadequate by the committee, the student will have failed the attempt and will be required to repeat the entire exam.
3) The committee can fail the student on the overall performance of the exam based on severe deficiencies in the written and/or oral portions of the exam. The student will be allowed to retake the exam, provided they are not already on academic notice. The second exam must be initiated (i.e. new Specific Aims advanced) within three months of the initial failure.

What are the most common reasons for students to fail the Qualifying Exam?

1) The foundational hypothesis is not tested by the proposed experiments, such that no definitive conclusions can be drawn.
2) The student does not have sufficient knowledge of the literature, such that they propose a project that is not feasible. For example, the student proposes to use a knockout mouse strain that previous studies have shown is embryonic lethal and cannot be obtained for testing. Or the student proposes to use a viral expression model that previous studies have shown is not specific for the cells of interest. Or the student proposes an experimental design that has never been successfully implemented. It is the student's and not the committee's responsibility to ensure projects can be successfully completed prior to the defense of the proposal.
3) The student's lack of knowledge of the field prevents them from demonstrating how potential results will move the field forward.
4) The student designs experiments that will only provide new information if they work as predicted; i.e., negative results are not interpretable.
5) The aims are interdependent, such that a negative result in one aim invalidates all subsequent aims.

APPENDIX B. DISSERTATION COMMITTEE REQUIREMENTS BY SCHOOL

An essential function of a dissertation committee is to ensure that a student who is awarded the PhD degree would be considered deserving of a doctoral degree by other departments, other schools, and other institutions across the world. Academicians, however, do not always agree what constitutes an optimal dissertation committee. Consequently, there are often slight differences among degree-granting bodies. As the CNUP spans at least two major schools, the School of Medicine (SOM) and the Dietrich School of Arts & Sciences (A&S), such differences must be recognized and satisfied. What appears here are the school-specific regulations that differ from those of the CNUP and therefore must be added to CNUP rules.

The school-specific rules are based on the primary appointment of their Dissertation Advisor. If their Dissertation Advisor does not have a primary appointment in the SOM or A&S, their secondary appointment determines the regulations to follow. Most typically, students of faculty at Carnegie Mellon University will follow A&S regulations, whereas students of faculty in the School of Bioengineering will follow the rules of the SOM for dissertation committees.

Regulations Specific to A&S

- The chair of the Dissertation committee must have their primary appointment in the Department of Neuroscience and have Graduate Faculty status.

Regulations Specific to the SOM

- The "external member" of the Dissertation committee cannot serve as the committee chair.
- The Dissertation committee must be approved by the director of the student's training program prior to seeking approval from the Associate Dean for Graduate Studies. This is achieved by completing the Nomination of a Doctoral Dissertation Advisory Committee. Only upon these approvals may the student convene a Dissertation Proposal/Overview meeting and then petition for Admission to Candidacy.

APPENDIX C. POLICY ON THE USE OF GENERATIVE AI TOOLS

The educational mission of the CNUP graduate program is to train the next generation of neuroscience research scientists. As a part of training to become the next generation of neuroscience research scientists, CNUP graduate students are expected to be able to design, conduct, and evaluate original research, to critically analyze primary scientific literature, and to communicate their ideas and findings clearly in their own words, both orally and in writing.

Generative Artificial Intelligence (GenAI) tools, including large language models (e.g., ChatGPT, Claude, Gemini, Copilot, and DeepSeek) as well as AI features embedded in other software, can be valuable aids to research and writing. However, use of GenAI can also interfere with the practice of independent learning, critical thinking, and scientific reasoning that graduate education is designed to build. GenAI tools may also produce inaccurate, biased, or fabricated ("hallucinated") content, and can create serious risks to the confidentiality of unpublished research data and other protected information. This document sets forth the CNUP's policies and expectations for the use of GenAI tools in graduate education, research, and program milestones.

This policy supplements the University of Pittsburgh's institutional policy, *Acceptable Use of Generative Artificial Intelligence Tools* (Pitt Digital), and the CNUP *Guidelines and Regulations for Doctoral Study*.

1. Data Security and University Data Classification (Applies to All Uses of GenAI)

Before using any GenAI tool for any purpose, students and faculty should consider what kind of GenAI tool they are using. GenAI tools fall into two categories:

- **University GenAI Tools** – tools specifically approved for use with University Private or Restricted data (e.g., Pitt's licensed Claude For Education). These tools interact with private University large language models that do not share data with outside parties.
- **Public GenAI Tools** – tools available to anyone (e.g., the free or individually-subscribed versions of ChatGPT, Claude, Gemini, DeepSeek). These tools may retain submitted data for model training, and those data can in some cases be exposed to other users.

CNUP students and faculty should never enter information that is not already publicly available into a Public GenAI Tool. Examples of data not to be entered into public GenAI tools include, but are not limited to:

- Unpublished or pre-publication research data, including raw data, figures, or analyses not yet submitted for publication.
- Human subjects data, including any data that could be linked to individually identifiable research participants.
- Grant applications, manuscript drafts under confidential peer review, or other confidential scholarly material belonging to the student, the advisor, or a third party.
- Student records, letters of recommendation, evaluation materials, or other information protected under Family Educational Rights and Privacy Act of 1974 (FERPA) or University policy (e.g., HIPAA, Social Security or Pitt ID numbers, payment card data).

As with any use of University computing resources, users are individually accountable for verifying the accuracy of anything a GenAI tool produces, and for using GenAI tools only for legitimate purposes. GenAI must never be used to fabricate or falsify research data or results, to impersonate another person, or to engage in disinformation, deception, or harassment.

2. General Policies for Program Milestones and Scholarly Work

The CNUP requires students to complete a sequence of milestones on the way to the doctoral degree: the Rotation Reports, the Preliminary ("Reprint") Exam, the Annual/Second-Year Progress Reports and Research Evaluation, the Qualifying Exam, the Dissertation Proposal, and the Doctoral Dissertation (see the CNUP Guidelines). The policies below apply to all these milestones:

2.1 Prohibited Uses

Generating text or figures from a prompt: Using a GenAI tool to produce original text, analysis, or figures for submission as part of any program milestone is prohibited. For example, asking a chatbot to draft, outline, or substantially rewrite a section of a rotation report, exam answer, proposal, or dissertation is prohibited. Work submitted for program milestones must be the student's own reasoning, analysis, and scientific voice, consistent with the Program's objective of developing each student's independent scientific judgment.

Substituting for required reading or analysis: Students may not use GenAI tools to summarize assigned readings, primary literature, or exam papers in place of reading and analyzing them directly. Skills obtained from practicing this independent analysis will be tested in the Preliminary (Reprint) Exam and Qualifying Exam.

2.2 Permitted Uses, With Conditions

Passive grammar and copyediting tools: Tools that passively flag or correct grammar, spelling, and clarity within a word processor (e.g., the grammar checker in Google Docs, the built-in Editor in Microsoft Word) may be used freely, without disclosure, on any program milestone.

AI copyediting tools: (e.g., Gemini, Grammarly, Copilot proofreading). More capable AI copyediting or line-editing tools may be used on program milestones only under the following conditions:

1. The student must first prepare a complete, original draft entirely on their own, without any GenAI input.
2. The AI tool may be used only to correct grammar, spelling, and syntax. It may not be used to significantly rewrite content, restructure arguments, or edit the meaning of the text.
3. The final submission must include a brief statement identifying which AI tool(s) were used and how.
4. Upon request of the relevant evaluating body (e.g., a Reprint Exam committee, the Qualifying Exam committee, the dissertation committee, or the CNUP Graduate Program Co-Directors), the student must be able to produce the original, pre-AI draft for comparison.

Literature search and research assistance: Using GenAI tools as a search or summarization aid, for example to help identify candidate references, or to get a first orientation to an unfamiliar subfield, is permitted. However, GenAI tools can fabricate citations, misstate findings, and miss important context. Students must verify every citation and factual claim against the primary literature, and they must be able to demonstrate mastery of that literature independent of the tool. Errors from unverified GenAI output will be judged as the student's own errors.

Figures and images**:** Scientific figure-generation tools (e.g. BioRender, which has pre-made icon libraries for manual assembly into figures) may be used, even though many now incorporate generative AI components. These tools may not be used to generate an entire figure from a prompt; the overall composition, data presentation, and interpretation must be the student's own work. A figure may incorporate individual AI-assisted elements (e.g., a stock cell or organ icon), but the use of any AI-assisted element must be appropriately acknowledged in the figure legend or methods.

Statistical software, coding, and data analysis tools: The use of AI-assisted coding or statistics tools (e.g., AI code completion, AI assistance in R, Python, or MATLAB) for data analysis is permitted and does not require a disclosure statement unless it substantially shaped the written presentation of results.

2.3 Disclosure Requirement

Whenever a GenAI tool is used on a program milestone under the conditions described above, the student must include, at the end of the submitted document (or in the methods/acknowledgments section for a dissertation), a brief statement naming the tool(s) used and describing how they were used (e.g., "Grammarly was used to check grammar and spelling in the final draft; no content was generated by AI"). Reviewing bodies (exam committees, the dissertation committee, advisors, and the CNUP Graduate Program Co-Directors) will consider this disclosure, along with the original draft when applicable, in evaluating whether the use of AI was consistent with CNUP policies.

3. Coursework and Classroom Policy

The appropriate use of GenAI varies by course. For example, some courses may have legitimate uses for AI-assisted coding or literature review, while others may prohibit AI use entirely for a given assignment. In the absence of a specific course statement, the general policies in Section 2 of this document applies by default. Students who are uncertain about a course's AI policy should ask the instructor before using any GenAI tool on a graded assignment.

4. Use of GenAI in Laboratory Research

The laboratories in which CNUP students perform research may routinely make use of computational tools, including AI-assisted coding, statistical analysis, and image analysis tools. CNUP students should follow the policies of the laboratories in which they work, with the following limitations:

- Data classification rules (Section 1) apply at all times: unpublished data, human subjects data, and other Private or Restricted data may only be processed using University-approved GenAI tools.
- Research advisors are strongly encouraged to establish and communicate lab-specific guidelines on the use of GenAI tools in day-to-day research (e.g., in code development, image analysis, or manuscript drafting for publication), consistent with CNUP policy, University policy, and the norms of the relevant journals and funding agencies.
- Manuscripts (published, submitted, or in preparation) that are incorporated into the dissertation are governed by the AI policies of the journal to which they were or will be submitted, and by any policy of the advisor's laboratory. Students and advisors remain responsible for ensuring that any AI use in those manuscripts complies with applicable academic and research integrity standards and is properly disclosed to journals and co-authors.
- Any use of GenAI in research that could affect the integrity of reported data or results (for example, AI-assisted image manipulation or AI-generated summaries mistaken for verified findings) is subject to the CNUP and University Research Integrity policies (see Section 6).
- As with any tool, students remain accountable for the accuracy of AI-assisted analyses; an AI tool's output is never, by itself, sufficient justification for a scientific claim.

5. Relationship to Academic and Research Integrity Policies; Enforcement

Use of GenAI tools in a manner inconsistent with CNUP policy is treated as a breach of academic or research integrity under Section 10 of the CNUP Guidelines and Regulations for Doctoral Study, and under the University's Guidelines on Academic Integrity and Research Integrity Policy.

- When a committee identifies GenAI use inconsistent with CNUP policy, the matter will be handled through the existing CNUP procedures for the relevant milestone (e.g., partial pass, fail) and, when warranted, through the CNUP research misconduct procedures described in the CNUP Guidelines.
- Suspected misuse of GenAI involving fabrication, falsification, or plagiarism may also be reported directly to the University's Office of Research Integrity or through Pitt Concern Connection (https://www.report.pitt.edu), consistent with the Academic and Research Integrity section of the CNUP Guidelines.
- As with any use of University computing resources, noncompliance with the University's Acceptable Use of Generative Artificial Intelligence Tools standard may separately result in disciplinary action up to and including suspension or termination of computing access privileges, consistent with University Policy AO 10 (Access to and Use of University Computing Resources).

6. Resources

Questions about this policy, about whether a specific tool or use is permitted, or about the classification of a particular kind of data, should be directed to a CNUP Graduate Program Co-Director (currently Dr. Jon Johnson, jjohnson@pitt.edu, and Dr. Rob Turner, rturner@pitt.edu).

Related policies and resources:

- Pitt Digital, Acceptable Use of Generative Artificial Intelligence Tools – https://www.digital.pitt.edu/acceptable-use-generative-artificial-intelligence-tools

- University of Pittsburgh list of approved University GenAI Tools (consult Pitt Digital's AI page for the current list). https://services.pitt.edu/TDClient/33/Portal/KB/Article/2792/University-GenAI-Approved-Tools-List-and-Data-Classifications
- Pitt Digital Vendor Security Risk Assessment process (for requesting evaluation of a new GenAI tool; consult the Vendor Security Risk Assessment link on the Pitt Digital site identified above).
- University Policy AO 10, Access to and Use of University Computing Resources (accessible using the AO 10 link on the Pitt Digital site identified above).
- Guidelines on Academic Integrity – https://www.provost.pitt.edu/faculty/academic-integrity-freedom/academic-integrity-guidelines
- University Research Integrity Policy – https://www.orp.pitt.edu/research-integrity
- CNUP Guidelines and Regulations for Doctoral Study

This policy will be reviewed and, if necessary, revised alongside the CNUP Guidelines and Regulations for Doctoral Study (see Section 2.1) as warranted by significant changes in GenAI technology, University policy, or program experience.