Neuroscience
Graduate Student
Handbook
The Neuroscience Program, established in 1992, is an interdisciplinary/interdepartmental PhD program designed to guide trainees through the process of acquiring the research skills and the intellectual rigor needed to become independent professional neuroscientists. The Program achieves these goals through coursework, seminars and journal clubs, dissertation research committee guidance, and outstanding faculty mentorship. The Program also provides 2 annual forums for students to showcase their research: Neuroscience Research Day to celebrate Neuroscience in South Florida, and a 2-day retreat in Marco Island with students, faculty and other researchers.

The faculty of the Neuroscience Program consists of more than 70 neuroscientists drawn from the Miller School of Medicine, the College of Arts and Sciences, and the Rosenstiel School of Marine and Atmospheric Science. The research interests of these faculty include but are not limited to:

- Cellular mechanisms of neurological diseases such as Parkinson’s, Alzheimer's, and AIDS-related-dementias;
- The way in which addiction to nicotine, alcohol and other drugs is acquired and can be controlled;
- Strategies to limit and repair damage to the brain and spinal cord caused by traumatic injury, ischemia, or stroke;
- Molecular mechanisms of ion channels and neurotransmitter receptors, and transporters;
- Sensory transduction and cellular mechanisms in the visual, auditory, olfactory, and gustatory systems;
- the mechanisms of learning and memory;
- Development of the nervous system, with emphasis on axon growth and synapse formation
- Neurogenesis during development and in the adult.
- Cellular mechanisms pertinent to nervous and glia in central and peripheral nervous systems.

Other research interests can be found on the Neuroscience Program Web site:
http://neuroscience.med.miami.edu/
COURSEWORK

To be eligible to receive the Ph.D., students are required to complete a minimum of 60 (sixty) credit hours, including the required coursework and research credit hours.

Required courses for Neuroscience:

- NEU 600 Seminar in Neuroscience 1 credit every semester
- NEU 631 Advanced Topics in Neuroscience 1 credit
- NEU 661 Neuroscience I-Molecular & Cellular Neuroscience 2 credits
- NEU 662 Systems Neuroscience 4 credits
- NEU 663 Developmental Neuroscience 2 credits
- NEU 697 Neuroanatomy 3 credits
- PHS 641/642 Membrane Physiology & Biophysics 2 credits each

The NEU Core Curriculum Follows This Sequence

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>Spring A</td>
</tr>
<tr>
<td>PIBS  601</td>
<td>NEU 663</td>
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<tr>
<td>PIBS  602</td>
<td>PHS 641</td>
</tr>
</tbody>
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^Prerequisite: PHS 641
§Prerequisites: NEU 661, PHS 641, PHS 642

Advance Topics (NEU 631) is an advance seminar-style course taught on a variety of topics (e.g. mitochondrial function, neurogenetics, imaging technologies, etc.). All NEU program students are required to pass this course at least once before requesting sufficiency. Announcements for this course are sent by email to all students.

MD/PhD students may waive Neuroanatomy. MD/PhD students may also request permission from the Program Director and Course Director to take a course out of sequence.

Required Dissertation Research Credit hours:

In addition to course work, students will enroll for research credits as determined by the Neuroscience Program and Graduate Office, but not for less than a total of 24 (twenty-four) credit hours.

NEU 730: Dissertation Research before requesting Admission to Candidacy (previous to qualifying exam). No more than 6 (six) of these credits may be taken prior to completion of the qualifying exam.

NEU 740: Dissertation Research after requesting Admission to Candidacy.

NEU 750: Dissertation Research used to establish research for the Ph.D. candidate after the student has been enrolled for the permissible cumulative total in appropriate doctoral research.
All requirements should be fulfilled within 8 years of initial enrollment in the Graduate School and within 4 years of passing the Qualifying Examination. Students must maintain a cumulative GPA of B (3.0) or better. In core courses, grades of B or better are required.

For details of general requirements for the Ph.D. degree, consult the Graduate School Bulletin and Handbook.

If a student decides not to continue work toward the PhD, (s)he should consult with the Program Director for more information. The Neuroscience Graduate Program will only grant a Master's degree under special circumstances.

**COURSE DESCRIPTIONS**

**NEU600 Seminars in Neuroscience**
Required each Fall and Spring for all NEU students, emphasizes student research presentations (30 min each for 2\textsuperscript{nd} year students; 60 min each for student 3\textsuperscript{rd} year on). Attendance at neuroscience related seminars is also required. (1 credit)

**NEU631 Advanced Topics in Neuroscience**
A seminar course with graded readings and discussions based on research literature. The course is taught by various faculty in areas related to their research topics. Writing assignment or homework exercises may also be assigned. (1 credit)

**NEU 650 Modeling CNS Injury and Repair (elective)**
This course provides an overview of a number of complex modeling systems using in CNS Injury and Repair biomedical research. The course examines models, such as spinal cord injury, traumatic brain injury, ischemic/stroke injury, experimental autoimmune encephalomyelitis (EAE) model of multiple sclerosis, axon regeneration in retinal nerve and spinal cord, and drosophila models of degeneration. The course will consist of both lectures and hands-on laboratory components. (1 credit)

**NEU661 Neuroscience I - Molecular and Cellular Neuroscience**
NEU 661 is an eight-week introduction to the cellular and molecular biology of the nervous system. The course is an intensive, interactive discussion of neurons, synapses, sensory cells, and learning/memory. (2 credits)

**NEU662 Systems Neuroscience**
NEU 662 aims to provide a general, but intensive, background to the neurosciences beyond Cellular Neuroscience (NEU 661) and Developmental Neuroscience (NEU 663) and to prepare students for more specialized neuroscience courses, for lab rotations, and for subsequent dissertation work. NEU 662 will present sensory, motor and integrative neuroscience at the level of functional systems, but will do so in the context of cellular and molecular neuroscience. The course concentrates on the experimental basis for our understanding of nervous system function and uses both didactic lectures and student discussions of current research literature. The course expects that students have a working knowledge of synaptic transmission, excitable cell membranes, and ion channels from previous coursework in PHS 641/2 and NEU 661, as well as a general knowledge of biochemistry and molecular biology from their PIBS course. It will also be useful to have taken NEU 663. [Pre-requisites: PHS641/2 and NEU661, or in exceptional cases, permission of instructors]. (4 credits)

**NEU663 Developmental Neuroscience**
This course will explore nervous system development from early neural induction and neurogenesis to the construction of neural circuits. Cellular and molecular mechanisms of neurulation and CNS patterning, neural
progenitor migration, neural crest and ectodermal placodes, programmed cell death, construction of neural circuits and axon guidance, and synaptogenesis will be covered. (2 credits)

**NEU697 Neuroanatomy**
This course is designed to teach functional neuroanatomy to individuals engaged in basic neuroscience research. Therefore, most of the emphasis will be placed upon gross anatomy, identification of pathways and circuits, and a description of the physiological functions of neuroanatomical systems. To the extent that it may help to explain functional aspects of the nervous system, each lecture will contain some clinical examples and/or case histories. An important feature of each class period will be a laboratory segment in which the student will study human and sheep brains, examine models of the brain, and use internet neuroanatomy websites containing pictures, text, clinical examples, and 3-dimensional rotations of the nervous system. (3 credits)

**PHS641 Principles of Membrane Physiology and Biophysics I**
Course discusses chemical and physical structure of membranes, model systems, permeability and transport, membrane potential, ionic channels, excitability in nerve and muscle, ionophores, active transport, and membrane receptors. (2 credits)

**PHS642 Principles of Membrane Physiology and Biophysics II**
Course topics include osmosis and cell volume, tracer analysis of permeability and compartmentation, theory of channels and carriers, cable properties, Hodgkin-Huxley formalism, Na, K, and Ca ion channels, regulation of cellular Na, Ca activities, single-channel analysis, chemical synapses, membrane receptors, cell junctions, excitation and E-C coupling in muscle. Prerequisite: PHS 641. (2 credits)

**QUALIFYING EXAM AND PROPOSAL DEFENSE**

The Neuroscience Program expects that the student orally defend an original research proposal and pass a Qualifying Exam (QE) after completing NEU Core courses and before August 1 of the second year of graduate school. Once the students pass the QE and Proposal defense, they will be admitted to candidacy for the PhD degree. MD/PhD students may schedule their exam between the end of year 1 and August 1 of the second year of graduate study.

The topic of the research proposal is chosen by the student and serves as a roadmap for their dissertation research. The oral examination will be the student's defense of the written research proposal in response to questions and will last approximately 2-4 hours. During the oral proposal defense, questions designed to examine the student's general knowledge of neuroscience will also be asked, making up the Qualifying Exam portion of the evaluation.

1. **Formation of Dissertation Committee**
To establish his/her committee, early during the student’s second year of graduate studies, each student works with his/her mentor to identify faculty members who will be the best suited to promote the student’s scientific and professional development.

**Selection of Dissertation Committee Members**
The dissertation committee, in accord with the Graduate Bulletin, consists of:
- Supervisor (mentor)
- Three additional members. One of these people will be the committee chair
- The mentor, Chair and at least one other member must be Neuroscience Program faculty
- At least one member must be from a department other than mentor’s
- If a student has a mentor and co-mentor, three additional members are required

Revised March 2015
• MD/PhD students must have at least one member of the MD-PhD Committee (can be mentor/co-mentor)
• The Chair of the Dissertation Committee may not be the mentor

**The Neuroscience Program discourages the participation of active collaborators of the mentor on a student’s dissertation committee.**

The Dissertation Committee is formally approved by the Neuroscience Program Steering Committee during the spring of the student’s second year of graduate study. In order to obtain approval of the committee, the student must provide the title of the dissertation and the rationale for choosing each dissertation committee member.

In addition to the student dissertation committee members selected by the student, the qualifying exam committee will comprise two additional faculty members, the Program Director, and one additional Steering Committee member. The Program Director attends all qualifying exams to ensure consistency within the program but is a non-voting participant. The additional Steering Committee member is selected by the Neuroscience Steering Committee among its membership to serve as a voting QE Committee member. The Program Director and additional Steering Committee member attend only the Qualifying Exam, not subsequent progress meetings.

All committee members must be physically present for the qualifying exam and proposal defense. Students must select committee members who can meet these requirements and confirm their willingness to attend in person when scheduling the QE. Videoconferencing and teleconferencing are not acceptable.

**2. Research Proposal**

The research proposal is based on the student’s projected dissertation research. The format of the written proposal is similar to that of standard NIH fellowship applications, enabling the student to submit this proposal to an agency following committee feedback. Students should prepare a 2-year research proposal that adhere to the page limits and guidelines below. Students may include diagrams and/or figures to support their proposal.

The written proposal must be ENTIRELY the work of the student being examined. Students may ask questions of faculty members (or other students) concerning specific experimental methods, but the hypotheses and experimental design must be conceived and written by the student being examined. For example, using the mentor’s past grant applications as a guide is not acceptable.

The proposal is to be submitted by the student to the Neuroscience Graduate Program Office at least **3 weeks** before the scheduled exam date. Students must screened their proposals for plagiarism using SafeAssignment. The Neuroscience Coordinator will provide the necessary access to SafeAssignment. Afterwards, the student must email the proposal along with SafeAssignment report, to the Neuroscience Program. If the Neuroscience Program finds no concerns, the student will be informed that he/she may send the proposal to the Qualifying Exam Committee. The Committee must receive the proposal document no less than **2 weeks** prior to the scheduled oral defense/examination.

**Written Proposal Format**

- Overall Page Limit: 9 pages, not including cover page or references.
- Font: 11 point Arial or Helvetica font single spaced (Type density is no more the 15 characters per inch [including spacing] and 6 lines per inch)
- Margins: 0.5 inch on all sides using standard paper size (8.5” X 11).

Cover Page should include:

- Name
• Title
• Date/Time/Place of the examination
• Abstract: (30 lines maximum) stating the main scientific question or problem to be addressed, hypotheses and brief outline of proposed experiments to test them.

Specific Aims (1 page only):
• Clearly state the questions and hypotheses and how you propose to address them.

Critical Review of the Literature (2 pages):
• Review the pertinent literature on the chosen research topic describing in brief the historical background, the current research leading to your proposed questions, and the basis for your hypotheses.

Research Strategy (total 6 pages):
• This includes background and significance, experimental design and methods, anticipated results and alternative strategies, as well as all preliminary data (including figures, tables, charts and diagrams). Typically, background and significance is 1-2 pages, while the majority of the page limit is used to describe your proposed research; however, this may vary between individual people/proposals. See below for additional descriptions on each sub-topic.

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

Approach:
• Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project. Include how the data will be collected, analyzed, and interpreted as well as any resource sharing plans as appropriate.
• Discuss potential problems, alternative strategies, and benchmarks for success anticipated to achieve the aims.
• If the project is in the early stages of development, describe any strategy to establish feasibility, and address the management of any high risk aspects of the proposed work.
• Include any courses that you plan to take to support the research training experience.

Bibliography of References Cited: (not included in page limit)
• Provide a bibliography of any references cited including the names of all authors (in the same sequence in which they appear in the publication), the article and journal titles, volume number, page numbers, and year of publication. Include only bibliographic citations.

3. Grading of the Oral Proposal defense & Qualifying Examination
The oral examination will include: (A) the student's defense of the written research proposal, and (B) an evaluation of the student’s general neuroscience knowledge. The exam will last 2-4 hours. The student must receive a Pass grade on each part (A and B) of the examination. The grade of the research proposal (A) will be based on both, the written proposal and the oral defense.
If the Qualifying Exam Committee regards the student’s performance as unsatisfactory, the student will be required to retake the corresponding portion of the exam. If the proposal is not satisfactory, the student will be asked to revise the proposal and/or successfully defend it at a repeat oral within the timeframe specified by the committee, usually two months. In general, the student will be allowed only one opportunity to retake the double exam.

If the Qualifying Exam Committee does not reach a consensus regarding one or both grades, the Chair will provide a written summary of the exam proceedings, and the decision on the student’s status will be made by a majority vote of the Steering Committee following a discussion.

ADMISSION TO CANDIDACY

Neuroscience Program students must pass both, Proposal Defense and Qualifying Exam, in order to be admitted to candidacy. Students must file for admission to candidacy at the Graduate School within 3 months of passing the Qualifying Exam and Defense Proposal. Students are responsible for contacting the Program Coordinator to initiate the required forms. Per Graduate School requirement, to be eligible for graduation, students must be admitted to candidacy for the Ph.D. at least one semester prior to the one in which the degree will be awarded.

PROGRESS TO THE DISSERTATION DEFENSE

Dissertation Committee Meetings

1. Timing of Meetings
Meetings of dissertation committees are to take place every 6 months (or every 4 months if a student has been in the Graduate Program longer than 5 years). Any student whose meeting is delayed more than one month from this schedule, should seek permission from the Program Director based on a clear, objective reason for the delay (does NOT include “I don’t have any data”). It is the responsibility of the student to schedule timely committee meetings and notify the Neuroscience Program office at least two weeks before the meetings. The students are instructed to begin scheduling their committee meetings several weeks in advance. In some cases, committee members’ travel and professional schedules make scheduling difficult.

In addition to this regular schedule, meetings will be held 1) if there is a major redefinition of the research problem, 2) when the student is ready to draft the dissertation, or 3) if a major change in the research findings occurs after permission to draft the proposal is given.

2. Progress Meeting Document
Students must submit a document outlining experimental progress and plans (1 -2 pages) at least 1 week before each meeting. Students must also bring primary data to the meeting (e.g. lab notebooks, electronic files) for review by the committee. Dissertation Committee meetings include an oral presentation by the student and a discussion of progress and plans, followed by a summary discussion in the absence of the student.

3. Post-Meeting Report
After each meeting, a report will be written to the student that 1) summarizes deliberations and recommendations of the committee, and 2) sets a date or deadline for the next meeting. This memo is prepared by the Chair, and circulated via email to the Committee members for revision. The Committee Chair will sent a final consensus report to the Neuroscience Program, copying the rest of the committee (but not the student). The Program Director and Program Coordinator will send the report to the student.
Sufficiency Meeting

Permission to write the dissertation is obtained at a “Sufficiency Meeting” of the Dissertation Committee.

1. Sufficiency Document
The Sufficiency Meeting Document consists of:

1) A 1-2 page text consisting of a background section (1-2 paragraphs), the hypothesis and specific aims (1-2 paragraphs) and the major conclusions (1-2 paragraphs).
2) An outline of the dissertation showing what will be in each chapter.
3) All data figures (these may be draft versions).

Each committee member must receive the Sufficiency Meeting Document at least 1 week before the meeting, at which the Committee hears and discusses the student’s presentation of the work.

2. Criteria for Obtaining Sufficiency
The Dissertation Committee will evaluate if the student has satisfactorily completed the proposal research, including any modification of the original proposal that had been approved during interim progress meetings.

Permission to write the dissertation requires a consensus of the Committee (1 member may dissent) and will only be granted when the committee finds that all experimentation is complete.

Students are required to have an accepted or published first-author research article in a peer-reviewed journal prior to being granted sufficiency. Students should note that one published paper is necessary but may not be enough to be granted sufficiency. The Neuroscience Program strongly encourages the publication of dissertation work in high quality journals.

3. After Sufficiency Is Granted
Once permission to write has been received, the student will have a period of 4 months in which to complete the dissertation. The 4 month period may be extended only with the approval of the candidate’s sponsor and dissertation committee, as well as the Neuroscience Steering Committee. The dissertation chair will provide the Steering Committee with a written statement outlining the rationale for the extension request for approval.

4. Guidelines for the External Examiner
The Neuroscience Program expects each student to have an external examiner for their dissertation defense. This ensures that the degree submissions from the University of Miami are of a high standard and judged impartially. After the doctoral candidate reaches sufficiency and in consultation with the candidate, the mentor or another member of the dissertation committee will contact an expert in the field of the candidate’s thesis research.

To ensure impartiality, the external examiner must not have an active collaboration on studies related to the student’s thesis work in the past 3 years, nor have worked with or supervised the candidate in the past 3 years. The external examiner must complete the external examiner application form at and submit it to the program, along with a current curriculum vitae at least 4 weeks prior to the tentative oral examination. The candidate’s sponsor will schedule and provide financial support that includes travel costs and honorarium. The dissertation committee chair will send the written thesis to the external examiner following approval by the dissertation committee at least 4 weeks in advance of the oral examination date.

Revised March 2015
DISSENIATION AND DEFENSE

The candidate must provide a final version of the written thesis to the committee at least 6 weeks before the tentative date for the oral examination, and the committee should indicate within 2 weeks if the dissertation is acceptable (see below) to send to the external examiner (at least 4 weeks prior to tentative oral examination). The external examiner will have 2 weeks to read the dissertation and email the Neuroscience Program that he or she has no concerns that would be serious enough to prevent the candidate from proceeding with the oral examination. Then, the candidate will have 2 weeks to schedule the dissertation defense. If the external examiner finds major changes are needed with the written document or anticipates that it will take additional time (more than 2 weeks) to review the written document, then the external examiner should immediately contact the dissertation committee chair and Neuroscience Program. The oral examination must be rescheduled and the Ph.D. candidate should work to make the necessary corrections before rescheduling the oral examination.

1. Timeline for submission of draft thesis to final document

<table>
<thead>
<tr>
<th>Week 6</th>
<th>Week 4</th>
<th>Week 2</th>
<th>Dissertation seminar and oral examination</th>
<th>Weeks 4-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre defense</td>
<td>Pre defense</td>
<td>Pre defense</td>
<td>Defense seminar and oral examination</td>
<td>Post defense</td>
</tr>
<tr>
<td>Written thesis draft is submitted to dissertation committee</td>
<td>If “approved,” the thesis draft is sent to the external examiner</td>
<td>If “approved” by the external examiner, seminar and oral examination are scheduled</td>
<td>Final edited documents and signed approval pages must be submitted to the Graduate School.</td>
<td>Student’s stipend is terminated.</td>
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To be “acceptable”, the thesis must be written in a scientifically sound and scholarly manner, fully formatted and inclusive of all text sections, figures and figure legends. The committee will provide the doctoral candidate with specific suggestions to improve the written thesis. “Acceptable” means that only minor revisions are required to improve the text of the document, which should be able to be completed in a few weeks.

If the written thesis is deemed unacceptable, the committee will make specific recommendations to the doctoral candidate regarding rewriting and/or further experimentation and contact the external examiner to revise the date of the tentative oral examination. Unless extensive experimentation is required, the doctoral candidate will resubmit the written thesis within 2 months. If further experimentation is required, the committee will set a time limit.

2. After the Defense

The dissertation must be submitted to the Graduate School with careful attention to formatting requirements (www.miami.edu/etd). Graduate School editors can be consulted for help with meeting these requirement. Students should pay attention to the defense and submission deadlines posted at this site for each semester. Students are also responsible for contacting the Graduate School to ensure they meet all requirements.

To receive the Ph.D. degree, a doctoral candidate must submit a formal application to the Graduate School. Several required forms and a checklist are available at: http://www.miami.edu/gs/index.php/graduate_school/current_students/electronic_theses_dissertations/aft er_defense_etd_upload/doctrical_candidates/
The doctoral candidate has a maximum of 6 weeks following their successful oral examination to make any additional minor changes and submit the document to the Graduate School. For PhD candidates, financial stipends will expire following this 6 week period.

3. Publication of Dissertation
All dissertations submitted to the Graduate School are published by ProQuest/University Microfilms, Inc. In addition to copies of dissertations required by the Graduate School, one copy should be provided to the Neuroscience Program Office.

4. Degree Time Limit
All work towards the dissertation must be completed within 8 years of admission to graduate work. Exceptions may be granted by the Dean of the Graduate School at the request of the Graduate Program Director.

SEMINARS

Students are required to attend the seminar course (NEU 600), and the Neuroscience Center Seminar Series. They are also strongly encouraged to attend other neuroscience-related seminars. Seminars are an important forum for training students to interpret scientific research and improve presentation skill. As they advance, students also begin presenting their own findings in research seminars.

Seminars in Neuroscience (NEU 600)
Students participate each semester in a reading/discussion and present research seminar annually. Each Neuroscience student presents a paper once per year. In addition to being a presenter, all students should participate weekly by asking questions and discussing during the presentation.

Neuroscience Center Seminar Series brings prominent Neuroscience researchers to UM one Friday each month.

Neuroscience-Related Seminar Series
- The Gail F. Beach Lecture Series is held once a month
- Weekly seminars within the Miami Project
- Weekly seminars in several departments including:
  - Physiology and Biophysics
  - Molecular and Cellular Pharmacology

A complete list of neuroscience related seminars and event is produced by Maria Chagoyen (mchagoyen@med.miami.edu). Please let Maria know if you wish to receive the weekly announcement.
RESEARCH FORUMS

Richard P. Bunge Memorial Lecture

Richard P. Bunge, MD, was at the forefront of research efforts to understand and improve the processes of repair in the nervous system. He trained some of the first Ph.D. students in the Program. In honor of Dr. Bunge, a prominent neuroscientist is invited to speak every year.

Neuroscience Research Day

Neuroscience Research Day is a one day conference held at the Miller School of Medicine, designed to showcase and promote neuroscience in south Florida. It is a venue for sharing ideas and developing networking opportunities between current and future Neuroscientists.

Graduate students, postdoctoral associates, faculty and staff from UM, as well as other local South Florida universities, are invited to present posters, discuss their research programs, and attend a lecture given by an internationally-renowned neurobiologist.

Neuroscience Research Day is a high point in the academic year. Students in the graduate Neuroscience program are expected to present a poster at the event.

Neuroscience Retreat

The retreat is held each spring to give Neuroscience students, faculty and post-doctoral associates the opportunity to hear about each other’s work and exchange scientific ideas in an informal atmosphere. There is an overnight stay and a beautiful dinner on the beach with fellow neuroscientists. This is a good place to learn about the research of some of our program faculty and senior students, as well as experience the best beaches South Florida has to offer. Beginning in year 2 of graduate study, students are required to present their research in a 15-minute oral presentation. The presentation is waived for students who have gained sufficiency prior to the retreat date.

Research Seminars

Experience with presenting research seminars is a valuable part of each student’s graduate training. Students who have passed their Qualifying Exam and Proposal are expected to present a full (i.e. 50 min.) research seminar each academic year, beginning the year after the QE. The best forum for these presentations is an established seminar series within the mentor’s and student’s primary department. Students are expected to schedule their annual seminar presentations and should inform the Neuroscience Program Coordinator and provide the announcement/flyer once the presentation is scheduled.
The proper standards of ethical behavior are mainly a matter of common sense. The purpose of examinations is to evaluate the knowledge and grasp of a subject by a student. Similarly, papers are assigned to evaluate the ability of the student to assimilate ideas and write clearly about them. Any action with the intended effect of subverting these goals constitutes unethical behavior. In particular the following are unacceptable unless they have been explicitly allowed by faculty:

1. Obtaining or observing the answers of others or donating the answers to others during an examination.
2. Obtaining a copy of the examination before it has been distributed by the examiner.
3. Altering the answer after the examination is finished.
4. Performing the examination outside the assigned time.
5. Consulting notes, reference sources or other material which would not normally be permitted in that course or examination.
6. Altering the answers of others, misleading others or denying them access to allowed material or sources.
7. Collaboration. In particular in “take home” examinations students may not consult with each other or with others concerning either answers or the sources from which the answer may be obtained. Students who live together should take reasonable steps to avoid unintended communication of information.
8. Abstracting answers or ideas from others. It is the obligation of the student to reveal any potential conflict of interest that might arise when discussing science with faculty, post docs, or other students an examination is in progress.
9. Plagiarism is defined as “the appropriation or imitation of the language, ideas and thoughts of another author, and representation of them as one’s original work”. The paraphrasing of the observations and ideas of others is normal part of scientific communication, but the original contribution of the sources must be properly acknowledged, by explicit reference. Direct quotations are acceptable, but must be both cited and placed within quotation marks. Such direct quotations are not normally found in scientific writing. Note that changing the order of words from a source or altering a few words within a sentence does not make them “your” words. The best practice is to do your reading (from multiple sources), and then compose your own sentences without consulting your sources.
FINANCIAL SUPPORT

Students who are in good academic standing are supported financially throughout their graduate studies, up to a maximum of 6 weeks following successful dissertation defenses. Financial support includes:

- an annual stipend of $28,000 (effective June 2014)
- fully paid tuition
- 80% of the University of Miami student health insurance premium for a single person

ADDITIONAL INFORMATION

Student Fellowships
The Neuroscience Program strongly encourages students to work with their mentors to submit application for fellowships. In particular, students are encouraged to apply for NIH NRSA support. Students who successfully obtain external fellowships will receive a $2,000 yearly supplement to their stipend for the duration of the fellowship award (as long as the fellowship is at least 75% of the stipend).

Email. Email is the most important avenue of communication between the Neuroscience Program and the graduate students. Free email accounts are provided to all students. It is vital that every student have an email account, and that email is read daily, so that the Program has a reliable means of communication with students.

LEAVE/VACATION FOR PHD STUDENTS

This statement applies to full time PhD students in good academic standing at the University of Miami Miller School of Medicine (UMMSM). Similar to UMMSM employees, graduate students receive the following as paid holidays: New Year’s Day, M. L. King’s Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

PhD students may receive stipend support for vacation days, normally expected to be no more than 14 calendar. The exact number and timing of vacation days is negotiated between student and mentor or for 1st year PIBS students, the PIBS Program Director.

Individuals requiring periods of time away from their research training experience longer than specified here must seek approval from their mentor and program director for an unpaid leave of absence. Well in advance of the proposed leave of absence, the trainee must submit a written request, which includes the reason for the request as well as the date the proposed leave will begin and end. This request, once approved by the mentor and program director, should be submitted to the Office of Graduate & Postdoctoral Studies, which will seek the necessary final approval from the Senior Associate Dean.

PhD students may also receive stipend support for up to 15 calendar days of sick leave per year. They may also receive stipends for up to 30 calendar days of parental leave per year for the adoption or birth of a child. The use of parental leave is requested from the student’s dissertation mentor and graduate program director.
**APPEALS**

Students may appeal decisions of their Dissertation Committee to the Program Steering Committee. To appeal a major programmatic decision (e.g., dismissal, denial of degree, termination of stipend), students should first present their reasons for appealing to the program director (and the graduate program committee, if applicable). If the student remains dissatisfied with the result of this appeal, s/he may appeal the program decision, in writing, to the Associate Dean for Graduate Studies, within 30 days of the program's final decision. Decisions by the Associate Dean are appealable to the Dean of the Graduate School through the filing of a formal Graduate School Grievance.
CONTACT INFORMATION

Email address to send documents or to contact the Neuroscience Program:
neuroscience@miami.edu

Program Director / Steering Committee Chair:
Nirupa Chaudhari, PhD.
Room: Rosenstiel Medical Science Building # 4062
Ph: 305-243-3187
Email: nchaudhari@med.miami.edu

Program Coordinator:
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Email: neuroscience@miami.edu

Office of Graduate and Postdoctoral Studies:
Sandra Williams, Director
Room: Rosenstiel Medical Science Building # 1128C
Ph: 305-243-8105
Email: s.williams12@med.miami.edu

Office of the Graduate School:
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