

2020-2021 Student Guide

Graduate Training in Neuroscience Laney Graduate School Emory University

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Leadership Contact Information and Roles

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Responsible for overall management of the neuroscience programing including:

- First point of contact for student inquires
- Most knowledgeable on overall student requirements, responsibilities, and program organization.

Dr. Robert Liu, Program Director, robert.liu@emory.edu

Oversees program operations including program development, curriculum, and recruitment

- Chairs Executive committee
- Program representative at GDBBS and Laney Graduate School Program Directors meeting

Dr. John Hepler, Junior DGS, Years 1-2, jhepler@emory.edu

Oversees student academics in years 1 & 2 including:

- Academic and program-related personal issues
- Approval of student rotation proposal and reports

Dr. Shannon Gourley, Senior DGS, Years 3+, shannon.l.gourley@emory.edu

Oversees student academics in years 3 and above including:

- Academic and program-related personal issues
- Monitors and ensures adequate student progress
- Attends final dissertation committee meeting
- Chairs dissertation defense

Purpose and Goals of the Graduate Program in Neuroscience

The study of the mechanisms by which the brain controls and integrates organismal function is one of the most exciting and rapidly advancing areas of modern science. The general field of neuroscience involves the study of the nervous system at all levels of organization, from single molecules transporting specific ions across biological membranes, to large interconnected networks of neurons controlling complex motivated behaviors. Scientists in this challenging area must consequently cross the normal boundary lines dividing traditional disciplines and employ complex multidisciplinary approaches to begin to understand brain function. Neuroscience draws upon knowledge developed in all of the traditional disciplines, including anatomy, biology, biochemistry, microbiology, physiology, pharmacology, and psychology. The task of the neuroscientist is to choose the most appropriate tools and approaches from each of these disciplines that will assist him or her in unraveling the mechanisms by which neurons and glia perform their integrative functions.

The graduate program in Neuroscience provides the multidisciplinary training required for a successful research and teaching career in neuroscience. The program allows the student to learn currently accepted scientific facts and theories; learn to plan, conduct and critically evaluate experiments; make an original contribution to scientific knowledge; become skilled in oral and written communication; and become self-sufficient in continuing education beyond graduate school. The program also prepares the student to teach neuroscience and related disciplines in professional and graduate schools. Because of the diversity of program goals and the variety of approaches used in neuroscience, the program is broadly based with Program members drawn from Departments and Centers across the University, such as - Anesthesiology, Anthropology, Biochemistry, Biology, Biomedical Engineering, Biostatistics (SPH), Cell Biology, Digestive Diseases, Economics, Emergency Medicine, Environmental and Occupational Health (SPH), Epidemiology (SPH), Human Genetics, Neurology, Neurosurgery, Ophthalmology, Otolaryngology, Pathology, Pharmacology, Physiology, Psychiatry, Psychology, Radiology, Rehabilitative Medicine, and the Yerkes National Primate Research Center.

Program Administration

A member of the Program faculty who serves as Program Director coordinates the graduate program. The Program Director works in conjunction with the two Directors of Graduate Studies, the Program Executive Committee and the Program Administrator. The Director is responsible for managing Program operations and coordinating the Directors of Graduate Studies who monitor the performance of students, organize the qualifying examinations, and oversee selection of research advisors and dissertation committees. In addition, the Program Director is the representative of the Neuroscience Program to the Graduate Division of Biological and Biomedical Sciences and the Laney Graduate School Executive Council, which oversee policy and curricular matters. The Program Director is approved by the Dean of Laney Graduate School. The Admissions Committee, which is comprised of Neuroscience Program faculty, is chaired by a member of the Executive Committee who is responsible for providing information on the graduate program to prospective applicants and overseeing admissions. The two Directors of Graduate Studies (DGS) work with each student to develop an appropriate program of study in the early stages of training before the selection of a research advisor, and they monitor student progress until graduation.

The Director serves a three-year term with the possibility of renewal for additional three-year terms, beginning on May 1 and ending April 30. A Nomination Committee comprised and chaired by faculty members, including some who are not members of the Executive Committee, solicits nominations for

the position of Director, from faculty in the program. This committee presents a recommended list to the Executive Committee with alternates and the Executive Committee makes the final selection. The Executive Committee terms are three-year terms beginning on May 1 and ending on April 30. Executive Committee members do not normally serve more than 3 consecutive terms. New members will be elected regularly. No more than five members of the Executive Committee can be from any one department.

In addition to the elected members of the Executive Committee, an “At-Large faculty member” is selected by and serves on the Executive Committee at the request of the Neuroscience graduate students in consultation with the NS Program Director and Directors of Graduate Studies. The At-Large Faculty Advisor will be an Associate Member of the NS training faculty and will have a permanent non-voting position on the NS Executive Committee. Duties include: a) providing unbiased support to students within the NS program, b) being available to meet/consult with peer liaisons as and when needed, c) being knowledgeable regarding Emory resources on graduate student well-being and policies pertaining to advisorship issues, discriminatory harassment and such. The At-Large Faculty Advisor may provide advice for academic and program-related issues, particularly if the student is uncertain about involving a DGS or NS leadership. Any communication with the At-Large Faculty Advisor will be confidential. However, the At-Large Faculty Advisor may involve a DGS, in consultation with the student, if the At-Large Faculty Advisor perceives that additional support is needed. Like all Emory Faculty and staff, the At-large Faculty Advisor is a mandatory reporter.

Laboratory Research Rotations

Upon entering the Neuroscience Program, the Junior DGS will advise each student about potential labs in which to rotate and perform dissertation research. Each new student should find a dissertation advisor by the Fall of the second year.

During the first year in the program, each student will perform experimental work in at least three faculty laboratories. These rotations provide an opportunity for students and faculty to mutually evaluate whether the lab is a potentially good fit for the student to join. **First year Students are required to complete a total of three laboratory rotations.** During the semester in which the students satisfy a rotation requirement they should register for NS 597R (Laboratory Rotations) for a letter grade. Students are required to begin their first rotation in the Fall semester, and complete their third rotation by the end of the Spring term. The duration for the lab rotation during the Fall and Spring Semesters are generally 8-10 weeks. If a student is unable to find an advisor after three rotations, a fourth will be required and must be approved by the Junior DGS. Prior to the start of rotations, the students will be given written guidelines, which outlines the rotation schedule, expectations, and instructions for the rotation report that is due to the Junior DGS at the end of each rotation.

At the beginning of the Fall semester of the first year, the Program Administrator will arrange a series of faculty orientation sessions. Faculty who are interested in training a new student will present a brief, 10-minute overview of their lab research. Students will be provided with a lab profile form from each lab, which will help the students in choosing their rotations. In arranging these rotations, every attempt will be made to accommodate the wishes of students who are interested in the research programs of particular faculty members. Information is available on the program website (www.emory.edu/NEUROSCIENCE) to students entering the program prior to their arrival at Emory that gives a brief description of the research interests of program faculty. Students should choose three or four faculty members from these descriptions, contact these faculty members, and meet with them

early in the Fall semester. Based on these meetings, each student can make an informed decision as to the most appropriate lab for the first rotation. Students can contact the Director of Graduate Studies for assistance in scheduling these interviews.

MD/PhD students normally complete one or two rotations during the summer between their first and second years of basic health science classes in the Medical School. Another rotation is completed during the Spring semester of their second year of Medical School. Some students also complete a rotation during the summer prior to the beginning of their first year of basic health science classes in the Medical School.

A. Rotation Proposals

After selecting a rotation advisor, each student must send a Rotation Proposal Form to the Junior Director of Graduate Studies stating the name of the faculty member with whom the rotation will be completed and a brief summary of the proposed rotation research project. **This form must be signed by both the student and the rotation advisor and must be submitted two weeks prior to beginning the rotation.** Students who wish to do a rotation in a laboratory of someone who is a member of the Graduate Division (GDBBS) but not a member of the Neuroscience Program must receive prior approval from the Junior DGS.

B. Rotation Reports

At the end of each rotation, students are required to submit a rotation report that summarizes their work to the Junior Student DGS. This report must be signed by both the student and the advisor and must be submitted to the Junior DGS. **Guidelines for preparing the Rotation Report are provided in the Appendix.** Students working in labs for the entire summer must submit reports by the last week of August prior to the beginning of Fall Semester classes. **This form must be submitted no later than two weeks after the completion of each rotation. Students who have not submitted a rotation report by the due date will receive an incomplete for the rotation.**

C. Rotation Grading

Rotations are graded by a letter grade by the advisor and the Junior DGS. A PASS grade, defined as an average grade above B-, is required. A grade equal or below B- requires re-submission of an amended report.

D. Rotation Research Credits.

During the Fall or Spring semesters in which the student is taking a laboratory rotation, they should register for NS 597R (Laboratory Rotations) for either 2 or 3 credit hours. If students are still rotating during the summer, they should register for NS 597R for 9 credits. All rotations should be completed by the beginning of the fall semester. After completion of the required laboratory rotations and selection of a permanent research advisor, the student should register for IBS 699R, Advanced Graduate Research. This “course” is for variable credit and the number of credit hours registered for should be the number needed to bring the total (with formal courses) to total 9 credit hours. After the student has successfully passed the oral qualifying examination (Fall of Year 3) and has accumulated the required course credits to advance to candidacy, they should register for NS 799R, Dissertation Research.

Courses Requirements and Grades

The scale of grades in the Graduate School ranges from A (4.0) to C (2.0) and F (0); there is no D

grade. Some courses, including the required sequence of neuroscience seminars are taken on a Satisfactory/Unsatisfactory (S/U) basis.

If a student receives a grade of C or F in any one of the four required Neuroscience courses (IBS 526: Neuroanatomy & Systems Neuroscience, IBS 514: Cellular, Molecular, Developmental and Translational Neuroscience, IBS 522R Hypothesis Design and Scientific Writing, or a Statistics course) that course must be repeated and a minimum grade of “B” (3.0 or higher) must be obtained. At the discretion of the Program, a failing grade in other required courses may also necessitate repeating the course.

A. Required Courses

The overall requirements to obtain a Ph.D. are published in the Laney Graduate Handbook. The following courses are usually required for all Neuroscience students.

(i) PhD students

A minimum of 9 credits are required by the Laney Graduate School each semester in order to receive a stipend and be considered a full-time student

Course Number	Course Title	Credits
Semester 1 (Fall)		
IBS 526:	Neuroanatomy and Systems Neuroscience	7 Credits
NS 551:	Techniques in Neuroscience (S/U)	2 Credit
NS 570R:	Professional Development, Communication & Ethics (S/U)	2 Credits
IBS 530R:	Frontiers Seminar (S/U)	1 Credit
NS 597R:	Laboratory Rotation	1 Credit
JPE 600:	Jones Program in Ethics (pre-semester)	0 Credits
Semester 2 (Spring)		
IBS 514:	Cellular, Dev. Molecular and Translational Neuroscience	7 Credits
NS 570R:	Professional Development, Communication and Ethics (S/U)	2 Credits
IBS 530R:	Frontiers Seminar (S/U)	1 Credit
NS 597R:	Laboratory Rotation	2 Credits
Summer (between years 1 & 2)		
IBS 699R or NS 799R		9 Credits
<i>Students should register for the appropriate research course (IBS 699R or NS 799R) based on the candidacy status.</i>		
Semester 3 (Fall)		
IBS 699R:	Advanced Graduate Research	5-9 Credits*
IBS 522R	Hypothesis Design and Scientific Writing	4 credits
TATT 600	Teaching Assistant Training & Teaching	1 Credit
IBS 530R	Frontiers Seminar (S/U)	1 Credit
*If a rotation is needed during this semester, this course must be replaced by NS 597R-Laboratory rotations		
Semester 4 (Spring)		
IBS 699 R	Advanced Graduate Research*	2-6 Credits*
IBS 538	Design & Analysis of Experiments**	4 Credits**
IBS 530R	Frontiers Seminar (S/U)	1 Credit

*the number of credits IBS 699R should be adjusted to make it up to a total of 9 credit hours for the semester depending on credits for other courses

**or other graduate statistics course with approval of the Junior DGS

(ii) MD/PhD students

M3 after USMLE 2 (Spring)

NS 597R Laboratory Rotations 3 Credits
At least three laboratory rotations will be completed and a thesis lab identified by the Fall semester (G1)

Grad yr. 1 (Fall)

NS 570R	Professional Development, Communication and Ethics (S/U)	2 Credits
IBS 699R	Advanced Graduate Research	5-9 Credits
IBS 522R	Hypothesis Design and Scientific Writing (grant writing)	4 Credits
IBS 530R	Frontiers Seminar (S/U)*	1 Credit*
TATT 600	Teaching Assistant Training & Teaching (pre-semester)	1 Credit
JPE 600	Jones Program in Ethics (pre-semester)	0 Credits

Grad yr. 1 (Spring)

NS 570R	Professional Development, Communication and Ethics (S/U)	2 Credits
IBS 699R	Advanced Graduate Research	5-9 Credits
IBS 530R	Frontiers Seminar (S/U)*	1 Credit*
IBS 538	Design & Analysis of Experiments*** (statistics)	4 Credits

* Students are allowed no more than two absences per semester

Additional requirements for MD/PhD students:

- 4 semesters (total) of IBS 530R (Frontiers Seminar)
- Plan to take the written qualifying exam in June of M3 after USMLE2 but the written exam can be postponed to June of G1, if needed
- Oral qualifying exam at the start of G2

Although MD/PhD students do not have to register for IBS 526 (Neuroanatomy and Systems Neuroscience) and IBS 514 (Cellular, Molecular, Developmental and Translational Neurosciences), they are strongly encouraged to audit these courses or seek advice from the junior DGS before taking the written qualifying examination.

B. Course Exemptions

Students may be exempted from taking one or more of the required courses under appropriate circumstances. Such circumstances usually consist of having taken a prior graduate course with similar content and received a grade of "B" or better, or demonstration of competence in a particular area (usually by special examination). These exemptions require consultation with and approval by the Director of Graduate Studies, and previous coursework syllabi should be provided.

C. Additional Coursework

Students are encouraged to pursue supplemental courses that are relevant to their development as a neuroscientist-in consultation with their advisor and dissertation committee.

Teaching Requirements

The Teaching Assistant Training and Teaching Opportunity Program (TATTO) is administered by the Emory University Laney Graduate School to provide teacher training and experience for doctoral

students in the Graduate Division of Biological and Biomedical Sciences (GDBBS). Completion of the TATTO program is required for the doctoral degree.

(A) Summer Teaching Workshop

The summer teaching workshop (TATT 600) sponsored by the Graduate School (usually scheduled one week immediately prior to the beginning of the fall semester) is the first stage of teacher training. No student may engage in any classroom related teaching activities in his/her training Program until completion of the summer workshop. Normally, Ph.D. students will participate in this Teaching Workshop in the summer following their first year of graduate study at Emory. However, this may be adjusted depending upon an individual student's previous training and academic program.

(B) Teaching Assistantship

Please click here for information about TATTO [GDBBS webpage](#) . The GDBBS Assistant Director of Student Affairs organizes all GDBBS student participation in TATTO 600 and 605 and will contact students the summer prior to the academic year in which they'll participate.

(C) Additional Teaching Requirements

Third year students are required to mentor second year students through the Oral Qualifying Exam. See Oral Qualifying Examination below for additional information.

Selection of Research Advisor

It is the responsibility of each student to identify an advisor from among the Faculty of the Graduate Division of Biological and Biomedical Sciences. Students are encouraged to identify a research advisor by the end of the Spring semester of the first year. If a research advisor has not been identified by that time, rotations may continue through the Summer semester of the first year. Any student who has not identified a dissertation research advisor by the end of the Summer semester of the first year may be put on probation due to lack of satisfactory progress toward the degree. If a research advisor has not been identified by the end of the Fall semester of the second year, the NS Program may recommend dismissal of the student to the LGS after review by the NS Executive Committee due to unsatisfactory progress toward the degree. **Once a student has identified an advisor, they should have him/her complete the Advisor Agreement form and submit this to Junior DGS for approval.** Should a student wish to have a research advisor that is not a member of the Neuroscience Program, or to have co-advisors it must be explicitly approved by the Junior DGS acting on behalf of or in concert with the Executive Committee.

In some cases, if the advisor is not a member of the NS Program, the student may wish to transfer to the graduate program where the proposed Advisor holds a training appointment. This can result in changes in required coursework or exam scheduling to meet the requirements of the new program. A letter of intent requesting the transfer should be sent to the student's current program, to the intended program, and to the GDBBS Director. All parties must agree to the request for it to be approved. The Dean of the LGS provides final approval of transfer.

On rare occasions, it may be necessary for a student to switch to a new advisor. For example, the advisor may leave Emory or the goals of the student may no longer be compatible with those of the research advisor. The first step is for the student to discuss the problem with the Director, the Director of Graduate Studies, and/or members of the Executive Committee. If a change in advisor is recommended, the Director, the Director(s) of Graduate Studies, and/or members of the Executive Committee will help the student identify a new advisor and alternative sources of funding, if needed.

Almost invariably the student will lose substantial time when changing laboratories and research projects, so this should be undertaken only if there is no other option.

Selection of Dissertation Committee

In consultation with the advisor, each student must select an advisory committee (i.e. Dissertation Committee) that will assist the student and advisor in formulating and executing an appropriate independent research project to fulfill the requirements of the doctoral program. This committee should be formed in the summer of the second year. Each member of the committee must sign the Dissertation Committee Signature Form, which is then submitted to the Senior DGS for approval. The committee must consist of at least four members of the Neuroscience Program faculty, including the dissertation advisor. At the discretion of the student and research advisor, a fifth committee member may be added; the fifth member does not need to be a member of the NS program.

The graduate school recognizes the value of involving faculty who possess expertise relevant to the interest of PhD candidates, but who are located outside the candidates' home departments or programs. The graduate school therefore encourages departments and programs to identify, where appropriate, readers of PhD dissertations drawn from across Emory University or from outside Emory. If a reader from outside the University is selected, the dissertation director must supply the resume and a brief letter highlighting the value of the proposed reader on the committee to the Director of Graduate studies who will seek approval from the GDBBS director and Dean of the Laney Graduate School.

The primary function of the advisory committee is to make available to the student a broad range of scientific expertise, to support the research efforts of the student, and help to guide the project to a successful conclusion. The advisory committee is also the primary body responsible for reading and evaluating the doctoral dissertation, and for examining the student in the public oral defense of the doctoral dissertation.

Dissertation Committee Meetings

These meetings provide the opportunity for the faculty to provide guidance and assistance that is particularly vital in cases of difficulties of any kind. The student should present a summary of the progress that was made as well as an outline of the studies that the student and research advisor anticipate will be included in the final dissertation. The committee will give the student and advisor feedback and comments on what they consider necessary for successful completion of the dissertation research. Any members of the Executive Committee can be present at the committee meetings to monitor the student's progress.

After the committee meeting, the student must complete the Dissertation Advisory Committee Meeting Summary and Progress Report (Appendix 1). This report must provide a detailed account of the discussion of the student's progress and suggestions made during the meeting. The report must be sent to all committee members for approval signatures before being sent to the Senior DGS. Both the advisor and the student must sign this form. If the committee feels that the student is making reasonable and sufficient progress towards completing the dissertation research, this should be stated. If the committee feels that the student is not making sufficient progress or that there are major issues that need to be dealt with, this should be stated on the form.

Students must meet with their Dissertation Committee before the Oral Qualifying Examination. Thereafter, students must meet with their Dissertation Committee every 6 months through their sixth

year. Starting in their seventh year, students must meet with their Dissertation Committee at least every 4 months. ***Failure to hold committee meetings within the required time frames will result in the student's research grade for the current term being penalized to at best a C. This will result in the student being placed on probation.*** Students are responsible for notifying their Senior DGS prior to the end of the term of any extenuating circumstances that have prevented them from holding their committee meeting within the required time frame. In consultation with the Division Director, the Senior DGS may then choose to grant an exception and not penalize the research grade. **Therefore, the final research grade assigned will reflect both the student's work in the research advisor's lab as well as their compliance in holding their committee meetings within the required time frames.**

Should a student go on probation for a second time (inconsecutively) due to failure to hold required committee meetings, the Assistant Director of Student Affairs and Senior DGS will work with the student to determine what intervention and support may be needed to help the student meet the requirement for holding timely committee meetings.

Qualifying Examinations

The Laney Graduate School requires a student to demonstrate adequate intellectual mastery of his or her field of specialization and of appropriate supporting fields by passing a general doctoral qualifying examination before being admitted to candidacy for the Ph.D. degree. The qualifying exam will be composed of two parts: Part 1 is a written exam to be taken in June between year 1 and 2, and Part 2 is a Dissertation Proposal Defense, to be taken in August or September at the start of the third graduate year. In order to be eligible to take part 2 of the qualifying examination, the student must have an overall grade point average of at least "B" (i.e. 3.0) for all graduate-level courses taken prior to the examination, and must have a B- or better in all required courses.

(A) Written Examination

All students will take this portion of the qualifying exam simultaneously in June of the first year of graduate study.

Part 1 of the Qualifying Exam is a written exam designed to test general knowledge of neuroscience and other basic biomedical sciences laid out in general texts and covered in the two core introductory courses of the Neuroscience Program (IBS 526 and IBS 514). Detailed material given in these courses may change over the years, but each student is responsible only for the specific material covered at the time that he/she attended the course. The written exam will be composed of ten essay and/or problem style questions. Students must answer 7 of the ten questions. They may spend only 24 hours preparing and writing these answers. They will be able to make their own work hours within the limits set and to use calculators, typewriters or word processors, class notes and textbooks; i.e. the exam is "open book." The Emory University Honor Code will be observed throughout. Each year, specific instruction will be issued as to how and when the exam is to be picked up and turned in. The faculty who wrote the questions will grade the answers to these questions. Each grader will assign a grade of 0 - 100% to all questions graded.

A passing grade on the exam requires an average grade of 75% or above on the total of seven essay questions. Failure to meet these requirements is grounds for dismissal from the Ph.D. program. A student who fails the written qualifying exam may petition the Executive Committee to be allowed to retake the examination. However, the reexamination will be considered on a case-by-case basis and will not be granted in all cases. If granted, the re-examination must be given within 3 months of the original examination. A student may retake the written exam only once. Failure to pass the re-examination is grounds for recommendation for dismissal from the program.

(B) Oral Examination.

Part II of the qualifying exam consists of a written proposal for an original research project and an oral defense of that proposal. The proposal should be based on the project that will ultimately form the student's Ph.D. dissertation. The purpose of the exam is to test the student's ability to formulate and defend a novel research project and to test the student's knowledge of the pertinent literature, methodological issues, etc. The purpose of the proposal and defense is not intended to determine the ultimate content of the student's doctoral dissertation. Thus, the student should be less concerned with preliminary data than with knowledge of theoretical and technical issues related to the proposed studies.

The proposal should be written by the student, based on regular discussions with the research advisor. The research advisor may have substantial input into the content of the proposal. However, the proposal should be primarily the student's work. Therefore, the advisor should avoid writing any portion of the proposal, and limit guidance primarily to verbal comments. Meeting with your advisor and members of your dissertation committee prior to the exam can greatly assist in preparing a successful written proposal and oral defense.

Students from the rising 4th year will advise the rising 3rd year students. They will work individually or in small groups to help each student formulate and/or edit the written proposal. Additionally, the rising 4th year students will hold a group mock oral examination for each 3rd year student.

(i) Submitting a Written Proposal

The proposal should be based on the project that will ultimately form the student's Ph.D. dissertation. It should be prepared according to the instructions given for an Individual National Research Service Award Application Form provided in IBS 522R.

The following instructions (taken from the General Instructions for PHS Grant Application) are emphasized. Proposals failing to meet these specifications will be returned without review.

- The proposal including all tables, figures, specific aim and research strategies should not exceed 7 pages.
- The proposal should be single sided and single spaced, staying strictly within the following margins: top 1in., bottom 1in., left 3/4", and right 1/2in.
- The proposal should be typed in a print that does not exceed 15 CPI and that does not exceed 6 lines of type within a vertical inch, 12-point font is recommended.
- The proposal should be organized sequentially into subtitled sections as described in the instructions for preparing NRSA proposals discussed in detail in IBS 522R.

The completed written proposal must be submitted to the Oral Exam Coordinator, typically 2-3 weeks before the oral examination. Proposals will not be accepted after this time. A cover page should identify (1) the title of the proposal and your name and (2) your advisors name and a list of the members of your dissertation committee.

(ii) The Oral Examination

All examinations for the students in a given class will be scheduled during a three week period in September following the end of the second year. One hour will be allowed for examination of each student. The examination will begin with a power point presentation by the student that summarizes key elements of the proposal. This presentation will last no longer than 5 minutes. The examination committee will then question the student for approximately 55 minutes. The student can expect to receive questions on specific points in the proposal as well as on more general aspects of the subject area of the proposal, such as basic principles, methodology, or the

literature. The faculty will have considerable latitude in the style of questioning of the student at this defense.

The examination committee will consist of 4 faculty made up of two members of the dissertation committee plus two additional faculty from the Neuroscience program who are selected to represent a broad range of neuroscience expertise. Also present but not voting on the examination will be the student's dissertation advisor and the Senior DGS and/or the Oral Exam Coordinator.

After the completion of the examination, the committee will confer with the dissertation advisor to discuss the merits of the oral examination. Then, the dissertation advisor will be asked to leave, and the four members of the exam committee will vote individually by secret ballot to pass or fail the student.

The student will be considered to have passed the exam if a minimum of 3/4 of committee members votes to pass.

Students who fail the exam may retake the exam once. No appeal is required. If a second proposal is required, it must be submitted to the Examination Committee and to the Director of Graduate Studies at least two weeks before the retake of the Oral Qualifying exam. Failure of the student to pass the second oral examination, which must be taken by May of the third graduate year, will be grounds for recommendation for dismissal from the program.

Advancement to Ph.D. Candidacy

(A) Eligibility

To be eligible for candidacy, a student must meet the following requirements:

1. Complete all program requirements for candidacy: coursework and other training required by the degree program, including program required JPE training
2. Complete qualifying examinations required by the degree program
3. Complete TATTO 600, TATTO 605, and JPE 600 (also see item 1)
4. Resolve any Incomplete (I) or In Progress (IP) grades
5. Be in good standing with a minimum cumulative 3.0 GPA
6. Have earned at least **54 credit hours** at the 500 level or above

JPE 610 may be completed after entering candidacy.

(B) Timing

Students should enter candidacy as soon as all requirements have been completed. Students must reach candidacy by September 15 of their fourth year. Students who do not meet this deadline will be placed on academic probation, will not be eligible for PDS funds, and may forfeit financial support. These sanctions will be lifted when the student enters candidacy.

(C) Effective Date & Previous Policy

This policy is effective starting fall semester 2017, and applies to all students immediately, with two exceptions:

1. Students who started their programs before the fall of 2017 must meet the candidacy deadline in effect when they first enrolled, and must be in candidacy no later than August 1 before their fifth year of study
2. Students who started their programs before the fall of 2017 will not be placed on probation if they fail to meet the candidacy deadline.

Writing and defending the Ph.D. Dissertation

The work must be an original contribution to scientific knowledge and should be of a quality that will allow its publication in a peer reviewed scientific journal. Generally, dissertation work will be performed on site at Emory. Completion of dissertation work at other institutions will require the explicit approval of the Executive Committee. ***It is expected that the student has at least one published or accepted original research manuscript as first author from their dissertation work published in a peer-reviewed journal.*** Under exceptional circumstances, the dissertation committee may decide not to apply this requirement (expectation) if it judges that the quality and content of the body of work equals that of a peer-reviewed publication and that the work represents a significant contribution to the field.

(A) Committee Approval

When the candidate and advisor agree that the project is nearing completion, a meeting of the Dissertation Committee is held to discuss the acceptability of the completed research. Approval of the committee should be obtained prior to writing the dissertation. The Senior DGS should be informed via email that approval was granted or by submitting the Provisional Dissertation Defense Approval Form (see Appendix) to the Senior DGS.

(B) Writing

The general format of the dissertation includes the following sections: abstract, introduction, historical background, methods, results, discussion and references. Each section can encompass one or more chapters as appropriate. At the discretion of the Dissertation Committee and Program Director scientific papers on which the student is first author and which have been published in refereed journals may represent some of the methods, results and discussion. More detailed directions as to the form of the dissertation are available from the Graduate School Website - http://www.graduateschool.emory.edu/resources/progress.php?entity_id=7.

(C) Submission of the dissertation and scheduling of the oral defense

After the dissertation has been read and approved by the dissertation advisor, the student must give a copy to all members of the dissertation committee and to the Senior Director of Graduate Studies. The dissertation must be complete at this time, including figures and references. Scheduling of the final public oral defense of the dissertation is contingent upon approval of the written document as “defensible” by the dissertation committee. The public oral defense can occur no sooner than 4 weeks after the written document is submitted to the dissertation committee. **After the dissertation is submitted to the dissertation committee, the committee has two weeks to read the dissertation. If less than two weeks is provided, the committee may not have time to fully review the dissertation, which may necessitate a postponement in the oral defense date to give the committee time to render a decision on the dissertation.** Two weeks after distribution of the dissertation, each dissertation committee member will notify the student and Senior DGS whether the dissertation is defensible. If determined to be incomplete, the dissertation committee will provide the student with advice to improve the document. In this case, the student must make the changes suggested by committee members and resubmit the dissertation to the committee; the timeline is reset and the committee is again given two weeks to read and comment on the dissertation.

After unanimous approval of the dissertation has been given (the document is deemed defensible), the oral defense can be scheduled and announced. **The oral defense will be scheduled no sooner than two weeks after unanimous approval of the dissertation**, and must be at a time when all members of the dissertation committee can be present. These two weeks are necessary to give the program and the graduate school sufficient time to advertise the dissertation defense. The time and location of the defense and an abstract of the dissertation must be provided the Senior DGS and to the administrator

of the Neuroscience Program, who will advertise the defense. The cost of preparation of the dissertation is borne by the student.

It is the candidate's responsibility to find a date, time and location for the dissertation defense and to notify the committee and faculty in writing. The Program Administrator can provide location assistance if needed. Although most dissertation defenses require less than two hours, a three-hour period should be scheduled should additional time be necessary.

(D) Defense of Ph.D. Dissertation

As a final requirement for obtaining the Ph.D. degree, the candidate must orally defend the dissertation before the Dissertation Committee and other interested faculty and students. The Senior DGS and the Program Administrator must receive written notification of a dissertation defense. The Program Administrator must announce the public seminar by sending a written notice to the neuroscience listserv and GDBBS office two weeks prior to the defense. The Senior DGS or his/her designated representative from the Executive Committee will chair the dissertation defense. The dissertation defense will consist of a public seminar with public questioning at the end, followed by private deliberations between the student and his/her dissertation committee. The committee will then meet privately to assess the success of the defense. The Senior DGS will be present and chair all aspects of the defense and its deliberations but will not be involved in the assessment of the dissertation and its defense.

Following the public defense, the Senior DGS or his/her designated representative from the Executive Committee will chair the private defense in an administrative capacity. At this time any issues brought up at the public defense and any other questions that dissertation committee deems appropriate should be addressed. At no time should the advisor answer questions posed to the student. After the student has been dismissed, the student's performance will be discussed and evaluated by the committee. All committee members must confirm in writing that the student has successfully defended the dissertation. The appropriate form is available on the Graduate School Handbook web site. **The student is responsible for providing the committee with the form.**

In general, all revisions to the dissertation should be made prior to the defense. However, if revisions have not been made in a satisfactory manner, as judged by the committee, final approval of the dissertation will be delayed until the appropriate revisions have been made and reviewed.

(E) Deadlines

The Graduate School has several deadlines that must be met by the candidate during the semester in which the degree is to be awarded. These deadlines are published in the Academic Calendar of the Graduate School Bulletin. Most forms are due early in the semester. Students are advised to complete the forms at the beginning of the semester in which they intend to defend. Consult the Senior DGS for details regarding dates. <http://gs.emory.edu/academics/completion/index.html>

(F) Dissertation Completion Time

Students are expected to complete their dissertations and apply for their degrees within six years. MD/PhD students should aim for completion of the program within four to five years after beginning the graduate school portion of their studies. Most graduate students should be able to complete their dissertation research and defense within this period of time. Each Spring 2-3 members of the Executive Committee meet with each student in year 4 and above to discuss their progress in the program. If there are difficulties, usually during this time those issues surface.

If a student has not completed the degree at the end of the seventh year, the program may grant a one-year extension. The program will submit notice of this extension to the Dean, no later than August 1

of the seventh year (before the eighth year). The notice will contain a completion timeline signed by both the student and the dissertation committee chair or co-chairs. Students who enroll for this extension year will be responsible for some tuition, as detailed in the LGS Handbook Section 2.2.1 (A).

If a student has not completed the degree at the end of the eighth year, the student may continue work for at most one additional academic year and only with approval from the Dean. To obtain approval, the program will submit a request to the Dean no later than August 1 of the eighth year (before the ninth year). The request will (a) outline the reasons the student has not completed, (b) consider whether the student needs to repeat any part of the qualifications for candidacy or obtain approval of a new dissertation prospectus, and (c) present a detailed completion timeline signed by both the student and the dissertation committee chair or co-chairs. Students who enroll for this extension year will be responsible for some tuition, as detailed in the LGS Handbook Section 2.2.1 (A).

(G) Master of Science – Special Circumstance

The Neuroscience Program is designed for the Ph.D. degree. Under certain circumstances, a student may be permitted to work for a terminal M.S. degree in lieu of the PhD.

A student who fails the oral Qualifying Examination may petition the faculty for permission to complete a Master's thesis. In addition, a student who passes the oral qualifying examination, but due to unforeseen personal and/or academic reasons cannot complete the doctoral program may request permission to complete a Master's thesis. If the petition is approved, such a student must form a Master's Thesis Committee of a faculty advisor and a minimum of two additional members of the Neuroscience Program Faculty. The student must complete a research project approved by the committee and write a Master's thesis. The general format of the thesis is the same as for the PhD dissertation, except that the content needs not to be as extensive. The research must, in the judgment of the Dissertation Committee, be scientifically rigorous and of sufficiently high quality that it contributes new scientific knowledge. After the thesis has been read and approved by the advisor, the student must give a copy to members of the committee and to the Director of Graduate Studies. The thesis must be complete at this time, including all figures and references. Members of the committee will then have two weeks to read and evaluate the thesis. As a final requirement for obtaining the MSc degree, the candidate must orally defend the thesis before the Committee. A public thesis defense is not required for a Master's degree. The Senior DGS or his/her representative will chair the thesis defense. It is the student's responsibility to setup a date and find a location for the defense, based on the availability of the thesis committee members and the Senior DGS. If necessary, the Program Administrator can help in this regard. The main purpose of this committee defense is to assess the candidate's knowledge of the thesis content and/or further clarify scientific points that the thesis committee members may deem appropriate. After questioning, the student will exit the room while committee members discuss their performance. A minimum of three committee members (including the advisor) must confirm in writing that the student has successfully defended the dissertation. The appropriate forms are available on the Laney Graduate School website. The student is responsible for providing the committee with the forms.

Policies and Resources

Minimum Standards for Academic Performance

(A) GPA Standards and Probation

All GDBBS students must maintain a minimum GPA of 3.0 in each term (i.e., fall, spring and summer) of graduate work. If a student's term GPA is below 3.0 in any one term of work, that student will be placed on academic probation. Grades of U, D, or F in a course, regardless of credit hours, will also lead to the student being placed on academic probation. With regards to cumulative GPA, GDBBS students must maintain a minimum cumulative GPA of 2.7 throughout their time in the Program, as required by the LGS.

(B) Causes for Recommending Dismissal

Two consecutive terms of probation or four terms of probation at any point in the student's graduate career will lead to the Division recommending to the LGS that the student be dismissed from the Program.

Additionally, if the student receives a grade of F in 597R, 599R, 699R, 799R or Directed Study the Division Director will immediately recommend to the LGS that the student be dismissed from the Program, regardless of probation status.

A student who fails the reexamination of either part of the doctoral qualifying examination will be recommended for dismissal from the Program. Appeals may be made to the Graduate School, as outlined in the Laney Graduate School Handbook.

If a student who recommended for dismissal believes that there were extenuating circumstances that adversely affected his/her performance, he/she may submit to the appropriate DGS and the Executive Committee and the Division Director a written appeal for consideration of reinstatement. The appeal should clearly outline the extenuating circumstances and must be submitted within one month of grades being recorded by the Office of the Registrar. The Neuroscience Program Executive Committee will review all appeals. If Neuroscience Program rejects the appeal, the student has the option to appeal to the GDBBS Executive Committee.

(C) Meeting Required Milestones

Students must meet LGS, GDBBS, and Program required milestones within the specified time frames. Students must document their progress in meeting these requirements by submitting the associated forms.

Stipends

Stipends and tuition fellowships awarded to students on the basis of academic merit are intended to cover basic living expenses and tuition. With the exception of special awards, such as the Woodruff, Laney, and Centennial Fellowships, stipend levels are set by the Division based upon the availability of funds from Graduate School and university sources. The faculty also encourages and assists students in obtaining individual stipend support from extramural sources, such as federal agencies and private foundations. Students who obtain their own extramural funding from major nationally competitive grants are awarded a \$2,000 increase in their stipend level by GDBBS. Neuroscience

Students have been fairly successful at obtaining funding by submitting their Oral Exam proposal to NRSA.

It is the policy of Laney Graduate School and the Division to continue support for 21 months for a student in good standing working for a Ph.D. Financial support after the 21 months in residence is the responsibility of the student's dissertation advisor. Typical sources of support after the third year are from research grant funds of the student's advisor or individual fellowships awarded to the student. LGS/GDBBS provides a safety net for the support of students (beyond the second year) in good standing whose advisors have lost research support for their students.

Financial support may be withdrawn from students whose performance in the graduate program is unsatisfactory as stipulated in the sections above. Financial support is normally provided only to full-time students working toward the doctoral degree.

Employment

Stipend and tuition fellowships are awarded to allow students to devote full time to the graduate program and complete the requirements for the Ph.D. degree in as short a time as is consistent with adequate training and research progress. The student should not engage in employment while receiving a stipend through the graduate program, regardless of the source of that stipend.

If a student feels strongly that employment is necessary while in the graduate program, the student must discuss the need with his or her advisor and submit a formal request to the appropriate DGS who may consult with the Executive Committee, at least 30 days in advance of beginning employment. The petition must be fully supported and signed by the student's advisor. However, students should be aware that such requests will only be granted if it is deemed appropriate and will further the student's ultimate career goals. Also, such requests will normally be considered only for students in Advanced Standing. If employment is necessary and allowed by the Executive Committee, the student must not allow it to interfere with high standards of performance or with attendance in required courses.

Withdrawals and Leaves of Absence

(A) Voluntary Withdrawals

A student who decides to withdraw from her/his program of study should consult with the director of graduate studies or program director, and then follow the steps outlined on the LGS [Withdrawal, Leave of Absence, Parental Accommodation page](#).

International students are required to discuss their plans to withdraw with [International Student and Scholar Services](#) to determine how the withdrawal will impact their visa status.

If the student is a veteran, she/he must contact the [Office of the Registrar](#) at registr@emory.edu.

(B) Involuntary Withdrawals

A student may be withdrawn involuntarily from Emory if the University determines that the student represents a direct threat to the health and safety of himself/herself or others by:

1. Engaging or threatening to engage in behavior that poses a high probability of substantial harm to himself/herself or others; or
2. Engaging or threatening to engage in behavior which would cause significant property damage, would directly and substantially impede the lawful activities of others, or would interfere with the educational process and the orderly operation of the University.

Withdrawal in such cases shall normally incur no academic penalty for the term in which the student is enrolled, and a tuition refund, if any, shall be based on the schedule established for voluntary withdrawal. Because the [Involuntary Withdrawal Policy](#) applies to cases in which there is a concern about the safety of the student or others, the Dean or his/her designee may require a student who has been involuntarily withdrawn under this policy to be re-evaluated before he/she is readmitted.

View [procedures for involuntary withdrawal](#).

(C) Transfers to Another Graduate Program at Emory

Students admitted to GDBBS Programs are supported by the LGS/GDBBS in the first 21 months of graduate school. They may choose to do rotations or dissertation research with any of the Graduate Training Faculty of the Division regardless of their program affiliation. Thus, a student could be a member of one GDBBS program and their advisor could be a member of a different graduate program. In such a case the dissertation research committee must be selected according to the guidelines established by the student's program and not the program where their advisor resides.

1. Transfers Within GDBBS

A student in good academic standing can transfer to the graduate program where their proposed advisor holds a training appointment. This can result in changes in required coursework or exam scheduling to meet the requirements of the new program. The following is required:

- A letter of intent requesting the transfer should be sent to the student's current program, to the intended program, and to the GDBBS Director. The current program will acknowledge the program change request; the new program must approve the transfer.
- The program the student will be transferring to should also provide the student with written documentation of any program-specific requirements that the student will need to complete.
- The student must also complete the LGS Program Transfer Request form, and the Dean of the LGS will provide final approval of the transfer.

2. Transfers to Another LGS Program

If a student would like to transfer to a non-GDBBS program, the student needs to discuss this with both programs and then complete the LGS Program Transfer Request form, which will be reviewed and approved by the Dean of the LGS.

MD/PhD students need to complete this transfer process once they have started their G1 year in the fall.

(D) Leaves of Absence

See the LGS [Withdrawal, Leave of Absence, Parental Accommodation page](#) for appropriate forms and process.

Under certain circumstances a student may request a Leave of Absence (LOA). To request a LOA, students should meet with the appropriate DGS to initiate the process, which occurs through LGS. Additional information may be found here (insert link to LOA from LGS)

A student in good standing may be granted 2 one-year leaves of absence upon recommendation of the student's program and approval of the Dean. Leaves of absence are available to students only within eight years of admission. The student must demonstrate that during this period he or she must interrupt progress toward the degree. The student should be aware that the University will not certify to loan officers or government agencies that a student on leave of absence is in residence or actively pursuing

a course of study. International students are required to contact International Student and Scholar Services if the leave of absence is approved by the Dean. If the student is a veteran, she/he must contact the Office of the Registrar at registr@emory.edu.

For the purpose of determining eligibility for leave of absence, a student must be in good standing and have resolved all incomplete assignments. Time spent in leave of absence does not count toward the nine-year limit for the doctoral degree or the five-year limit for the terminal master's degree. Students beyond these limits are not eligible for leave but may apply for extension of the time allowed to complete degree requirements in accord with the rules governing such extensions.

Leaves of absence are not to be used to resolve academic difficulties or finish incomplete assignments. Rather, this policy is intended to allow students to step out of academic life for a specified period, during which they will be unable to continue to make progress toward the degree in any way. Examples include a unique professional opportunity, short-term disabilities, or competing responsibilities of a nature which preclude meaningful progress toward the degree. Issues pertaining to pregnancy, childbirth, and childcare should first be considered through our [Parental Accommodation Policy](#), but may also be addressed through the leave of absence policy.

Students on unpaid leave are not considered registered students and will only receive health insurance until the end of the semester in which they go on leave (as long as they go on leave after the date of record for that semester). If the leave extends into the next semester the student is eligible to purchase health insurance coverage under COBRA guidelines. Students may only return from a leave at the beginning of a semester.

The official Request for a Leave of Absence does not ask you for the reason you are requesting a leave. We encourage you to discuss those reasons as well as your plan for returning with your advisor and/or Director of Graduate Studies, and then Assistant Dean for Student Affairs in Laney Graduate School. You and your program may wish to create a written record of those discussions, to be kept by your program. As noted above, obtaining a leave of absence will affect your health insurance coverage as well as stipend payments (if applicable). Ask your program administrator and graduate school staff and be sure you know exactly how these important areas will be affected.

Requests for an unpaid Leave of Absence for any student must adhere to Laney Graduate School guidelines (LGS Handbook), must be approved by the Program Executive Committee of the student's Program, and then forwarded to the GDBBS office for the Director's approval. The Dean of the Laney Graduate School must give the final approval for any leave.

A student returning to the Laney Graduate School after a leave of absence should request readmission at least 30 days prior to the beginning of the term in which he or she wishes to return. If this has been an ongoing illness the student is experiencing, it is highly recommended that the student document his or her illness with the Office of Accessibility Services and discuss accommodations. [More information on readmission.](#)

Office of Accessibility Services (OAS)

The Office of Accessibility Services (OAS), part of the Office of Equity and Inclusion, assists qualified students, faculty, and staff with obtaining a variety of services and ensures that all matters of equal access, reasonable accommodation, and compliance are properly addressed.

This office determines what level of accommodation if any should be extended to the student. This third-party evaluation puts objectivity into the situation and also protects the student's privacy. It does not excuse poor performance. It only determines what is fair so that a student can continue to get the

job done. The process usually does help the student to see that he/she may have unreasonable expectations about what the advisor should do. The advisor will know as well if he/she is being fair to the student.

Parental Accommodation

This policy is for students with substantial parenting responsibility as a result of childbirth, care of newborn, or a newly adopted child. This policy guarantees PhD students a minimum level of accommodation during the transition to parenthood.

(A) Policy

The caregiver designated as having substantial parental responsibility may be relieved of graduate responsibilities for up to eight weeks after the birth or adoption of a child. Up to four of those weeks may be situated before the anticipated birth or adoption date.

(B) Eligibility

Any matriculated doctoral student in good academic standing. Note: If both parents are Emory PhD students, they may discuss with their respective programs and the Laney Graduate School a reasonable and feasible proposal for dividing a twelve-week accommodation period.

(C) Stipend Support during Accommodation

Eligible students who are receiving stipend support continue to receive this support throughout the accommodation period. If a student receives her/his/their stipend through a training or research grant, the extramural sponsor will be expected to continue to fund the student to the extent allowable by the granting agency.

If a student is ineligible for a stipend through his or her extramural sponsor during this accommodation period, the student will receive the stipend from the Laney Graduate School. During these eight weeks, students are expected to maintain registration, remain in contact with their advisors, and engage in limited academic activity (e.g., reading), assuming the good health of the student and the infant or child. After the eight-week period is over, students are expected to resume their responsibilities as outlined by the granting agency.

(D) Accommodation Principles

Enrollment status: PhD students benefitting from accommodation will remain as full-time students, and thus their eligibility for graduate student benefits remains intact (e.g., student services and health insurance).

Suspension of academic requirements: PhD students benefitting from accommodation are relieved of full-time academic and related educational activity, such as teaching and research assistant academic requirements, official academic examinations such as qualifying or preliminary examinations, lab and research deadlines, and course activity.

- Scheduled courses or examinations should be rescheduled if possible and as necessary to avoid conflicts with the accommodation period; re-scheduling should provide reasonable time to complete these academic requirements. In the event that the amount of course work to be rescheduled is excessive, the student may need to drop a course and retake it in another semester.

- The student's program will develop a plan to replace necessary required academic activity, such as teaching and research. The Laney Graduate School expects that the program will exercise flexibility in this process. Contact the Senior Associate Dean of the Laney Graduate School for specific discussion of this matter, if necessary.

Accommodation is not a Leave of Absence: Students benefitting from accommodation are expected to maintain registration, remain in contact with their advisors, and engage in limited academic activity (e.g., reading), assuming the good health of the student and the infant or child. Students may prefer to apply for a Leave of Absence.

(E) Requesting Accommodation Procedure

PhD students seeking accommodation should inform their program (normally through their director of graduate studies/program director, advisor, and the Laney Graduate School in writing **at least 3 months before** accommodation is anticipated (unless unforeseen circumstances arise) in order for programs to have adequate time to plan any activity that might be carried out by other students. Students are expected to take into consideration the needs of their programs and collaborators in determining when to inform their program. Students must discuss accommodation plans with their advisors and director of graduate studies / program director before submitting the request to the Laney Graduate School.

LGS Grievance Procedure

Students who wish to outline grievances or disagreements of an intra-program nature should first address either the program Director or the appropriately designated committee in their program. Students who do not receive satisfaction through these channels, or who believe that they have recognized academic or professional problems that cannot be presented profitably to their programs, may present grievances to the Laney Graduate School Committee on Grievances. This committee is composed of three graduate faculty members. Any student who wishes to present grievances in academic matters to the Laney Graduate School Committee on Grievances should communicate with the Associate Dean of the Laney Graduate School.

To file a formal complaint, the student is required to submit a written statement to the committee addressed to the Associate Dean of the Laney Graduate School. This statement must state concisely the charge to be considered; describe fully the nature of the complaint, the evidence available in support of the charge, and all circumstances surrounding the events in question; and describe previous efforts to resolve the difficulty. This written statement and any supporting documentation may be shared with others deemed appropriate by the committee.

Upon receipt of the formal complaint, the committee may request additional information from or about the student, and statements from other parties. The committee may also request to meet with the student or other parties involved. Such meetings are for informational purposes only. No party may be represented by another, or accompanied by a representative, except on the express invitation of the committee. The committee may meet and discuss the case after sufficient information has been acquired.

On the basis of the written statement and any other information requested or available to it, the committee will make a recommendation to the Dean. The committee will provide the Dean all supporting documentation relevant to its considerations. Ultimate responsibility for deciding the legitimacy of the grievance and determining any further action rests with the Dean. The Dean will inform the student and the committee of his or her decision.

Student appeals beyond the Laney Graduate School Committee on Grievances may be addressed to the Laney Graduate School Executive Council. The Dean of the Laney Graduate School or an elected faculty member designated by the Dean will preside, and, consistent with the policy that the faculty has final authority in academic matters, the decision of the Executive Council will be final.

Use of the Laney Graduate School grievance procedure will not prejudice in any way a student's rights under the University's Student Grievance Procedure. (08/95)

Student Support Services

Emory University offers a variety of support services including Health and Safety, Financial Services, Career Advisement and much more. To learn more about these services please go here:

<http://gs.emory.edu/guides/students/support.html>

University Policies

Every effort has been made to make this document as accurate and complete as possible. Formal University requirements are detailed in the current issue of the Handbook of the Laney Graduate School, and are in addition to those detailed in this document. Policies are subject to change without notice.

Appendices

Appendix 1. Essential Forms

For your convenience, a list of all the forms/guidelines is provided below. Included are explanations/requirements and where to deliver forms. All of the forms are available on the Neuroscience website (resources tab) and LGS specific forms can also be found on the graduate school website as well.

ROTATION PROPOSAL

Outlines a brief summary of your proposed rotation project. The form should include overall goals and the approximate number of hours you plan to spend in the lab each week. The form should be completed and returned to the Program Administrator and Junior DGS no later than two weeks after the start of each rotation. https://biomed.emory.edu/PROGRAM_SITES/NS/_includes/documents/sections/resources/nsrotationproposal.pdf

ROTATION REPORT GUIDELINES

Rotation Reports are short manuscripts that detail your dissertation/goal, experimental accomplishments, and data interpretation. Reports should be prepared irrespective of whether any or all of the experiments conducted during the rotation yielded positive results. The objectives of this report are to, (i) allow the student to critically reflect on the rotation project, (ii) evaluate the relevant literature, identify an unsolved problem, and formulate a hypothesis/procedure to be tested, and (iv) generate a detailed record of the experiments performed during the rotation. Rotation reports must be submitted to Junior DGS following each rotation.

GDBBS ADVISOR AGREEMENT FORM

Upon completion of rotations and selection of an advisor, the GDBBS Advisor-Advisee Agreement Form and should be completed and given to the Program Administrator. The purpose of these forms is to validate and secure the agreement including financial support between the student and advisor through their dissertation project.

https://biomed.emory.edu/PROGRAM_SITES/NS/resources/forms-and-docs.html

LGS DISSERTATION COMMITTEE SIGNATURE FORM

This form lists each dissertation committee member and requires original signatures. At least three committee members must be Emory faculty (note: The Neuroscience Graduate Program requires that at least four members be current Neuroscience program faculty) and outside committee members require separate approval. The form is completed at the end of year 3 but is due no later than March 15th of the student's fourth year. This form is scanned and submitted online through the LGS student online action site.

http://gs.emory.edu/_includes/documents/sections/academics/policies-progress/dissertation-committee-signature-form.pdf

APPLICATION FOR CANDIDACY

Candidacy is an important milestone in the progress towards the PhD degree. It indicates that the student has achieved a substantial level of expertise in his or her field, and has articulated a plan for independent research and writing that has been approved by the faculty of his or her program. Students must reach candidacy by September 15 of their fourth year. This form should be submitted online.

<http://www.gs.emory.edu/academics/policies-progress/candidacy.html>

DISSERTATION ADVISORY COMMITTEE MEETING SUMMARY AND PROGRESS REPORT

The purpose of this form is to summarize and document each dissertation committee meeting. Both the student and Committee chair should complete the form immediately after each meeting. **Students are required to meet with their committee every six months.** Completed forms should be signed by the Senior DGS and then submitted to the Program Administrator.

http://biomed.emory.edu/PROGRAM_SITES/NS/documents/forms-and-docs/ns-committee-mtg-progress-report.pdf

PROVISIONAL DISSERTATION DEFENSE APPROVAL FORM

The Provisional form verifies that all members of the student's committee have read the dissertation and the student may proceed and schedule their defense. The form should be signed at the final committee meeting by all members of the committee. It should be noted that the Senior DGS or Neuroscience Program Director must attend all final committee meetings. This form should be given to the Program Administrator.

http://biomed.emory.edu/PROGRAM_SITES/NS/documents/forms-and-docs/Provisional-Dissertation-Approval-Form.pdf

DEGREE COMPLETION

Several forms must be complete to receive the degree. There are also important guidelines, instructions, and checklists to guide the preparation of the dissertation for submission:

<http://gs.emory.edu/academics/completion/submit/phd-completion.html>

Application for Degree

This form must be completed by the application deadline for the semester the student plans to graduate. See <http://gs.emory.edu/academics/completion/apply.html> for online or paper options

Doctoral Degree Completion Report

This form should be submitted to the Senior DGS along with the dissertation approval sheet signed by the full committee. **Special Note: BRING THIS FORM TO YOUR DEFENSE. All committee members must sign the approval page.**

http://gs.emory.edu/_includes/documents/sections/academics/completion/doctoral-completion-form1.pdf

Submitting the Dissertation

The Program Administrator will send you instructions for submitting the dissertation after permission to defend is granted.

Appendix 2. Survival Skills Checklists and Career Guide

ROTATION ADVISOR QUESTIONS

- Are you currently taking students/ would you have funding to support me should I choose your lab for a dissertation?
- How many graduate students have you trained and how long did it take them to graduate?
- What projects are you currently working on? How much freedom do I have to customize my research interests?
- Who would be training me? How much contact time do you normally have with students?
- What are your expectations of me; (i) during a lab rotation? (ii) as a doctoral student?
- How many other students have you advisors and what are they doing now?
- How do you help students develop their research skills and hone independence in the lab? What are your views on professional career development outside the lab?
- How would you describe the environment of your research group inside and outside the lab?
- What are the rules for attendance and presentation at scientific meetings?

TIME MANAGEMENT AND PRODUCTIVITY

- Acquire a regular sleep schedule and maintain a regular exercise routine.
- Use a calendar wisely: Schedule regular meetings. Structure time blocks for study time, extracurricular activities and days you plan to be inside the lab.
- Use checklists to prioritize daily and weekly schedules with realistic goals. Break down each large assignment into small parts.
- Pomodoro technique (http://en.wikipedia.org/wiki/Pomodoro_Technique): Use a timer to define work tasks. When you need to focus on a task, set up a timer for a reasonable amount of time, have a pad of paper and pen, and begin working. If another task pops into your mind (e.g. ideas, remembering to e-mail someone) write that task on your piece of paper and perform all of them after your timer goes off.
- Know thyself: Find the time of day and/or environment in which you work the best. Save your most difficult work for the time when you are at your peak productivity.
- Optimize work environment: Set up a workspace that optimizes productivity. Pick your study partners wisely.
- Spend less time messing around on the internet. Identify and restrict times for social networking (e.g. only read emails and look at Facebook pages at set times during the day).
- Remember that rest and play are important for good mental health and creativity.

GOOD LABORATORY PRACTICE

- Get to know your area and where supplies are kept.**
- Take safety rules seriously and report accidents or unsafe situations.**
- Clean up after yourself.**
- Determine the general lab structure.**
- Learn everyone's name.**
- Respect others' time and space.**
- Label everything utilizing naming conventions established in the laboratory.**
- Identify the person you should go to for help and to ask questions.**
- Help others in need.**
- Use checklists for routine methodological procedures to prevent critical errors.**

LABORATORY RULES FOR SUCCESS

- Treat all members of the lab with the same respect you give the ADVISOR.**
- Be a good lab citizen: clean up after yourself, take your turn when doing common tasks.**
- Attend all laboratory meetings to learn content area and support lab mates.**
- During dead time in the lab, read the relevant literature. Resist the temptation to read non-science material.**
- Write down detailed notes when learning new skills/equipment.**
- Data management: Keep a detailed and accurate lab notebook record of your experiments (even when results are negative). This includes experimental design, protocol, calculations, and detailed summary of observations/results. Lab notebooks are the property of the university and must stay in the lab. Never delete data!**
- Plan experiments thoughtfully (trash in = trash out): Carefully define the question through reading the literature and discussions with others. Choose proper controls. Consider sample number.**
- Build a reputation for being a careful, thoughtful scientist by asking questions, reading the literature and demonstrating critical thinking.**
- Establish authorship on manuscripts early to avoid conflict.**
- Use checklists as an organizational tool to identify important experiments and plan logical steps towards completion of a research goal (e.g. figures for a publication).**

ATTITUDE DESIDERATA

- Try to see things from other people's perspectives, remembering that we are all human.
- Learn people's names and get to know people around you.
- Thank people when they do even small things that benefit you.
- Compliment others to encourage mutual positive interactions.
- Consider cultural factors in yours and others actions and how this affects your interpretation of actions.
- Smile. Make eye contact when speaking with people.
- Explore new areas to expand your own interests and be more interesting.
- Provide constructive critiques with the focus on improvement.
- Treat people courteously and with respect, even in a disagreement.

RESEARCH COLLABORATIONS

- Communicate openly and frequently with collaborators to be sure everyone is informed.
- Establish authorship on manuscripts early to avoid conflict.
- Keep deadlines for expected work accomplishments with collaborators.
- Capitalize on opportunities to highlight your contributions to the research effort (e.g. offer to present your work at group meetings).
- Be enthusiastic about others' work and try to ask good questions at group meetings.
- Be punctual: Arrive on time for all meetings.

NETWORKING

- Be a social butterfly. Go meet, talk, repeat.
- Develop relationships with individuals that are networking hubs (typically extroverts that know many people in several professional circles).
- Practice your elevator talk.
- Get involved in local associations.
- Ask for contact information (e.g. business cards) and write notes that remind you of the interaction. Follow-up with additional communication to solidify connection.
- Be punctual.
- Make eye contact and engage the other person when being introduced.
- Communicate openly and frequently with collaborators so everyone is informed.
- Establish authorship on manuscripts early to avoid conflict.
- Keep deadlines with collaborators.

CAREER OPTIONS: PROPOSAL DEVELOPMENT AND GRANT WRITING CONSULTANT

PROS

- Own boss: set own salary, flexible work/family balance: pick clients.
- Projects have a finite time commitment.
- Intellectual stimulating: learn new subject areas.
- Keeps abreast of latest technological advance in writing (software, graphic design, health, etc.).
- Use online learning to expand skill set.

CONS

- No regular pay check.
- Can take years to build reputation.
- Distant from hands-on science and energy of working with a team.
- No longer expert in subject of training---know little about many different topics.
- If have PhD and working with scientists, they assume that you are an expert in their filed.

CAREER OPTIONS: PATENT AGENT/BIOTECHNOLOGY CONSULTANT

PROS

- At forefront of science/technology commercialization.
- Observe application of science impacting population.
- Flexibility in work schedule.
- Diversity of work with different clients
- High activity/energy.

CONS

- Less specialized/more generalized application of skills.
- No longer current in research field of PhD dissertation.
- Lack of job stability.
- Impersonal/detachment from work: commercial direction constantly changes or even halts.
- Requires learning a new area to pursue this career option.

CAREER OPTIONS: TECHNOLOGY TRANSFER LICENSING ASSOCIATE

PROS

- Constant learning: “Jack of all trades, master of none”.
- Remain part of academic community
- Contribute directly to transferring new discoveries and innovations from bench to bedside to benefit society
- Working with people as a team to achieve a goal
- Bridging three worlds- science, law and business-to effectively communicate and achieve the goals

CONS

- Workload quite heavy and time management important.
- Face of university administration. Have to abide by university policy, even when don't agree with them.
- Low success rate for projects.
- Dealing with others' unrealistic expectations (both company and faculty).
- Limits to salary, location and advancement when working in a university office

CAREER OPTIONS: RESEARCH POSITION AT THE VA

PROS

- Extra funding avenue in addition to NIH.
- Research Career Scientist award provides 100% salary support (equivalent to tenure).
- Opportunity to work with physician scientists
- Research support services
- Government sponsored retirement program

CONS

- Administrative paperwork and regulations are burdensome.
- Financial management of grants can be difficult (no carry over from year to year)
- Grants have lower direct costs
- Need to work hard to stay integrate with the university.
- Doesn't have respect that some institutions have.

CAREER OPTIONS: EMORY UNIVERSITY LECTURER

PROS

- Interacting with good colleagues and students.
- No grant writing, but all the resources of an R1 university without a research group.
- Infrastructure for teaching at Emory is strong. There is time and support for educational innovation.
- Time is flexible – Lecture track faculty can contribute to college life on many fronts, from committees, optional research projects, curricular reform
- You can be a valued member of a department if the department sees teaching as a priority.

CONS

- There was pressure to pursue the "Most Noble Path" for a PhD - the one of research, training graduate students, and writing papers.
- Some colleagues do not see the value of lecture track faculty. They see two levels of faculty, with tenure-track being superior.
- Guidelines for reappointment and promotion are not always clear. Resources do not always match expectations.
- Larger classes, less variety of courses taught, almost always first-and second-year level classes. Few opportunities to teach advanced classes.
- No true job security.