

Program in Neuroscience

Graduate Student Handbook



FLORIDA STATE UNIVERSITY

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NEUROSCIENCE GRADUATE STUDENT HANDBOOK

Philosophy

The Interdisciplinary Program in Neuroscience provides comprehensive training of graduate students in this exciting discipline that probes the function of the brain and nervous system. Neuroscience combines the resources of many traditional disciplines such as anatomy, biology, biomedicine, chemistry, nutrition, physiology, psychology, and behavioral science to look at all aspects of neural function. The goal of the FSU Program in Neuroscience is to transform students into first-rate scholars prepared for neuroscience research and teaching positions in academic settings or applied careers in industry or government. Through mentored research experience supplemented with formal and informal instruction, students obtain a broad appreciation of the field of neuroscience with expertise in an area of specialization; an ability to formulate and test hypotheses that advance our knowledge of the nervous system; an understanding of ethical and moral standards in the conduct of research; and training in effective communication in written and oral form.

Faculty members of the interdisciplinary Program in Neuroscience have their primary appointments in one of four departments in two colleges: In the College of Arts and Sciences, the departments of Biological Science, Psychology and Mathematics and in the College of Medicine, the department of Biomedical Science. These faculty members come together in the Program in Neuroscience for collegial interaction and research collaborations, and to provide classroom instruction and research mentoring for students studying for the Ph.D. in Neuroscience. Students must meet the admission requirements for the Program in Neuroscience and be accepted into a home department, generally the department of their initial advisor/major professor. The degree program is governed by the specific requirements for the Ph.D. in Neuroscience administered by the Program in Neuroscience, as explained in this document, and by the general degree requirements of The Florida State University. Advice on interpretation of these requirements is generally available from a student's doctoral supervisory committee, from the graduate office of the student's home department or from the Director of the Program.

Formal courses required for all students are kept to a minimum to allow flexibility in assembling a program of coursework and research compatible with the highest standards of scholarship and best suited to the student's research goals. Despite this flexibility, there are timelines that have to be observed. Students should take control of their careers at FSU using careful time management, looking forward to each goal and "planning backwards" to determine where to start and what route to take in order to arrive at that goal at the appropriate time.

Admission

Applicants are generally required to meet minimal criteria of 3.0 undergraduate grade point average (upper division work). In addition, the faculty evaluate three current letters of recommendation from individuals who are able to assess the applicant's academic and research potential. Foreign students, in addition to the above, also must meet University minimum standards for English proficiency (e.g., TOEFL or DUOLINGO exam). The Program ordinarily does not accept a student without a faculty sponsor or sponsors willing to serve as the initial advisor(s). More details on the admission process are available from the Program in Neuroscience website at <http://www.neuro.fsu.edu>.

Degree Requirements

The Ph.D. in Neuroscience is a research-intensive degree for which the main effort will be an independent research project that makes a scholarly contribution to scientific knowledge in the discipline. The minimum requirements are 54 semester hours of graduate level courses (or 24 hrs beyond the master's degree) including designated required courses, various additional requirements specified below, the writing and defense of a dissertation, and publication of the results of the dissertation research (see section 14: Dissertation, Defense and Seminar).

Degree requirements may be modified from time to time by vote of full members of the Program in Neuroscience, on the recommendation of the director and executive committee, or in accordance with University regulations. With approval of the supervisory committee, students may elect to complete their degrees under the rules in place at the time they enter the degree program or any subsequent complete set of rules.

Each stage of a student's progress to the degree is documented by memos or letters sent to the student's home department as specified in the relevant sections below. Some departments (e.g. Biological Science) require copies of all these documents be sent to the graduate office of the student's home department. It is the student's responsibility to ensure that all documents reach the appropriate destinations.

Responsible Conduct of Research

Students entering the Program in Neuroscience are expected to know and follow the accepted practices of good scientists including respect for intellectual property, full and honest reporting of experimental results, and careful attention to the welfare of human subjects and experimental animals. These and other concerns are discussed in a required course taken in the first semester.

1. Degree Program: Students entering the Program in Neuroscience are admitted into a doctoral-track. However, students have the option, with approval of the major professor and supervisory committee, to obtain a Master's degree in their respective home departments. Each student's progress towards the Ph.D. degree will be assessed each year by that student's supervisory committee.

2. Time Limit: The Ph.D. degree must be completed within 5 years from the date of the passing of the Preliminary Exam (normally by the fall semester of the students 3rd year). This is when formal admission to candidacy occurs (see section 12: Preliminary Exam, page 7).

3. Major Professor: By the beginning of the Spring semester of the first year, students should choose a major professor, to become the chair of the student's supervisory committee mentoring the student's progress in the program. In most cases the initial advisor/sponsor is also the major professor but this is not required. With mutual agreement between the student and another faculty member, and the director, a new major professor may be chosen. The Program will make every effort to arrange funding where the transfer to a new lab is seen to be in the student's best interest but the former source of funds may not be transferable (e.g., if from an individual faculty research grant). To remain in the program, all students must have a major professor.

4a. Initial Supervisory Committee membership (3+ members).

Students enter the Program under the sponsorship of an initial advisor whose area of research matches the student's interest. This matching process allows students to start hands-on research in their area of

interest but does not obligate them to continue in the same lab for their dissertation research. The initial three-person supervisory committee guides students as they choose a research project. It is normally expanded to form the full five-member committee, but an entirely new committee could be formed if appropriate. The initial supervisory committee also has the correct membership to be a Masters Degree committee if the student and the committee agree that the experience of completing a MS degree (in the student's home department) would be an advantage.

1. Initial faculty sponsor acting as major professor: Neuroscience member.
2. A second Neuroscience member.
3. Non-Neuroscience member from the student's home department.

The initial committee should be chosen in consultation with the major professor and established by the end of the Spring semester in the student's first year. When committee membership is agreed by all members, a memo is sent to the Graduate Office of the student's home department and a copy is sent to the Neuroscience Office. The student is responsible for ensuring that this memo is sent, as well as completing the necessary paperwork in the home department, if a master's degree is sought.

4b. Doctoral Supervisory Committee membership (5+ members; at least 3 Neuroscience members). The doctoral supervisory committee provides advice and guidance, and monitors the student's progress to the degree and graduation. The committee has the responsibility for ensuring that the work conforms to the standards for scholarly research at FSU, that the student meets all the other requirements for the degree, and that the student is fairly treated by all. Any personal or financial relationships that could create a perception of bias or conflict of interest must be avoided. The University Graduate Faculty Representative will ultimately make a written report to the Dean of Graduate Studies that this responsibility has been met and that the dissertation defense was properly conducted. Within the constraints of the required make-up of the committee, members are chosen for their expertise in the student's field of research. Committee members are, thus, qualified to evaluate the work and to give useful advice on avoiding pitfalls so that the completed work is of the highest possible quality.

1. Major Professor - NS member and (normally) a member of the student's home department.
2. University Graduate Faculty Representative – Tenured faculty member, NOT a member of the student's home department and NOT a member of the Program in Neuroscience.
3. Member of the student's home department, NOT a member of the Program in Neuroscience.
4. Neuroscience member who is NOT a member of the student's home department. (could be the major professor if not a member of the student's home department).
5. Neuroscience member from any department.

All members except the University Representative are selected as experts qualified to give advice on and/or to evaluate the student's dissertation topic. Additional members beyond the five specified may be included but are not required. All voting members must have Graduate Faculty Status at FSU (see below). The Major Professor and a minimum of two other members must have current approval to direct doctoral dissertations in Neuroscience. Departments may prefer that a majority of committee members be from the student's home department. If there is a conflict with the guidelines, students should consult the Neuroscience Director.

FSU Faculty (regular or courtesy) with approval to direct doctoral dissertations only in degree programs other than Neuroscience cannot be major professor for the Neuroscience degree but may be co-major professor with a Neuroscience member approved to direct Neuroscience doctoral degrees. Faculty without an FSU appointment (regular or courtesy) cannot be voting members of a Neuroscience supervisory committee. Temporary Graduate Faculty Status may be requested from the Dean of Graduate Studies specifically to allow an FSU faculty member without such status, or a non-FSU faculty member, to be a voting member of the committee. Non-FSU faculty must receive the

appropriate courtesy appointment before requesting this one-time Graduate Faculty Status. The full five-member committee should be established before the preliminary exam and by the end of the Spring semester in the student's second year, or by the end of the first semester after completing a MS degree. A memo from the major professor indicating committee membership and initialed by each committee member is sent to the Graduate Office of the student's home department with a copy sent to the Neuroscience Office. The student is responsible for ensuring that this memo is sent and for completing all necessary paperwork in the home department.

5. Required Courses:

The minimal course-load is 9 credit-hours each semester for each of the three semesters: Fall, Spring and Summer. Some of these required hours each semester will normally be devoted to research in the student's home laboratory.

Four core graduate neuroscience courses are required for all students. Responsible Conduct of Research (Fall, first year), Neuroscience Methods (Spring, first year), Summer Seminar (Summer, first year), and Research Design & Analysis I or Quantitative Methods (generally Fall, second year). Students also complete several advanced electives (minimum of 17 letter-graded hours).

Students must complete a one-semester DIS laboratory course with one Neuroscience faculty member outside the lab of the student's advisor. Selection of a program of study beyond the introductory courses, or alteration in the sequence of courses, should be made in consultation with the major professor and the supervisory committee. The committee may also require a student deficient in some field essential to the student's chosen research project to take one or more courses in that field.

The Neuroscience Summer Seminar series provides an opportunity for students to practice assembling and presenting a body of scientific research, an essential skill for scholars in any field. All students are expected to make one or more presentations in the Summer Seminar series (see Seminar requirement).

Students are expected to follow one of the two curriculum tracks, a Neuroscience Track for students using laboratory animal subjects and a Cognitive Neuroscience/Human Imaging Track for students using human subjects. A student may request approval from the supervisory committee to take an elective that does not appear on the approved list of electives (see Appendix 1). The final decision will be made by the Director. Students requesting waiver of requirements on the basis of courses taken at another institution must provide sufficient evidence on the substitute-course content and level. Any decision on substitution of a required course will not create a precedent for other students.

Where their course loads allow, all students should also register each Fall and Spring for Neuroscience Colloquium. The colloquium series features nationally and internationally known neuroscientists discussing their latest research findings.

A list of graduate courses available to Neuroscience students is provided in Appendix I.

6. Program of Studies: It is a University requirement that a Program of Study be prepared, to include a "complete plan of courses to be taken." The plan for future courses to be taken while a graduate student at FSU, should be compiled in consultation with the major professor, starting with a list of upper level undergraduate courses and graduate courses already taken. The completed Program of Studies should be approved and signed by each member of the supervisory committee and sent to the Graduate Office of the student's home department. A copy of the signed Program of Studies should be provided to the

Program Office.

The University's residence requirement is (*University Bulletin, Graduate Edition*): "After having finished thirty (30) semester hours of graduate work or being awarded the master's degree, the student must be continuously enrolled on The Florida State University Tallahassee campus for a minimum of twenty-four (24) graduate semester hours of credit in any period of 12 consecutive months"

7. Research Presentation Requirement: All students must make at least two formal research presentations in addition to a presentation in the Neuroscience Summer Seminar (and the doctoral dissertation-defense seminar). At least one of these presentations must be at a local, national or international meeting. A poster presentation at a regional, national or international meeting may be substituted, but only if the student is first author. The purpose of the requirement is to ensure that students have an opportunity to assemble and present scientific data and receive feedback on content, organization and presentation. The supervisory committee is responsible for determining that the presentation is acceptable to satisfy the requirement and that the student has received adequate feedback. Presentations in the Neuroscience Seminar (Baker Seminar or summer- seminar) will be evaluated by the instructor of record, who will communicate with the supervisory committee.

8. Committee Meetings: Each graduate student must meet with her/his supervisory committee at least once per year, generally towards the end of the Fall semester. The purpose of this meeting is to review the student's academic progress in research or in formulating a suitable research project. It is an opportunity for the committee to contribute advice and offers of technical/theoretical assistance as well as constructive criticism. The content of the meeting is determined by the major professor and the committee, but it is the responsibility of the student to make sure the meeting takes place in a timely manner. A face-to-face meeting is required. A component of the annual committee meeting will be the annual graduate student review (see below). A key time for assessment of progress and of the student's suitability for continuation in the Ph.D. track is at the end of the student's second year. Some departments require a written memo at this time stating if the student is bypassing the MS (see 11. Continuation in Neuroscience PhD track, below). Students should check with their committee members well in advance of any required committee meetings or examinations to make sure that everybody will be available to participate. Committee members may be out of town or on sabbatical for one or both semesters of the academic year. It is often difficult to arrange an exam or defense during the summer because of the unavailability of committee members who may be off-campus during this time.

9. Annual Graduate Student Review: Each graduate student's progress in the Neuroscience Ph.D. degree track is reviewed by the Program each year to ensure that students make timely progress towards the degree. The major portion of this review will take place in the annual committee meeting, but some participating departments may wish to institute additional procedures. Students prepare an Annual Activities Report (see appendix) containing a summary of activities and a 200 word (+/-) abstract summary of their research over the previous year, plus a description of plans for the upcoming year. This document and a copy of the student's updated Curriculum Checklist (see appendix) should be approved by the major professor and sent (by the student) to supervisory committee members before the review meeting. Following the review, a written evaluation for each student, is approved by the supervisory committee and reviewed by the student, and is submitted to the Graduate Coordinator of their home department, together with final, committee approved, versions of the Activities Report and Progress Checklist. The evaluation should indicate whether progress has been satisfactory (with reasons, if not satisfactory), and indicate any areas of concern. A recommendation that a certain degree requirement be met ASAP is not necessarily an "area for concern" unless the student fails to comply. Unsatisfactory progress or other concerns will be referred to the Program Director and/or Graduate

Training Committee for corrective action. For students who are formal candidates for the Ph.D., that is, those who have passed the preliminary examination and whose Admission to Candidacy form has been certified by the Office of University Registrar, the University requires an annual written evaluation of the student's progress from the supervisory committee.

The following is provided as a guideline to the meaning of "satisfactory progress." Progress is expected on both course work and research. Students on academic probation (GPA less than 3.0) or who make two grades of C or lower on Neuroscience required/core courses are not necessarily evaluated as "unsatisfactory progress" if considerable research achievements have been made, but these students' performance is definitely an area for concern. Too little research progress even when grades are high is also an area for concern when students are beyond the second year. Too little achievement in both coursework and research is always unsatisfactory. An evaluation of "unsatisfactory progress" or two evaluations of "progress a matter for concern" could be cause for dismissal from the program. A student receiving such an evaluation is not automatically dismissed. He/she should consult with his/her major professor and supervisory committee within 2 weeks of the evaluation, for advice on how to improve. A written plan for improvement should be prepared by the student within 30 days and approved by the major professor and supervisory committee, who will monitor adherence to the plan. Copies should be sent to the training committee and the Neuroscience Office. This document will be available for the next annual review, and progress in completing the plan will be considered in determining the next evaluation. Evaluations can be appealed to the Neuroscience Director.

10. Continuation in the Neuroscience Ph.D. Track: A decision by the student's supervisory committee that the student should not continue for the Ph.D. degree is reviewed by the Program in Neuroscience Training Committee faculty. The reviewing faculty can recommend that the decision be reconsidered, but cannot overrule a unanimous decision by the supervisory committee. In the event the supervisory committee is not unanimous, the student has the option of finding another committee (and/or major professor) that would be prepared to support the student's continuation in the Program. If the supervisory committee's final decision involves dismissal or continuation to a terminal MS degree only, this is indicated in the annual evaluation report. An extra copy of the report is supplied to the student and should be signed by the student and major professor and returned to the Neuroscience Office. If the student decides to drop out of the Ph.D. track, no formal decision by the committee on the student's suitability for doctoral studies is required. The decision to drop a student from the Neuroscience Ph.D. track may be appealed to the Neuroscience Director, who will consult with the supervisory committee, the training committee and other Neuroscience faculty before making a final decision. This decision has no necessary direct effect on any *departmental* decision to continue the student in a *departmental* doctorate or master's degree track.

11. Preliminary Exam: This comprehensive exam provides evidence of scholarly competence before admission as candidate for the Neuroscience Ph.D. degree (see timetable). Generally, written questions are submitted to the major professor by each committee member to be answered by the student in writing. The University Representative on the committee may simply serve as a reader and is not required to pose a separate question. The committee decides the question format. The committee member who set the question evaluates the written answer, but all questions and answers should be available to the committee, generally one week prior to the oral exam. The student is further evaluated by the full committee in the oral examination. The content of the oral exam is open but should concentrate on clarification of written answers plus general questions relevant to the student's chosen research area. Generally, the oral exam should follow completion of the written exam by no more than two weeks. The entire process should be complete within one semester's length.

There are four possible outcomes:

- Pass,
- Conditional pass, requiring additional work and approval by the committee (the additional work should generally be completed within 60 days),
- Fail with opportunity to retake the exam (normally within one semester, with, generally, only one opportunity to retake the exam),
- Fail with dismissal from the Ph.D. program (completion of a terminal MS may be recommended).

Students who do not complete the preliminary exam by the end of their fourth year are considered to have made "unsatisfactory progress" unless there are special extenuating circumstances (as determined by vote of the supervisory committee) and must pass the exam by the end of the next semester.

The outcome of the exam is reported in writing to the graduate office of the student's home department and the office of the student's Academic Dean. If the student retakes the exam, the written report must indicate that the student either passed or failed. When the student passes the exam, notice must be sent to the University Registrar, on an official Admission to Candidacy form. The student is responsible for ensuring these notices are sent.

12. Ph.D. Degree Proposal: The Ph.D. proposal should take the form of a research-grant proposal in NIH or NSF format. Its purpose is to enable the student to plot a course to the completion of a significant research project; to identify the experiments and resources necessary, the methods of analysis, anticipated results, the resolution of possible pitfalls and the time required. The student should meet with the supervisory committee and defend the proposal. On acceptance of the proposal by the committee, an approval form signed by all committee members is submitted to the Graduate Office of the student's home department, with a copy to the Neuroscience Office. Students are reminded that animal care and human subjects research requires preapproval by the ACUC and/or IRB, respectively. A copy of the approval form will be required as an appendix to the dissertation. Students must be named in any approved protocol that covers research that the student intends to include as a part of their dissertation.

13. NRSA Proposal: An individual National Research Service Award (NRSA), from a federal funding agency such as the National Institutes of Health (NIH), is recognized as a significant achievement both for the student and for the Program, and also provides more financial support than most other sources. The Program in Neuroscience strongly encourages eligible students to apply for these awards. Students should consider submitting an application in the Fall semester of their third year. Well-prepared students could submit earlier. A special workshop on preparation of an NRSA application is provided, generally each Fall semester, which takes students step by step through the process. Drafts of student-prepared applications are reviewed by a "mock study section" to illustrate the criteria used in the review that will determine whether the proposal is funded. The mock study section is made up of faculty who sit on real study-sections (review groups) reviewing grant and fellowship applications for NIH or other agencies. These faculty members provide detailed feedback to students and their major professors on ways to modify the proposal to increase the probability it will be funded. Students in neuroscience research are fortunate in that this is one of the few fields in which individual predoctoral NRSA's are currently available. However, they are only available to US citizens and permanent residents ("green-card" holders).

14. Dissertation, Defense and Seminar: "The dissertation must be completed on some topic connected with the student's major field of study. To be acceptable it must be an achievement in

original research constituting a significant contribution to knowledge and represent a substantial scholarly effort on the part of the student” (FSU Graduate Bulletin).

The Dissertation Defense for neuroscience doctoral students consists of a public seminar presenting information from the dissertation followed by an oral examination, which is administered by the candidate’s supervisory committee. The major professor is responsible for deciding when and where the student should defend the dissertation and should preside at the examination. University policy demands that all committee members be present for the dissertation defense. The use of distance technology (e.g., Zoom) is allowable to meet this requirement.

Students should consult the most recent deadlines (see FSU Graduate Bulletin: http://registrar.fsu.edu/bulletin/grad/info/grad_degree.htm). A preliminary draft of the dissertation must be submitted electronically and to each member of the supervisory committee at least **four weeks before** the date of the oral examination. At least **two weeks before** the date of the examination, the student or major professor must submit an announcement of the dissertation title and the date and place of the examination to their home department and Neuroscience office.

The result of the defense and oral examination: passed, failed or to be re-examined must be certified in writing via a memo signed by all members of the oral examining committee, to the Academic Dean of the student’s home department, with copies to the graduate office of the student’s home department. Following any re-examination a follow-up written report must indicate that the student either passed or failed. The student is responsible for adhering to all FSU regulations with respect to graduation and dissertation format and publication. Students should contact the FSU Office of Graduate Studies *before* the term in which they expect to defend their dissertation.

Dissertation work should be of a high scholarly standard suitable for publication in peer-reviewed scientific journals. However, the requirement for publication of the dissertation is satisfied by deposit of the dissertation in the University Libraries System, via the FSU Office of Graduate Studies. The student agrees to this form of publication as a condition of undertaking a doctoral program.

15. Outline timetable for the Neuroscience Ph.D. Degree:

Initial Advisor	On Entry (Initial faculty sponsor serves as major professor for up to one year).
Major Professor	Beginning of Spring semester, year 1.
Initial Committee	Spring semester, year 1 (3 members).
First Committee Meeting	End of Summer/ beginning of Fall, year 1-2 (plans, prospects) First full Annual Review.
Program of Studies	Fall semester, year 2.
Degree project selected	Spring semester, year 2 or earlier.
Decision on track	End of Year 2 (committee decision on progress/potential) (Proceed with Ph.D., or to intervening or terminal MS, or dismissal)
Full committee meeting	Annual Review each Fall (before Preliminary Exam, 5+ members).
NRSA proposal written	Generally by Fall semester, year 3 (could be earlier) (Deadline Dec 5 - if funded: starts July + 6mo.).
Preliminary exam	Year 3, preferably early
Degree proposal	Beginning of year 4 or earlier.

A detailed timeline and checklist for program requirements is provided in Appendix I and III.

Note that each student is responsible for ensuring that their departmental graduate office receives the appropriate memos marking her/his progress in the degree program.

16. Financial Support: The Program in Neuroscience makes every effort to support all students in good standing with adequate stipends and full payment or waiver of tuition. Support comes from:

- Institutional NRSA (National Research Service Award) Training Grants (Federal funds)
- Individual NRSA Fellowships (Federal funds)
- Neuroscience Fellowships (State funds)
- University Fellowships (State funds)
- Teaching or Departmental Assistantships (State funds)
- Individual faculty research grants (various sources).

The funds available and the rules governing these sources vary. The Program strongly encourages and assists eligible students to apply for individual NRSA support as early in their careers as possible (see NRSA proposal section above).

NRSA awards: Stipend levels are currently set by the federal government and adjusted periodically. These awards also pay insurance, partial tuition and some research and travel expenses. Appointments to Training Grants are decided by the director(s) of the grant and a committee of faculty on the basis of academic performance and potential. Eligibility is limited to US citizens or permanent residents and Training Grant support may be further limited by the conditions of the grant to students in their first two years of study or to students working in certain fields.

Individual predoctoral NRSA awards are highly competitive awards to an individual student on the basis of a detailed training and research proposal submitted and reviewed by the specific funding agency in NIH.

Neuroscience Fellowships: Funds for these awards come from the Program in Neuroscience general budget. Stipend levels are set by the Program in Neuroscience Director in consultation with faculty on the basis of academic performance and potential, and are currently similar to the federal NRSA level..

University Fellowships: University Fellowships are awarded on a University-wide competitive basis following application by departments or programs. Stipend levels are similar to NRSA rate and major professors are requested to supplement the stipend up to NRSA level if necessary. Not all faculty have research funds that can be used for this purpose. There are no research or travel funds set aside for awardees but they are eligible for travel funds available to all students.

Teaching and Graduate/Departmental Assistantships: These are awarded by the student's home department in exchange for teaching or other duties. Their availability depends on the departmental budget and the number of students to be supported. The stipend level is set by the department and may vary across departments participating in the Program in Neuroscience. Major professors are requested to supplement stipend levels up to the NRSA level if possible from their own externally funded research grant(s). Not all faculty have research funds that can be used for this purpose. There are no research or travel funds set aside for awardees but they are eligible for travel funds available to all students.

Research Assistantships: These appointments are made at the discretion of individual faculty members to qualified students in exchange for work on an externally funded research grant. The research work performed is generally the student's dissertation work. University rules require that a student's tuition be paid from the same source as the student's stipend. Research grant funds can be used only in accordance with the original terms of the grant and some grants may not allow student support or tuition expenditures.

Tuition waivers: Waivers of tuition are available from departments for students performing service (teaching or other) to that department. Waivers may be available for tuition beyond the minimal nine credit hours per semester, but this should be approved in advance.

Continued support is dependent on good academic standing and satisfactory progress. Students supported for three years on traineeship or fellowship support are expected to have made sufficient research progress to have a publication submitted or ready for submission by the end of the third year. This criterion will be considered in decisions on continued support beyond the third year.

Students on academic probation (GPA below 3.0) are not eligible for support on training grants except in exceptional circumstances. Students receiving two grades of C or lower on required or core Neuroscience courses, even if maintaining a 3.0 GPA, will also be ineligible for traineeship/fellowship support for at least the subsequent semester. Students receiving an evaluation of "unsatisfactory progress" or two successive evaluations of "concern" are ineligible for traineeship/fellowship support for at least the subsequent semester and/or until their progress is considered satisfactory upon completion of the plan for improvement.

Students supported on FSU institutional assistantships have certain rights under the FSU UFF- GAU Collective Bargaining Agreement, including an annual employment evaluation, separate from the annual academic evaluation.

17. Procedures for Dismissing a Graduate Student

The University reserves the right to terminate enrollment in an academic program and dismiss a student whose academic performance is below the standards of the program, regardless of GPA, or whose conduct is deemed improper or prejudicial to the interest of the University community. Dismissed students will not be permitted to register for graduate study, including registering as a non-degree student.

Program terminations (dismissal for a reason other than GPA) are determined by the faculty at the academic program/departmental level and may occur for a number of different reasons, including but not limited to:

- Inability to conduct independent research in a fashion appropriate with the accepted norms of a discipline,
- Inability to function within a team environment to the degree that it negatively affects the learning, practice and/or research of fellow graduate students,
- Behavior that does not meet the professional standards of a discipline (typically clinical, social work or school settings, but also including Motion Picture Arts),
- Failure to meet one or more major milestone requirements,
Inability to pass the diagnostic/preliminary examination/comprehensive examination

- (note that university policy limits preliminary examination attempts to two),
- Failure to complete the doctoral degree/make timely progress towards the dissertation, or
 - Extensive petitions for candidacy extension.

If a graduate student is identified as meeting any of the potential dismissal items listed above, procedures outlined in the Graduate Student Handbook from the student's home department (Biology, Biomedical Sciences, or Psychology) will be implemented.

18. Dispute Resolution and Appeals: Substantive disagreements on interpretation or application of degree requirements or other rules should generally be brought first to the next higher authority for resolution. Thus, disagreements between student and major professor should be brought to the full supervisory committee, one of whose reasons for existence is to assure a fair treatment for the student in accordance with FSU policies. All unresolved disputes of any kind may be appealed to the Program in Neuroscience Director, who will seek advice from the Neuroscience Training Committee and other Program faculty. Many elements of the Neuroscience degree requirements are also University requirements. Disagreements on interpretation of University degree requirements may be appealed first to the Program in Neuroscience Director. If not satisfied, the student may then appeal to the Academic Dean of the student's home department, and then the Dean of Graduate Studies. See also GSAC, below.

19. Graduate Student Advisory Committee (GSAC): The six-member GSAC is mandated by Program in Neuroscience by-laws to provide two-way communication between the Program and graduate students. Members are elected annually by graduate students in the Program (except that a minority-group member may be additionally appointed by the Director). The GSAC polls students and makes recommendations to the director and faculty on courses, degree requirements and all aspects of graduate student life and reports back to students. The GSAC selects one of its members to be the student member of the Program in Neuroscience Training Committee. The GSAC is specifically designated to communicate the concerns of individual students or groups of students, who wish to remain anonymous, to the Director or other appropriate faculty member(s). Inappropriate behavior or treatment of a student or students by any member of the university community are examples of legitimate concerns that might warrant anonymous reporting (and resolution). See also dispute resolution and appeals, above.

By courtesy of the Neuroscience Graduate Students Association (NGSA), and for simplicity, the student elections for NGSA officers and for GSAC committee members are traditionally combined. The NGSA officers serve as GSAC members, which facilitates the two-way communication that GSAC is intended to provide. However, NGSA is an independent student organization. It is only in their capacity as GSAC members that its officers have any specific obligations to the Program. NGSA officers and members have provided outstanding community service in outreach to local K-12 schools and the general community, with assistance from the Program and the N. Florida Chapter of SfN.

20. MISCELLANEOUS

1. Graduate students are not permitted to have undergraduates, graduates or technical staff conduct any part of their dissertation research for them other than the repetition of routine tasks, the principles and practice of which the graduate student has already mastered.
2. DIS students can work with a graduate student on a non-thesis/dissertation project as long as the DIS student has significant interaction with the major professor/faculty member.

3. Supervisory committees can recommend that a particular requirement (e.g., teaching) be modified or a deadline postponed but these decisions are subject to review and approval by the Program in Neuroscience Director. Be aware, also, that supervisory committees may impose additional requirements than those listed in the graduate student guide (handbook).
4. Travel funds for graduate students: The Program may have a small pool of funds to assist graduate student travel to scientific meetings in order to present research conducted at FSU. The student must be first author on the presentation and must make strenuous efforts to obtain funding from other sources including the major professor, the home department and the Congress of Graduate Students (COGS). In most cases Neuroscience funds will not cover the entire cost of the trip.
5. Dissertation Format. The dissertation may be written as a single work or as several individual chapters intended to be, or actually, independent manuscripts. The Graduate School requires that in the latter case the thesis/dissertation must include an overall Introduction and an overall Conclusions section. Clearance guidelines can be found via the GradSpace blackboard site.
6. Academic Probation. Students on initial probation (1st semester of probation) have one (1) semester to bring their cumulative GPA up to 3.0. If the student does not reach a cumulative 3.0 by the end of that term, he/she will be dismissed from the University. Reinstatement for one additional term is possible in cases in which a cumulative GPA of 3.0 is very likely by the end of the next semester. The University does not allow reinstated students to draw a stipend during the additional term.
7. Program/Departmental/University Facilities. The Program maintains various research-support facilities available to all Neuroscience faculty and students including, Photo-Lab/Graphic Artist (Charles Badland), Computer lab (Jason Orman), Histology/Molecular lab (Dr. Xixi Jia). The Program shares the maintenance of additional facilities with the Psychology and Biology Departments. These shared facilities are available to all Neuroscience faculty and students by arrangement with facilities supervisors, and include: Electronics engineer (Psy), Electronics lab (Psy), Machine shop (Psy), Illustrator/Graphic Artist (Psy),, Imaging/ Electron Microscope facility (Bio). Additional facilities maintained by Biological Science are available by arrangement including: Analytical Laboratory, Molecular and Hybridoma Laboratory, Machine shop and, Electronics shop. Some of the equipment and services are free or at materials-cost only, but some are not. Students should consult first with the major professor and then with the contact person named above concerning the use of these facilities. Additional research facilities are located in the College of Medicine and may be available to Neuroscience students and faculty, by arrangement.

APPENDIX I: Curriculum

Core curriculum: Students should follow one of two curriculum tracks: a Neuroscience Track for students using laboratory animal subjects and a Cognitive Neuroscience/Human Imaging Track for students using human subjects.

Students will follow one of the two tracks, but deviations in the recommended course sequence are permitted if approved by the student's supervisory committee. Specific courses listed in each track are considered foundational and electives are used to reach the **minimum requirement of 22 letter-graded credit hours** from the courses on the approved curriculum list below (substitutions may be considered if approved by the student's supervisory committee and the Program Director).

*Required course for all Neuroscience graduate students.

Neuroscience Track (recommended course sequence)

Fa Yr1 PCB 5845 Cell & Molecular Neuroscience (4 h) or *PSY 6919 Research Design & Analysis 1 (3 h)
*PSB 5077 Responsible Conduct of Research (2 h; S/U graded)

Sp Yr1 PSB 5230C Vertebrate Neuroanatomy (4 h)
PSB 5341 Systems & Behavioral Neuroscience (3 h)
*PSB 5057 Neuroscience Methods (2 h)

Su Yr1 *PSB 6933 Summer Seminar (2 h; S/U graded)

Fa Yr2 PCB 5845 Cell & Molecular Neuroscience (4 h) or PSY 6919 Research Design & Analysis 1 (3 h)
Elective (3 h)

Sp Yr2 Elective (3 h)

Cognitive Neuroscience/Human Imaging Track (recommended course sequence)

Fa Yr1 PSY 5916 Intro. to fMRI (3 h) or PSY 5916 MATLAB (3 h) or PSY 5916 Translational EEG Res. (3 h)
*PSY 6919 Research Design & Analysis I (3 h)
*PSB 5077 Responsible Conduct of Research (2 h; S/U graded)

Sp Yr1 PSB 5230C Neuroanatomy (4h) or PSB 6048 Affective Neurosci. (3h) or EXP 5406 Neurobio of L&M (3h)
*PSB 5057 Neuroscience Methods (2 h)

Su Yr1 *PSB 6933 Summer Seminar (2 h; S/U graded)

Fa Yr2 PSY 5916 Intro. to fMRI (3 h) or PSY 5916 MATLAB (3 h) or PSY 5916 Translational EEG Res. (3 h)
Elective (3 h)

Sp Yr2 PSB 5230C Neuroanatomy (4h) or PSB 6048 Affective Neurosci (3h) or EXP 5406 Neurobio. of L&M (3h)
Elective (3 h)

List of Approved Courses (additional courses may be added following approval by the Graduate Training Committee)

Core Courses (offered every year; all students must take these courses)

- PSB 5057 Responsible Conduct of Research (S/U; fall)
- PSY 6919 Research Design & Analysis I or BSC 5936 Quantitative Methods (3 h; fall)
- PSB 5057 Neuroscience Methods (2 h; spring)
- PSB 6933 Seminar in Neuroscience: Summer Seminar (S/U; summer)

Course Electives (offered every year)

- PCB 5845 Cell & Molecular Neuroscience (Fall; 4 h)
- PCB 5525 Molecular Biology (Fall; 3 h)
- PSB 5341 Systems & Behavioral Neuroscience (Spring; 3 h)
- PSB 5230C Vertebrate Neuroanatomy (Spring; 4 h)
- PCB 5137 Advanced Cell Biology (Spring; 3 h)
- PSY 6919 Research Design & Analysis II (Spring; 3 h)

Course Electives (typically offered every other year)

- BMS 5525 Bioregulation (3 h)
- EXP 6609 Working Memory and Cognitive Control (3 h)
- PSB 6048 Affective Neuroscience (3 h)
- PSY 5916 Introduction to fMRI (3 h)
- PSY 5916 MATLAB (3 h)

Course Electives (typically offered every 3rd year)

- BMS 5700 Developmental Neuroscience (3 h)
- BSC 5936 Neuroepigenetics (3 h)
- PCB 5786 Membrane Biophysics (3 h)
- EXP 5406 Neurobiology of Learning & Memory (3 h)
- EXP 5717 Animal Psychophysics (3 h)
- GMS 5095 Modeling Human Diseases (3 h)
- MAP 5932 Computational Neuroscience (3 h)
- PCB 5795 Sensory Physiology (3 h)
- PSB 5347 Molecular Neuropharmacology (3 h)
- PSB 6059 Behavioral Neuroendocrinology (3 h)
- PSB 6059 Neurobiology of Social Behavior (3 h)
- PSY 5916 Translational EEG Research (3 h)

Professional Development Opportunities (the letter-graded courses below do not count toward the 22-credit hour minimum).

- GMS 6001 Tools of the Trade (3 h; letter graded)
- PSB 6920 Neuroscience Colloquium (1 h; S/U)
- PSB 6993 Seminar in Neuroscience - Baker lunch (1 h; S/U)
- PSY 6919 Grant writing (2 h; letter graded)
- PSY 6945 Teaching Psychology Practicum (3 h; letter-graded)
- Conference Presentation
- Departmental Presentation
- Teaching Assistantships
- Workshops/Presentations on Diversity, Equity, and Inclusion

APPENDIX II: Dual Compensation

The stipend provided to graduate students is intended to facilitate study, educational progress and research. Additional, unrelated, outside employment reduces a student's role in contributing to the graduate program, and could also be construed as indicating a lack of commitment to a student's training.

However, special extenuating circumstances may make outside employment critical for a student's continuation in the Program. The following guidelines should be observed:

1. Half-time (or less) graduate research assistants (RAs): Such a student finding it necessary to obtain supplementary, outside employment must provide justification and obtain signature-approval of his/her major professor, other supervisory committee members and the Program in Neuroscience Director.
2. Graduate training grant and fellowship recipients (domestic and foreign): Some fellowships include funds for payment of all fees, others pay some but not all fees, and some pay no fees. There may be funds available to provide students a supplement equivalent to the fee waivers available to other graduate assistants. A copy of the award letter or fellowship appointment indicating the distribution of external funds will be needed to determine eligibility for internal supplemental funds. Nevertheless, any fellowship recipient finding it necessary to obtain supplementary, outside employment should provide justification and obtain signature-approval of his/her major professor, other supervisory committee members and the Program in Neuroscience Director.

Without the necessary approvals, it is inappropriate to be a full-time student on a TA/DA/RAship or fellowship and also receive outside employment. Unapproved dual employment could jeopardize a student's eligibility for continued University support and/or grant support, and/or research training with the major professor of choice.

Written approval of supplemental work and compensation is required two weeks before the work begins and separate approval is required for each semester that such supplemental work continues. Copies of the written approval should be sent to the Neuroscience Office for inclusion in the student's academic folder. Approval does not excuse a student from the timelines applicable to other students.

APPENDIX III Curriculum Checklist:

I. Required Courses (List the semester and year completed.)

- _____ PSB 5077 Responsible Conduct of Research (S/U graded)
- _____ PSY 6919 Research Design and Analysis I (3 h) or BSC 5936 Quantitative Methods (3 h)
- _____ PSB 5057 Neuroscience Methods: Molecules to Behavior (2 h)
- _____ PSB 6933 Seminar in Neuroscience: First-year Summer Seminar (S/U graded)

II. Elective Courses (Minimum of 17 letter-graded hours are required. List the semester and year completed. Additional elective courses may be approved by your Doctoral Supervisory Committee.

- _____ BMS 5700 Developmental Neuroscience (3 h)
- _____ BMS 5525 Bioregulation (4 h)
- _____ BSC 5936 Neuroepigenetics (3 h)
- _____ EXP 5406 Neurobiology of Learning and Memory (3 h)
- _____ EXP 5717 Animal Psychophysics (3 h)
- _____ EXP 6609 Working Memory and Cognitive Control (3 h)
- _____ GMS 5095 Modeling Human Disease (3 h)
- _____ MAP 5932 Introduction to Computational Neuroscience (3 h)
- _____ PCB 5845 Cell and Molecular Neuroscience (4 h)
- _____ PCB 5137 Advanced Cell Biology (3 h)
- _____ PCB 5525 Molecular Biology (3 h)
- _____ PCB 5595 Advanced Molecular Biology (3 h)
- _____ PCB 5747 Mammalian Physiology (3 h)
- _____ PCB 5786 Membrane Biophysics (3 h)
- _____ PCB 5795 Sensory Physiology (3 h)
- _____ PSB 5230C Vertebrate Neuroanatomy (4 h)
- _____ PSB 5341 Systems and Behavioral Neuroscience (3 h)
- _____ PSB 5347 Molecular Neuropharmacology (3 h)
- _____ PSB 6048 Affective Neuroscience (3 h)
- _____ PSB 6059 Behavioral Neuroendocrinology (3 h)
- _____ PSB 6059 Neurobiology of Social Behavior (3 h)
- _____ PSY 5916 Introduction to fMRI (3 h)
- _____ PSY 5916 MATLAB (3 h)
- _____ PSY 6919 Research Design and Analysis II (3 h)

III. Laboratory Experience

Students are required to gain research experience (equivalent to a 3 h DIS) outside of their home lab. This may be in the form of a DIS or similar research experience (e.g., immersive workshop), and must be approved by the student's committee. List the topic, directing professor (if applicable) and the semester/year completed.

1. _____

IV. Talk Requirement

Students must give at least 2 formal presentations (oral or poster). At least one of these presentations must be delivered to an audience outside of FSU. List the semester/year and venue for each presentation.

1. _____
2. _____

V. Research Courses (list the semester and year completed)

- _____ PSY 6656 Preliminary Exam Preparation (minimum of 3 credit hours; NS/PSY students only)
- _____ BSC 8964 / IHS 8960 / PSY 8964 Preliminary Doctoral Exam (0 credit hours)
- _____ IHS 5503 Proposal Development (1 h; NS/BMS students only)
- _____ BSC 6980 / IHS 6980 / PSY 6980 Dissertation* (minimum of 24 credit hours)
- _____ BSC 8985 / IHS 8970 / PSY 8985 Dissertation Defense** (0 credit hours)

*Students must register for at least 2 credit hours of Dissertation in the semester of graduation.

**Students must be registered for Dissertation Defense in the semester in which the manuscript is defended. If the manuscript clearance deadline is not met for that semester, graduation will be deferred to the following semester.

VI. Research Elective Courses (used to bring your course schedule to 9 credit hours per semester)

Students may take the following courses to maintain full-time enrollment status. These courses may be repeated.

- PSB 6920 Neuroscience Colloquium (1 h/semester; S/U)
- PSB 6933 Seminar in Neuroscience (1 h/semester; S/U)
- BMS 5905 Directed Independent Study in Biomedical Sciences (1-9 h/semester; S/U)
- BSC 5900 Individual Research Study (3 -9 h/semester; S/U)
- PSY 5900 Individual Research Study (3-9 h/semester; letter-graded)
- PSY 5908 Directed Individual Study (1-9 h/semester; S/U)
- BMS 6936 Seminar in Biomedical Sciences (1 h/semester; S/U)