Georgia State University

Neuroscience Institute

Graduate Program Policy Document
2014-2015

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I. INTRODUCTION

This Graduate Program Policy Document describes requirements for earning an advanced degree in Neuroscience from the Neuroscience Institute, College of Arts and Sciences, Georgia State University. Graduate students in the Neuroscience Institute and their advisors are expected to be familiar with all of the requirements, policies, and procedures described herein.

Students and their advisors are also responsible for knowing and complying with the policies and requirements of the College of Arts and Sciences as described in the Graduate Catalog.

In general, students must adhere to the course requirements and other requirements in effect when they enroll, as described in the edition of the Graduate Program Policy Document that corresponds to the year they entered. Students may elect, however, to be governed by a later edition of the Graduate Program Policy Document. To do so, they must submit a request in writing to the Director of Graduate Studies (DGS).

II. DEGREE REQUIREMENTS

A. Master of Science (36 hours)

A Master of Science is earned en route to the Neuroscience Ph.D. degree (See D. below regarding Terminal Masters degree). A minimum of 36 hours of graduate coursework is required for the Master of Science degree in Neuroscience. To satisfy the minimum requirements for the degree, the student must complete successfully:

i. A minimum of 28 hours of graduate classroom coursework, which must include:

   a. Neuroscience core courses (8 hours)
   b. Quantitative course requirement (4 hours)
   c. Graduate Studies core courses (4 hours)
   d. Neuroscience electives (12 hours, 8 of which must be Topics, Concepts, and/or Seminar courses)

ii. A minimum of 8 semester hours of research credit. This requirement may be satisfied by enrolling in Neur 8800 Master’s Research or the equivalent.

iii. A successful qualifying exam (see Section X).
B. Doctor of Philosophy (90 hours)

A minimum of 90 hours of graduate credit is required for the Ph.D. degree in Neuroscience. To satisfy the minimum requirements for the degree, the student must complete successfully:

i. The Master of Science in Neuroscience (36 hours).
ii. A minimum of 54 semester hours of research credit. This requirement can be satisfied by a combination of Neur 9910 Advanced Research, NEUR 9999 Dissertation Research (minimum 20 hours) and Neur 9920 Advanced Directed Readings or the equivalent.
iii. An approved dissertation proposal (see Section XIB).
iv. An approved dissertation (see Section XIC).
v. A successful dissertation defense (see Section XID).

C. Evaluation of previous coursework and degrees

Students admitted for graduate study that have already taken relevant graduate classes or who are in possession of a graduate degree may be accorded advanced standing after an evaluation of previous graduate work. This evaluation would normally be conducted by the DGS before entry into the program or at the very latest during the first semester of enrollment.

D. Terminal Master’s Degree Policy

Some students, for various reasons, will not complete the PhD degree, but may want to exit the NI graduate program with a Master's degree.

Students may enter the terminal M.S. track in the following ways:
1. A student indicates in writing to the DGS that s/he has decided to pursue the terminal Master’s degree and not go on to pursue a doctoral degree.
2. The student has failed the qualifying exam twice.
3. Annual review of the student’s progress indicates that the student will not be able to complete the doctoral degree requirements successfully.

Requirements for the Terminal Master’s degree (36 hours)
To satisfy the minimum requirements for the degree, the student must complete successfully

i. A minimum of 28 hours of graduate classroom coursework, which must include:
   1. Neuroscience core courses (8 hours)
   2. Quantitative requirement (4 hours)
   3. Graduate Studies core courses (4 hours)
4. Neuroscience electives (12 hours), of which 8 must be Topics, Concepts, and/or Seminar courses

ii. A minimum of 8 semester hours of research credit. Enrolling in Neur 8800 Master’s Research or the equivalent may satisfy this requirement.

iii. A written product approved by the student’s Terminal Master’s committee.

Possible products
1. Literature review
2. Empirical paper
3. Methodological/technical paper
4. Research proposal
5. Other (determined by the committee and student with approval of the Graduate Program Committee)

Committee composition and selection
The terminal Master’s degree committee will consist of three core and/or associate NI faculty. The student will provide the DGS with a list of five names and the DGS will select three based on faculty workload constraints.

Committee responsibilities
The committee will determine which product the student will complete and the timeline for completion, and will evaluate the final product as satisfactory or unsatisfactory.

*Students should apply for graduation as soon as they choose this track.

III. DEGREE OBJECTIVES AND REPRESENTATIVE SKILLS

A. Objective 1: Neuroscience Theory and Content
Develop expertise with major concepts, theoretical perspectives, and empirical findings in neuroscience and in their research specialty area.

Representative Skills:
i. Use concepts in neuroscience to describe, explain, and evaluate phenomena and to generate new ideas.

ii. Apply knowledge from other scientific disciplines to the understanding of fundamental neuroscience principles.

B. Objective 2: Critical Thinking Skills
Use critical and creative thinking, skeptical inquiry, and the scientific approach.
Representative Skills:
i. Ask scientific questions and construct reasonable hypotheses.
ii. Establish a research focus that identifies and builds on primary research in neuroscience.
iii. Practice the scientific method and understand its limitations.
iv. Master laboratory skills consistent with the requirements of the student’s field.
v. Use statistical reasoning routinely for evaluating research and apply appropriate statistics and other analytical methods.
vi. Seek the most precise and parsimonious explanation of data.
vii. Use skepticism consistently as an evaluative tool.
viii. Formulate and test alternative explanations and models for experimental evidence.
ix. Evaluate relevant content from a broader range of available resources; show refined and flexible use of published research.
x. Create compelling arguments with attention to subtle meaning of content; anticipate and defend against criticism, adapt arguments for a wide range of audiences.

C. Objective 3: Communication and collaboration

Representative Skills:
i. Communicate effectively in oral and written forms.
ii. Read and demonstrate an understanding of scientific literature.
iii. Critique and analyze claims of others in a scientific context.
iv. Demonstrate an understanding of scientific terminology.
v. Work effectively in group situations.

D. Objective 4: Professional Standards

Representative Skills:
i. Engage in ethical professional behavior.
ii. Demonstrate awareness and compliance with regulations and compliance issues.

E. Objective 5: Career Planning and Development

Emerging from graduate school with credentials and plans for career path.

Representative Skills 5:
i. Attend and participate in conferences relevant to area of specialization.
ii. Collaborate on publications relevant to area of specialization.
iii. Demonstrate effective teaching and mentoring skills.
IV. COMMITTEE ADVISORY

The Advisory Committee advises students about issues related to the graduate program and professional development. Each incoming student will have an Advisory Committee composed of three Core, Associate, or Affiliate tenured or tenure-track faculty members of the Neuroscience Institute. The DGS will choose the committee members (in consultation with the advisor, if applicable; see Advisors, Section V). Students are expected to meet with their Advisory Committee (separately or as a group) at least once per academic year for the first 2 years in the program. Students must email the Graduate Program Administrator to indicate the date the meeting took place and which faculty members were in attendance. The advisory committee will be disbanded after the qualifying exam is passed. At that point, the student will form a dissertation committee.

V. ADVISORS

The advisor advises students regarding issues relating to the degree program and serves as the student’s mentor. Each incoming student will have the choice of either 1) immediately working with a particular advisor or 2) rotating between two or three laboratories during their first year in order to identify a suitable advisor. Once the student has selected an advisor and the advisor has agreed to serve in this role, the student must notify the DGS by submitting an Advisor Designation Form (see Appendix, Section XIV). Students are welcome to consult with the DGS regarding the selection of their advisor.

VI. ADMINISTRATIVE PROCEDURES

A variety of University, College, and Neuroscience Institute administrative matters are described in this section. Students should also be familiar with college polices as described at the College of Arts and Sciences Website http://www.cas.gsu.edu/grad.html

A. University and College Matters

i. Registration for Courses:

There are two opportunities to register for courses each semester. Regular registration is held during the middle of the preceding semester. Late registration is held the week immediately before the beginning of the semester. Typically students register via the Internet. Computer registration is available on campus at times and locations listed on the following URL: https://www.gosolar.gsu.edu/webforstudent.htm

Student appointment times are valid from the beginning of their assigned time until the last day of their registration phase. Regular
registration appointments are assigned with priority to students scheduled to graduate and then to continuing students in reverse order of the total credit hours earned.

Students needing a particular course should register and pay for it during regular registration since it cannot be assumed that spaces will remain in the course through late registration.

ii. Application for graduation:

Students must apply for graduation two semesters in advance of their expected date of graduation. This applies to both the MS degree and the PhD degree. Applications and additional information are available on the College of Arts and Sciences’ website (http://www2.gsu.edu/~wwwgas/graduation.html). If a student is unable to finish by the semester originally specified, it is the student’s responsibility to change the date by contacting the Graduation Office. Once a student has applied to graduate, an audit of the student’s records will be completed by the Office of Graduate Studies, College of Arts and Sciences (8th floor Haas-Howell Bldg). It is the student’s responsibility to discuss any discrepancies with the Neuroscience Institute DGS.

When students apply to graduate they should also schedule a meeting with their committee and the DGS to discuss the graduation timeline, review policies and procedures, and to ensure all committee members are informed and in agreement.

iii. Residency requirements: In order to earn a graduate degree at Georgia State University, students must earn the majority of their graduate program credit hours from Georgia State University.

iv. Inactive status:

Students who have not registered for course work at Georgia State University for one year (i.e., three consecutive semesters, including summer semester) will be placed on inactive status by the Registrar’s Office of the University. Such students, if they wish to resume their studies, must file a re-entry application with the Office of the Registrar. Whether such an application will be accepted or denied will be decided on a case-by-case basis and requires the approval of the Graduate Program Committee.

v. Time limits on coursework presented for degrees:

All credits presented for the Master’s degree must have been earned within 7 calendar years of the date of the degree. All credits for the
doctoral degree must have been earned within 10 years of the date of
the degree. Courses taken earlier must be retaken or, alternatively,
students may file a Petition for Deviation from Graduate Bulletin
Regulations with the Office of Graduate Studies. Before filing such a
petition, students should consult with the DGS.

B. Neuroscience Institute Matters

i. Updating the Student’s Master Record:

The Graduate Program Administrator is responsible for maintaining
records relating to students’ progress in the program. This database
contains the dates on which students met milestones, the name of their
advisor, the names of chairs and members of their committees, etc. No
committee is regarded as officially formed, nor is any exam, proposal or
oral defense regarded as officially passed, until appropriate notice has
been given to the Graduate Program Administrator and until the
information is recorded in the database.

ii. Current Student Addresses:

Both the university and the department need to have each student’s
current mailing address and telephone number on file. If your mailing
address or telephone number changes, please let the Graduate
Program Administrator know immediately (via email or campus mail).
You must also notify the Registrar’s Office via GoSolar of any change in
address. Likewise, if your wish to change your name of record, you
must inform both the department and the Registrar.

iii. Student email addresses:

Much of the communication in the department takes place
electronically. Thus, all graduate students are required to have a GSU
e-mail address and to check their messages frequently (the University
provides GSU student email accounts to any student who does not
already have one). The department will only use the e-mail account
that is provided by the University to contact students (i.e.,
studentlastname#@student.gsu.edu). For instructions on forwarding
your GSU email to your personal account, visit
http://www.gsu.edu/ist/31718.html#7.

iv. Leaves of Absence:

Students who wish to take a leave of absence for personal or medical
reasons should submit such requests in writing to the DGS for
consideration by the Graduate Program Committee. Such requests
must specify the intended duration of the leave of absence, specified
with exact dates that span one or more semesters. A maximum of 1
year may be requested at a given time, although extensions may be requested by following the same procedure.

The purpose of the leave is to temporarily suspend the timeline on the student’s milestones for the period of the leave. Although Neuroscience Institute progress guidelines are adjusted for departmentally-approved leaves of absence; this does not exempt students from any College or University policies (e.g. expiration of coursework, continuous enrollment, inactive status, etc).

VII. TIMETABLE AND COURSE OFFERINGS

In order to qualify for a tuition waiver, students must register for exactly 18 credit hours during Fall, Spring and Summer. Maymester registration is not required. This can be accomplished through a combination of course and/or research/reading hours. Summer hours are typically all research hours. Approval is required from the DGS to register for more than 18 hours. Requests must include a strong and compelling justification.

In order to obtain authorization for courses, you must turn in a Course Authorization Form to the Graduate Program Administrator.

A. Recommended Core Course Timetable

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>Neurobiology I (NEUR 8010)</td>
<td>Neurobiology II (NEUR 8020)</td>
</tr>
<tr>
<td></td>
<td>Statistics (NEUR 8040) or Computational Neuroscience (will be NEUR 8030, to be 1st offered in Fall 2015)</td>
<td>Neuroscience Electives</td>
</tr>
<tr>
<td></td>
<td>Responsible Conduct in Research (NEUR 8600)</td>
<td></td>
</tr>
<tr>
<td>2nd year</td>
<td>Neuroscience Electives</td>
<td>Professional Development in Research (NEUR XXXX) or Survival Skills (NEUR 6600)</td>
</tr>
</tbody>
</table>

B. Research/Reading Hours

Students are expected to register for a total of 62 semester hours of research hours. Students’ register for

- NEUR 8800 until they have passed their qualifying exam,
- NEUR 9910 until they have defended their dissertation proposal,
- NEUR 9999 until they defend their dissertation.
*In addition, students should also register for NEUR 8810 (Directed Lab Study) every semester.

Research/Reading hours

<table>
<thead>
<tr>
<th>NEUR #</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>6990/8990</td>
<td>Internships in Neuroscience</td>
</tr>
<tr>
<td>8800</td>
<td>Master's Research</td>
</tr>
<tr>
<td>8810</td>
<td>Directed Lab Study</td>
</tr>
<tr>
<td>9910</td>
<td>Advanced Research</td>
</tr>
<tr>
<td>9920</td>
<td>Advanced Directed Readings</td>
</tr>
<tr>
<td>9999</td>
<td>Dissertation Research</td>
</tr>
</tbody>
</table>

C. Topics/Concepts

In addition to the core courses and research hours, students are expected to successfully complete 7-8 semester hours of topics and/or concepts courses and 3-4 semester hours of electives. Students are encouraged to begin taking elective and topics/concepts courses beginning in their first year. Students should consult GoSolar to determine which topics/seminar and elective courses will be offered in a given year as the selection varies and may include new courses not listed here.

<table>
<thead>
<tr>
<th>NEUR #</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>8700</td>
<td>Seminar in Psychology</td>
</tr>
<tr>
<td>8705</td>
<td>Topics in Neuropsychology</td>
</tr>
<tr>
<td>8710</td>
<td>Concepts in Neurobiology</td>
</tr>
<tr>
<td>8715</td>
<td>Brains and Behavior Seminar</td>
</tr>
<tr>
<td>8720</td>
<td>Topics in Behavior and Neurobiology</td>
</tr>
<tr>
<td>8730</td>
<td>Concepts in Neuroscience</td>
</tr>
<tr>
<td>8740</td>
<td>Topics in Behavioral Neuroscience</td>
</tr>
<tr>
<td>8750</td>
<td>Seminar in Philosophy of Science</td>
</tr>
<tr>
<td>8760</td>
<td>Seminar in Philosophy of Mind</td>
</tr>
<tr>
<td>8761</td>
<td>Seminar in Moral Psychology</td>
</tr>
<tr>
<td>8762</td>
<td>Topics in Neuroethics</td>
</tr>
<tr>
<td>8763</td>
<td>Seminar in Ethics</td>
</tr>
<tr>
<td>8764</td>
<td>Seminar in Bioethics</td>
</tr>
<tr>
<td>8770</td>
<td>Seminar in Philosophy &amp; Cognitive Science</td>
</tr>
<tr>
<td>8780</td>
<td>Seminar in Neuroscience</td>
</tr>
<tr>
<td>8790</td>
<td>Topics in Neuroscience</td>
</tr>
</tbody>
</table>

D. Electives

<table>
<thead>
<tr>
<th>NEUR #</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>6010</td>
<td>Neurobiology (taken if weak background)</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>6100</td>
<td>Developmental Neurobiology</td>
</tr>
<tr>
<td>6110</td>
<td>Neural Plasticity</td>
</tr>
<tr>
<td>8035</td>
<td>PSY Research Statistics I</td>
</tr>
<tr>
<td>8100</td>
<td>Developmental Neuropsychology</td>
</tr>
<tr>
<td>6200</td>
<td>Endocrinology</td>
</tr>
<tr>
<td>8200</td>
<td>Protein Structure and Function</td>
</tr>
<tr>
<td>8210</td>
<td>Nucleic Acid Structure and Function</td>
</tr>
<tr>
<td>8230</td>
<td>Psychopharmacology</td>
</tr>
<tr>
<td>8240</td>
<td>Graduate Neuroendocrinology</td>
</tr>
<tr>
<td>6300</td>
<td>Introduction to Psychopharmacology</td>
</tr>
<tr>
<td>6310</td>
<td>Neurobiology Laboratory</td>
</tr>
<tr>
<td>6320</td>
<td>Fundamentals of Bioinformatics</td>
</tr>
<tr>
<td>6340</td>
<td>Neurophysics</td>
</tr>
<tr>
<td>6350</td>
<td>Numerical Methods for Neuroscience</td>
</tr>
<tr>
<td>6360</td>
<td>Mathematical Biology</td>
</tr>
<tr>
<td>6370</td>
<td>Applied Dynamical Systems</td>
</tr>
<tr>
<td>8300</td>
<td>Functional Human Neuroanatomy</td>
</tr>
<tr>
<td>8310</td>
<td>Research Methods in Psychology</td>
</tr>
<tr>
<td>8320</td>
<td>Psychological Research Statistics II</td>
</tr>
<tr>
<td>8330</td>
<td>Psychological Research Statistics III</td>
</tr>
<tr>
<td>8340</td>
<td>Dynamical Foundations of Neuroscience</td>
</tr>
<tr>
<td>8350</td>
<td>Advanced Bioinformatics</td>
</tr>
<tr>
<td>8360</td>
<td>Informatics of Neural &amp; CV Systems</td>
</tr>
<tr>
<td>8370</td>
<td>Computational Modeling and Methods</td>
</tr>
<tr>
<td>8380</td>
<td>Computational Neuroscience</td>
</tr>
<tr>
<td>8385</td>
<td>Systems Biology</td>
</tr>
<tr>
<td>8390</td>
<td>Intro to Modeling for the Life Sciences</td>
</tr>
<tr>
<td>8395</td>
<td>Advanced Mathematical Biology</td>
</tr>
<tr>
<td>9300</td>
<td>Neuropsychological Assessment</td>
</tr>
<tr>
<td>6400</td>
<td>Primate Behavior</td>
</tr>
<tr>
<td>6410</td>
<td>Sensation &amp; Perception</td>
</tr>
<tr>
<td>6420</td>
<td>Hormones and Behavior</td>
</tr>
<tr>
<td>7400</td>
<td>Psychology of Animal Behavior</td>
</tr>
<tr>
<td>8400</td>
<td>Intro to Clinical Neuropsychology</td>
</tr>
<tr>
<td>8410</td>
<td>Advanced Cognitive Psychology</td>
</tr>
<tr>
<td>6500</td>
<td>Philosophy of Science</td>
</tr>
<tr>
<td>6510</td>
<td>Philosophy of Cognitive Science</td>
</tr>
<tr>
<td>6520</td>
<td>Philosophy of Mind</td>
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<tr>
<td>6530</td>
<td>Neuroethics</td>
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<td>6540</td>
<td>Moral Psychology</td>
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<tr>
<td>6550</td>
<td>Ethical Theory</td>
</tr>
<tr>
<td>6560</td>
<td>Advanced Bio Ethics</td>
</tr>
</tbody>
</table>
If a student wishes to take a graduate course offered at GSU for an elective that is not on this list, then the student must submit a petition to the DGS, which will be considered by the Graduate Program Committee.

VIII. ANNUAL REVIEW

A. Goal

The objective of the review is to assess each student’s performance and progress to better advise him/her through the PhD program. The annual review summarizes and reflects the faculty member’s judgment regarding each student’s ability to complete more advanced academic work and to master all aspects of professional training relevant to the student’s area of research. The annual review also serves as the basis for the development of a corrective action plan if significant concerns are identified.

B. Procedures

Annual evaluations occur each year according to the following procedures:

i. One week after the last day of finals in the spring semester, students submit an annual report describing their research, academic activities, and accomplishments during the previous academic year, and their plans for the next academic year (see Annual Report Form, Appendix XIVB). One copy is submitted to the Graduate Program Administrator (electronically) and one to the student’s advisor.

ii. At the end of each academic year, the DGS will solicit Neuroscience Institute Core and Associate faculty for written feedback that they may have regarding Neuroscience Institute graduate students (e.g., performance in class, research activities, or as a teaching assistant).

iii. The DGS will forward this information to the student’s advisor.

iv. Based on this information, the student’s advisor will write a letter to the student. This letter will summarize the contents of the student’s annual report, include any feedback from other faculty, and will provide feedback and/or advice from the advisor. The letter will not contain any specific ratings, but is meant to provide the student with feedback (as described in ‘Goal’ section above). All aspects of a student’s activities and performance are reviewed, including:

- academic performance
- research performance
- teaching assistant performance (when applicable)
teaching performance (when applicable)

- professionalism and citizenship (e.g., compliance with regulations, service to the scientific community, conduct with colleagues)

v. On or before June 15, the student and the advisor will review and sign the advisor’s letter and the student will submit a signed copy to the DGS. (Signature indicates that the student and advisor have both seen and discussed the document.)

vi. If the student has any concerns with the advisor’s letter, the student may submit a letter addressing these concerns to the DGS and the advisor by July 15.

vii. The annual report and advisor’s letter will be reviewed by the Graduate Program Committee in a meeting called for this purpose. All graduate faculty will be notified of this meeting and may attend. This meeting will be scheduled in the summer before the start of the fall semester.

In those cases in which the Graduate Faculty determine that there are serious concerns with a student’s performance, the DGS will design a plan of corrective action in consultation with the student’s advisor and the student.

IX. PERFORMANCE EXPECTATIONS

Students must adhere to the progress guidelines and performance standards of both the College of Arts and Sciences and the Neuroscience Institute. The College of Arts and Sciences and the Neuroscience Institute expect students to maintain superior performance in course work as detailed below.

A. Grades

i. Letter Grades:

As per regulations of the College of Arts and Sciences, the Neuroscience Institute requires that a grade point average (GPA) of 3.0 (i.e., a B average) be maintained and stipulates that a graduate student may be subject to dismissal for failure to achieve a 3.0 cumulative GPA by the end of the next 18 semester hours of enrollment in letter-graded courses after the GPA has fallen below 3.0. Letter-graded courses used to satisfy Neuroscience degree requirements must be passed with a grade of B or better (a B- is not sufficient). If the student earns a lower grade in one of these courses, the student will need to remedy this in a manner to be determined by the DGS (in consultation with the course instructor when possible).

ii. Satisfactory and Unsatisfactory Grades:
Certain courses in the Institute are graded as satisfactory (S) or unsatisfactory (U). Although these grades are not included in the student’s GPA, unsatisfactory performance is considered a serious matter and could constitute grounds for dismissal.

B. Research & Exams

i. Qualifying Exam and Dissertation:

The student has two opportunities to take the Qualifying Exam. If a student fails the Qualifying Exam twice, then the DGS will initiate a dismissal action as per College requirements (see Dismissals and Appeals, Section XIII).

If the student fails the dissertation defense, the student has 8 months to correct the deficit by passing a second dissertation defense. If this does not occur, the DGS will initiate a dismissal action.

ii. Research Performance

Research performance plays a significant role in the evaluation of a student’s progress. Two negative evaluations in research courses (i.e. NEUR 8800, 9910 or 9999; see Section VII), as indicated by grades of U (unsatisfactory), will be grounds for dismissal (see Dismissals and Appeals, Section XIII).

C. Probationary status:

Students who do not meet performance expectations or specified deadlines will be placed on probationary status. At this time, the DGS, in consultation with the student’s advisor, will determine the steps the student must take in order to be removed from probationary status and the deadline for completing those steps. The DGS will provide this information in writing to the student. Failure to complete the required steps in the specified time is grounds for dismissal (See Section ?).

X. QUALIFYING EXAM

A. Background

The NI faculty consider the Qualifying exam as both an exam and an assessment. It is also an opportunity to provide students with training in the scientific method and grant writing.

B. Goals of the exam

i. To assess the student’s understanding and communication of fundamental and complex concepts in neuroscience
ii. To assess the student’s development and potential as an independent research scientist.

C. Timing

Students will take the qualifying exam during the Fall semester of their third year in the program.

D. Requirements

i. Students must have completed all of their core coursework (i.e. NEUR 6600, 8010, 8020, 8030 8040, and 8600).

ii. Students must have obtained a minimum overall GPA of 3.0 in all of their GSU graduate coursework.

E. Examination committee

Before the end of the Spring semester of their second year, students must submit a list of at least five potential examination committee members in rank order to the DGS. Two of these potential members should be identified as breadth members (i.e., not closely related to the student’s research area). Students should also identify faculty with which they have a conflict of interest (faculty who's judgment may be adversely affected due to a personal interest or conflict) and the reason why they should not serve on the student’s committee. The student should discuss their list with their advisor prior to submitting it to the DGS. The DGS will use this list to select three faculty members to serve on the student’s committee and will appoint one of these members as the chair. Faculty workload issues may constrain the Director of Graduate Study’s ability to choose from the student’s list.

All Core, Associate, and Affiliate Neuroscience Institute graduate faculty are eligible to serve as examination committee members. There are no stipulations regarding the number of Core, Associate, or Affiliate members that must serve on a given committee, although Affiliate members may not serve as the committee Chair. If the student suggests a non-NI faculty member, then that person’s curriculum vitae needs to be submitted and reviewed by the Graduate Program Committee. The student’s advisor may not serve on this committee.

Students should consult with their individual committee members to determine whether to submit hard copies and/or electronic versions of their Qualifying Exam documents.

F. Timetable

1. Pre-proposal:
Due approximately by the end of the second week of classes (exact date specified by the DGS).

2. **Pre-proposal meeting:**
Within 2 weeks of submitting pre-proposal to committee

3. **Summary of recommended changes:**
Student provides committee with a summary of the meeting including recommended additions and revisions within 24 hr of the pre-proposal meeting.

4. **Pre-proposal acceptance by the committee:**
Within 1 week of pre-proposal meeting.

5. **Full proposal:**
Due mid-way through the semester (exact date specified by the DGS)

6. **Feedback from committee on full proposal:**
Within 1 week of receipt of the proposal. The committee chair will provide the student with a written summary of strengths and weaknesses and recommended changes.

7. **Submission of final proposal:**
At least 2 weeks before oral examination.

8. **Oral examination:**
No later than the last day of classes.

<table>
<thead>
<tr>
<th>PRE-PROPOSAL</th>
<th>MID-POINT ASSESSMENT</th>
<th>DEFENSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student submits 1000 word or less document</td>
<td>Student submits draft of full document</td>
<td>Student submits completed document at least 2 weeks prior to oral defense</td>
</tr>
<tr>
<td>Student gives 15 min maximum presentation</td>
<td>Committee discusses / reviews the document (student not included)</td>
<td>Student gives 20 min maximum presentation</td>
</tr>
<tr>
<td>Student writes summary of committee discussion / recommendations / changes within 24 hr</td>
<td>Chair sends comments and any required changes within 1 week to student</td>
<td>Committee asks questions related to defense of proposal and breadth of knowledge related to proposal</td>
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</tbody>
</table>
9. Failure to follow Qualifying Exam timetable
Students who fail to submit their QE documents when they are due will be placed on probationary status. Note that failure to meet the terms of the probationary status are grounds for dismissal.

G. Written component

i. General Rules:

The candidate is expected to write a 10 page single-spaced proposal for a research project using either the NSF-style grant application format or the NIH NRSA pre-doctoral format.

In order to assess the candidate’s ability to develop an independent research proposal, the topic will be selected by the student. The content of the proposal should be original, should not duplicate any previous research, and cannot include:

a. Experiments that have already been proposed by the student’s advisor.

b. Experiments that are underway in the advisor’s laboratory.

c. Experiments that have been planned or designed by members of the student’s lab research group.

d. Prior research conducted or proposed in other laboratories they have worked in.

At all stages of the Qualifying Exam (with the exception of the oral portion), the candidate is encouraged to use multiple sources of written materials and to consult with departmental faculty, including their advisor. Such consultations are expected to cover general approaches to writing or methodology, rather than issues pertaining to the proposal in particular.

You may discuss:

• a particular experimental, analytical or statistical technique: how it works, what it measures, its range of validity, etc.

• any published paper or any grant proposal by anyone other than you

• your plans with your advisor, but only to ensure that there is no significant overlap with your advisor’s research program.

• questions about writing style

You may not discuss:

• any part of the proposed content/experiments, described orally or in written form (with the exceptions noted above).
ii. Specifics

a. Pre-proposal:

For the first step of the Qualifying Exam, the candidate is expected to submit a 1000-word pre-proposal to all members of his/her committee and advisor by a deadline specified by the DGS (approximately second week of classes).

This pre-proposal will include:
1. One to two specific aims (1-2):
   Each aim will be stated, either in the form of a question or a statement. The aim will likely have more than one experiment associated with it (for example Aim 1, Expt 1a, 1b, etc).

2. The overarching hypothesis, which is NOT a prediction.

3. Predictions based on the hypothesis.
   This prediction should take the form of TWO if-then statements. For example, 1) “if my hypothesis that caffeine improves critical thinking is true, then subjects who drink a cup of coffee before taking a test of critical thinking will perform better than students drinking a cup of decaffeinated coffee and 2) if my hypothesis is NOT true then the cafffeinated students will perform no better or worse.

4. A brief description of the background and significance.

5. Research design (i.e. independent and dependent variables, delineation of research groups and controls) and methods (rationale, expected results and interpretation)

6. Certification by your principal advisor that your proposed experiments do not overlap with your advisor’s research program as described in the Graduate Program Policy Document.

Within 2 weeks of the submission of the pre-proposal, the student and committee will meet to discuss the pre-proposal. The student will give a 15 min maximum oral presentation. Following this meeting, the student is expected to prepare a written summary of the committee’s description of the pre-proposal deficiencies and give this summary to each member of the committee the following business day after the meeting. The committee will revise the summary as needed. Based on this summary, the candidate will have 1 week to submit a revision of the pre-proposal. At this point the committee will let the student and DGS know whether or not the pre-proposal has been approved. If it has not been approved, the committee chair will
consult with the DGS and the student to determine when the student can retake the exam.

b. Full proposal:

The full proposal will be due to the committee and advisor at the mid-point of the semester (exact date specified by the DGS) and must include the following:

1. Specific Aim(s):

List the broad, long-term objectives and the goal of the specific research proposed, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, address a critical barrier to progress in the field, or develop new technology.

2. Background and Significance:

Briefly sketch the background research leading to the proposed project, critically evaluate existing knowledge, and specifically identify the gaps that the project is intended to fill.

3. Research Design and Methods:

Describe the research design, procedures, and analyses to be used to accomplish the specific aim(s) of the project. Include how the data will be collected, analyzed, and interpreted. Describe any new methodology and its advantage over existing methodologies. Describe any novel concepts, approaches, tools, or technologies for the proposed studies. Discuss the potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the aims. As part of this section, provide a tentative sequence or timetable for the project.

The candidate will submit one hard copy and one electronic copy of the completed proposal to the committee members and advisor by the appropriate deadline. The maximum length of the proposal is 10 single-spaced pages and minimum 11 point font size.

H. Oral Examination

The oral examination will be scheduled within 2 weeks of the submission of the written proposal. The student will make a 20-min (maximum) oral presentation of their proposal using PowerPoint or similar presentation software. A typical exam is expected to last approximately 2 hours. The candidate is expected to demonstrate understanding of all components of
the proposal and an understanding of the fundamental principles of neuroscience. The only members present will be the candidate and Examination Committee.

I. How to prepare
In addition to reviewing core coursework, especially the portions of the Survival Skills class dealing with strong inference, experimental design, and grant writing, students should read numerous papers in a critical fashion, attend and give many presentations, and examine funded and unfunded grant proposals, and strong pre-proposals and proposals from other students. Look at the milestone evaluation form to see what will be expected of you.

To get started, read papers and think about what the next obvious experiments would be. Or if there is a new technique that has come out, think about how you would apply it to a question that you’re interested in. The hardest part is defining the question. So, spend time thinking about the question that you are posing and the hypothesis that you are generating from that question. These will guide the experiments that you will propose.

J. Evaluation criteria

The Milestone Evaluation Form (see Appendix XIVA) will be used. All members of the Examination Committee will rate the student independently. Ratings will be discussed by members after the ratings are completed and revised based on discussion if need be. The rating endorsed by the majority of committee members for each skill will be the rating the student receives for that skill. The Committee Chair will give the form to the Graduate Program Administrator for the student’s file. Students should contact the Graduate Program Administrator for a copy.

K. Possible outcomes:

Following completion of the oral examination, the candidate will be excused and the Examination Committee will confer on the outcome of the examination.

Possible outcomes include:

i. Satisfactory:

All ratings on the Milestone Evaluation Form = 1 or 2. The student has passed the Qualifying Exam.

**Once the student has passed the Qualifying Exam, taken all core courses etc, they can apply for the Master’s degree (see Master’s Requirements, Section II and Applying for Graduation, Section VI).
ii. Conditional Satisfactory:

One or two ratings on the *Milestone Evaluation Form* = 3. The student’s performance is satisfactory, but some deficiencies have been identified and the committee develops a plan that the student must follow to make it satisfactory (e.g., additional coursework, rewriting portions of the proposal, meeting with a faculty member to discuss the relevant literature in the field).

iii. Unsatisfactory:

Three or more ratings on the *Milestone Evaluation Form* = 3. The student has failed the Qualifying Exam. If this is the first failure, the student will have to re-take the complete examination at a later date to be determined by the DGS. This will require a new research pre-proposal and proposal.

L. Common mistakes:

INSUFFICIENT CREATIVITY: The student has proposed to do what has already been published or communicated. Rather, the proposal should be creative and not just a repackaging or slight variation on what is being done by the mentor or in the literature.

NOT HYPOTHESIS DRIVEN: The proposal is descriptive or a “fishing expedition”. The student's aims must reduce to the form "We predict that Y will happen if we do X", and not reduce to “We want to see what will happen if we do X".

PROBLEM WITH SCOPE: The scope of the project is too ambitious (e.g. too many hypotheses, experiments, etc) or too unfocused.

PROBLEM WITH RATIONALE: The rationale (the reason the study should be done) has not been made explicit. The fact that something has never been done before is NOT a sufficient reason to spend money doing it- there may be an excellent reason it hasn’t been done!

NOT MECHANISTIC: The experiments have not been designed to elucidate the mechanism of the phenomenon studied. Mechanisms could be at any of several levels of analysis, e.g. endocrine, evolutionary, pharmacological, physiological, cellular, or molecular level. Ask yourself, am I trying to stop something that is started, or start something that is stopped? If yes, then it is mechanistic, if no, then it is not.

EXPERIMENTS DON’T ADEQUATELY ADDRESS THE HYPOTHESIS: The proposal is hypothesis driven, but the design of the experiments does not test or only indirectly tests the question. The experiments should not test a different question than the one that the student has posed.
TRYING TO “PROVE” THE HYPOTHESIS: The emphasis and the bulk of the proposed experiments/controls have been aimed at proving rather than DISproving the hypothesis. Experiments that are designed to prove the hypothesis are nearly always lacking controls or including too many assumptions. Science advances by exclusion of alternative hypotheses, not trying to ‘prove’ your favorite one. Controls are actually more important than the experimental treatments in many respects because they allow proper interpretation of the experimental results.

HOUSE OF CARDS: The experimental design is such that if the first experiment doesn’t work then the rest of the project can’t be done. There should be a guaranteed interesting and useful outcome no matter whether the hypothesis is supported or refuted.

WEAK CONTROLS: The controls have not been properly designed to interpret the outcomes of experiments or rule out false positives or false negatives. It is not acceptable to simply state that “a vehicle control will be included”, unless it is made explicit what alternative hypothesis the control is intended to test/exclude. For example, the decaf coffee in the example above controls for some alternate explanations of a false positive result- that drinking anything at all could improve thinking skills, or that something in coffee other than caffeine is responsible. It is essential to include BOTH positive and negative controls.

PROBLEMS WITH THE MODEL OR METHOD: Model systems and methods have not been used correctly or there are no controls or assurances to show that the methods are working as planned. For example, e.g. how can you confirm that your manipulation, which is intended to lower blood glucose levels, actually does so? The proposal does not take advantage of the strengths of the model systems. For example, don’t propose single unit physiology in C elegans or manipulating genes in single neurons of a monkey.

Here's some advice:
You need to have a good idea about how to answer an important question. Your proposal should make clear to your examination committee: WHAT you want to do and WHY it is important (from NIH). You need to specify what is unique about your work. Why are you and your model system able to answer a question that has heretofore gone unanswered?
   It is wise to think about demonstrating both necessity and sufficiency when testing the involvement of some factor in a phenomenon. Think about using multiple different ways of testing the same thing to provide converging evidence.
   It is very helpful to make a flow chart when designing experiments, with the items in the chart being experiments and their possible outcomes, each of which then lead into the next set of experiments.
XI. DISSERTATION REQUIREMENTS

A. Dissertation Committee

i. Committee composition:

The dissertation is completed under the direction of a committee consisting of a chair (the dissertation advisor) and at least three additional members. The chair and the majority of members must be Core, Associate, or Affiliate Neuroscience Institute tenured or tenure-track faculty. Affiliate members may not serve as chair. The remaining members may have a faculty appointment in a department at Georgia State University or another university or research institution. It is highly recommended that at least one member be from another institution. A student who wishes to have someone serve on his/her committee who does not meet these criteria may add that person as an additional committee member.

ii. How to nominate a committee:

When nominating the members of the dissertation committee, the student will submit a Nomination of Dissertation Committee Form (see Appendix XIV). The student should prepare the form in consultation with his/her advisor. The student will specify the manner in which the members provide:

   a. Expertise in content areas relevant to the dissertation topic.  
   AND/OR
   b. Expertise in methodology relevant to the research plan.  
   AND/OR
   c. Breadth- it is highly recommended that at least one member provide breadth.

A current Curriculum Vita should accompany the form for any person who is not a tenure-track faculty member of the Neuroscience Institute. Graduate Program Committee approval of committee members is required.

The Graduate Program Committee will review the composition of each dissertation committee to ensure that it complies with all of the requirements.

B. Dissertation Proposal

A written dissertation proposal is required and must be formally approved by the committee as a whole. The dissertation proposal must be written and defended within one calendar year of passing the qualifying exam. It is the student's responsibility to secure approval of the Dissertation Proposal from the individual Dissertation Committee members.
The proposal is a comprehensive plan of future research that details the rationale, methods, and procedures for the proposed work. It should be formulated early in the course of the research project and need not be supported by extensive data. It is not a contract. Changes in the direction of the project after the proposal has been approved are common and even expected, and can be accommodated (see section below).

The dissertation proposal must be clear and concise. The aims and significance of the proposed work must be clearly stated. Sufficient background material must be included to make the significance and the experimental design intelligible to the reader without necessitating referral to outside material.

i. Format:

Candidates must follow the format instructions for either NSF grant applications or NIH NRSA pre-doctoral applications. The format should be selected in consultation with the dissertation committee chair.

ii. Proposal approval:

To obtain approval of the proposal, students should schedule one or more meetings with their committee to present the proposal and obtain feedback. The proposal must be given to the committee to review no less than two weeks prior to the scheduled date of the proposal approval meeting. The Dissertation Committee will evaluate the proposal using the Milestone Evaluation Form (see Appendix XIVA). Ratings will be discussed by members after the ratings are completed and revised based on discussion if need be. The rating endorsed by the majority of committee members for each skill will be the rating the student receives for that skill. The Committee Chair will give the form to the Graduate Program Administrator for the student’s file. Students should contact the Graduate Program Administrator for a copy.

As the form indicates, ratings of 1 or 2 on all items are needed for a satisfactory proposal. If there is one rating of 3, then this proposal is satisfactory with some conditions. A failing proposal is one that has two or more items rated 3. The committee will provide feedback and recommendations on this form as well.

iii. Admission to candidacy:

A candidate is admitted to candidacy after the dissertation proposal is approved. Only students who have been admitted to candidacy may enroll in NEUR 9999 Dissertation Hours.
iv. Dissertation Progress reports:

Following approval of the proposal, each student is required to submit a written progress report to the dissertation committee at least once a year. If there are changes in the direction of the dissertation, then the changes must be identified in the progress report and approved by all Committee members. Students are also expected to include the Dissertation Progress report (or a hard copy of visual aids used in the case of an oral report) when they submit their Annual Report Form (see Appendix XIVB).

C. The Dissertation

i. Format:

All requirements of the College of Arts and Sciences must be satisfied. The College of Arts and Sciences requirements specify the margins, format for preliminary pages (title page, table of contents, abstract, etc.), and pagination. In addition, the dissertation should be prepared according to the following format:

a. Chapter 1:

A thorough synthetic review of the literature culminating with the aims of the dissertation research.

b. Next chapters:

Copies of (a) published papers, (b) manuscripts in press, (c) manuscripts submitted, and/or (d) manuscripts in preparation*. Given that they may have been published, submitted, or targeted for different journals with different journal styles, the chapters may not all be formatted in the same style. As is found in most published papers, each chapter would have an Introduction, Methods, Results, and Discussion section. The number of these chapters will vary according to the publication rate of the subfield of neuroscience in general, and of the researcher and advisor, specifically.

*The College of Arts and Sciences requires that the student submitting the dissertation must be listed as either the sole author or as the first author of each article used as a chapter. The inclusion of any articles that are previously published or accepted for publication requires permission from the copyright
holder. Articles not yet copyrighted by another party will be covered under the copyright of the dissertation.

c. Final chapter:

This chapter will be a summary written from a more global perspective than Chapter 1. That is, it answers the question: How does this work fit into the big picture? This chapter most likely will have a speculative quality to it and will entertain the directions for future research on the topic by the author or by other investigators. This final chapter is not a recapitulation of the middle chapters, but rather a synthesis of the middle chapters. This chapter also offers the author the unique opportunity to speculate without the fetters that constrain typical research papers.

ii. Use of Consultants for Dissertations:

Doctoral dissertations must be the product of the student to whom the degree is awarded. A doctoral committee’s approval of a student’s dissertation is not only an approval of the manuscript and of the research described in it but also a certification that the student is qualified to conduct research in the areas examined. Basic to that certification is the knowledge that the student was primarily responsible for designing the study, analyzing the data, and discussing the results, with minor help from his or her advisor, committee members, and others.

Hiring someone to conceptualize, design, analyze, or write a dissertation undermines the purpose of a dissertation and is inconsistent with the mission of a research university. With regard to the use of consultants, no student is allowed to obtain help with the design and analysis of his or her dissertation without prior written approval from his/her committee. Violation of this policy may result in the student’s dismissal and revocation of the degree, if already received.

ii. Publication of Dissertations:

Although the dissertation is a public document, students are strongly encouraged to submit papers based upon their dissertation research to scholarly journals for possible publication. Students should collaborate with their dissertation chair to submit their work for publication in a scholarly journal. If a student does not make the effort to publish and if the dissertation chair has a strong investment in the research effort and its findings, the chair may prepare articles based on the research. In such cases, it is recommended that the chair consult with the GPC.
Students and faculty should be mindful of Society for Neuroscience Guidelines for Authors of Research Manuscripts (www.sfn.org).

D. Dissertation Defense

i. Timing:

   a. Six Months Prior to Dissertation Defense Date:

      A student must meet with his/her Dissertation Committee at least six months before the planned Dissertation defense date in order to discuss the dissertation. At that time the committee will decide on the feasibility of the proposed Dissertation defense date.

   b. Six Weeks Prior to Dissertation Defense Date:

      A copy of the entire complete dissertation must first be approved by the dissertation chair and then submitted by the student to all Dissertation Committee members at least 6 weeks before the proposed Dissertation Defense date. This allows at least 4 weeks for the student to work with his/her Dissertation Committee in order to obtain approval from the Dissertation Committee that the dissertation is ready for defense and 2 weeks for the Request for Defense Form to be submitted on time (see next section).

   c. At Least 2 Weeks Prior to the Dissertation Defense:

      After the Dissertation Committee agrees that the dissertation is ready for defense, a Request for Defense Form (see Appendix XIV) signed by the Dissertation Committee members must be submitted to the DGS at least 2 weeks before the requested date for the dissertation defense.

      Upon submission of a completed Request for Defense form, the student will schedule a defense date in consultation with his/her committee members.

*The student will work with the Graduate Program Administrator to schedule a room for the presentation and to ensure that an announcement is sent to all Neuroscience Institute faculty and graduate students at least 2 weeks before the defense (note that rooms are usually difficult to reserve; therefore, it is recommended that a room be reserved as soon as possible). The dissertation abstract must accompany the announcement. A copy of the dissertation must be
available for faculty examination in the Graduate Program Administrator’s office at least 1 week prior to the presentation.

ii. Format:

The dissertation defense is open to all faculty, students, and other interested individuals. The dissertation chair will introduce the student to attendees, limit the student to a 45-50 minute summary of the dissertation, and oversee a question-and-answer period. Once the student has responded to all questions from the general audience, the student will meet privately with members of the Dissertation Committee to answer more questions about the dissertation.

iii. Evaluation:

The Dissertation Committee will evaluate the proposal using the Milestone Evaluation Form (see Appendix XIV A). Ratings will be discussed by members after the ratings are completed and revised based on discussion if need be. The rating endorsed by the majority of committee members for each skill will be the rating the student receives for that skill. As the form indicates, the student must obtain ratings of 1 or 2 on all items in order to pass. The Committee Chair will give the form to the Graduate Program Administrator for the student’s file. Students should contact the Graduate Program Administrator for a copy.

If the student does not defend the dissertation successfully, the DGS and the Dissertation Committee will schedule a new presentation or provide for other appropriate action.

iv. To complete the process:

Students must submit copies of their dissertation to the College of Arts and Sciences Office of Graduate Studies only in digital .pdf format. All electronic files submitted for partial fulfillment requirements must conform to the university and Library of Congress national standards before the Graduate Office grants final approval.

*It is the responsibility of the student to meet the requirements and deadlines of the Graduate Office of the College of Arts and Science concerning submission of the final Dissertation copies. In particular, students should inform themselves as to the dates by which acceptable copies must be provided in order to graduate in a given semester.

XII. POLICY ON ACADEMIC INTEGRITY
The Neuroscience Institute follows the University’s Policy on Academic Honesty described in the General Catalog for Georgia State University and the College of Arts and Sciences Graduate Bulletin. The Faculty of the Neuroscience Institute strongly affirm the following principles:

A. Work presented by students in fulfillment of class requirements or other requirements of an academic program should be that student’s own work, and not that performed by someone else.

B. Granting of credit for such work implies that the piece of work has been accomplished for a particular course or requirement.

C. The same piece of work should not be presented for credit for two different courses or requirements without special arrangements being made with relevant faculty.

D. Falsification of any kind of data is a violation of academic and ethical principles.

XIII. DISMISSALS, APPEALS, AND GRIEVANCE PROCEDURES

A. Dismissal Procedures

The Neuroscience Institute is committed to supporting students in their progress through the program in every way consistent with the maintenance of highest academic and professional standards. There are, however, occasions when the standards of the Neuroscience Institute and/or the College of Arts and Sciences are not met and dismissal (called scholastic termination by the College of Arts and Sciences) must be considered. It is the College of Arts and Sciences that ultimately assumes responsibility for both the admission of students and, in rare cases, their dismissal.

iii. Neuroscience Institute Level:

When a Neuroscience Institute standard is violated, the DGS will initiate the dismissal action. The student will receive written notice from the DGS that dismissal is being considered. This will occur only after the student has failed to address or correct the deficiency during any specified probationary period.

Reasons for initiating dismissal at the Neuroscience Institute level include:

a. Cheating (see Policy on Academic Integrity, Section XII).

b. Two unsatisfactory grades in research hours or core courses.

c. Two annual evaluations with significant concerns (see Annual Review, Section VIII).
d. Violation of professional ethical principles endorsed by the Society for Neuroscience, which are available via the Society’s website (www.sfn.org).

e. Failure to pass a dissertation defense within 8 months after a failed defense.

f. Failure to maintain a Neuroscience GPA of 3.0 after the probationary period of 18 semester-hours.

g. Failure to meet conditions to remove probationary status within a specified time.

iv. College of Arts & Sciences Level:

When a college standard is violated, the Associate Dean for the Natural Sciences initiates the dismissal action.

Reasons for initiating dismissal at the college level include:

a. A second failure of the doctoral Qualifying Exam.

b. Failure to maintain a cumulative GPA of 3.0 after the probationary period of 18 semester-hours.

B. Appeals

i. Grade appeals:

The Neuroscience Institute follows the current procedures and policies of the College of Arts and Sciences regarding grade appeals and complaints. See the College of Arts and Sciences Student Grievance Policy.

ii. Appeals in response to dismissal initiation:

a. Initial Process:

2. A student receiving a notice of dismissal from the DGS may appeal this, in writing, to the DGS no later than 30 business days after notice was given.

3. The appeal will be considered by the Neuroscience Institute Graduate Program Committee.

4. At the meeting called for this purpose, the student has the opportunity to present evidence, including any testimony from faculty with whom he or she has worked, that he or she is capable of successful completion of the graduate program and that the conditions leading to the dismissal action represent atypical behavior or the presence of temporary, mitigating circumstances.
5. The committee will inform the student of their decision within 30 business days of receiving the appeal.

b. Actions of the Graduate Program Committee may include, but are not limited to:

1. Let the dismissal action stand, in which case the student may not continue in the program.
2. Place the student on probation and specify remedial actions which must be taken before the student may continue in the program. Such actions are at the discretion of the Graduate Program Committee as informed by faculty who are familiar with the student’s work. Retaking courses with low grades is one possible action. A deadline for completing such remedial action must be specified.

c. If the appeal is granted:

1. If an appeal is granted and the student is placed on probation, the student’s advisor and DGS will monitor whether the student has met the specified requirements by the specified deadline.
2. If the student has not done so, the DGS will again initiate a dismissal action. The student may again appeal the action to the Graduate Program Committee. There is a limit of two appeals.

d. To appeal to the Neuroscience Institute Director:

If the student believes that a decision by the Graduate Program Committee has been arbitrary, capricious, or discriminatory, s/he may appeal the decision in writing to the Director of the Neuroscience Institute. This action must be taken within 30 business days of the date of the Graduate Program Committee’s decision.

e. No appeal action taken or appeal is denied:

If the student does not appeal the decision or if the appeal is denied at the Departmental level, the DGS will forward the recommendation for dismissal to the Associate Dean of Natural Sciences in the College of Arts and Sciences. The Associate Dean will notify the student that this has occurred. The student may then appeal the decision through normal channels within the College of Arts and Sciences.

f. Appeals in response to dismissal initiated at the College level
In such cases, the Graduate Program Committee is not empowered to consider an appeal. The student may, however, request support from the Graduate Program Committee for an appeal to the appropriate college committee. The student should refer to the College Graduate Bulletin for instructions on appeal procedures at this level.

C. Grievance Procedures

The Neuroscience Institute follows the current procedures and policies of the College of Arts and Sciences regarding grade appeals and other complaints. Students who believe that they have been treated in an unethical, unprofessional, or unfair manner by university faculty, staff, administrators, or fellow students should act to correct the situation. Several procedures are available to do so. First, students should bring the situation to the attention of their advisor, the DGS, or the Director of the Neuroscience Institute. At the college level, students should bring their complaint to the attention of the Associate Dean of Natural Sciences. Students may also discuss the situation with the University’s ombudsperson.

XIV. APPENDICES

A. Milestone Evaluation Form
B. Annual Report Form
C. Nomination Dissertation Committee Form
D. List of Request Forms
Appendix A

Milestone Evaluation

Student name: ____________________

Date: ___________________________

Evaluator name: ___________________

Milestone (circle one):
A. Qualifying Exam  B. Dissertation Proposal  C. Dissertation Defense

Instructions: Please rate the student’s performance in the above milestone on the following skills. Ratings should take into consideration the student’s oral presentation and accompanying written document.

All members of the student’s committee should rate the student independently. Ratings will be discussed by members after the ratings are completed and revised based on the discussion if need be. The rating endorsed by the majority of committee members for each skill will be the rating that the student receives for that skill.

Ratings are based on the following scale:
1 = excellent
2 = satisfactory
3 = unsatisfactory

<table>
<thead>
<tr>
<th>Skill</th>
<th>Rating</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrated an understanding of scientific literature.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critiqued and analyzed claims of others in a scientific context.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrated an understanding of scientific terminology.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used concepts in neuroscience to describe, explain, and evaluate phenomena and to generate new ideas.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formulated and tested alternative explanations and models on the basis of evidence.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asked scientific questions and constructed reasonable hypotheses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practiced and understood the scientific method.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used appropriate applications of statistics and/or other analytical methods.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicated effectively orally.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicated effectively in written form.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Qualifying exam**
Satisfactory: all ratings = 1 or 2
Conditional satisfactory = one or two ratings = 3
Unsatisfactory = three or more ratings = 3

**Dissertation Proposal**
Satisfactory: all ratings = 1 or 2
Conditional satisfactory = one rating = 3
Unsatisfactory = two or more ratings = 3

**Dissertation Defense**
Satisfactory: all ratings = 1 or 2
Unsatisfactory = one or more ratings = 3

Student passed or failed (Circle one): **Passed** **Failed**

**Committee feedback and recommendation (use reverse side if necessary)**
Appendix B

Annual Report Form for Year __________
(Previous academic year)

Due date: _____________

Please answer the following questions or prompts as accurately as possible using a word processor. Use 12 pt Times New Roman font. Items 1-6 pertain to the previous academic year.

Student Name: ____________________ Date of Enrollment: ______________

1. List any courses you have taken and semester taken, along with your grades, and most current GPA.

2. List any conferences attended and any conference presentations.

3. List any manuscripts submitted, in press, or published.

4. What research projects have you been conducting over the past year? How is this work progressing? If your progress has been slower than expected, have you encountered any difficulties that might explain this? (1 page, single-spaced maximum)

5. List any new procedures, models, techniques, and/or methodologies learned. How have they, or will they, help you in your research?

6. Please list any teaching activities and/or departmental, university, and/or community service.

7. What courses do you intend to take this coming year?

8. What are your research plans for this coming year? This includes plans for conferences and manuscripts?

9. What milestone(s), if any, do you expect to complete this coming year (e.g., qualifying exam, dissertation proposal, or dissertation defense)?

Please provide any other pertinent information that you feel may be needed to assess your academic progress accurately.

Note: If you have successfully defended your dissertation proposal, you must attach the most recent copy of your dissertation progress report.
Appendix C

Neuroscience Institute

NOMINATION OF DISSERTATION COMMITTEE

Name: _____________________________________________
Date: ______________________________________________

Nomination of Members

Chair: ______________________________________________

Members: ___________________________________________
____________________________________________________

Title of Dissertation:

_____________________________________________________________________

Attach a description specifying the manner in which the members provide:

a. Expertise in content areas relevant to the dissertation topic.
   AND/OR
b. Expertise in methodology relevant to the research plan.

Excerpt from NI Graduate Program Policy Document:
A current Curriculum Vita should accompany this form for any person who is not a tenure-track faculty member of the Neuroscience Institute. The Graduate Program Committee will review and approve the composition of each dissertation committee to ensure that it complies with all of the requirements.

I have read this nomination and support it as submitted.

Chair, Dissertation Committee    Date
____________________________________________________

Committee Member    Date
____________________________________________________

Committee Member    Date
____________________________________________________

Committee Member    Date
____________________________________________________

Committee Member    Date
____________________________________________________

Committee Member    Date

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List of Forms

There are several forms with which students should be familiar. All are available from the Graduate Program Administrator, and most can be downloaded from the Neuroscience Institute web page (www.neuroscience.gsu.edu under “Downloadable Documents”), and most have been referenced earlier in this document in the appropriate context. These include:

1. Advisor Designation. This form must be submitted to the Graduate Program Administrator when the student has selected an advisor who has agreed to serve as the student’s advisor. This form is also used to inform the DGS of any changes in advisors (Section V).

2. Nomination of Dissertation Committee. This form must be submitted to the Graduate Program Administrator for approval by the Graduate Program Committee (Section XI).

3. Request for Scheduling of Dissertation Defense (Section XI). This form must be submitted to the DGS at least 2 weeks before the requested date for the dissertation defense.

4. Course Authorization. This form must be submitted to the Graduate Program Administrator for registration each semester (Section VII).