

NEUROSCIENCE TRAINING PROGRAM

Graduate Student Handbook

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Graduate School Requirements For The Ph.D. Degree

All requirements of the Graduate School must be met.

The *Graduate School Academic Guidelines* includes information about the Graduate School's administrative and academic policies. The *Guidelines* contains information on those aspects of graduate training at the University of Wisconsin that apply to all graduate students regardless of their fields. The rules of the Graduate School are stated in the *Guidelines*, and you are responsible for knowing them. The Graduate School is the final authority in determining compliance. You can disregard the sections dealing with requirements for the minor since the Program does not require a minor.

Other Graduate School publications that you should be familiar with are:

Graduate School Catalog

A Guide to Preparing Your Doctoral Dissertation

The Three D's: Deadlines, Defending, & Depositing Your Ph.D. Dissertation

Most of these publications are available on-line on the Graduate School's web page (<http://info.gradsch.wisc.edu/for/current.html#publications>). Updates to the publications occur as needed, and the electronic version is the official document of record.

Program Requirements For The Ph.D. Degree

Registration Requirements

Full-time registration is required of all students in the Program during the fall and spring semesters. The Graduate School considers full-time registration for students who are not dissertators (dissertator status is explained on page 6) to be 8-12 graduate level credits (level 300 and above, no audits or pass-fail) during each of the fall and spring semesters. In the summer, students in the Program who are not dissertators may register for 2 credits during the 8-week summer session, which is not considered full-time registration. If you decide to register for 2 research credits, you are responsible for knowing about other obligations that may be affected by part-time registration in the summer, such as visa regulations or those of certain funding agencies that may require continuous full-time registration for the calendar year (see *Graduate School Academic Guidelines* for additional caveats).

You are eligible to become a dissertator after you have passed the Program's Preliminary Examination and met the Graduate School's residence requirements. Dissertators register for 3 credits each semester including the summer. Usually dissertators register for 2 credits of Research and Thesis and 1 credit of the Neuroscience Seminar fall and spring semesters and 3 credits of Research and Thesis during the 8-week summer session. If you are a dissertator and you wish to register for other courses, you may be able to. Please contact the Program Office for additional details.

Course numbers, drop/add procedures, and registration deadlines are published in the *Timetable*. A new version is available each semester on the web (<http://registrar.wisc.edu/timetable/>). Registration will occur on the web at your My UW enrollment page (<http://my.wisc.edu>). Some registration information also is available on the Registrar's website (<http://registrar.wisc.edu/>). Class numbers for research courses such as Neuroscience 990 Research and Thesis change each semester and are listed in the timetable. It is your responsibility to be aware of the information published in the *Timetable*. Students will be responsible for any fees for additional credits, late registration, or late payment of tuition and fees.

Neuroscience Research Symposium

In September of 2002, the Program held the first Neuroscience Research Symposium at Promega and the BioPharmaceutical Technology Center Institute. The symposium includes research talks by students and faculty, poster sessions, and a keynote speaker. In 2004 the keynote speaker was designated as the Distinguished Alumnus Lecturer. This event is held biennially.

Laboratory Rotations

All students are required to complete three laboratory rotations before choosing a laboratory for their thesis research. A laboratory rotation typically lasts about eight weeks, which should be adequate to sample the research that is being done as well as the laboratory's style and environment. The first laboratory rotation should begin in the fall, soon after entering the Program, and the third rotation should be completed by the end of March. At the completion of each rotation, both the faculty member sponsoring the rotation and the student will complete a short report about the rotation and submit these reports to the Program Office. These forms are available in the appendix of this Handbook, in the Program Office (7225 Medical Sciences Center), or on the web (<http://ntp.neuroscience.wisc.edu/studforms.html>).

Advisory Committee

An Advisory Committee of five or more tenure-track or tenured faculty members will oversee your graduate education. During the first year, before an Advisory Committee has been formed and a major professor selected, the Student Advisory Committee will serve as your advisor. The Student Advisory Committee will help you select courses, laboratory rotations, and your major professor, and they can assist you with other issues that may arise during the first year.

Your major professor will help you in choosing the other members of your Advisory Committee. Choose this Committee carefully, taking time to discuss potential members with faculty and other students. Selection of a major professor and the additional four members of the Advisory Committee should be completed by the end of March of the first year. At least five members of the Committee must be tenure-track or tenured professors at UW-Madison. To ensure that Advisory Committees reflect a broad perspective, the Program requires that at least three of the five members of the Committee be drawn from different areas of neuroscience. For example, an Advisory Committee that included at least one molecular, one cellular, and one systems neuroscientist would be acceptable, but one with three molecular and two systems neuroscientists would not meet the Program's guideline for breadth. At least three members of

the Committee should be members of the Program. The composition of each student's Advisory Committee will be reviewed and must be approved by the Student Advisory Committee. If you should select an Advisory Committee that doesn't work well together, its membership can be changed. Please notify the Program Office of all changes.

The Advisory Committee will meet with you once each semester before you become a dissertator (during the first four academic semesters) and once each year after you become a dissertator to review your progress. At least four members of the Committee must be present at each meeting. Your major professor chairs the Advisory Committee and will write a report that summarizes each meeting. You should review each report and discuss it with your major professor. Every report must be signed by you and your major professor and becomes part of your permanent record. The summary reports are used by the Steering Committee, Program faculty, and Chair to monitor progress. If you believe the report does not describe your progress accurately or is in error in some other respect, you should bring these concerns to the attention of your major professor immediately. If a satisfactory resolution cannot be achieved, you should inform the Student Advisory Committee, which will assist you in deciding whether to ask for a review by the Steering Committee. The Student Advisory Committee can handle any issues or problems that arise after the first year and are not resolved by your Advisory Committee. A report form is in the appendix of this Handbook, is available in the Program Office (7225 Medical Sciences Center), or on the web (<http://ntp.neuroscience.wisc.edu/studforms.html>).

Prior to each semester, a student progress report will be sent to all students, major professors, and Advisory Committees. The report shows the student's progress in completing the Program's requirements. An example of this report is in the appendix.

It is your responsibility to meet with your Advisory Committee at least once each semester if you are not a dissertator, and at least once a year if you are a dissertator. Advisory Committee meetings for all students who are not dissertators are to be held at the beginning of each semester and a summary report of the meeting should be filed in the Program Office no later than the end of the third week of the fall and spring semesters. Dissertators should meet with their Committees and file a summary report no later than the end of the third week of the fall semester.

A reminder notice to schedule the meeting will be sent to you at least one month prior to the start of the semester. If an Advisory Committee meeting has not been held and a summary report has not been filed by the end of the third week, one additional reminder will be sent stating that a hold will be placed on your registration by the Program Office and will be removed only after the Committee meeting is held and a report is filed. No further reminders will be sent. Failure to register on time will result in the Registrar's Office assessing a late payment fee.

Courses

The Program requires that first-year students complete Neuroscience 610, Cellular and Molecular Neuroscience, and Neuroscience 700, Professional Development for Graduate Students in Biomedical Sciences, in the fall semester. In the spring semester Neuroscience 611, Systems Neuroscience, should be taken. Other course requirements include registration and active participation in Neuroscience 900, Neuroscience Seminar, during each fall and spring semester that you are a student in the Program, and completion of the Mid-Level Course

Requirement. The Mid-Level Requirement can be met by taking at least one course from each of two categories, Cell/Molecular/Developmental and Systems/Behavior, for a total of two additional courses in or relating to neuroscience. A list of approved courses available in each category will be prepared biannually by the Program's Curriculum Committee. This list is available on the web (<http://ntp.neuroscience.wisc.edu/studforms.html>). You may propose that additional courses be added to the list by the Curriculum Committee. You are required to propose courses for the Mid-Level Requirement prior to attending and completing them. Competence in quantitative methods, *e.g.*, statistics, also must be demonstrated. Numerous options are available to meet this requirement and include UW-Madison courses as well as courses taken elsewhere. Once your Advisory Committee has been formed, an agreement will be made between you and the Committee at its first meeting on the courses that will be taken for credit towards the Ph.D. degree. Part I of the Certification Form can be completed and filed in the Program Office at this time (see page 7 for details).

During the first year it is wise to choose non-required courses that will be useful regardless of future directions. Depending on a student's background, courses in statistics, biochemistry, histology, molecular biology, etc., can be good choices. Alternatively, work on the Mid-Level Course Requirement may be started during the first year by taking one or more courses that have been approved by the Curriculum Committee for meeting the requirement. Unless a student has several prerequisite courses to complete, a typical first semester course load consists of Neuroscience 610, possibly one elective course, the Neuroscience Seminar, the Professional Development course, and Research and Thesis, for a maximum of 12 credits.

Preliminary Examination

You should complete the Preliminary Exam by the end of the second summer. If you fail to pass the Preliminary Examination before the start of the spring semester of the third year, you will be placed on probation automatically. Reversion to regular status will not occur until you have passed your Preliminary Exam. Two consecutive semesters of enrollment on probation precludes your continuation in the Program.

If you change advisors during the first two years of study or experience unusual circumstances beyond your control that delay normal progress substantially, such as an extended illness, you may petition the Steering Committee for an extension to complete the Preliminary Examination without sanctions.

At least three weeks before the day of your Preliminary Examination, contact the Program Office for a "Request for a Preliminary Warrant" form to the Graduate School. The Ph.D. office of the Graduate School issues a Warrant authorizing the Program to administer the Examination. The Warrant will be sent to you by campus mail. Fill out the requested information on the Warrant prior to the Examination. The Preliminary Warrant is taken to the Examination and signed by your Advisory Committee and the Chair of the Program after you have successfully completed the Examination. Part II of the Certification Form can also be filled out and filed at this time. Please return the completed Warrant and Certification Form II to the Program Office.

The Preliminary Examination consists of two papers, an "outside-area" paper and a thesis proposal, which are reviewed together by your Committee. The papers must be submitted to your Committee for review at least two weeks before the Preliminary Examination. If the papers

are delivered late, your major professor will reschedule the Examination to allow two weeks for the Committee to read your work. A waiver of this scheduling requirement requires written approval by the entire Advisory Committee.

The outside-area paper should be a critical evaluation of current knowledge about a topic that is not related to your area of research. The topic is chosen by you and approved by your Committee. The purpose of this paper is to stimulate directed reading in a specific area, to integrate what is known, to critique it, and to propose new experiments or ideas that clarify unresolved issues. Generally, this can be accomplished in 20 pages or less, as long as emphasis is placed on critical analysis and not on exhaustive description. You should allow about 4 weeks, but not longer than 6 weeks, to write your outside-area paper.

The thesis proposal should include an introduction to the research problem, specific aims, description of methods to be used, preliminary results, and a discussion of the results and future goals. The introduction (generally 20-30 pages) consists of an in-depth overview of the essential areas related to the proposal. It should provide a strong conceptual framework and rationale for the proposed project. Often this part of the thesis proposal (with the necessary updates) serves as the first chapter in the Ph.D. thesis. Obtaining satisfactory preliminary results for an acceptable thesis proposal may take longer than anticipated. Therefore, you should be exploring various research topics during the summer between the first and second years, and working in the laboratory on your proposal no later than the second semester of the second year. Keep in mind, however, that the aim of the proposal is to demonstrate that the thesis research you have selected is original and feasible. The proposal and preliminary results need not address every conceivable problem that might occur once the research is fully underway. **In other words, the thesis proposal is not a preliminary thesis and should not be approached as such.**

The outside-area paper will be considered first, and its review should occupy at least one-third of the time allotted for the entire Preliminary Examination, which typically is 3 hours or less. You must pass the Preliminary Examination to become a candidate for the Ph.D. degree. If you fail one or both parts the first time, you will have a second chance within two months to retake the Examination. If you fail again, it will not be possible to continue in the Program.

Presentation of Thesis Proposal in Neuroscience Seminar

Related to the Preliminary Examination, but not part of it, is the presentation of your thesis proposal in the Neuroscience Seminar. This presentation can be made before your thesis proposal is examined, if you wish to obtain comments in advance from the group at large, or it can be deferred until after your proposal has been accepted. In either case, the sole purpose of the Seminar presentation is to give everyone in the Program the opportunity to become familiar with your work. Contact the Program Office one month prior to the start of the semester to arrange the date for your presentation. (See page 12 for details on audiovisual equipment.)

Dissertator Status

After you have completed all requirements for the Ph.D. degree, except for the Dissertation, you are classified by the Graduate School as a dissertator. To be eligible for dissertator status, the Graduate School requires that you:

1. Pass the Preliminary Examination
2. Complete 32 UW-Madison graduate level credits (300 or above courses)
3. Complete all Program requirements except the Dissertation and teaching requirement
4. Clear all I or P grades in non-research classes.

Dissertation and Oral Defense

After you have completed your research and are beginning to plan the writing of the Dissertation, a meeting must be convened with your Advisory Committee before writing commences. The purpose of this meeting is to plan with the Committee how your research will be presented in the Dissertation, its scope and the details of organization. You should not begin writing your Dissertation until you and the Committee agree on its content and format. You should also complete Part III of the Certification Form and file it with the Program Office.

As part of the thesis planning, you should consult the publications *The Three D's: Deadlines, Defending, & Depositing Your Ph.D. Dissertation* and *A Guide to Preparing Your Doctoral Dissertation* on the Graduate School website (<http://info.gradsch.wisc.edu/for/current.html#publications>). These publications contain important information concerning formatting your thesis, submission of your thesis, and deadlines for completion of degree requirements.

You and your Advisory Committee will set a date for the Oral Defense of the thesis. The date chosen for the defense must allow sufficient time prior to your departure from the University for revisions suggested by the Committee to be incorporated into the final version of the Dissertation. At least three weeks before the final Oral Examination, you should submit the Ph.D. Final Oral Committee Form to the Graduate School. This form is available in the Program Office and at the Graduate School in Bascom Hall. No later than two weeks before the defense and after the details have been approved by your major professor, you should provide the Program Office with the date, time, and place of the Oral Defense and an abstract of the thesis. An announcement of the defense will be mailed to Program faculty, Program students, and other neuroscientists on campus.

The completed Dissertation should be delivered to your Committee at least two weeks before the oral defense. If the Dissertation is submitted later than this, the date for the defense will be rescheduled automatically by your major professor to allow at least two weeks for review. Any change in this schedule must receive prior approval in writing by all members of your Committee.

The thesis defense consists of a public presentation of the thesis followed by a closed meeting with the Advisory Committee. At the conclusion of the defense you will be asked to leave the room and the Committee will discuss whether to accept the thesis. This decision will be based on the quality of the public presentation and of the written Dissertation. The Committee will not approve the Dissertation until it is judged to be a satisfactory final version acceptable for the Ph.D. degree and for submission to the Graduate School. One copy of the final version of the Dissertation should be submitted to the Graduate School and three copies to

the Program. The Program will bind three copies of your Dissertation: one each for you, your major professor, and the Program's permanent collection.

While the details of your Dissertation will be determined by you and your Advisory Committee, all Dissertations are expected to be of publishable quality and to conform to a general standard. **The standard Ph.D. thesis consists of three published or publishable manuscripts on which you are the sole or first author.** The Dissertation should be written in a style that is compatible with that commonly used for manuscripts published in major scientific journals. Thus, the Dissertation may consist of a series of published papers or publishable manuscripts, accompanied by an informative introduction that includes sufficient background information so that all neuroscientists should be able to comprehend the significance of the thesis. Appropriate bridging chapters and a substantive, global discussion that integrates the chapters also should be included.

Time to Degree

It is expected you will complete the Dissertation by the end of the fifth academic year. If this is not accomplished by the end of the summer following the sixth academic year, your major professor and one member of your Advisory Committee must meet with the Steering Committee to present a written statement that explains why the Dissertation has not been finished, and describes plans that you and the Committee have agreed upon to ensure completion. You may attend this meeting if you wish. Continuation in the Program beyond the fall semester of the seventh year will be at the discretion of the Steering Committee.

Certification

At the end of this handbook is a Certification Form that becomes part of your permanent record. This form gives the Program a way to keep track of your academic progress. However, Certification also serves the important function of formalizing your individual program. Thus, Part I of the Certification Form is an agreement signed by you and your Advisory Committee concerning the courses that will be taken for credit towards the Ph.D. degree. You should file Part I of the Certification Form in the Program Office by the end of the second semester of your first year. The Preliminary Warrant for the Ph.D. degree will not be issued until Part I of the Certification Form is completed and filed in the Program Office. Part II of the form can be completed and filed after completing the Preliminary Exam. The Ph.D. Final Oral Committee Approval Form will not be signed by the Chair until Parts II and III of the Certification Form have been filed in the Program Office. These forms are available in the appendix of this Handbook, in the Program Office (7225 Medical Sciences Center), or on the web (<http://ntp.neuroscience.wisc.edu/studforms.html>).

Training in the Responsible Conduct in Science

The National Institutes of Health (NIH) has mandated that all graduate students receiving financial support from an NIH training grant be given instruction in the responsible conduct in science. The Program faculty believes that training in scientific ethics is important, regardless of source of support, and therefore requires it of all neuroscience students. Training in scientific ethics is included each year as part of the Neuroscience Seminar by a scientific ethics subgroup. **Participation in the scientific ethics subgroup, including planning and presentation of the**

ethics program, is required of all students supported on the training grant and of all first- and third-year students, regardless of their sources of support. For presentation in the Seminar, the scientific ethics subgroup selects the format and topic(s) to be covered in keeping with the Program's policy on training in scientific ethics: "The ethics subgroup should not present cases in the Seminar involving individuals or groups of individuals on the UW-Madison campus. However, discussion within the subgroup should not be limited."

One unexcused absence per year will be allowed for students required to participate in the scientific ethics subgroup planning sessions. Failure of any students supported by the training grant, or first- or third-year students, to participate in the scientific ethics subgroup will result in the assignment of a directed essay. The essay will consist of a case study of a real issue or situation in scientific ethics, as described in the appropriate literature, and will be chosen by the student. The completed essay will be distributed to all members of the Ethics Committee, including the student members, for review.

Attendance at the Program-wide scientific ethics presentation is required of all students in the Program each year. Students failing to attend the ethics presentation also must complete a directed essay as described above.

Teaching

As part of your education, one semester of teaching is required. Typically this involves being a laboratory instructor or section leader and should not require more than 10 hours per week. Financial compensation for this teaching is not always available, although it can be arranged sometimes, depending upon the needs and resources of individual departments. You may fulfill the teaching requirement in other ways as well. For example, teaching in the summer PEOPLE program fulfills one-half of the teaching requirement. Final approval of how you fulfill teaching requirement is given by your Advisory Committee.

Typical Timetable for Student Progress

The following is a typical timetable of student progress in the Program from matriculation to earning the Ph.D. degree. Departure from the timetable may occur, but this timetable is the norm that is expected.

I. FIRST YEAR:

(A) First Semester:

- (1) Register for required fall courses and choose elective(s) after meeting with Student Advisory Committee.
- (2) Attend Neuroscience Research Symposium (every other year).
- (3) Plan laboratory rotations and complete 1-2 of these rotations. Turn in report(s) on completed rotation(s).

(B) Second Semester:

- (1) Register for required spring courses and choose elective(s) after meeting with Student Advisory Committee.
- (2) Complete laboratory rotations. Turn in report(s) on completed rotation(s).
- (3) Select your major professor and other members of your Advisory Committee by March 30.
- (4) Have Advisory Committee members approved by the Student Advisory Committee.
- (5) Meet with Advisory Committee and submit summary report and Certification Form Part I to the Program Office no later than the end of the third week of the fall semester.
- (6) Participate in Ethics subgroup and Ethics presentation.

II. SECOND YEAR:

(A) First Semester:

- (1) Work toward completing Mid-Level Course Requirement and any other courses suggested by your Advisory Committee.

(B) Second Semester:

- (1) Meet with Advisory Committee and submit summary report to the Program Office no later than the end of the third week of the semester.
- (2) Complete all course requirements.
- (3) Attend Ethics presentation.
- (4) Participate in Ethics subgroup (if supported by the training grant).

(C) Summer:

- (1) Plan to complete Preliminary Examination by the end of the summer. Submit Request for Preliminary Warrant form to Graduate School.
- (2) Complete 32 UW-Madison credits. (Completion of the credits and the Preliminary Examination permits registration for 3 credits at the dissertator rate for all subsequent sessions.)
- (3) Submit Part II of the Certification Form after the Preliminary Examination is completed.

III. THIRD YEAR:

(A) First Semester:

- (1) Meet with Advisory Committee and submit summary report to the Program Office no later than the end of the third week of the semester. (This meeting can be omitted if the Preliminary Examination is completed after the spring Advisory Committee meeting and before the beginning of the fall semester.)
- (2) Present thesis research proposal in Neuroscience Seminar.
- (3) Conduct thesis research.

(B) Second Semester:

- (1) Complete teaching requirement.
- (2) Conduct thesis research.
- (3) Participate in Ethics subgroup and Ethics presentation.

IV. FOURTH YEAR:

(A) First Semester:

- (1) Conduct thesis research.
- (2) Meet with Advisory Committee and submit summary report to the Program Office no later than the end of the third week of the semester.

(B) Second Semester

- (1) Conduct thesis research.
- (2) Attend Ethics presentation.
- (3) Participate in Ethics subgroup (if supported by the training grant.)

IV. FIFTH YEAR:

(A) First Semester:

- (1) Meet with Advisory Committee to decide format and content of Dissertation and submit summary report to the Program Office no later than the end of the third week of the semester.
- (2) Submit Part III of the Certification Form.
- (3) Conduct thesis research.

(B) Second Semester:

- (1) Submit Ph.D. Final Oral Committee form to Graduate School.
- (2) Complete Dissertation and Oral Defense.
- (3) Submit one copy of thesis to Graduate School and three copies to the Neuroscience Training Program.
- (4) Attend Ethics presentation.
- (5) Participate in Ethics subgroup (if supported by the training grant).

General Program Requirements

- Attend Neuroscience Research Symposium (first-year students only)
- Meet with Advisory Committee (each fall and spring semester for students who are not dissertators, each fall semester for dissertators)
- Participate in Scientific Ethics subgroup (Students supported on training grant and first- and third-year students)
- Attend Scientific Ethics Presentation (all years)

General Program Course Requirements

These course requirements are common for all students in the Program:

- First-Year Requirement: fall and spring semester sequence of neurobiology courses
- Professional Development Course: fall semester of first year

- Mid-Level Course Requirement: One approved course from each of two broad areas of neuroscience
- Neuroscience Seminar Course: all fall and spring semesters

The Neuroscience Seminar

Subgroup Meetings

The purpose of the Seminar study group or “subgroups” is two-fold. The first is to educate students in the group about the topic area and its place in current neuroscience research. To accomplish this, the study group should function as a graduate seminar, albeit of limited scope and duration. It is the responsibility of study group leader(s) to ensure that assigned papers are reviewed critically and that issues in the topic area are discussed in depth by the members of the group. This assumes that an agenda or format will be prepared for each meeting. Similarly, it assumes that students will take seriously their responsibility to read assigned papers and to participate in the discussion at each meeting. Performance in the subgroup will be graded by the faculty member(s) in charge of the group. If your work is unsatisfactory, you will be notified by the faculty member(s), and if this deficiency is not corrected, a grade of unsatisfactory (no credit) will be reported.

Seminar Presentations

The second aim of the study group is the preparation of lecture/discussions for the Neuroscience Seminar that will present a critical analysis of specific aspects of the topic area. Typically, each study group will prepare three lecture/discussions for presentation, and the group will invite and host an outside speaker who will deliver a complementary Neuroscience Lecture. In general, the Seminar presentations will be given by individual students in the group. Each Seminar presentation should be rehearsed, but not over-rehearsed, in the group to establish style, content, and accuracy. Usually this can be accomplished in one practice session, or two at most. If additional sessions are necessary, they should not be scheduled during regular group meetings. Subgroup members are not required to attend any additional practice sessions.

All Neuroscience graduate students are expected to participate in two Seminar study groups during each of their first three years in the Program and one study group thereafter. In addition to attending the Seminar regularly, active participation involves making presentations in the Seminar. Included in these presentations is your thesis proposal and presentations based on your work in Seminar subgroups. The determination of student assignments for subgroup-related Seminar presentations is made by the Program Office on a rolling eligibility basis following a "last shall be first" sequence. All first-year students are excused from making a presentation in the Seminar during the first semester of their first year in the Program. However, first-year students will give a Seminar presentation during the second semester of the first-year, because they automatically become the most eligible students in the subgroup for making a Seminar presentation.

Upon completing a subgroup-related Seminar presentation, students are placed at the bottom of the eligibility list. From time to time, more than one student with the same eligibility elects the same subgroup. In those instances when there are more students with identical eligibility than there are available opportunities in the subgroup schedule for students to make a Seminar presentation, speaking assignments will be determined by chance, *e.g.*, by drawing straws.

You are allowed one Seminar presentation waiver. The waiver will excuse you from a subgroup-related Seminar presentation, but it can be used only once at your discretion during the course of training. This waiver does not apply to the presentation of the thesis proposal.

Guest Lecturers

The outside speaker should be selected well before the anticipated lecture date. The speaker should be aware that he or she will deliver one public lecture and will visit informally with students and faculty. Each study group will be responsible for all social arrangements (lunch with students, dinner, etc.) with the speaker, and for scheduling individual meetings between the outside speaker and interested students and faculty (see page 19 for guidelines regarding reimbursement).

There are several opportunities for you to meet with invited speakers. Usually, a student lunch is held on the day of the lecture. These lunches are held at noon and give students a chance to meet with the speaker in an informal setting. An e-mail invitation to these lunches is sent to all students in the Program approximately 1-2 weeks before each lunch date. There is also time for you to talk with the speaker after the lecture. Occasionally a potluck dinner is held and students are invited to dinner.

Materials for Seminar Preparation and Presentations

A copy machine for photocopying articles related to Seminar presentations is available in the Program Office. PowerPoint presentations are the most popular medium to present information in the Seminar because they are easy to prepare and inexpensive. The Program has two laptop computers (PC and Mac) and a LCD projector that can be checked out for presentations. Contact the Program Office to check out computers or the projector. The Biology New Media Center has a computer projector that can be used for presentations in the Medical School, but advance reservations are necessary and should be made through the Program Office.

Student Representation on the Steering Committee

While authority and governance on major issues remains with the Program faculty at large (see Program-Wide Meetings), the Steering Committee oversees most of the routine

business of Neuroscience Training Program. The Steering Committee consists of ten faculty members and two student representatives. Five faculty members are elected, and five are appointed by the Chair. Traditionally, students in the Program have played an important role in helping to define Program policies. Each year, students in the Program elect two student representatives to the Steering Committee. The student representatives attend all Steering Committee meetings and bring student views and concerns to the Committee and vice-versa. The student representatives are excused from those parts of Steering Committee meetings that involve discussion of individual students and faculty in the Program. While University statutes preclude students from voting on most policy and procedural issues, the faculty in the Program take student opinion very seriously. For example, the student representatives have the right to delay a Steering Committee vote on an issue until they believe that students in the Program have been fully informed about the issue and have had an opportunity to comment.

Program-Wide Meetings

Program-Wide Meetings are held twice yearly. All faculty and students in the Program are encouraged to attend. The purpose of these meetings is to keep members apprised of ongoing activities and business, receive standing committee reports, solicit new ideas or comments/suggestions, and vote on major issues, if necessary. Larger issues such as major changes in curriculum, seminar structure, or leadership issues will be discussed and voted upon in Program Meetings.

Student Membership on Program Standing Committees

There are openings for up to two students to serve on each of the Program's Standing Committees except for Admissions. At least one student will serve on each Committee during each academic year. A call for nominations of Committee representatives will be sent by the Program Office to all students during the summer term. In the event that no student is elected or volunteers to participate on a particular committee, it is the responsibility of the student representatives to name a student to serve.

In addition to the responsibilities defined by their respective Committees, student committee members also are responsible for forwarding copies of any Committee minutes to the student representatives on the Steering Committee within one week of each Standing Committee meeting. Additionally, student members also will notify all Program students of relevant meeting and event dates, proposed Program changes, and other matters of interest to students. This notification should occur within one week following the Committee meeting or two weeks before any such meeting, event or effective date of a proposed Program change, whichever is earlier.

Standing Committees

The list of current Standing Committees, including a description of the purpose of each Committee, is given below. Unless otherwise noted, the roles of the student members on each Committee are identical to those of faculty members.

Curriculum

The Curriculum Committee is responsible for proposing the general standards of the Program's core curriculum requirements for consideration by the Steering Committee and/or Program faculty. The Committee makes both broad and specific recommendations regarding course sequences and requirements, and it evaluates the appropriateness of a specific course for fulfilling these requirements.

Ethics

This Committee has the responsibility for meeting the NIH mandate that all students supported by the federal government shall receive annual instruction in the responsible conduct of science (scientific ethics). All first- and third-year students in the Program, regardless of their source of support, and all trainees are required to take part in preparing the annual presentation in scientific ethics. All students in the Program are required to attend the presentation.

Student Advisory

The Student Advisory Committee serves in lieu of an Advisory Committee for all first-year students in the Program, and the Committee is responsible for first-year students until they choose a major professor. The Committee advises students on all aspects of the Program throughout the first year, from orientation in the fall to choosing a major professor in the spring. It is also responsible for handling any student issues that may arise after the first year, including academic, personal, or disciplinary problems. This committee also administers the Travel Awards Competition. Student members of this committee do not participate in the Travel Awards Competition decisions or decisions involving individual students.

Minority Affairs

The Program makes vigorous efforts to encourage applications of admission by qualified minority students and to recruit these students to the Program. The Minority Recruiting Committee oversees the Program's Minority Speaker Series, arranges visits by minority students from high schools and colleges, attends area recruitment fairs, helps coordinate the Program's participation in the SRP-Bio program and sends representatives to schools with large minority enrollments in an effort to increase the number of minority student admissions.

Recruitment

This Committee is responsible for planning, coordinating and conducting applicant recruiting visits. Student members arrange transportation and activities on Saturday of the interview weekends.

Dual-Degree Program with the La Follette School of Public Affairs

Formally approved by the Graduate School in May 2005, the newly formed dual-degree program with the La Follette School of Public Affairs will welcome the first incoming class in fall 2007. It is expected that most students will begin the dual-degree program during their first year, but other more senior students may be able to join the program as well. A one-credit seminar on neuroscience and public policy will be the capstone for the program, and it is anticipated that students in the Neuroscience Training Program will be able to register and take the seminar. More information about this new program is available on the web at (<http://npp.neuroscience.wisc.edu>)

Primary Affiliation

Although you work and reside in the academic department of your major professor, your only formal affiliation with the University of Wisconsin is as a graduate student with the Neuroscience Training Program. Thus, whenever identification of your University home department is required, the Program and not your professor's department should be cited. It is important to include this identification when you present research at scientific meetings or publish. If you received support from the Program's training grant at any time during the conduct of your research, the following statement should be included on posters and in papers: "This research was supported by National Research Service Award (NRSA) T32 GM007507."

Assistance During the First Year and Later

The first year of graduate school can be a challenging time in your life, with new surroundings and considerable demands on your time. While developing a sense of independence is important in a research program, you should be absolutely assured that we are here to help you with problems in any way we can, whether they be of a professional, academic, or personal nature. There are several resources available to you. The Student Advisory Committee oversees all issues and student plans relating to first-year students and is also charged with assisting students in later years as well. You may consult with any of these members, who have a lot of experience in helping incoming students. Heather Daniels, Assistant Director of Graduate Studies, is an excellent source of information about all aspects of the Program, and you may drop in to chat with her anytime. Please also note that the Program's Chair, Tom Yin, would be happy to meet with you as well. Dr. Yin's lab is located at 290B Medical Sciences Building. Also, feel free to contact him by phone (262-0368) or email (yin@physiology.wisc.edu).

Master's Degree

The Program does not have an elective Master's degree program and does not award the Master's degree under normal circumstances but may do so for students who have decided not to complete the requirements for the Ph.D. degree. Students wishing to be considered for a terminal Master's degree must: (a) complete satisfactorily one year of coursework that covers molecular, cellular and integrative neurobiology; (b) participate for at least two semesters in the Neuroscience Seminar; and (c) submit a research paper, following the conventional format used for publication, that is based on at least one year of laboratory research. Candidates for the Master's degree will present the research paper orally to the full (five-member) Advisory Committee for evaluation.

Epilogue

As members of one of the foremost graduate programs in neuroscience in the nation, each of us has a responsibility to our colleagues and to the field. The faculty's responsibility is to do the best job possible in training those who will replace them and become the next leaders in neuroscience. The responsibility of students is to support and encourage each other to excel, now and in the future, regardless of gender or background.

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Financial Information

Sources of Support

1) Neuroscience Training Program Training Grant. These traineeships come from a training grant awarded to the Program by the National Institute of General Medical Sciences. These traineeships pay tuition and fees and a 12-month stipend of \$20,772. Students who are supported by the training grant are eligible for a \$300 travel allowance. Reimbursement for the travel allowance must follow University regulations. These regulations are published in the *Travel Reference Guide* that is available on the web (<http://www.uwsa.edu/fadmin/travpub.htm>).

2) Outside Fellowships. Various fellowships, administered by federal or private sources, are available to graduate students in the biological sciences. The Program encourages you to seek outside fellowships when appropriate. Some examples of fellowships that have been awarded to Neuroscience students in recent years are offered by the National Science Foundation (<https://www.fastlane.nsf.gov/grfp/>); Individual Predoctoral Fellowships (NRSA) from the NIMH, NIAAA, NIDA and NINDS (<http://grants2.nih.gov/training/nrsa.htm#fellowships>); MD/PhD Individual Predoctoral Fellowships (NRSA) from the NIMH, NIDA and NIAAA (<http://grants2.nih.gov/training/nrsa.htm#fellowships>); and Individual Predoctoral Fellowships for Minority Students (<http://grants2.nih.gov/training/nrsa.htm#fellowships>). Information about outside fellowships can also be obtained from the Program Office (7225 Medical Sciences Center, 262-4932) or from the Fellowships Office of the Graduate School (217 Bascom Hall, 262-5837).

3) University and Advanced Opportunity Fellowships. These Fellowships are awarded by the Graduate School, primarily to entering students. In addition, some Fellowships are designated for specific categories of students, such as those from qualified ethnic backgrounds.

4) Research Assistantships. Research grants and contracts awarded by outside agencies to support the research projects of individual faculty members may include funds for Research Assistantships that can be held by graduate students. Research Assistants receive remission of all tuition, but not fees.

Beginning September 1, 2006, the Program target stipend is \$23,000. If your starting stipend is below the target stipend (i.e., Research Assistants, University Fellows, Trainees and some outside Fellowships), it will be supplemented either by the Program or your major professor up to the target stipend level.

Mechanisms of Payment

Checks are paid on the first of each month. Your first paycheck will be available at the beginning of the month following your first full month of employment or appointment. For example, if your appointment begins on September 1st, your first check will be available October 1st. You may pick up your check in person in room 5101, 21 N. Park Street or you may choose to have your check deposited directly at your financial institution. If you would prefer the direct deposit method of payment, you must fill out an authorization form. If you need to

change the institution or account where your check is deposited, a new form must be filled out. Direct deposit authorization forms are available in the Program Office.

Taxes

If you are appointed as a Trainee or a Fellow, taxes will not be withheld from your paycheck by the University. However, the support that you receive is considered taxable income. The University provides trainees and fellows with a summary of stipend payments each January. You may need to file an estimated quarterly tax return with the federal and/or state government. For students who are appointed as Research Assistants, the University is required to withhold State and Federal income taxes on the entire stipend based on your W-4 information. Please note that you may change the number of exemptions on your W-4 at any time. Forms are available in the Program Office. You may wish to consult IRS publication 970 (Tax Benefits for Education) or IRS publication 678 (Foreign Students and Scholars) for further information about tax reporting. Copies may be requested by calling 1-800-TAX-FORM or they can be downloaded from the IRS website (<http://www.irs.gov/>). State tax forms are available for downloading on the web (<http://www.dor.state.wi.us/>).

Loans

For information on the various types of graduate student loans, contact the Office of Student Financial Services (432 North Murray Street, 262-3060). This Office also can provide short-term loans during temporary financial crises as well as financial counseling.

Benefits Including Health Insurance

As a UW-Madison Graduate Assistant, you are entitled to State Group Health Insurance. As soon as you arrive, you should contact the Program Office (7225 Medical Sciences Center) to receive a packet describing the benefits that are available to you, including health insurance, life insurance as well as dental insurance and excess medical insurance. Read this packet carefully as there are different deadlines for the various benefit programs, but in general you should return all forms within 30 days of your appointment date.

There are several plans offering services within the State Group Health Insurance Program. They offer different types of coverage ranging from the Standard Plan to Health Maintenance Organizations. You may elect to change your health plan once each year during a two-week "dual-choice" enrollment period, which typically falls in October. Changes made during dual-choice are effective January 1 of the next year.

If you get married, divorced or have/adopt a child while appointed as a graduate assistant, please consult with the Program Office regarding changes to your benefits.

Graduate assistants (excluding teaching assistants and program/project assistants) are not eligible for vacation, sick, holiday or other leave benefits. Requests for vacation, sickness, maternity leave, or holidays should be reasonable and are approved by the student's major professor.

Disability Information

The University of Wisconsin-Madison campus has an office to assess students for accommodations because of a disability. For more information on these services, please visit the McBurney Center website (<http://www.mcburney.wisc.edu/>). Providing documentation of disability is the responsibility of the student. Eligibility for services is based on a combination of the student's description of need, the thoroughness of the disability documentation, and documentation policies. At the conclusion of the intake a verified individualized services and accommodations plan (VISA) is written for each student and training in use of the accommodations or services is provided.

Mental Health Resources On and Off Campus

Your health insurance provides some coverage for mental health services. In addition, Counseling Services through University Health Services is available on campus free to all students. In addition to individual counseling, group sessions are available. Groups of special interest to graduate students include a Graduate Women Group and Dissertation Support Group. For more information on Counseling Services, please visit their website (http://www.uhs.wisc.edu/home.jsp?cat_id=36).

Funding for Travel to Scientific Meetings and Courses

Funding Through the Program

Students supported by the Program's Training Grant are eligible for \$300 of travel expenses. In addition, the Program holds an annual Travel Award Competition in May or June. The Program awards two \$500 travel allowances that can be used in the following fiscal year. There is a short application that needs to be filled out to apply for these awards. The Student Advisory Committee administers this competition. From the pool of applicants, the Student Advisory Committee also selects the Program's nominee for the Society for Neuroscience Graduate Student Travel Award. This award is worth \$750 plus the meeting registration fee.

Outside Funding

There are several opportunities for students to obtain outside funding for travel. Many meetings have competitions for student travel awards.

1. Women in Neuroscience group offers travel awards to the Society for Neuroscience meeting. Guidelines for these awards are available on the web (http://www.sfn.org/index.cfm?pagename=WomeninNeuroscience_cwintravelgrad).
2. The Society for Neuroscience offers a Neuroscience Scholars Program for under-represented minority students. More information can be found on the Society for Neuroscience webpage (http://apu.sfn.org/index.cfm?pagename=NeuroscienceScholars_Main).
3. The UW-Madison Graduate Student Council and Graduate Student Professional Development Office offers \$600 Vilas Travel Awards for dissertators. Information

regarding this award can be found on the Graduate Student Collaborative site (<http://info.gradsch.wisc.edu/admin/gsc/vilasawardapp.html>).

4. For students interested in attending the SACNAS National Conference, financial aid is available as well (http://64.171.10.183/confNew/confClient/current/register/attendee/financial_aid.asp?att_type=3).

Guidelines for Reimbursement of Entertainment Expenses

Entertaining Guest Speakers/Interviewing Applicants

Typically, speakers in the Neuroscience Lecture Series and interviewing applicants meet with students and faculty in the Program for meals during their visits to Madison. The Program has funds to reimburse faculty and students for these meetings. In order to distribute these funds equitably, the following rules for reimbursement apply.

Student Lunches

1. Students in the Neuroscience Training Program will be reimbursed for lunch only with guest speakers sponsored by the Program and applicants interviewing with the Program. Students are encouraged to go to lunch with other speakers, such as those who give departmental seminars, but reimbursement cannot be provided by the Program for these lunches.
2. The reimbursement rate per student is \$9.00 including tax and tip. This rate is the current reimbursement rate set by the state legislature for in-state lunches. Reimbursement for each lunch will be limited to 5 students plus the speaker. If the lunch is with an interviewing applicant, the number of Program students attending should not exceed the number of applicants.
3. To process a reimbursement, the Program Office needs the original receipt including an itemized bill for the cost of the lunch and a list of people who attended the lunch. If an itemized bill is unable to be provided by the restaurant, please notify the Program Office when the receipt is turned in. Reimbursement takes approximately 6-8 weeks.

Student Dinners

1. The reimbursement rate per student is \$17.00 including tax and tip. This rate is the current reimbursement rate set by the state legislature for in-state dinners. For dinners with an interviewing applicant, the number of Program students attending should not exceed the number of applicants.
2. To process a reimbursement, the Program Office needs the original receipt including an itemized bill for the cost of the dinner and a list of people who attended the dinner. If an itemized bill is unable to be provided by the restaurant, please notify the Program Office when the receipt is turned in. Reimbursement takes approximately 6-8 weeks.

Any variations from these guidelines must be approved prior to the event by the Program Office.

Outreach

Brain Awareness Week

The Program is involved in many outreach activities. The biggest outreach effort of the Program is Brain Awareness Week (BAW). BAW is a national outreach effort spearheaded by the Society for Neuroscience and the Dana Alliance. Each year, the Program participates in this campaign by providing brain information for free to children and adults. The Program typically sponsors an evening lectures series by UW-Madison faculty members throughout the week at the Waisman Center. In addition, the Program collaborates with the Madison Children's Museum to provide an educational experience for children and adults. Faculty and students volunteer their time to operate stations that children visit to learn more about the brain. Activities in the past have included optical illusions, memory testing, constructing a pipe cleaner neuron, exploring the senses, and seeing a human brain.

PEOPLE Program

The Neuroscience Training Program coordinates part of the curriculum for the PEOPLE Program. The PEOPLE Program is a UW-Madison based initiative to increase enrollment of minorities at UW-Madison. Students in the Madison, Milwaukee, and Racine school districts as well as several tribal schools are eligible to apply following their first semester in high school and participate in activities at UW-Madison each summer until they enroll in college. Successful completion of the PEOPLE Program, admission and satisfactory progress at UW-Madison guarantees a full tuition grant for up to five years. The Program coordinates the unit in neuroscience for students during their first summer at Madison, where graduate students serve as instructors. Generally, 12-14 graduate students from the Program participate in this activity. This is a unique initiative to increase diversity at the UW-Madison and encourage interest in neuroscience.

Other Outreach Opportunities

The Program also visits area schools by request. Graduate and undergraduate students and faculty provide hands-on brain activities to students as well as families on occasions. Occasionally students are brought to the UW-Madison campus to learn about neuroscience from our faculty. Volunteers for these presentations are solicited via e-mail. In addition, the Program occasionally participates in other community outreach activities. These have included the Future Fair in 1999, UW-Madison Open House in 2000, Whys and Wows in 2003, and Science Expeditions 2004-2006.

Carnegie Initiative on the Doctorate

The Carnegie Initiative on the Doctorate (CID) was a multi-year self examination and experimentation project spearheaded by the Carnegie Foundation for the Advancement of Teaching. Six fields of student were selected: chemistry, education (educational psychology and curriculum and instruction), English, history, mathematics, and neuroscience. Department and programs from across the nation applied to participate. The Neuroscience Training Program was a partner department/program in the neuroscience section of the project.

Major accomplishments during the Program's participation in the CID include writing the description of prototypical Ph.D. recipient from the Neuroscience Training Program; conducting parallel surveys of current faculty and students; creating Dual-Degree Program in Neuroscience and Public Policy (see page 14 for more information) and attending three convenings of participating programs at the Carnegie Foundation. Additional information is available online at (<http://www.carnegiefoundation.org/programs/index.asp?key=29>)

Neuroscience Poster Fair

Every November or December, the Program sponsors a campus-wide neuroscience poster fair. The fair takes place at Union South and generally between 35-45 posters are presented. This poster session is open to any neuroscientists on campus and researchers from outside the Program have participated every year.

Miscellaneous Information

Membership in the Society for Neuroscience

Student membership is available in the Society for Neuroscience at a nominal fee (\$45.00) and all students in the Program are encouraged to join. Members of the Society receive an informative, bi-monthly newsletter, a listing in the Society's annual directory, eligibility to sponsor an abstract for presentation as first author, and reductions in the cost of publications and subscriptions. Membership forms are available on the Society for Neuroscience website (<http://www.sfn.org/>).

Lectures, Seminars and Journal Clubs

Notices of upcoming special lectures and seminars from many departments are posted on the bulletin board outside the Program Office. Program sponsored lectures and seminars also appear on the Program's website (<http://ntp.neuroscience.wisc.edu/training/semsch.html>). Journal clubs of interest to students in neuroscience appear on the web as well (<http://ntp.neuroscience.wisc.edu/jrnclub.html>).

Identification Cards

Student identification cards may be obtained at B109 Union South (lower level, next to games room) from 8:00 a.m. - 4:15 p.m. Before an ID card may be issued, students must register for at least one credit. For ID card validation, fees must be paid. A replacement card may be obtained free of charge if there is a name change, the picture needs updating, or the card is damaged.

ASM Bus Pass Program/Parking

The Associated Students of Madison Bus Pass Program makes a free semester bus pass, valid on any Madison Metro routes, available to all registered students. For more information see the ASM Bus Pass website (<http://www.asm.wisc.edu/bus/buspass.htm>). Lost bus passes can be replaced for a small fee. Parking for students is not available on campus except in unusual circumstances. For more information on parking visit the Transportation Services website (<http://www2.fpm.wisc.edu/trans/>).

My UW-Madison Portal

This is your personalized gateway to campus. To access, use your NetID (the part of your e-mail address prior to @wisc.edu) and password to login (<http://my.wisc.edu>). If you haven't obtained a NetID yet, you can click on the link to activate your NetID. Popular features include web-based e-mail, web-based calendar, web enrollment, course information, payroll records, financial aid and student records. Students must use My UW-Madison to register for courses.

E-Mail and Information Technology

All students should set up e-mail accounts. These are available automatically once you sign up for your NetID through My UW (<http://my.wisc.edu/portal/index.jsp>). The Division of Information Technology (DoIT) maintains a technology store (Tech Store) where students may purchase software, computers and other computer accessories. Students are eligible to purchase discounted software (Adobe, Microsoft, etc.) through the Wisconsin Integrated Software Catalog. This discounted software can only be purchased through the Tech Store. Free anti-virus and firewall software is available for free download through DoIT (<http://www.doit.wisc.edu/software/security/download.asp>). Wireless network is available in many buildings throughout campus. A list of specific locations and instructions on how to access the network can be found on-line (<http://www.doit.wisc.edu/network/wireless/index.asp>).