

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* (<https://grad.wisc.edu/acadpolicy/>) 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 field. 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

(<http://www.wisc.edu/grad/catalog/index.html>)

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 **8-15** 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 have met the Graduate School's residency requirements. Dissertators register for 3 credits each semester including the summer. Usually dissertators register for 2 credits of Neuroscience 990 Research and Thesis and 1 credit of the Neuroscience Seminar Neuroscience Training Program fall and spring semesters, and 3 credits of Research and Thesis during the 8-week summer session. It is advantageous to all concerned for you to become a dissertator as soon as possible since tuition payments for dissertators are much lower. 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 online *schedule of classes*. A new version is available each semester on the web (http://registrar.wisc.edu/schedule_of_classes.htm). Registration will occur on the web at your My UW enrollment page (<http://my.wisc.edu/>). Some registration information is also 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 online schedule of classes. It is your responsibility to be aware of the information published in the *schedule of classes*. Students will be responsible for any fees for additional credits, late registration, or late payment of tuition and fees.

The Program adheres to the Graduate School's minimum course credit requirements. To earn the Ph.D. in Neuroscience you must complete 51 credits, 32 of which must be taken in residence. Half of your degree coursework (26 credits out of 51 total credits) must be completed in courses numbered 700 or higher or in NTP courses 610, 611, 619, 630, 635, 670, 675, or in courses outside of the NTP that have been identified as graduate level by the courses' subject owner or department.

Neuroscience Research Symposium

Every other year, the Program holds a 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. The keynote speaker is typically a Distinguished Alumnus Lecturer.

Chalk Talks

In years when the Neuroscience Research Symposium is not held, chalk talks may be held instead. These are short talks by faculty members who are interested in having students rotate in their laboratories. All first-year students are required to attend the chalk talks regardless of whether they have selected a major professor or not.

Laboratory Rotations and Choice of Thesis Advisor

All incoming students who are not direct admits (see below) are strongly encouraged to complete at least three laboratory rotations before choosing a laboratory for their thesis research. Students doing rotations have the highest priority for funding on the NIH training grant for the first year. 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. Because they have considerably more course requirements, N&PP students have the option of delaying their first rotation until the start of the spring semester of their first year and to finish three rotations by the end of the first year. Neuro/Law students have the option of beginning their rotations during their second year. 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, "Rotation Evaluation-Student," and "Rotation Evaluation Faculty", are available in the appendix of this Handbook, in the Program Office (9531 WIMR II), or on the web (<http://ntp.neuroscience.wisc.edu/forms.htm>).

Upon the completion of rotations, students will select a faculty mentor and laboratory to join. Faculty mentors must be approved faculty trainers in the program. This selection must be approved by the Student Funding Committee after the student and faculty member have completed and signed the "Student/Advisor Approval" form. In general, funding for the student after the first year will be provided by research grants awarded to the faculty mentor and it is important that there is mutual understanding of the available support for the student. The "Student/Advisor Approval" form is meant to facilitate this discussion. Students who decide to do fewer than 3 rotations must be approved by the program office. Please be sure to keep the program office updated of your rotation status.

Direct Admit Students

Incoming students who, prior to entering the NTP, have already decided to join a particular laboratory enter the program as a "direct admit" with the approval of the admissions committee, the faculty mentor and the Student Funding Committee. Since direct admit students already have a lab and faculty mentor selected, they are not required to do laboratory rotations. The faculty mentor will provide the financial support for the student as documented in the "Student/Advisor Approval" form submitted to the Student Funding Committee for approval.

Individual Development Plan (IDP)

Beginning Spring 2015, NTP students are required to have an Individual Development Plan (IDP). An IDP is a planning tool designed to help students identify annual progress, professional development needs, and career objectives. The IDP also serves as a communication tool between students, their mentor, and the advisory committee. The responsibility for writing, maintaining, and implementing the plan belongs to the mentee, although conversations with and feedback from the mentor(s) and advisory committee are essential. Students will document their engagement with the IDP on the Certification Forms and Advisory Committee Reports submitted to the NTP Office.

There are tools and resources available for the IDP at the UW-Madison Graduate School's website: <http://grad.wisc.edu/pd/idp>. There are several IDP templates available. NTP strongly encourages all students to utilize the American Association for the Advancement of Science's (AAAS) Individual Development Plan web-based template: <http://myidp.sciencecareers.org/>.

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 First Year Advisory Committee will serve as your advisor. The First Year 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.

After you have chosen a lab, 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. At least three members of the Committee should be members of the Program. To ensure that Advisory Committees reflect a broad perspective, at least three different areas of neuroscience or approaches to neuroscience must be represented on the Committee. Examples of different areas include behavior/cognition, development, synaptic transmission/membrane excitability. Examples of different approaches include electrophysiology, genetic/model organisms, biochemistry/pharmacology, human brain imaging, stem cells. The student is responsible for describing how the proposed committee represents at least three areas/approaches. The composition of each student's Advisory Committee will be reviewed and must be approved by the First Year Advisory Committee. All changes to the makeup of your Advisory Committee, must be approved by the First Year Advisory Committee.

In order to have your committee approved you must fill out and turn in the NTP Advisory Committee Approval Form which is found on the web. After you return the form to the NTP office the First Year Advisory Committee will review your proposed committee and approve your committee or make suggestions for additional members to ensure a broad perspective.

The Advisory Committee will meet with you once each semester before you become a dissertator (during the first four or five 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 First Year

Advisory Committee, which will assist you in deciding whether to ask for a review by the Steering Committee. The First Year Advisory Committee can handle any issues or problems that arise after the first year and are not resolved by your Advisory Committee. An Advisory Committee Report form is shown in the appendix of this Handbook, is found in the Program Office (9531 WIMR II), or on the web (<http://ntp.neuroscience.wisc.edu/forms.htm>).

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.

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.

Certification

At the end of this handbook are Certification Forms that become part of your permanent record. These forms give the Program a way to keep track of your academic progress. 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. Part III is completed prior to your defense and signed by the committee agreeing to the timeline to complete the thesis and the general content of the document. 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 found in the appendix of this Handbook, in the Program Office (9531 WIMR II), or on the web (<http://ntp.neuroscience.wisc.edu/forms.htm>). For an outline of the Certification Form and when each part is due, please see below.

Certification Form	Purpose	When to fill it out and turn it in.
Part I	An agreement signed by you and your Advisory Committee concerning the courses that will be taken for credit towards the Ph.D. degree	At your first meeting (by the end of the second semester of your first year).
Part II	Outlines your thesis proposal and outside area paper presented at your Preliminary Exam.	At your Preliminary Exam.
Part III	An agreement signed by you and your Advisory Committee to the timeline to complete your thesis and the general content of the document.	Prior to your defense.

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 found on the web (<http://ntp.neuroscience.wisc.edu/mid-levels.htm>)

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.* If you are interested in proposing a course be added to the Program's list of approved Mid-Levels please keep the following information in mind. Mid-level courses are intended to assure a minimum amount of breadth in neuroscience. These are intended to be rigorous courses focused on a topic directly related to neuroscience. The course should satisfy the requirement for 3 credits, although it is understood that some students may want the option to minimize the number of credits received and may want the option of taking the course for 2 credits. The course should cover a formal body of information related to the topic of the course. The form of these courses is open, ranging from formal lectures, to teach-oriented projects, to combined lectures and student-led discussion of primary research articles as well as other formats. However, it is expected that a mid-level course will involve more than a weekly journal-club type of course. There should be some mechanism for assessment of student knowledge, be it tests, a paper, or performance in presentations. In the case of a course involving a large number of student-presented papers, there should be a mechanism to promote discussion between both the students and the instructor of issues raised in a given paper. The simple reiteration of the results of a paper would fall short of the goal of these courses.

Competence in quantitative methods, *e.g.*, statistics, must also 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.

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. Following two consecutive semesters of enrollment on probation, you are required to petition the Steering Committee for an extension if you have experienced extenuating circumstances that have delayed

your progress or else you will not be allowed to continue in the Program. N&PP students will be given an additional year and Neuro/Law students an additional two years to complete the preliminary exam.

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

At least one month before the day of your Preliminary Examination, contact the Program Office to request a "Request for a Preliminary Warrant" form be completed by the Program office and sent to the Graduate School. The Ph.D. office of the Graduate School issues a Warrant authorizing the Program to administer the Examination. You may pick the Warrant up from the Program office. Fill out the requested information on the Warrant prior to the Examination. Leave the minor section blank as NTP students are not required to complete a minor. 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 should also be filled out and filed at this time. **Please return the completed Warrant and Certification Form II to the Program Office immediately following your examination**

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 be 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 13 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 Incomplete (I) or Progress (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://www.grad.wisc.edu/>). 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 e-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 expected Ph.D. thesis consists of two or three published or publishable manuscripts on which you are the 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

Median time to degree in the program has been a little over 5 years. It is expected you will complete the Dissertation by the end of the sixth 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. N&PP students will be given an additional year and Neuro/Law students an additional two years to finish the Ph.D. degree

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." In 2007, the Program expanded requirements to include attendance at two graduate school seminars per year for each of the first three years of training in the Program. In 2010, the graduate school office of professional development and the office of research policy partnered to create a committee called Integrated Research Ethics and Scholarship (IRES). This committee coordinates campus-wide research ethics symposia or guest lectures on ethical conduct in science. Each semester, the Program encourages students to attend IRES symposia or lectures to complete a portion of their ethics requirements. The Program provides students with a list of approved seminars each semester.

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 sometimes be arranged 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. Two summers of PEOPLE instruction fulfills the entire requirement. The PEOPLE Program runs a summer school session for underrepresented high school students from Madison, Milwaukee, Racine, and tribal schools. We coordinate a neuroscience section for both the one-week and three-week sections. You have the opportunity by teaching for the PEOPLE Program to develop your own curriculum, daily lesson plans, and evaluations in addition to hands on experience teaching local youth. You are expected to dedicate time to preparation starting at least one month before teaching begins. Another way to complete your teaching requirement is by acting as a teaching assistant for a subgroup as part of the Neuroscience Seminar. You may only act as a teaching assistant for a subgroup one time and it fulfills one half of your requirement. Final approval of how you fulfill the teaching requirement is given by your Advisory Committee.

Teaching Fellows in Neuroscience (TFN)

The Program has instituted a program called Teaching Fellows in Neuroscience (TFN). The aim of the program is to allow interested NTP graduate students to obtain training in teaching while they maintain our traditional research-oriented training leading to a Ph.D. in neuroscience. TFN is designed for students who are interested in getting faculty positions where teaching is a requirement of the job, such as at four-year liberal arts colleges where teaching is the primary obligation or at primarily research universities where the emphasis is on research but teaching and mentoring students is nonetheless an important aspect of the job.

NTP graduate students who complete the TFN program will be much more effective teachers since they will have seriously considered pedagogical practices for teaching neuroscience and received mentoring training and hands-on experience as a mentor of an undergraduate in a research setting. The TFN program will provide our graduate students with a distinct competitive advantage when they complete their research training and seek a faculty position.

To implement the TFN program the Program has partnered with several outstanding programs on the UW-Madison campus, the Delta Program and WISCIENCE, that have targeted the training of graduate students and faculty in teaching.

To apply for the certificate, students must submit the Teaching Fellows in Neuroscience form to the NTP office and upon review and approval, will be awarded the certificate.

TFN Requirements

- Coursework

Graduate courses are an integral component of both the Delta and WISCEINCE programs. Graduate students can fulfill the requirements for the TFN certificate by taking one Delta or WISCIENCE course. The coursework must be taken before the Delta Internship. Examples of courses recently offered by both programs include:

1. *Instructional Materials Development* - Graduate students work in partnership with faculty/staff to design and implement high quality instructional materials.
2. *Informal Science Education for Scientists: A Practicum* - Participants learn to effectively communicate their disciplinary research to a wide array of audiences by examining informal communication strategies.
3. *Diversity in the College Classroom* - Participants consider the complex issues of diversity and how to address them effectively in their courses.
4. *The College Classroom* - Participants gain knowledge in the basics of learning theory and effective teaching methods, in addition to creating a teaching philosophy and designing a course curriculum. Offered in class and online for participants across the CIRTl Network.
5. *The College Classroom: Effective Teaching with Technology* - Participants learn both how to incorporate technological tools into their teaching practices and how to develop and evaluate technology-based instructional materials.
6. *Inquiry-based Biology Teaching* - In this graduate-level course, students build a foundation of knowledge about teaching biology at the college level. The course is both scholarly and practical in nature: students construct an understanding of fundamental principles and sound pedagogy that they apply to their own teaching.

- **Practical Experience**

The second requirement, completion of the Delta Internship, is usually done during the semester that the graduate student is fulfilling the teaching requirement of the NTP. The Delta Internship Program provides practical experiences for participants to help them advance their training as teachers. Working in partnership with a faculty or instructional staff member, interns define a problem to be addressed (e.g. student misconceptions), and then devise and implement a solution and evaluate its efficacy for improving learning. The course aims to provide: (a) an intern learning community within Delta, (b) opportunities for peer and constructive feedback on teaching activities, (c) a chance to discuss relevant topics, and (d) a place for interns to reflect and translate their experiences into material for their teaching portfolio. Internships can include, but are not limited to:

- Adding an evaluation component to an existing course or laboratory;
- Curriculum (re)design and implementation;
- Instructional material design and implementation;
- Assistance with teaching a course.

- **Mentor Training**

The third and final requirement is to take the mentoring seminar, CBE 562: Research Mentor Seminar, which is typically taken in concert with a real mentoring experience in the student's research laboratory. There are many opportunities for mentoring of undergraduate students: the Biology 152 course requires sophomore undergraduate students to do a one-semester research project in a biology lab and numerous undergraduate summer research programs provide mentoring opportunities, in addition to undergraduates participating in laboratory research for independent study credit. The seminar addresses issues of effective communication and work habits, of diversity in the lab, and the use of scientific approaches to mentoring students.

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 First Year Advisory Committee.
- (2) Attend Neuroscience Research Symposium (every other year).
- (3) Attend Chalk Talks (when held).
- (3) If rotating, 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 First Year Advisory Committee.
- (2) If rotating, 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 First Year Advisory Committee.
- (5) Schedule an Advisory Committee meeting for no later than the third week of the fall semester.
- (6) Fulfill program ethics requirements.

(C) Summer:

- (1) Register for Neuroscience 990, Research and Thesis credits with your advisor

II. SECOND YEAR:

(A) First Semester:

- (1) Work toward completing Mid-Level Course Requirement and any other courses suggested by your Advisory Committee.
- (2) 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.

(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) Fulfill program ethics requirements.

(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) Fulfill program ethics requirements.

(C) Summer:

- (1) Register for Neuroscience 990, Research and Thesis credits with your advisor

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) Fulfill program ethics requirements.

(C) Summer:

- (1) Register for Neuroscience 990, Research and Thesis credits with your advisor

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) Fulfill program ethics requirements.

General Program Requirements

- Attend Neuroscience Research Symposium
- Attend Chalk Talks (first-year students only)
- Meet with Advisory Committee (each fall and spring semester for students who are not dissertators, each fall semester for dissertators)
- Fulfill program ethics requirements.

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 (Neuroscience 610 and Neuroscience 611)
- Professional Development Course: fall semester of first year
- Mid-Level Course Requirement: One approved course from each of two broad areas of neuroscience (see list of approved courses on the NTP website: (<http://ntp.neuroscience.wisc.edu/resource/midlevel.html>)).
- Neuroscience Seminar Course, Neuroscience 900: all fall and spring semesters, including subgroups when relevant

NTP Peer Mentoring Program

The NTP Peer Mentoring program was created to foster reciprocal relationships between mentors and mentees where both can learn and grow from each other's knowledge and experience. The goals of the NTP Mentoring program are as follows:

- Increase student satisfaction and retention.
- Contribute to a holistic student support system.
- Develop meaningful connections between new and more experienced students.
- Facilitate more opportunities for social and networking interactions within the wider NTP community.

All incoming students will be paired with senior students in the program for the year. The senior students will serve as mentors to provide new students with a variety of perspectives on everything from life in Madison, Grad School, transitioning to a new town, lab rotations, etc. Current students are also invited to participate as mentees if they so choose. Mentors and mentees are expected to meet at least once per month, preferably in person but e-mail, phone, or other forms of contact are acceptable when necessary. All mentors and mentees are required to attend the welcome event each Fall semester and the bimonthly events (every two months) coordinated by the NTP Staff. For additional information regarding the NTP Peer Mentoring Program please refer to the NTP Peer Mentoring handbook.

The Neuroscience Seminar

Subgroup Meetings

The purpose of the Seminar study group or "subgroup" 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.

Faculty can assign a grade of "unsatisfactory" if they have spoken with the student about expectations and they feel as though the student's actions has earned them an "unsatisfactory" grade. The faculty member must report these grades to the Director, who will enter the grade for the student. If a student receives an "unsatisfactory" grade, that student must participate in another subgroup in addition to the program requirement in order to

make up the grade. If the faculty member in charge of the additional subgroup decides that the student's work is "satisfactory" they must report that to the Director, who will change the grade for the student's previous subgroup to "satisfactory".

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 may 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. When a guest lecturer has been identified, please contact the Program office to coordinate a formal invitation, the guest's travel and specific itinerary during the visit.

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 around 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.

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 laptop computers (PC and Mac) and LCD projectors that can be checked out for presentations. Contact the Program Office to check out computers or the projector. The Digital Media Center located in the Biochemistry building also has audio/visual equipment for students to check out directly (<http://dmc.wisc.edu/equipmentforloan.php>).

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 those dealing with individual students or faculty issues: Admissions, First Year Advisory, Faculty Trainers, and Student Funding Committees. 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 once per academic year, generally prior to the fall semester. 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 research (scientific ethics).

First Year Student Advisory

The First Year 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.

Diversity Enhancement

The Program makes vigorous efforts to encourage applications of admission by qualified minority students and to recruit these students to the Program. The Diversity Enhancement Committee oversees the Program's Diversity Enhancement Speaker Series, arranges visits by minority students from high schools and colleges, attends area recruitment fairs, helps coordinate the Program's participation in the IBS-SRP Neurobiology program and sends representatives to schools with large minority enrollments in an effort to increase the number of minority student admissions. Members of the committee also participate in the Biosciences Opportunities Program, an annual preview weekend hosted for prospective underrepresented students at UW-Madison.

Seminar Topics

This committee is responsible for the choice of seminar topics on the ballot for the Neuroscience seminar series, which is then selected by vote of the faculty and students. This entails surveying students and faculty for interesting topics and, when necessary, recruiting faculty to organize these seminars.

Neuroscience and Public Policy Program

The Neuroscience and Public Policy (N&PP) Program offers three degree tracks. Students may elect to earn a Ph.D. degree in neuroscience, awarded by the Neuroscience Training Program (NTP), and either of two Master's degrees that are awarded by the La Follette School of Public Affairs: a Master's degree in Public Affairs (M.P.A.), with an emphasis on domestic public policy, or a Master's degree in International Public Affairs (M.I.P.A.), or a J.D. degree in law which is granted by the Law School. Each of the three degree tracks engages students in an integrated graduate program, specifically tailored for each track, that combines course work and laboratory research.

It is expected that most students will enter the N&PP Program as First Year students, but qualified students in later years of graduate study may apply to join the Program. The requirements for the Ph.D. degree in neuroscience follow those established for the degree by the Neuroscience Training Program. The requirements for the M.P.A. or M.I.P.A. degrees are determined by the La Follette School, and those for the J.D. degree by the Law School.

N&PP students will select an Advisory Committee by the end of the first academic year. The Committee will include faculty drawn from neuroscience and public policy or neuroscience and law. This Committee will advise the student during each of the years that the student is enrolled in the N&PP. The director of the N&PP Program will serve as an *ex officio* member of each student's advisory committee.

The monthly Neuroscience and Public Policy Seminar, which is open to all students, is a central element in the Program, and is a required course for all N&PP students during each semester in which they are enrolled in the Program. At the end of the sixth academic semester, or the eighth semester for J.D./Ph/D. students, N&PP students will write a position paper that bridges neuroscience and public policy or neuroscience and law. This paper will replace the outside area paper required of NTP students as part of the Preliminary Examination. In addition, N&PP students complete a summer internship in an institution or agency engaged in science policy. The internship must be approved by the N&PP Program's Steering Committee before it is undertaken.

Detailed information about the N&PP Program, the faculty who are involved, course requirements for the degree tracks that are offered, model timetables for each track, and other relevant material is available on the N&PP's web site (<http://npp.wisc.edu/>).

Graduate Student Vacation Policy

Each student is expected to notify their PI and the Program when they plan to take a vacation the semester PRIOR to the trip. This notification will serve to inform the Program that the student will be away from campus, The program will assume the student has discussed the trip with the PI and was given permission by the PI to be away from lab. If a student is enrolled in classes it is inadvisable to schedule a vacation during the semester.

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 First Year Advisory Committee oversees all issues and student plans relating to first-year students and is

also charged with assisting students in later years. You may consult with any of these members, who have a lot of experience in helping incoming students. If you would like to contact the members of the First Year Advisory Committee please contact the office.

Mallory Musolf, Student Services Coordinator, and Tera Holtz, Outreach Specialist, are excellent sources of information about all aspects of the Program. Feel free to drop in to chat with either Tera or Mallory at any time. Please also note that the Program's Director, Mary Halloran (mchalloran@wisc.edu; 263-7875) would be happy to meet with you as well.

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) satisfactorily complete one year of coursework that covers molecular, cellular and integrative neurobiology; (b) complete 30 credits, 15 of which must be completed in courses numbered 700 or higher or in NTP courses 610, 611, 629, 630, 635, 670, 675, or in courses outside of the NTP that have been identified as graduate level; (c) participate for at least two semesters in the Neuroscience Seminar; and (d). Submit a manuscript suitable for publication or the equivalent of part one of the preliminary exam to their Advisory Committee for approval. Approval should occur once the student has presented either option at their Advisory Committee meeting.

Grievances and Appeals

If you feel that you have been treated unfairly by the program, faculty, staff or another student, there are set procedures for trying to resolve the grievance or conflict. In general the policy is to initially try to resolve the conflict at the lowest level but make your way step by step to higher levels as necessary. For example, if you have a grievance with your mentor, try to resolve it by talking to him/her first. If that is not satisfactory, contact the chair of the department or the chair of NTP. The next levels are the Associate Dean of the School of Medicine and Public Health and the Dean of the Graduate School. More information can be obtained at the following website: <http://grad.wisc.edu/acadpolicy/#97>.

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. First priority for the annual traineeship slots is given to the incoming first-year students who are doing research rotations to choose a lab. Any remaining slots are awarded by the Student Funding Committee on the basis of a competitive application submitted by the student and faculty mentor. Students who are supported by the training grant are eligible for a \$300 travel allowance. Reimbursement for the travel allowance must follow University regulations and are submitted via E-Reimbursement. These regulations are published in the *Travel Reference Guide* that is available on the web (<http://www.bussvc.wisc.edu/acct/policy/ppindex.html>). Please contact the Program office prior to travel to coordinate the most efficient means of providing payment in advance or reimbursement for the travel.

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/Login.do>); Individual Predoctoral Fellowships (NRSA, F31) from the NCI, NIA, NIAAA, NIDCD, NIDCR, NCCAM, NIMH, NIDA and NINDS (http://grants2.nih.gov/training/F_files_nrsa.htm); MD/PhD Individual Predoctoral Fellowships (NRSA, F30) from the NCI, NIA, NIAAA, NIDCD, NIMH, NIDA, and NHLBI; and Individual Predoctoral Fellowships to Promote Diversity in Health-Related Research (all NIH Institutes, F31 for diversity). Information about outside fellowships can also be obtained from the Program Office (9531 WIMR II, 262-4932) or from the Fellowships Office of the Graduate School (217 Bascom Hall, 262-5837).

3) **Advanced Opportunity Fellowships.** These Fellowships are awarded by the Graduate School, through the SciMed Graduate Research Scholars Program (SciMed GRS) to entering students of specific underrepresented minority ethnicities. Qualified incoming students are nominated by the NTP Admissions Committee to receive these fellowships and will be notified individually if selected.

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

Beginning September 1, 2012, the Program target stipend is \$24,500. If your starting stipend is below the target stipend (i.e., Research Assistants, 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 for the preceding month's work. 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. Paychecks are deposited directly at your financial institution following completion of a direct deposit 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 online at: <http://www.bussvc.wisc.edu/howto/Payroll/pay-direct-deposit-auth-uw1032.pdf> and may be completed and turned into the Program Office at anytime.

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/>).

*Please note that the Program office cannot offer tax advice. Please consult the following page provided by the University for tax filing resources: <http://uwservice.wisc.edu/tax/filing-resources.php>.

Loans

For information on the various types of graduate student loans, contact the Office of Student Financial Aid (333 East Campus Mall #9701, 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 (9531 WIMR II) to receive information describing the benefits that are available to you, including health insurance, life insurance as well as supplemental dental and vision insurance and excess medical insurance. A link to the University Benefits Services page also provides helpful information: <http://www.ohr.wisc.edu/benefits/>. **Read this information 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. The health insurance application must be received on or before your first month of employment to have effective coverage in that month. For example, if your appointment begins September 1, the program office must have completed health insurance application no later than September 1 in order to have coverage for the month of September.**

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. Typically, you have thirty days from the date of a major life event to change your coverage.

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://uhs.wisc.edu/services/counseling/>).

Funding for Travel to Scientific Meetings and Courses

All travel expenses for which you expect to be reimbursed should be approved before travel occurs. **Contact the Program office prior to travel to learn about state and federal guidelines.**

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. The Program awards \$500 travel allowances that can be used in the following fiscal year (July 1-June 30). There is a short application that needs to be filled out to apply for these awards. The Student Awards Committee administers this competition. From the pool of applicants, a WI Chapter nominee will be selected for the Society for Neuroscience Graduate Student Travel Award and Postdoctoral Travel Award. In the past this award has been worth at least \$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. Here are just a few examples.

1. SACNAS offers travel scholarships to attend the SACNAS National Conference. More information can be found on their website (<http://sacnas.org/events/national-conf/travel-scholarships>).
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://www.sfn.org/Awards-and-Funding/Individual-Prizes-and-Fellowships/Fellowships/Neuroscience-Scholars-Program>).
3. The UW-Madison Graduate Student Council and Graduate Student Professional Development Office offer Vilas Travel Awards for dissertators. Information regarding this award can be found on the Graduate Student Collaborative site (<http://grad.wisc.edu/pd/vilas/research/>).

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 (in addition to state and/or federal rules).

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. Reimbursement for alcoholic purchases is not allowable.
2. The reimbursement rate per student is \$10.00 including tax and tip. This rate is the current reimbursement rate set by the state legislature for in-state lunches. Reimbursement policy only allows for reimbursement for one student and 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 1-2 weeks.

Student Dinners

1. The reimbursement rate per student is \$20.00 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 for alcoholic beverages is not allowable. Reimbursement takes approximately 1-2 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 various events, including Science Expeditions and a collaboration 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 underrepresented 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 UW-Madison and encourage interest in neuroscience.

Other Outreach Opportunities

The Program also visits area middle school classrooms 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 regularly participates in other community outreach activities including family science nights/days at local schools.

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 Double-Degree Program in Neuroscience and Public Policy (see page 15 for more information) and attending three meetings of participating programs at the Carnegie Foundation. Additional information is available online at (<http://www.carnegiefoundation.org>)

Neuroscience Poster Fair

Alternating with the Neuroscience Symposium, the Program sponsors a campus-wide neuroscience poster fair. The fair takes place on campus and generally between 25-30 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 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. The Program sends e-mail notification to all faculty and students for relevant lectures and seminars. Program sponsored lectures and seminars also appear on the Program's website (<http://ntp.neuroscience.wisc.edu>). Journal clubs of interest to students in neuroscience appear on the web as well (<http://ntp.neuroscience.wisc.edu/journal-clubs.htm>).

Student Identification Cards

Student identification cards may be obtained by following instructions on the website (<http://www.wiscard.wisc.edu>). 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. The Wiscard functions as both a student ID card and building access on nights and weekends. Contact the building manager for the building in which you wish to gain building access.

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/buspass.html>). 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://transportation.wisc.edu/>).

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>). 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.cio.wisc.edu/security-antivirus.aspx>). Wireless network is available throughout campus.

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

APPENDIX

NEUROSCIENCE TRAINING PROGRAM
Rotation Evaluation-Student

(All evaluations will be reviewed by the Student Advisory Committee, Program Director and Program Assistant Director.)

Name: _____

Rotation Sponsor: _____

Description of Research Project: (Write a brief summary of the project you worked on during your rotation including any techniques you learned.)

Evaluation of Rotation

1. Did you have enough interaction with the Rotation Sponsor?
2. Do you feel that you received enough instruction regarding new techniques and protocols?
3. Was the research project appropriate for a rotation? (length, type)
4. Did you like the laboratory environment?
5. Did the research style of the Rotation Sponsor match yours?
6. Were you satisfied with this rotation as a learning experience?

Signature of Student: _____

NEUROSCIENCE TRAINING PROGRAM
Rotation Evaluation-Faculty Sponsor

(All evaluations will be reviewed by the Student Advisory Committee, Program Director and Program Assistant Director.)

Name: _____

Student's Name: _____

Description of Research Project: (Write a brief summary of the project you had the student work on during his/her rotation.)

Evaluation of Rotation

1. Did the student meet your expectations in the following areas?
 - a. Time spent in laboratory:

 - b. Laboratory technique:

 - c. Scientific method:

2. Did the student ask thoughtful and interesting questions?

3. Was the student courteous and respectful to others working in laboratory?

4. In what areas did the student excel?

5. In what areas could the student use the most improvement?

Signature of Faculty Sponsor: _____

**NEUROSCIENCE TRAINING PROGRAM
STUDENT/ ADVISOR APPROVAL FORM**

The following form must be completed and approved by the Student Funding Committee before a NTP student can formally join a lab. Complete the indicated information and email to ntp@mhub.neuroscience.wisc.edu.

To be filled out by the P.I.

Name of P.I.: _____

Name of NTP student _____

RESEARCH SUPPORT

ACTIVE:

FUNDING SOURCE & GRANT NUMBER	YOUR ROLE IN PROJECT & GRANT TITLE	PROJECT PERIOD	CURRENT YEAR DIRECT COST

PENDING:

FUNDING SOURCE & GRANT NUMBER	YOUR ROLE IN PROJECT & GRANT TITLE	PROJECT PERIOD & DECISION DATE	FIRST YEAR DIRECT COST

Which grant will provide support for the NTP student?

Past research support for last 10 years (Funding source, grant number, your role, period of funding, yearly direct costs, title of grant):

Please list all current lab personnel (postdocs, grad students, technicians, etc) and funding sources:

As the dissertation mentor of _____, I accept financial and intellectual responsibility for his/her development and successful completion of the Ph.D in neuroscience.

Signature of faculty mentor _____ **Date** _____

Signature of NTP student _____ **Date** _____

As chair of the department of _____, **I acknowledge this mentoring agreement.**

Signature of departmental chair _____ **Date** _____

The Student Funding Committee has examined the student/advisor agreement and approves the assignment.

Name of Committee member _____

Signature of Committee member _____ **Date** _____

Name of Committee member _____

Signature of Committee member _____ **Date** _____

Signature of Program director _____ **Date** _____

SAMPLE

NTP ADVISORY COMMITTEE APPROVAL FORM

Complete the indicated information and email to ntp@mhub.neuroscience.wisc.edu *prior to your first advisory committee meeting.*

Reminder-Committee requirements according to the NTP Student Handbook: At least three members of the Committee should be members of the Program. To ensure that Advisory Committees reflect a broad perspective, at least three different areas of neuroscience or approaches to neuroscience must be represented on the Committee. Examples of different areas include behavior/cognition, development, synaptic transmission/membrane excitability. Examples of different approaches include electrophysiology, genetics/model organisms, biochemistry/pharmacology, human brain imaging, stem cells. The student is responsible for describing how the proposed committee represents at least three areas/approaches.

Student Name: _____

Advisor: _____

Year joined NTP: _____

Summary of Proposed Research Project (1-2 Paragraphs):

Proposed Faculty Member (indicate if they are N&PP or MSTP representative)	Research Area	How will this individual contribute to your training?

NEUROSCIENCE TRAINING PROGRAM
Advisory Committee Report

Name of Student: _____ Major Professor: _____

Date of Committee Meeting: _____ Date of Report: _____

Names of Committee Members Present: _____

Names of Committee Members Absent: _____

Brief Description of Student's Progress Since Previous Report. Comment as appropriate on:
A. Activities Outside the Laboratory (e.g. attendance at Monday afternoon seminars, participation/performance in subgroups etc.)

B. Research Activities (e.g. participation in lab meetings, discussion/involvement with research, independence, initiative, research progress, etc.)

C. Individual Development Plan (IDP) Report. Please check off each category that you have worked on and discussed with your mentor/advisory committee:

Research Progress _____
Professional Development (grant writing, teaching, science communication) _____
Prelim Timeline _____
Defense Timeline _____
Career options/planning _____

Summary Evaluation:

Progress is: A. Satisfactory _____ B. Marginal _____ C. Unsatisfactory _____

If B or C, Please Comment:

Recommendations:

Signature of Major Professor: _____

Signature of Student: _____

Please return to Program Office, 9531 WIMR II

NEUROSCIENCE TRAINING PROGRAM
Certification for the Ph.D. Degree and Training Record

PART I

NAME _____

DATE: _____

CERTIFICATION

Date admitted to the Program:

Major Professor:

Advisory committee (five or more faculty members, including the major professor, collectively representing at least three distinct areas of specialization within neuroscience):

	<u>Name</u>	<u>Department</u>	<u>Area</u>
1.			
2.			
3.			
4.			
5.			

Program Course Requirements:

The overall course sequence should be reviewed to ensure that appropriate training in quantitative methods (e.g. statistics and/or computer science) is included.

First Year Courses:

<u>UW Courses, Title and Number</u>	<u>Credits</u>
-------------------------------------	----------------

Mid-Level Courses:

<u>UW Courses, Title and Number</u>	<u>Credits</u>
-------------------------------------	----------------

(2 courses from 2 areas in Neuroscience)

Courses, Title and Number Credits

Quantitative Methods:

Advanced Courses:

Individual Development Plan (IDP) Report:

Please check off each category that you have worked on and discussed with your mentor/advisory committee:

Research Progress _____
Professional Development (grant writing, teaching, science communication) _____
Prelim Timeline _____
Defense Timeline _____
Career options/planning _____

According to the NTP Student Handbook, the preliminary exam should be completed by the end of the second summer in the program.

Proposed timeline for Preliminary Exam (expected semester and year) _____

The above course of study was accepted on _____
date

Signatures: _____
Student Major Professor

Committee Signatures: _____

Please return completed form to the Program Office, 9531 WIMR II.

NEUROSCIENCE TRAINING PROGRAM
Certification for the Ph.D. Degree and Training Record

PART II

NAME _____

DATE of EXAM:

A. PRELIMINARY EXAMINATION

1. **Outside-area Paper.**

Title of Paper:

Brief description of topic covered:

SAMPLE

2. **Thesis Proposal.**

Title of proposal:

Brief description of proposed dissertation research:

B. INDIVIDUAL DEVELOPMENT PLAN (IDP) REPORT:

Please check off each category that you have worked on and discussed with your mentor/advisory committee:

Research Progress _____

Professional Development (grant writing, teaching, science communication) _____

Defense Timeline _____

Career options/planning _____

Date outside-area paper and proposal accepted:

Committee Signatures: _____ (Major Professor)

Please return completed form to the Program Office, 9531 WIMR II.

NEUROSCIENCE TRAINING PROGRAM
Certification for the Ph.D. Degree and Training Record

PART III

NAME _____

DATE OF MEETING: _____

A. TEACHING

Each student must teach at least one full semester in a substantial neuroscience or related course.

<u>Course(s) Taught</u>	<u>Credit Hours</u>	<u>Responsibility</u>
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B. RESEARCH PRESENTATIONS

Each student will make an informal presentation of his/her thesis proposal in the Neuroscience Seminar.

Date of presentation: _____

Title of presentation: _____

C. DISSERTATION MEETING

Date of agreement on style and content of written dissertation: _____

Expected date for thesis defense: _____

D. INDIVIDUAL DEVELOPMENT PLAN (IDP) REPORT:

Please check off each category that you have worked on and discussed with your mentor/advisory committee:

Research Progress _____

Professional Development (grant writing, teaching, science communication) _____

Defense Timeline _____

Career options/planning _____

Committee Signatures: _____ (Major Professor)

Please return completed form to the Program Office, 9531 WIMR II

Teaching Fellows in Neuroscience

Please outline below the courses/workshops/activities you completed to earn the Teaching Fellows in Neuroscience (TfN) certificate. Please submit the completed document to the Neuroscience Training Program office.

1. Delta course(s) taken prior to completing the Delta Internship. Please include when the coursework was completed.
2. Delta Internship: What course did you teach and when, what problem did you address? How did you address it and what were the results?
3. Mentor training: When did you complete the mentor training course, CBE 562: Research Mentor Training?

Overall, what was your experience like while obtaining the TfN certificate?

Do you have suggestions for improving TfN?

Other comments?