NEUROSCIENCE TRAINING PROGRAM
Faculty Handbook

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Information For Neuroscience Training Program Faculty

Program Governance

Criteria for Faculty Membership

The Neuroscience Training Program recognizes that there are multiple ways in which faculty members can contribute to the success of the Program. Faculty membership in the Neuroscience Training Program is evaluated using two major criteria.

1) Faculty contribute to the training of Neuroscience Training Program graduate students (as assessed by participating in any of the following activities during the review period: 1) serving as thesis advisor to a NTP student, 2) teaching part of a neuro-related course level 600 or up, 3) leading a NTP subgroup, 4) sponsoring a lab rotation for a NTP student, 5) serving on an advisory committee of a NTP student 6) serving on one of the standing committees of the NTP or 7) routinely participating in Monday seminar.

2) Faculty are active in neuroscience research (as assessed by a record of consistent grant support for neuroscience-related research and publication of recent peer-reviewed papers on neuroscience-related topics).

Every five years, the program will assess faculty membership by circulating an NTP Faculty Activity Report. Faculty members are responsible for submitting the activity report for the review in a timely fashion. The purpose of the review is to maintain a high level of quality in the categories of scholarship, training and productivity, which are necessary in order to recruit the highest quality student applicants and in order to ensure that the Program remains competitive for national and intramural funding.

All faculty in the NTP are expected to be active participants in the program by meeting criteria 1). In addition, Faculty trainers must have financial support to train graduate students as stipulated in criteria 2). Faculty who meet criteria 1) but not criteria 2) because of a lack of resources or lack of time commitment are eligible to be Associate Faculty. Associate Faculty can apply to be reinstated as a Faculty trainer at any time as conditions evolve. The NTP Faculty Trainers Committee will review faculty membership and will weigh the relative importance and application of each of the criteria on an individual basis. Some of these criteria will be waived for new, independent junior faculty.

Applications for faculty membership can be submitted at anytime. Prospective members are asked to submit a CV, research statement and statement of commitment to graduate training in neuroscience. The Steering Committee reviews submitted materials and approves new faculty members.

Director of Neuroscience Training Program

Appointments for the Director of the Neuroscience Training Program will be for a three-year period contingent on approval by the Dean of the School of Medicine & Public Health and renewable for an additional three years following a faculty vote of confidence and assuming mutual agreement between the Dean and the Director. There is a limit of two consecutive six-year terms for any individual for the Director of the Neuroscience Training Program. Near the end of each six-year term, an election will be held for the Director. All faculty members of the Neuroscience Training Program are eligible to vote for the Director following the release of an advisory vote of the students of the program. Because the Dean of the School of Medicine & Public Health officially appoints the Director of the Neuroscience Training Program, the results of the election are advisory to the Dean. The results of the election will be provided to the Dean three months prior to the beginning of the appointment period.
An election committee of three faculty members will be appointed by the Director to oversee the voting procedure and act as tellers for the voting. A Program staff member will also serve on this committee. Candidates must be nominated by other faculty in the Program and be willing to serve if elected. If there are more than two candidates and no candidate receives a majority (over 50%) of the votes on the first election, then a runoff election between the top two candidates receiving the most votes will be held a week later.

Faculty Membership on the Steering Committee
While authority and governance on major issues remain within the Program at-large (see Program-Wide Meetings below), the Steering Committee oversees most of the routine business of the Neuroscience Training Program. The Steering Committee consists of ten faculty members and student representatives. Five faculty members are elected, and five are appointed by the Director. In order to maintain continuity, membership is rotating with two to four new members every year. All members are elected for three-year terms. The Director and Associate Director of the Neuroscience Training Program are ex officio members.

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.

Faculty Membership on Program Standing Committees
The Neuroscience Training Program’s successful functioning depends on the input and commitment of its faculty and students. The Director of the Program appoints all committees and chairs, with the exception of the Steering Committee. Committee membership fulfills one of the requirements for membership in the Program. Appointments serve to balance turnover and continuity, as it is important to have some stability within the committees as well. Each committee has approximately 5-6 members.

Admissions Committee
This Committee determines the makeup of the student body and hence the quality of the Program. Members are involved in all aspects of the admissions and recruitment process.

Responsibilities: Reading applications, selecting candidates to visit campus, and participating in the recruiting weekends that typically take place in February.

Meetings: Meets as needed from mid-December to the end of March. Interviews of prospective applicants typically take place on two Fridays in February.

Student Awards Committee
This committee is charged with making recommendations for student and faculty awards, which include the student travel grants, HHMI international fellowships, etc.

Meetings: Meets as needed when nominations for awards are due.

First Year Advisory Committee
This Committee serves as a second group of faculty, beyond the Student’s Advisory Committee, that students can consult. The Committee serves as the Advisory Committee for first-year students and assesses and/or discusses issues relating to students beyond the first-year as the need arises.
Responsibilities: Welcoming and advising the first-year class, discussing possible rotations, course decisions, and general information. This function is gradually replaced as the first-year students form their thesis committees towards the end of the first year. This committee approves the makeup of the thesis committees chosen by the students. It is also responsible for handling any student issues that may arise after the first year, including academic, personal, or disciplinary problems.

Meetings: Two meetings in the fall with the first-year class, and as needed in the spring. Some work is done by email (approval of committees, etc.).

**Curriculum Committee**
This Committee has overall responsibility for the Program’s curriculum. This includes reviewing course requirements, encouraging the development of new courses, and helping with other initiatives such as the neurobiology concentration in the biology major.

Responsibilities: Sets curriculum guidelines and requirements for the Program. Approves any new course proposals. Handles and discusses curriculum issues, suggestions, and needs. The committee also deals occasionally with undergraduate neuroscience curriculum topics.

Meetings: Approximately 2-4 a times a year or as needed. Some work is done by email (course approval, etc.).

**Seminar Topics Committee**
The central forum for intellectual exchange in the Program is the Neuroscience Seminar (please see p. 6 for additional information). This Committee oversees the selection and implementation of the Monday Night Seminar topics.

Responsibilities: Solicits and approves the student seminar topics (i.e., subgroups) for the upcoming academic year. The Committee requests topics and arranges for the ballot to be distributed.

Meetings: Once each semester. Also deals with other seminar issues or suggestions that may arise related to neuroscience graduate training.

**Ethics Committee**
There is an NIH mandate that all students supported by federal training grants receive annual instruction in the responsible conduct of science (scientific ethics). First- and third-year students and all other trainees (students currently receiving stipend support from the training grant) are required to participate in the annual presentation.

Responsibilities: Organizes and guides the students in several subgroup meetings, arranges for presentations from outside speakers, helps choose topics and papers, and guides discussion.

Meetings: Meets 4-6 times in fall or spring, plus one Monday night seminar.

**Diversity Enhancement Committee**
The Program is committed to actively encouraging diversity in its community of scholars and to engaging in activities that inspire individuals from disadvantaged or underrepresented backgrounds to choose careers in neuroscience. This committee seeks to promote such activity, through gathering information on successful methods for recruiting minorities and ensuring the success of minority students that come to the Program.

Responsibilities: Organizing special lectures, usually in spring, of an invited minority neuroscientist. There are a variety of activities surrounding this visit including a round-table discussion of minority
issues in science and a dinner for students and faculty. Members of this committee also attend various graduate recruiting fairs.

Meetings: 2-3 times per year.

**Student Funding Committee**
Because the NIH training grant is a crucial component of student funding, the assignment of students to the training grant is a critical function. In addition, it is important that each student joins the lab of a faculty trainer that has sufficient funding to support them. This committee will oversee both of these important decisions.

Responsibilities: This committee is responsible for the assignment of training grant appointments as well as making sure that there is adequate support in the labs chosen by all students. Typically all of the incoming first year students who are doing rotations and do not have other support, such as Advanced Opportunity Fellowships (AOF) or Neuroscience and Public Policy traineeships, will be awarded slots on the training grant. Some students may also be appointed for one or more additional years based on an examination of the student’s academic performance, his or her funding needs, and an equitable distribution of training grant slots across the faculty. The Committee will also review the Student/Advisor Approval Forms submitted by students and faculty when a student chooses a lab to ensure that faculty trainers have adequate funding for the students that wish to work in their labs; in the majority of cases this is expected to be a formality.

Meetings: 1-2 meetings in the spring to make appointments to the training grant. Approval of the choice of faculty trainers by the students will be done by email following receipt of the Student/advisor Approval Form signed by both the student and faculty member.

**Faculty Trainers Committee**
The NIH training grant is the backbone of the Program, providing support for a subset of the graduate students. To be eligible to train students, faculty must be tenure-track, have research grants to support the research and the students, and a strong record as mentors of predoctoral training. Non-tenure track faculty can be approved to be a faculty trainer and can mentor an NTP student’s thesis work provided a tenure-track faculty trainer serves as a co-mentor to sign off on the necessary forms.

Responsibility: This committee is charged with overseeing the selection of faculty trainers on the training grant. Experience with serving on the T32 study section that reviews these grants is essential.

Meetings: Every four to five years, as needed.

**Program Website**
The Program maintains a website as a resource for current faculty and students as well as prospective students. The URL is [http://ntp.neuroscience.wisc.edu](http://ntp.neuroscience.wisc.edu). All faculty are encouraged to keep their online research description and publication information up-to-date. Please send updates to the Program Office at any time for inclusion on the website. The website also contains Program forms, seminar schedule, alumni directory and general Program information for prospective students.
Admissions Process

To reach potential students the Neuroscience Training Program is described in the directory of the Society for Neuroscience website (sfn.org). Program representatives also participate in recruiting conferences when able. When representatives are unable to attend these conferences/visits, program promotional materials are provided for distribution at the conferences. The program collaborates with the bioscience community on campus to host the annual BOPS (bioscience opportunities) preview weekend for potential underrepresented minority applicants. Lastly, the Program is described in full on the Internet under the Program’s website (http://ntp.neuroscience.wisc.edu/). The website allows prospective students to request information and application materials and communicate via email with any of the faculty in the Program. The Program also produces a paper recruiting bulletin that essentially duplicates the information available on the website in a portable format. More than 350 students from around the world inquire about the Program each year, and about half of them apply for admission. Highly qualified applicants are invited for interviews.

Admission to the Neuroscience Training Program is by recommendation of a 5-6 member admissions committee, which includes the Director of the Program and 4-5 faculty members. Selection for admission is based upon weighing many aspects of an applicant's background. Included among them are undergraduate performance in mathematics as well as the basic physical and life sciences, Graduate Record Examination scores, grade point averages, and written recommendations. The single factor that is weighed most heavily in deciding upon admission is evidence of prior research experience. Indeed, of all the indices available for predicting success in graduate school and later in a research career, our experience of more than two decades of evaluating applicants suggests that only prior research experience as an undergraduate has predictive validity. Applicants selected for final consideration by the admissions committee are invited to the Program for interviews. Typically, offers of admission are made only with a personal interview.

Graduate Student Recruiting

Faculty are encouraged to participate in the Neuroscience Training Program recruiting activities. Generally two recruiting weekends are scheduled in February of each year. Applicants arrive on Thursday afternoon or evening and depart from Madison on Saturday evening or Sunday.

The majority of faculty interactions with potential students occur on Friday. During the day, applicants meet with faculty members who have similar research interests. These meetings are generally 30 minutes. On Friday evening there is a buffet dinner held at a faculty member’s house. Both Neuroscience Training Program faculty and students are invited to socialize with the potential students. Invitations for these events are sent via e-mail.

Recruiting a Neuroscience Training Program Student Into Your Laboratory

Chalk Talks

In years when the Neuroscience Research Symposium is not held, chalk talks may be held instead. These are short 10-minute 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.

Neuroscience Research Symposium
In September of 2002, the Program held the first Neuroscience Research Symposium (NRS) at the BioPharmaceutical Technology Center and the NRS will be held on alternating years in the fall. All first-year students are required to attend the NRS. The symposium includes research talks by students and faculty, poster sessions, and a keynote speaker. In 2004, the keynote speaker was an alum of the Program, Kim Wallen. At the symposium, Kim was awarded the first distinguished alumnus award. Tom Reh, Art Weber, and Indira Raman, Jeremy Teissere were awarded the distinguished alumnus award in 2006, 2008, and 2010, 2015 respectively.

**Rotations**

The purpose of rotations is to help first-year students determine who their major professor will be and what research subject they intend to study. Students normally complete three rotations before deciding on a major professor. Rotations typically last from 6-8 weeks (8 weeks maximum). During a rotation, faculty are expected to assign students a small project that can be completed in a short amount of time. After each rotation, the faculty sponsor and student complete an evaluation to determine the success of the rotation. Evaluation forms are available in the back of this Handbook, 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 by the end of March of their first year. 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. If an untenured faculty mentor has not previously mentored a Ph.D. student, an experienced senior faculty member will be asked to be a co-mentor and member of the student’s Advisory Committee.

**Neuroscience Seminar**

The major forum for cohesiveness in the Program is the Neuroscience Seminar. The Seminar is held weekly throughout the academic year, and all Neuroscience graduate students are required to attend. The Seminar is central to the Program because it is the nexus for intellectual and social interaction among the faculty that binds the members of the Program together each week. The Seminar effectively counters a problem that is a continuing challenge for large campus-wide graduate programs, namely faculty and student members being dispersed at different locations and therefore lacking the advantages of daily contact and interaction. Faculty are strongly encouraged to attend seminar as often as possible since students depend on input, criticism, and questions from faculty when they make presentations.

**Subgroup Topics**

The Seminar involves the discussion and presentation of selected topics in neuroscience, as well as research presentations by the students in the Program and by new faculty. Typically, five to six topics in neuroscience are considered each year. In late spring a call is sent out to faculty and students asking for volunteers to teach topics for the coming academic year. Each topic must have at least one faculty sponsor, but may be sponsored by two or more faculty. Once topics have been gathered, a ballot is prepared, and Program students and faculty vote for their top six topics. Generally, three topics will be held each semester. Once topics have been scheduled, Program students vote on the topics they would like to participate in. The Program Office makes final student assignments to ensure that each group is balanced. Faculty in the Program who have agreed to sponsor the topics then join with students to form study groups that will prepare a series of presentations for the Seminar covering the topic area. If a Faculty sponsor would like assistance leading the subgroup, they may ask a student to act as a teaching assistant for the duration of the subgroup. All neuroscience students through the third year are required to participate in two of these groups each year. After the third year students participate in one subgroup
per year. Students from each group present three lectures in the group's topic area to those who attend the Seminar.

**Student Seminar Presentations**

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 will be 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 to make a Seminar presentation, speaking assignments should be determined by the subgroup leader.

Each student in the Program is allowed one Seminar presentation waiver. The waiver will excuse the student from a subgroup-related Seminar presentation, but it can be used only once at the student's discretion during the course of training. This waiver does not apply to the presentation of the thesis proposal.

**Subgroup**

The study group or subgroup meets 8-12 times or more to discuss the literature in the topic area and to prepare the three student-delivered presentations. These study groups usually function like journal clubs with students reading and presenting journal articles. Performance in the subgroup is graded by the faculty member(s) in charge of the group. Faculty sponsors should also record attendance for each meeting. 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".

On average students present at the Seminar at least twice during their tenure in the program. These presentations give students outstanding training in presenting a seminar to a diverse and critical audience. The coverage of each topic area by the study group concludes with a guest lecture by a well-known neuroscientist from an outside institution.

Collectively, the speakers for the seminar constitute the Neuroscience Lecture Series, and the discussion of their research areas as part of the Seminar is a valuable component in the training of a Neuroscience student because it gives each student, in the five years in which they are in the Program, systematic exposure to a broad range of research in modern neuroscience. Moreover, the students are very well prepared to interact with Lecture Series speakers when they visit the University because they are familiar, through the Seminar, with the speaker's field in general and research in particular. Additional speakers, outside the Neuroscience Lecture Series, are also invited to speak when partial funding is available from outside sources such as the University Lectures Committee.

Faculty subgroup sponsors are responsible for arranging the study group meetings and inviting the guest speaker. Faculty who have not led a subgroup are strongly encouraged to consult the Seminar Topics Committee chair for advice from the perspective of a student and a faculty. Once a guest speaker
has accepted an invitation, the Program Office should be notified so that an official letter of invitation can be sent. The Program Office can aid with travel arrangements and the itinerary.

The reasonable expenses for the speaker’s visit to UW-Madison are paid by the Program. A typical itinerary includes faculty visits during the day, a student-hosted lunch, lecture, and a dinner with faculty and/or students. Occasionally, a faculty member will host a potluck dinner at their house. All Program students are invited to attend lunch with the guest speaker regardless of their subgroup selections.

If there is any reason to believe that the speaker's airfare will be excessive (i.e., will exceed $500), approval must be given by the Program Office before the speaker is invited. The travel expenses of speakers from abroad will be reimbursed by the Program only up to the average round trip airfare for domestic speakers, currently about $500. In accordance with university policies, airfare purchased for over $500 must include quotes that show the ticket purchased was the least expensive.

Faculty often have meals with visiting speakers. The meal costs must meet School of Medicine & Public Health fiscal policies. Contact the Program Office for more information. To process a reimbursement, the Program Office needs an original itemized receipt for the cost of the dinner and a list of people who attended the dinner. Reimbursement takes approximately two weeks. An honorarium is also available for guest speakers. Please contact the Program office for more information.

Opportunities for Teaching Neuroscience

Undergraduate and Graduate Neuroscience Courses

During the past several years, faculty in the Program have developed several new courses in neuroscience for both advanced undergraduate and graduate students. The Program has been able to offer courses under its own auspices since 1977. New courses are needed to strengthen the list of mid-level courses for graduate students and to expand the list of courses available for the undergraduate neurobiology option. Courses offered by the Program can be crosslisted with other departments and the Program can be crosslisted on courses offered by other departments.

Faculty are encouraged to offer new courses on a trial basis under the Program’s selected topics number, 675. Selected topics courses can be offered without prior approval from school or university curriculum committees. Contact the Program Office to inquire about how to set up a selected topics course. Once a course has proved successful, faculty instructor(s) should complete a proposal to offer a new course. Information about the new course proposal/course change process can be found here http://www.secfac.wisc.edu/divcomm/courses/courseproposals.htm. Program staff can help with filling out and submitting new course proposals and/or course change forms.

Professional Development Courses

An additional opportunity for instruction is in the Program’s Professional Development for Biomedical Graduate Students Course 700. This course is required for first-year students in the Program. The course is designed to introduce graduate students to the skills necessary to succeed in science and survive graduate school. The course meets once a week for two hours for the first half of the fall semester. Various topics are covered in one or two one-hour sessions. Each section of the course is taught by a Neuroscience faculty member or other campus representative. If you are interested in teaching a session in this course, please contact the Program Office. A senior professional development course is also offered. The format is identical to the format for the first course, but the
topics covered are more relevant for students ending in graduate school. This course will be offered every other year in the fall, or as needed.

**Outreach Activities**

**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.

**Outreach Materials**

The Program has an extensive collection of outreach materials. Faculty are welcome to borrow any of the models, mounts, videos, specimens or experimental equipment for their own outreach events. A partial list of the items is available at the Program’s website (http://ntp.neuroscience.wisc.edu/lending-library.htm). Please contact Tera Holtz in the NTP office to schedule the use of these materials.

**Opportunities for Undergraduate Mentorship**

**Biology Faculty Advisor**

There is always a need for advisors to serve undergraduates in the biology major with a neurobiology option. For more information, please contact Lyn Turkstra, 2-7583, lsturkstra@wisc.edu.

**UW Undergraduate Research Experience**
Undergraduates often approach the Program Office regarding opportunities for research experience. If you have an opening in your laboratory, please feel free to contact the Program Office. We can advertise it to the Undergraduate Neurobiology Society.

**Integrated Biological Sciences-Summer Research Program (IBS-SRP) for Undergraduates**

Beginning in the summer of 2002, the Program began working with the Center for Biology Education Summer Research Program to place interested undergraduates in neuroscience labs. These undergraduates come from colleges across the country to conduct research for ten weeks. The Program hosts at least 3-5 students in this program each summer. For more information on IBS-SRP program, please visit the website [http://biology.wisc.edu/Undergraduates-GettingInvolvedBeyondtheClassroom-UndergraduateResearch-IntegratedBiologicalSciencesSummerResearchProgram.htm](http://biology.wisc.edu/Undergraduates-GettingInvolvedBeyondtheClassroom-UndergraduateResearch-IntegratedBiologicalSciencesSummerResearchProgram.htm) If you are interested in serving as a research mentor for one of these students, please contact the Program Office.

**Neuroscience Events**

**Annual Picnic**

Each fall the Program sponsors the annual picnic. This event is an excellent setting for faculty and students to meet each other in an informal setting and welcome new faculty and students to the Program.

**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 35-45 posters are presented. This poster session is open to any neuroscientists on campus and researchers from outside the Program have participated every year.

**Assistance**

If at anytime during your tenure in the Neuroscience Training Program you need assistance, there are many resources available to you. Mallory Musolf ([musolf@wisc.edu](mailto:musolf@wisc.edu)), Student Services Coordinator, provides financial oversight, manages grants and fellowships, enters payroll and coordinates teaching resources for the Program. Tera Holtz ([tholtz@wisc.edu](mailto:tholtz@wisc.edu)), Outreach Specialist, is responsible coordinating seminar visitor itineraries and billing; recruitment schedules, outreach coordination and travel expense reports. Both Tera and Mallory are excellent sources of information about all aspects of the Program, and you may drop in to chat with either of them at anytime. Please also note that the Director, Mary Halloran, would be happy to meet with you as well. Feel free to contact her by phone (263-7875) or email (mchalloran@wisc.edu). The Program’s website contains much of the information provided in this document and is maintained often. We encourage you to bookmark the webpage and use the resources available as needed: [http://ntp.neuroscience.wisc.edu/](http://ntp.neuroscience.wisc.edu/).

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.
Information for Neuroscience Training Program Major Professors and Advisory Committee Members

A large part of this section of the faculty handbook has been extracted from the Program’s Graduate Student Handbook.

Sources of Support for Neuroscience Training Program Students

Beginning September 1, 2014, the Program target stipend is $25,000. If your starting stipend is below the target stipend (i.e., Research Assistants, Trainees and some outside Fellowships), it will supplemented either by the Program or your major professor up to the target stipend level.

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, 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.
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/).

**Mentoring Neuroscience Training Program Students**

Good mentoring and guidance are essential to the success of a student as she or he progresses through graduate training. While the Advisory Committee has ultimate oversight of a student’s research project, a student clearly has the most interaction with the major professor. Before taking on a thesis student, the major professor should be able to make a long-term commitment to the training and success of the student. Although it is important for students to have funding support, productivity, and scientific excellence in the lab environment, frequent high quality personal interactions and guidance are also necessary. Because student progress and faculty mentoring style will naturally vary, it is the responsibility of the major professor, the thesis Advisory committee as well as the student to ensure that the student advances through experimentation, preliminary examination, dissertation research, and writing of journal articles in a timely manner. Most students finish the Ph.D. in 5 years with a thesis of three published or publishable manuscripts. Over the 2001-2011 period, the mean time to degree was 5.3 years (median of 5.1 years) and over 93% of the graduates had at least one first authored paper with a mean of 2.4 first-authored papers and a mean of 4.4 total papers. The major professor should help design experiments early on in the dissertation process that have a reasonable chance of success and will lend themselves to the process of manuscript writing. Advisors or potential advisors are welcome to consult with the Program Director for advice on mentoring matters.
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.

**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](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/](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).

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 up the Warrant 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.

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.

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.

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<thead>
<tr>
<th>Certification Form</th>
<th>Purpose</th>
<th>When to fill it out and turn it in.</th>
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<tr>
<td>Part I</td>
<td>An agreement signed by you and your Advisory Committee concerning the courses that will be taken for credit towards the Ph.D. degree</td>
<td>At your first meeting (by the end of the second semester of your first year).</td>
</tr>
<tr>
<td>Part II</td>
<td>Outlines your thesis proposal and outside area paper presented at your Preliminary Exam.</td>
<td>At your Preliminary Exam.</td>
</tr>
<tr>
<td>Part III</td>
<td>An agreement signed by you and your Advisory Committee to the timeline to complete your thesis and the general content of the document.</td>
<td>Prior to your defense.</td>
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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 WISCIENCE 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 Student Advisory Committee.
(2) Attend Neuroscience Research Symposium (every other year).
(3) Attend Chalk Talks (when held).
(4) Plan laboratory rotations and complete 1-2 of these rotations. Turn in report(s) on completed rotation(s).
(B) Second Semester:
(1) Register for required spring courses and choose elective(s) after meeting with Student Advisory Committee.
(2) Complete laboratory rotations. Turn in report(s) on completed rotation(s).
(3) Select major professor and other members of Advisory Committee by March 31.
(4) Have Advisory Committee members approved by the Student Advisory Committee.
(5) Meet with Advisory Committee and submit summary report to the Program Office no later than the end of the third week of the fall semester. Complete Part I of the Certification Form and submit to the Program Office.
(6) Participate in Ethics subgroup and Ethics presentation.

II. SECOND YEAR:
(A) First Semester:
(1) Work toward completing Mid-Level Course Requirement and any other courses suggested by Advisory Committee.
(B) Second Semester:
(1) Meet with Advisory Committee and submit summary report to the Program Office no later than the end of the third week of the semester.
(2) Complete all course requirements.
(3) Attend Ethics presentation.
(4) Participate in Ethics subgroup (if supported by the training grant).
(C) Summer:
(1) Plan to complete Preliminary Examination by the end of the summer. Submit Request for Preliminary Warrant form to Graduate School.
(2) Complete 32 UW-Madison credits (Completion of the credits and the Preliminary Examination permits registration for 3 credits at the dissertator rate for all subsequent sessions).
(3) Submit Part II of the Certification Form after the Preliminary Examination is completed.

III. THIRD YEAR:
   (A) First Semester:
   (1) Meet with Advisory Committee and submit summary report to the Program Office no later than the end of the third week of the semester. (This meeting can be omitted if the Preliminary Examination is completed after the spring Advisory Committee meeting and before the beginning of the fall semester.)
   (2) Present thesis research proposal in Neuroscience Seminar.
   (3) Conduct thesis research.
   (B) Second Semester:
   (1) Complete teaching requirement.
   (2) Conduct thesis research.
   (3) Participate in Ethics subgroup and Ethics presentation.

IV. FOURTH YEAR:
   (A) First Semester:
   (1) Conduct thesis research.
   (2) Meet with Advisory Committee and submit summary report to the Program Office no later than the end of the third week of the semester.
   (B) Second Semester:
   (1) Conduct thesis research.
   (2) Attend Ethics presentation.
   (3) Participate in Ethics subgroup (if supported by the training grant.)

IV. FIFTH YEAR:
   (A) First Semester:
   (1) Meet with Advisory Committee to decide format and content of Dissertation and submit summary report to the Program Office no later than the end of the third week of the semester.
   (2) Submit Part III of the Certification Form.
   (3) Conduct thesis research.
   (B) Second Semester:
   (1) Submit Ph.D. Final Oral Committee form to Graduate School.
   (2) Complete Dissertation and Oral Defense.
   (3) Submit one copy of thesis to Graduate School and three copies to the Neuroscience Training Program.
   (4) Attend Ethics presentation.
   (5) Participate in Ethics subgroup (if supported by the training grant).

General Program Requirements
- Attend Neuroscience Research Symposium
- 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)
• Participate in Scientific Ethics subgroup (students supported on training grant and first- and third-year students)
• Attend Scientific Ethics Presentation (all years)

General Program Course Requirements
These course requirements are common for all students in the Program
• First-Year Requirement: fall and spring semester sequence of neurobiology courses
• Professional Development Course: fall semester of first year
• Mid-Level Course Requirement: one approved course from each of two broad areas of neuroscience
• Neuroscience Seminar Course: all fall and spring semesters

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.

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/).

**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 a student works and resides in the academic department of his/her major professor, a student’s only formal affiliation with the University of Wisconsin is as a graduate student with the Neuroscience Training Program. Thus, whenever identification of a student’s University home department is required, the Program should be cited. It is important to include this identification when a student presents research at scientific meetings or publishes it. If a student received support from the Program's training grant at any time while conducting research, the following statement should be included: "This research was supported by National Research Service Award (NRSA) T32 GM07507."

**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.
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: ________________________________________
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:

<table>
<thead>
<tr>
<th>FUNDING SOURCE &amp; GRANT NUMBER</th>
<th>YOUR ROLE IN PROJECT &amp; GRANT TITLE</th>
<th>PROJECT PERIOD</th>
<th>CURRENT YEAR DIRECT COST</th>
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PENDING:

<table>
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<tr>
<th>FUNDING SOURCE &amp; GRANT NUMBER</th>
<th>YOUR ROLE IN PROJECT &amp; GRANT TITLE</th>
<th>PROJECT PERIOD &amp; DECISION DATE</th>
<th>FIRST YEAR DIRECT COST</th>
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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 _______________
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):

<table>
<thead>
<tr>
<th>Proposed Faculty Member (indicate if they are N&amp;PP or MSTP representative)</th>
<th>Research Area</th>
<th>How will this individual contribute to your training?</th>
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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):

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Area</th>
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<tbody>
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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.

<table>
<thead>
<tr>
<th>UW Courses, Title and Number</th>
<th>Credits</th>
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<tbody>
<tr>
<td>First Year Courses:</td>
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<table>
<thead>
<tr>
<th>UW Courses, Title and Number</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Mid-Level Courses:</td>
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</table>

(2 courses from 2 areas in Neuroscience)
Courses, Title and Number

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 _____________________________.

Signatures:

Student

Major Professor

Committee Signatures:

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

1. **Outside-area Paper.**
   Title of Paper:

   Brief description of topic covered:
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.
A. TEACHING
Each student must teach at least one full semester in a substantial neuroscience or related course.

<table>
<thead>
<tr>
<th>Course(s) Taught</th>
<th>Credit Hours</th>
<th>Responsibility</th>
</tr>
</thead>
</table>

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?