

July, 2009

To: Incoming Students in Neuroscience

Dear Entering Students:

We are delighted that you will be starting graduate school with us this fall.

Enclosed is a packet with information listing the orientation schedule for the week of August 24<sup>th</sup>. Additional information pertaining to the PhD. Life Science programs at Brandeis can be found on the web pages at: <http://www.bio.brandeis.edu>.

We will have a short meeting on Monday, August 24<sup>th</sup> from 1:00pm – 1:30pm, Shapiro Science Center 1<sup>st</sup> Floor Library

I look forward to seeing you soon. If you have any questions before you arrive you are welcome to contact either Marcia in the Biology Office [781-736-3100/cabral@brandeis.edu](tel:781-736-3100) or me [781-736-3181/nelson@brandeis.edu](tel:781-736-3181).

Sincerely,

Sacha Nelson  
Graduate Advisor

**NEUROSCIENCE, Orientation Schedule 2009**  
**BRANDEIS PROGRAM GUIDE AND ACTIVITIES SCHEDULE - REVISED**

**Monday, August 24th:**

11:30 am – 1:00 pm	Life Science Luncheon and Orientation Meeting, Volen 201
1:00 pm - 1:30 pm	Short Neuroscience meeting, Shapiro Science Center 1 <sup>st</sup> Fl Library Group Pictures will be taken (Ph.D. and Masters)
1:30 pm – 2:00 pm	Masters Orientation, Shapiro Science Center 1 <sup>st</sup> Floor Library
2:00 pm – 4:00 pm	International Students MANDATORY meeting

**Tuesday, August 25th:**

8:45 am - 12:30 pm	GSAS New Master's and PhD Student Orientation Program Shapiro Campus Center Theater
12:30 pm – 1:30 pm	Lunch hour
1:30 pm – 2:30 pm	Chemical Safety Talk, Andy Finn, Rosenstiel 118
2:30 pm – 4:30 pm	Radiation Safety Talk, Robin Bell, Rosenstiel 118 (Required prior to start of first rotation)
4:30 pm – 5:00 pm	Down Time
5:00 pm – 8:00 pm	Faculty Bazaar, Rosenstiel 118, refreshments served The bazaar provides brief overviews of the research interests of all the faculty and an opportunity to meet with individual faculty to discuss rotation and research opportunities.

**Wednesday, August 26th:**

9:00 am – 3:30 pm	Workshops for GSAS TA orientation in Olin-Sang Auditorium. Although Life Sciences students don't TA until their second year, this is a good way to get started and to meet people. Light lunch will be provided. Mantatory meeting (Ph.D. only)
5:00 pm – 8:00 pm	Faculty Bazaar, Rosenstiel 118, refreshments served

**Thursday, August 27th:**

**FIRST DAY OF CLASSES**

3:00 – 4:15pm	Library Tour, Gerstenzang Lobby, Kathy Button & Jen Ferguson
5:00 pm – 8:00 pm	Faculty Bazaar, Rosenstiel 118, refreshments served

**Friday, August 28<sup>th</sup>:**

11:00 am	Rotation advisor preferences are due in the Biology Office
4:00 pm	Graduate Student Reception for new and returning students, TBA
5:00 pm	Rotation selections will be posted in the Biology Office and emailed

**Friday, September 5th**

12:15pm, Life Science Pizza Party, Red Square

**Monday, September 14th**

1:00 pm – 2:00 pm	Interdisciplinary Programs Orientation (QB program) Shapiro Student Center, Room 313 Meeting is optional for graduate students
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**\*\*PLEASE NOTE:** All foreign students should contact Nancy Nies to set up ESL interviews at 781-736-3991 or by email at [nies@brandeis.edu](mailto:nies@brandeis.edu)

**SUMMARY OF REQUIREMENTS FOR NEUROSCIENCE Ph.D.**  
(see below for Masters requirements)

**FIRST YEAR**

Chair, Neuroscience Program – John Lisman  
Graduate Committee: Sacha Nelson (chair)

**Courses:** Students in the first semester of their first year should register for Rotations (Neur 300a), Proseminar (Nbio 250), Journal Club (Neur 306) and Graduate Student Research Seminars (Biol 350d), along with two neuroscience courses, usually to include NBio 140 and/or NBio 148. Students in the second semester of their first year should register for Rotations (Neur 300a), Proseminar (Nbio 250), Journal Club (Neur 306), Ethical Practice in Health-Related Sciences (Cont 300b) and Graduate Student Research Seminars (Biol 350d), along with two additional elective courses.

Students must take a total of at least 6 lecture courses during their graduate program. A grade of B- or better is considered a passing grade. The first year courses count as 4 of the 6. The remainder of the courses are generally taken in their second year, although students often take one or two additional lecture courses in their third year.

**Rotations:** All first year students are required to register for the research rotations as Neur 300a,b. Every student is required to do at least four rotations of 9 weeks each in four different laboratories during the academic year. The choice of laboratory is made jointly by the student, the chair of the graduate program, and the faculty member in whose lab the rotation is to take place. Students may choose from faculty in the Departments of Biology, Biochemistry, Chemistry, Physics, Psychology and Computer Science.

**Rotation Selection:** After the 3 Faculty Bazaars, students will turn in a list of 3 top choices for the 1<sup>st</sup> rotation. Assignments will be made on the basis of those requests. Subsequent rotations are arranged by the students. Neuro students turn in a written rotation report at the end of each rotation (one copy to rotation supervisor, one copy to **Marcia in Biology Office**).

**Rotation Schedule:**

	<b>Start</b>	<b>End</b>	<b>Written Report</b>
1st	Tues. 09/01/09	Fri. 10/30/09	Mon. 11/02/09
2nd	Mon. 11/02/09	Fri. 01/01/10	Mon. 01/04/10
3rd	Mon. 01/04/10	Fri. 03/05/10	Mon. 03/08/10
4th	Mon. 03/08/10	Fri. 05/07/10	Mon. 05/10/10

Thesis labs should be chosen between May 1<sup>st</sup> and May 12, 2010.

**Journal Clubs and Seminars:** Every student is required to register for and attend Neuro Journal Club. All students are expected to attend the Igert, Bauer, and Sloan-Swartz seminars Mondays at 3:30pm. and other relevant seminars in Neuroscience. All 1<sup>st</sup> year

students should enroll in and attend Nbio 250, Proseminar, Monday at Noon.

**Outside Research Proposition:** The outside is intended as both an introduction to the intellectual skills involved in devising programmatic research, and as an opportunity to gain breadth of scientific vision. Therefore, students are encouraged to choose an outside topic that is far from their main interests. Students are discouraged from developing a project related to any undergraduate work that they may have done, for instance. More centrally, a project that is too closely related to the focus of a grad student's future thesis lab will be deemed unacceptable. Therefore, students are well-advised to try a new "level of analysis" for their outsides-answering a neurobiology question if they intend to do a cognitive dissertation, for instance, or answering a systems question if their thesis lab works on more molecular issues, or vice-versa. If this cannot be done, students should make every effort to choose systems and/or techniques that they will not be using for their dissertations. The NBIO 250 instructor will sign off on a proposal by early April, and students are strongly encouraged to check back with this Professor as their proposed experiments change. The oral exam involves a brief presentation of the proposition followed by a series of questions from a three-member faculty committee. The Outside Research Proposition must be completed by June of the first year.

## **SECOND YEAR**

**Thesis Proposal:** The thesis proposal consists of a written document outlining specific plans for the student's thesis research, and a discussion of the proposed research with a three-member faculty committee comprised of faculty other than the advisor, selected in consultation with the thesis advisor. The advisor is present for this discussion, but the thesis proposal must be defended by the student in response to questions from the committee. This committee then becomes the student's Thesis Committee. The Thesis Proposal must be completed by the middle of the third year.

**Courses:** Generally students take one neuroscience course in the Fall and one elective course in the spring semester.

**Teaching:** Each student is required to act as a teaching fellow for two semesters usually in their second year. Teaching assignments are made in the summer preceding the second year. Second year students are expected to attend the TA orientation on Wednesday, August 26th, 9:00 am – 3:00 pm in Olin-Sang Auditorium.

**Thesis Research:** Students generally choose their thesis lab at the end of their first year and begin work on their thesis projects.

**Graduate Student Research Seminars:** (Biol 350d) All students are required to register for and attend these seminars which are held on Friday at 12:30 PM. Students present starting in their third year.

### **THIRD and continuing years**

**Thesis Research:** Students by this time are well into their thesis research projects.

**Research Seminars:** Each student from the third year on must present a Friday Noon Research Seminar each year. The student should make sure that her/his committee attends the talk and meets with the student afterwards. All students must register and attend.

**Journal Clubs and Seminars:** Every student is required to register for and attend Neuro Journal Club. All students are expected to attend the Igert, Bauer, and Sloan-Swartz seminars Mondays at 3:30 pm. and other relevant seminars in Neuroscience

**Thesis Committee:** Once thesis work has begun, each student will meet at least once a year with his or her Thesis Committee to discuss progress toward the completion of the thesis. These meetings should be arranged soon after the student's yearly research presentation (Friday Seminar). After the meeting, the Committee submits a report summarizing the committee's sense of the student's progress, identifying possible problems, and stating any recommendations that the committee wishes to make. Graduating students are required to have these yearly reports in their files.

**Fourth-Year Thesis Committee Meeting:** A Thesis Committee meeting at the end of the student's fourth year provides a particularly detailed evaluation of the student's status and progress toward completion of the thesis. Before the meeting, the student submits a brief written report to the Committee outlining progress to this point, including publications accepted, submitted, and in preparation.

**Thesis Requirements:** PhD thesis requirements are set by the student's advisor and Thesis Committee, but, as a rough guideline, PhD students are expected to have a minimum of two first-author papers accepted or published in quality journals at the time of the thesis defense. Each student is required to give a thesis seminar upon completion of the dissertation. It is usual to give this prior to the thesis defense.

EVALUATION PROCEDURES FOR GRADUATE STUDENTS  
IN NEUROSCIENCE

- YEAR 1:** The students must complete their formal courses with a grade of B- or better. Each of four required rotations is evaluated by its supervisor who submits a brief written report on the student's performance in the lab. The written lab reports are reviewed by the rotation adviser and by the graduate committee. Finally, students must submit an outside research proposition, which is a proposal for a topic other than their thesis research. They are examined orally on this proposal by a panel of three faculty members. The committee submits an evaluation in writing.
- YEAR 2:** Students submit their thesis research proposal in writing. They are examined orally by a panel of three faculty members not including the thesis advisor, who subsequently serve as the thesis committee. The committee submits a report in writing.
- YEAR 3 and on:** Each student presents a research talk sometime during the year. The student's thesis committee meets following the talk to evaluate the student's progress and submits a brief written report.
- YEAR 4:** Formal Committee Meeting in May of fourth year to ascertain that adequate progress is being made.
- THESIS:** The student submits the completed thesis, gives a seminar, and is examined by a panel of at least three faculty members including one from outside the university.

## **GRADUATE TEACHING ASSISTANTS IN NEUROSCIENCE**

### **ASSIGNMENTS**

Over the course of graduate study, each Ph.D. student is required to teach 2 undergraduate sections, courses, or labs.

TA assignments are made by the decision of an interdepartmental graduate committee on the basis of faculty request/enrollment/and graduate student experience.

In all cases, an attempt will be made to inform graduate teaching assistants of their assignments during the summer prior to the commencement of teaching responsibilities. In cases of unexpected enrollment shifts, cancellation or addition of courses, or inequities in work loads, assignments may be changed with little notice. If there is a likelihood that such a change will be made, the graduate committee will notify the teaching assistants concerned as soon as possible to permit ample preparation time.

Graduate students rarely teach their own courses, but some opportunities exist for senior graduate students.

### **RESPONSIBILITIES**

When the assignment is made, or at the beginning of the term, graduate teaching assistants and faculty members will discuss course requirements, attendance policies and the range of graduate responsibilities (in class, outside the classroom, administrative duties, technical assistance, e.g., running a projector, etc.).

To encourage an open, cooperative relationship between the graduate teaching assistant and faculty member, meetings will be held on a regular basis to discuss the progress of the course.

The teaching assistant and faculty member will consult on any problem arising in the course as soon as possible so that the faculty member and graduate student can cooperate in addressing it.

If graduate teaching assistants are to grade undergraduate papers or exams, the faculty member and TA will discuss the number of assignments, grading procedures and standards (letter grade/pass, fail/comments only, grading in pencil, expectations for student writing ability) and an expected range of grades.

Graduate teaching assistants are required to hold at least 2 weekly office hours.

Graduate teaching assistants are seldom asked to tutor students requiring additional help. If tutoring is expected and 1 hour/week is insufficient to address difficulties in the course, the graduate student will refer the problem to the professor and if necessary (and agreed upon) to the appropriate agency on campus for additional assistance.

Faculty members will advise graduate teaching assistants on policies for academic honesty and sexual harassment at the beginning of the term at which time procedures for alerting

the proper university officers and dealing with such matters will be agreed upon.

## **EVALUATION/OVERSIGHT/PROFESSIONAL DEVELOPMENT**

Graduate teaching assistants are encouraged to discuss teaching with the professor or with a member of the graduate committee.

Graduate teaching assistants are expected to consult teaching materials available at the Office of the Dean of Arts and Sciences and to attend teaching seminars sponsored by the Graduate School.

Faculty should evaluate graduate teaching assistant's performance and provide written comments documenting the teaching experience and teaching assistant's development over the course of the semester.

Every attempt should be made to resolve difficulties between graduate teaching assistants and faculty members involved. If such resolution is impossible, official grievances should be made per the stated procedures in the student handbook.

Graduate teaching assistants are encouraged to document teaching experiences for future job searches. Faculty members should agree to provide letters of reference for teaching which will be included in the student's departmental file.

## **SUMMARY OF REQUIREMENTS FOR NEUROSCIENCE M.S.**

**This program is designed to be completed in one year.**

### **Summary of requirements for candidacy to the M.S. program:**

All Neuro Masters students must take a total of at least 6 graduate level courses including a research-based course. Students should also participate in appropriate Journal Clubs and seminar series. In addition, all Masters students must register for and attend Ethical Practice in Health-Related Sciences (Cont 300b), which is a not for credit course. The laboratory or research based course should be chosen from NEUR 298 (Readings in Neuroscience), NEUR 299 (Masters Research Project), NEUR 300 (Laboratory Research) or BIOL 155 (Project Laboratory in Genetics & Genomics) and is typically taken in the spring.

**Courses:** Students are required to take six graduate level courses, usually three per semester. Graduate level courses are defined as having a number equal to or greater than 100 in the Brandeis Catalog. The six courses which must include NBio 140 (Principles of Neuroscience) and one laboratory or research-based course, with the balance of courses to be agreed upon with the neuroscience advising head. The student must receive grades of B- or better in all courses and may be terminated at the end of the first semester if the student's record is unsatisfactory.

Students in the first semester should register for Proseminar (Nbio 250), Journal Club (Neur 306) and Graduate Student Research Seminars (Biol 350d), along with

two neuroscience courses, usually to include NBio 140. Students in the second semester of their first year should register for Rotations (Neur 300a), Proseminar (Nbio 250), Journal Club (Neur 306), Ethical Practice in Health-Related Sciences (Cont 300b) and Graduate Student Research Seminars (Biol 350d), along with two additional elective courses.

**Rotations:** At the beginning of the fall semester, the Life Sciences programs hold the "Faculty Bazaar", a three night series of short research presentations (with dinner) designed to get you acquainted with research opportunities at Brandeis. Faculty are available by appointment at the end of that week, and students who are interested in a particular lab should discuss rotations with faculty during that window. Rotations are not assigned, but are arranged between you and the lab head. Neuro students turn in a written rotation report at the end of each rotation (one copy to rotation supervisor, **one copy to Marcia in Biology Office**). Students who wish to carry out a one-year Master's thesis in place of the two rotations negotiate these arrangements themselves with their lab of interest. Students who wish to complete a library research paper should talk to the faculty advisor.

**Rotation Schedule:**

	<b>Start</b>	<b>End</b>	<b>Written Report</b>
1st	Tues. 09/01/09	Fri. 10/30/09	Mon. 11/02/09
2nd	Mon. 11/02/09	Fri. 01/01/10	Mon. 01/04/10
3rd	Mon. 01/04/10	Fri. 03/05/10	Mon. 03/08/10
4th	Mon. 03/08/10	Fri. 05/07/10	Mon. 05/10/10

**Journal Clubs and Seminars:**

Every student is required to register for and attend Neuro Journal Club (Tues. at noon). All students are expected to attend the neuroscience seminars Mondays at 3:30pm. and other relevant seminars in Neuroscience, including relevant seminars in the Wed. life sciences seminar series. All 1<sup>st</sup> year students should enroll in and attend Nbio 250, Proseminar, Monday at Noon.