Neuroscience Graduate Student Handbook
Ph.D. in Neuroscience
(Revised AY2023-2024)

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Contents:

Program Summary

Summary of requirements for advancing to candidacy in the Ph.D. program:

All Neuro students must complete four lab rotations (typically nine weeks each), select a thesis lab by mutual agreement with a faculty member by the end of the first year, pass six lecture courses (including the required courses NBIO 240, BIOL 107, NBIO 208 and one reading/writing intensive elective) with a grade of B- or better, defend a Qualifying Exam, and be a teaching assistant (TA) for two courses. Graduate students must register for and attend a program on Responsible Conduct of Science in the first year and again in their fifth year (CONT 300, a not-for-credit course, or the equivalent Research Ethics Workshop), the Graduate Student Research Seminar every semester (BIOL 350), and a Journal Club (NBIO 306) every semester. Presenting in the yearly Graduate Student Research Seminar beginning in the third year is required to remain in good standing in

the program. Students must also register for their advisor's section of Dissertation Research (NEUR 401D) in the second and all subsequent years.

Courses:

Students must take a total of at least six lecture courses during their graduate Program and pass with a grade of B- or better.

Required: There are three required/mandatory courses for all Neuroscience Ph.D. students: NBIO 240 (Principles of Neuroscience – 1st year), BIOL 107 (Data Statistics and Analysis Workshop – 1st year), and NBIO 208 (Experimental Analysis and Design for Research Proposals– 2nd year).

Electives: The remaining three courses must have catalogue numbers of 100 or above (signifying graduate-level), be listed or cross-listed in the Neuroscience section of the Brandeis Bulletin, and be relevant to the student's area of interest. If a student chooses to take a class that is not cross-listed under Neuroscience, approval of the Graduate Chair is required. Of these courses, at least one must be reading/writing intensive, focusing on critically reading, discussing, and writing about primary scientific literature. Classes that satisfy this requirement may include (*depending on the instructor – check with Grad Chair): NBIO 148 "Cellular Neuroscience"; NBIO 145 "Systems Neuroscience"; NBIO 143 "Developmental Neurobiology"; NBIO 146 "Neurobiology of Human Disease"; NBIO 147 "Neurogenetics". These classes can be selected from a number of neuroscience topic areas, including cognitive, computational, systems, cellular, and molecular neuroscience, and must be approved by the graduate committee.

Students are encouraged to take four courses in the first year, two electives in the second year, and/or NBIO 207 (Advanced Topics in Data Analysis) as a final elective in their third year. Transfer credits will not be accepted.

Journal Clubs:

Every student is required to register for and attend the "Topics in Neurobiology" Journal Club (NBIO 306). Students may also attend the other approved journal clubs listed below, but they must be in addition to NBIO 306. Students supported by a specific Training Grant must choose from Journal Clubs approved by the Director of that Training Grant. In their first year, students should go to the Journal Club(s) attended by the lab in which they are rotating. Under these circumstances, it is fine to register for a particular Journal Club and attend a different one. Students are not required to present an article until their third year.

Journal Clubs: (See course listings for times)

Topics in Neurobiology:	NBIO 306
Systems/Computational Neuroscience:	NBIO 340
Topics in Molecular Genetics and Development:	BIOL 305

Colloquium Series:

All students are required to attend the regular Joint Biology/Neuroscience Colloquia (i.e. talks given by visiting scholars) on Tuesday.

Graduate Student Research Seminars (BIOL 350):

All students are required to register for and attend Friday Graduate Student Research Seminar Pizza Talks (BIOL 350). All Neuro (and MCB) PhD students present their thesis work annually starting in their third year.

Chemical and Safety Trainings:

All students must complete the appropriate chemical and safety trainings before they may begin in the lab. More information about these requirements will be explained during New Student Orientation. In addition, all neuroscience students are required to complete online Animal Care and Use training, attend the Foster Animal Facility training, and obtain Occupational Health Clearance. If applicable, students must also complete in-person Virus Training and Controlled Substances Training.

Yearly Timelines:

Year 1

Courses:

Students in the first semester of their first year must register for Principles of Neuroscience (NBIO 240), Data Statistics and Analysis Workshop (BIOL 107), Rotations (NEUR 300)*, Journal Club (NBIO 306), and the Graduate Student Research Seminar (BIOL 350).

Students in their second semester must register for Rotations (NEUR 300), Journal Club (NBIO 306), the Graduate Student Research Seminars (BIOL 350), and two additional neuroscience courses, one of which is recommended to be reading/writing intensive.

Sometime in the first year, students should complete Ethical Practice in Health-Related Sciences (CONT 300) or the equivalent workshop, whenever it is offered.

* In the event that a student is completing only one rotation in a given term (fall, spring, or summer), the student should register for the half-credit rotations course, NEUR 301.

If any of the required courses are not being offered, students should register for an elective and take the required course in the following year.

Graduate Student Research Seminars (BIOL 350):

All students are required to register for and attend the Graduate Student Research Seminar Pizza Talk, typically each Friday afternoon. All Neuro PhD students are required to present their thesis work annually starting in their third year.

Journal Clubs:

Every student is required to register for and attend at least one Journal Club, which must be or include NBIO 306, "Topics in Neurobiology". Students supported by a Training Grant must choose from Journal Clubs approved by the Director of the Training Grant. Students typically present starting in their third year.

Colloquium Series:

All students are required to attend the regular Joint Biology/Neuroscience Colloquia (i.e. talks given by visiting scholars), typically on Tuesdays.

Rotations:

All first year students are required to register for the research rotations in both semesters (NEUR 300). Every student is required to complete four rotations, typically nine weeks each, in four different laboratories during the academic year (specific dates below). The choice of laboratory rotations 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, with the agreement of the faculty member, may choose to rotate with any member of the neuroscience program or other members of the life sciences community.

Rotation Selection:

During orientation week, students will attend a three-night faculty bazaar where faculty members who are accepting graduate students will introduce their work. After, students will turn in a list of three top choices for the first rotation, and the first rotation will be assigned. First or second requests will be honored whenever possible.

The remaining three rotations are the responsibility of the student to arrange with the appropriate faculty member. Arrangements for subsequent rotations should be made at least 2-3 weeks before the end of the current rotation.

Rotation Schedule:

	Start	**End**	**Written Report Due**
1st	Tues. 9/5/23	Fri. 11/3/23	Mon. 11/6/23
2nd	Mon.11/6/23	Fri. 1/12/24	Mon. 1/15/24
3rd	Mon. 1/15/24	Fri. 3/15/24	Mon. 3/18/24
4th	Mon. 3/18/24	Fri. 5/17/24	Mon. 5/20/24

Selection of a Thesis lab:

Students are not permitted to approach faculty about joining a lab until Monday, May 13th, 2024 and should make every attempt to complete the selection process by Friday, May 24th, 2024. Students will begin work in their new thesis lab immediately following the end of the fourth rotation. The graduate committee reiterates that students should not ask for a commitment from a faculty member – nor can a faculty member promise a spot in their lab – **until May 13th**. This policy protects the rights of all first year students in the Life Sciences and creates a level playing field independent of the order in which rotations are performed. It is taken very seriously by the Graduate Committees of all of the Life Sciences programs.

In exceptional circumstances, students may be permitted to complete a fifth rotation in the summer following their first year. Students who wish to work on a collaborative project between two labs with two co-advisors may do so with advanced approval.

Rotation Reports:

At the end of each rotation, the student will submit a written rotation report. The student should discuss expectations for the rotation report with their rotation advisor, and whether an oral presentation will also be required in that lab's group meeting. By 5pm on the date the report is due, an electronic copy should be sent to the program administrator in the Division of Science Graduate Affairs Office, the rotation advisor, and the outside reader (see Rotation Report Feedback and Grading, below). Any requests for extensions must be received in advance, and must be approved by the rotation advisor and Grad Committee chair and shared with the program administrator.

Rotation Report Format:

All students should follow this standard rotation report format.

Instructions: The intended audience is your fellow lab mates, graduate students and PI, so use language that is understandable to these groups. Many labs will use this document to continue the project, so as you are writing, please consider what you would like to know if you were the person continuing.

I) Title (include name, lab name, and rotation number)

II) Introduction and Background
What is the big picture scientific question that the project is focused on? How does this work contribute to this question? Should be 1-2 pages.

III) Methods
Give enough detail that someone could pick the project up after you. Should be as long as necessary.

IV) Progress and Results
What did you do during the rotation? How did it work? Include any drawings of apparatus and any data figures in this section.

V) Discussion and Future Directions
If someone were going to pick up your project, what should they know? What advice would you give them? What would you try next if you were continuing? Include some discussion of your preliminary results and their implications.

VI) References
Put references here in some consistent format. Consider using a reference management program like EndNote because you'll need to use one for proposals, papers, and your thesis.

Reports should be no longer than 10 pages, double spaced, with figures embedded into the text.

Rotation Report Feedback and Grading:

Rotation reports will be read by the rotation advisor and by an "outside reader". Both will provide formal written feedback on the rotation report within one week of submission.

Students will then have the opportunity to revise the report and resubmit one week later. Revised reports will be graded using the following criteria:

1) Problem is well-framed: student has reviewed the literature, identified a gap in existing knowledge, and explained how the rotation project seeks to help fill that gap

2) Approach is well-described: the experimental design is justified, and the methods are clearly explained

3) Data presentation and statistics: the figures accurately represent the data and the statistical approaches are described and justified

4) Discussion: the implications and limitations of the data are considered, and possible next steps are described

At the end of the first year the four graded rotation reports will be assessed by the Graduate Committee as a Cumulative Qualifying Exam with satisfactory performance required to remain in good standing in the program.

Summer, between all years

Courses:

Each summer, all students will be automatically registered for CONT 250 (Summer Research).

Thesis Research:

Students will begin work on their thesis research immediately following their fourth rotation. They are expected to perform research through the summer. Vacations and other absences must be approved by the student's advisor.

Year 2

Courses:

Students will take one or two lecture courses in their second year*. All students will take the required class NBIO 208 "Experimental Analysis and Design for Research Proposals" in their fall semester. The other class can be chosen from the list of graduate courses (catalogue number of 100 or above) in the Neuroscience section of the Brandeis Bulletin. Students who did not take a reading/writing intensive course (see "Courses" above) in their first year should register for one in their second year. If a student chooses to take a class that is not cross-listed under Neuroscience, approval of the Grad Chair is required.

*The number of courses that a student takes in their second year may depend on whether they plan to take NBIO 207 (Advanced Topics in Data Analysis) as a final elective in their third year. NBIO 207 is encouraged, but is not required.

Teaching:

Each student is required to serve as a teaching assistant (TA) for two semesters, typically both semesters of their second year in the program. Teaching assignments are decided in the summer preceding the second year and will be emailed to students (usually in July). Any Ph.D. student who is TA'ing for the first time is expected to attend the Teaching Practicum for teaching fellows, which is held during Orientation events in August, unless they did during orientation their first year. TA assignments are decided by the Program, and students will usually do at least one semester in a basic biology course. Students are expected to take their teaching responsibilities seriously, and successful completion of this teaching is a program requirement.

Thesis Research:

Students will work on their thesis projects starting at the end of their first year, when they join their thesis lab, and continue until completion of their dissertation (typically at the end of their 6th year in the program). Students must register for their advisor's section of NEUR 401 (Dissertation Research) each semester. Specific Ph.D. thesis requirements are set by the student's advisor and the thesis committee (see below).

Graduate Student Research Seminars (BIOL 350):

All students are required to register for and attend the Graduate Student Research Seminar Pizza Talks, which are typically held on Fridays. All Neuro students are required to present their thesis work annually starting in their third year.

Journal Clubs:

Every student is required to register for and attend NBIO 306, "Topics in Neurobiology", and may register for a second journal club if desired, or depending on the student's funding source. Students typically give their first journal club presentations in their third year.

Colloquium Series:

All students are required to attend the regular Joint Biology/Neuroscience Colloquia (i.e. talks given by visiting scholars) on Tuesdays.

Qualifying Exam ("Inside Exam"):

Each student must write and orally defend a written prospectus (in the format of NRSA grant) of their proposed dissertation research. The Qualifying Exam will be defended in an oral exam in front of a committee of three faculty members.

The Qualifying Exam must be taken by the end of May of the second year. **For the 2023-2024 Academic Year, it needs to be completed by May 31, 2024.** Extensions to this timeframe must be approved by the Graduate Committee. Exams are usually taken in the month of May.

Written proposals should be handed in to the committee members a minimum of one week before the oral defense date. Qualifying Exam evaluation forms must be completed by each member of the examining committee and returned to the Graduate Affairs Office once the exam has ended. If revisions to the written exam or a re-defense are required, a

second set of evaluations forms must be submitted indicating acceptance of the revision/re-defense and turned into the Graduate Affairs Office.

Students will use feedback from the qualifying exam experience as a basis for revising their proposals for submission as NRSAs or other fellowships for which they are eligible in August or December of that year.

Qualifying Exam Committee:
The examining committee is composed of three faculty members, not including the thesis advisor. For students with more than one advisor, one of the two co-advisors must be chosen as the "primary advisor" for the purpose of the inside exam. The primary advisor is allowed to be present in the room during the exam, but the proposal must be defended by the student alone in response to questions from the committee (i.e. the primary thesis advisor must remain silent during the process and their input is strictly prohibited). The primary advisor should NOT fill out an evaluation form for the student. The "secondary advisor" may serve as one of the three members of the committee, and is allowed to participate and to fill out evaluation forms. Faculty for the examining committee should be selected by the student in consultation with their thesis advisor(s). One of the three faculty members must be chosen as Qualifying Exam Committee Chair, either by the student or by agreement between the three faculty members. At least one member of the examining committee, the thesis advisor(s), and a faculty member from a University other than Brandeis will compose the student's final thesis committee.

Year 3 and Continuing Years

Courses:
Students should finish all required coursework in their third year. Students are encouraged (but are not required) to take NBIO 207 (Advanced Topics in Data Analysis) as a final or additional elective in their third year.

Thesis Research:
Students by this time should be well into their thesis research projects. Students must register for their advisor's section of NEUR 401 (Dissertation Research) each semester.

Graduate Student Research Seminars:
Each student from their third year on is required to present a Friday Graduate Student Research Seminar Pizza Talk, (BIOL 350). The student should make sure that their thesis committee attends the talk and meets with the student very soon afterwards (usually the same afternoon or the following week) for their Annual Thesis Committee Meeting. All students must register and attend these seminars each semester, which are typically held on Fridays.

Journal Clubs:
Every student is required to register for and attend NBIO 306, "Topics in Neurobiology", and may register for a second journal club if desired or depending on funding source. Students typically do their first journal club presentations in their third year.

Colloquium Series:

All students are required to attend the regular Joint Biology/Neuroscience Colloquia (i.e. talks given by visiting scholars) on Tuesday.

Annual Thesis Committee Meeting (Progress Report):

The Thesis Committee is typically composed of two faculty members from the Qualifying Exam committee, plus the thesis supervisor(s). In the event that a student's research advisor leaves for another university or is on a non-resident leave of absence for more than one year, their graduate students must have another Neuroscience faculty member as a second mentor. This mentor shall meet with the student no less than once a month and will ensure that an annual thesis committee meeting will be held around the time of the student's Pizza Talk.

Once thesis work has begun, **each student is required** to meet at least once per year with their thesis committee to complete an Annual Progress Report. These meetings should be arranged in advance by the student soon after the student's presentation at the Graduate Student Research Seminar Series Pizza Talk. The graduate student should give each committee member a copy of a committee meeting Annual Progress Report that they will fill out in advance. This form will list any meetings attended or presentations given, publications, or professional activity accomplished in the last year (or since entering graduate school, if it is the student's first committee meeting). It should also contain a short summary of their project, specific progress on their project in the last 6-8 months, and their goals for the next 6-8 months. If the committee requires a more detailed written document, they should communicate this to the student prior to their committee meeting. The committee must fill out the section of the Annual Progress Report reserved for the graduate student advisor committee, including an evaluation of their performance in their Graduate Student Research Seminar Pizza Talk that year, and an overall evaluation of their academic progress.

After the meeting, the student will revise their Annual Progress Report to indicate anything that has changed as a result of discussion during the meeting, particularly in regards to their goals for the next 6-8 months. Both the original and updated Annual Progress Report must be returned to the Graduate Affairs Office after the committee meeting.

Students **are required** to have all of the Annual Progress Reports in their files in order to remain in good standing with the program. It is the student's responsibility to make sure that the report is received by the program administrator in the Graduate Affairs Office following the annual thesis committee meeting. The annual thesis committee meetings beginning at the end of the student's **fourth** year should provide a particularly detailed evaluation of the student's status and progress toward completion of the thesis. Before the meetings, the student will submit an additional Defense Planning Document to the Committee outlining progress to this point, including chapters that have been completed, are in progress, or are in preparation.

Once the committee agrees that the student has satisfied all thesis requirements set by the graduate program and the student's thesis advisor (see below), the student will be asked to assemble a thesis defense committee. The defense committee typically includes the student's advisor, 1-2 Brandeis faculty members (typically from the thesis committee) and must also include one "outside reader". The outside reader should be chosen in consultation with the student's advisor several months in advance of the defense.

See the University Bulletin for more detailed instructions on choosing a Dissertation Committee: http://www.brandeis.edu/registrar/bulletin/provisional/gsas.html

IDP (individual development plan):

An IDP is a career development tool that is used to a) maintain communication between you and your mentor(s) regarding your long-term goals and career development; b) help identify an appropriate career path based on your skills and interests; c) assess current and missing skills and abilities for the desired career path; and d) set specific goals to prepare for the desired career path. The IDP will evolve as the interests and experience level of the student change over time.

Students in their third year and above will be required to complete an Individual Development Plan once a year and to discuss that plan with their advisor. Any disagreements between the student and their advisor concerning the IDP should be discussed with a member of the Graduate Committee. The IDP must be completed sometime during the academic year from July 1 through June 30. Typically, IDPs are discussed with the entire committee at the annual committee meeting, so it is recommended that students do the IDP with their advisor before the committee meeting takes place. The student is encouraged to present the IDP to their entire committee if they are comfortable doing so.

The student and advisor can choose the written IDP format that they prefer. A copy of the IDP form should be returned to the Graduate Affairs Office via email to keep in the student's file.

Some example IDPs and IDP requirement forms can be found here (Brandeis login required).

Thesis Requirements:

Specific Ph.D. thesis requirements are set by the student's advisor and the thesis committee. As a rough guideline, PhD students are expected to have at least a first-author papers or its equivalent accepted or published at the time of the thesis defense.

Specific deadlines for thesis submission to the thesis committee should be set by the student's advisor and approved by the entire thesis committee. It is expected that the candidate will ask all members of the committee precisely when they want/need the written document and that the candidate will provide the finished document by whatever date is requested.

Thesis Seminar:

Upon completion of their dissertation work, each student is required to give a public thesis seminar on their research, followed immediately by a private thesis defense. Each member of the defense committee must be present at the talk and the defense.

Optional "Master's in Passing"

When students have completed the requirements needed to satisfy a Master's Degree in Neuroscience, they have the option to apply for a "Master's in Passing". Most Ph.D. students will qualify for a Master's in Passing after completing their second year in the Ph.D. program. Briefly, students must complete and pass six graduate level life science courses with a grade of B- or better, including one laboratory- or research-based course (One semester of rotations count towards this requirement). In addition to these six courses, students must register for and attend the following required courses/seminars: one semester of Responsible Conduct of Science or equivalent, two semesters of Journal Clubs, and two semesters of Graduate Student Research Seminar. The minimum residence requirement is one year.

Transition from Brandeis MS to Ph.D. program

Students who have earned a M.S. at another institution will be admitted as normal first-year students (i.e. the following text does not apply to students who have earned an M.S. from an institution other than Brandeis).

Students in a Brandeis Life Sciences M.S. program who apply to and are accepted into the Neuroscience Ph.D. program may be allowed to count courses and/or research experience towards the Ph.D. program. The exact timeline and circumstances surrounding the M.S. to Ph.D. transition will depend on the extent of independent lab research and courses completed during the M.S. degree. Brandeis M.S. students who have taken both NBIO 240 and BIOL 107, and have had extensive research experience in a Brandeis research lab, may be able to combine aspects of the first and second-year Ph.D. program in an accelerated first year.

Matriculation date:

M.S. students may enter the Ph.D. program immediately following the completion of their M.S, as early as June 1st following their M.S. completion. The start of stipend payments will coincide with their matriculation date. Any exceptions to this timeline must be discussed with and approved by the graduate committee.

Courses:

Students who have taken NBIO 240, BIOL 107, and two electives should have completed all but two of the six required Ph.D. courses, each class taken during the M.S. will be approved for the Ph.D. on a case-by-case basis. The independent research or project lab course taken as an M.S. student cannot count towards the Ph.D. elective requirement and they may still have a take a class with emphasis on quantitative methods, and/or a reading/writing intensive class, depending on the specific courses taken as a M.S. student.

These students are expected to complete the remaining classes in their first year as a Ph.D. student, but no later than the end of their second year, especially if the student wishes to take NBIO 207.

Presenting at Pizza Talks and Journal Club:

As with all Ph.D. students, students who transition to the Ph.D. program from the M.S. program are required to register for and attend Graduate Student Research Seminar Pizza Talks and Topics in Neurobiology journal club. Students are required to present annually, according to the timeline discussed and agreed upon at the time of matriculation into the PhD program. For accelerated students, this will typically be in their 2nd year in the Ph.D. program.

Rotations:

All students who transition from the Neuroscience M.S. program to the Ph.D. program must complete two additional rotations, typically during the summer between M.S. and Ph.D. It is expected that these students would have performed a full semester of independent research (NEUR 296, NEUR 299, and/or BIOT 293) in one or two labs in their M.S. year. If the student has completed only a Project Lab in their M.S., they may be required to complete three additional rotations.

As summer rotations are shortened and since students will not be taking classes during the summer, students are expected to work in their summer rotation labs full-time. During this time, they will register for the research rotation course (NEUR 300). In exceptional circumstances, students may be permitted to complete a fourth or fifth rotation. All guidelines and requirements are the same as for students who enter the program directly as Ph.D. students.

Selection of a Thesis lab:

The thesis lab selection process will occur following the end of the final rotation, typically at the end of the summer following the M.S. year or half-way through the fall semester of the first Ph.D. year, as applicable. Students are expected to join a lab and begin their dissertation project as soon as possible so that they may be on-track as a second year Ph.D. student.

Teaching:

Each Ph.D. student is required to serve as a teaching assistant (TA) for two semesters. Teaching assignments are decided in the summer and will be emailed to students (usually in July).

Ph.D. students are expected to attend the Teaching Practicum and Title IX training for teaching fellows, which will be held each summer during New Student Orientation week in August.

A student who has transitioned from the Brandeis M.S. program and who has been granted accelerated status will TA according to the timeline discussed and agreed upon at the time of matriculation into the Ph.D. program. If the student has joined a lab in the

summer and has already taken NBIO 240 and NBIO 207, they may be required to TA in both semesters of the first year in the Ph.D. program; otherwise, TA assignments may be delayed into their second year in the Ph.D. program.

Thesis Research Proposition ("Inside" Qualifying Exam)

M.S. to Ph.D. students must complete their Qualifying Exam no more than one year after joining their thesis lab. Extensions to this timeframe must be approved by the Graduate Committee. All guidelines and requirements are the same as for students who enter the program directly as Ph.D. students.

Evaluation of Graduate Student Performance in the Neuroscience Program

Yearly Readmission:

Each year in June/July, student progress will be evaluated, and students will receive a Progress Letter from the Graduate Committee. If the student has not completed a requirement, this will be noted in the letter, along with a suggested timeline for completion. Students will also receive a letter from the Graduate School of Arts and Sciences informing them of their readmission status and financial support for the following year.

Year 1:

- The students must complete their formal courses and four rotations with a grade of B- or better. To improve students' scientific writing skills, and to help prepare students for the Second Year Qualifying Exam, one of these courses should be reading/writing intensive. Any deficits in writing skills will be communicated in writing to the Grad committee and Grad Affairs Office by the instructor. A demonstrated deficit in writing skills is grounds for being assigned a writing tutor.
- Students must submit a rotation report for each rotation by 5pm on the indicated due date as established by the Grad committee/Graduate Affairs Office. Any requests for extensions must be received in advance, and must be approved by the rotation advisor and Grad Committee chair. The written lab reports are reviewed by the rotation advisor and an outside reader, and formal written feedback will be provided. Two distinct components of the lab rotations will evaluated by the supervising faculty member: lab work and a revision of the written report. The faculty member will submit a grade and a brief written report, on a form provided by the Grad Affairs Office, on the student's performance to be included in the student's permanent file at the end of the rotation. At the end of the first year the four graded rotation reports will be assessed by the Graduate Committee as a Cumulative Qualifying Exam with satisfactory performance required to remain in good standing in the program.
- By the end of the first year students must have secured a thesis lab by mutual agreement with the faculty mentor. Note that securing a dissertation advisor is an absolute requirement for continuing in the program, and that failure to do so necessarily requires withdrawal from the program. The Grad Committee evaluates the progress of each student at the end of the first year. Students who perform below the minimum expectations outlined above will be placed on probation (see definition below).

Year 2:

- Grades in formal courses must be B- or better. Students should take a reading/writing intensive course in their second year if they did not take one in their first year.
- A panel of three faculty members (not including the thesis advisor(s)) are selected by the student for the oral defense of the "Inside" Qualifying Exam. Students submit a NRSA-style proposal in writing and orally defend their written proposal by the end of May of their second year. Committee members evaluate the student's performance and submit a written evaluation to the Grad Committee /Grad Affairs Office using a form provided to the student by the Grad Affairs Office. Two of the faculty committee members will be

retained for subsequent service and, along with the thesis advisor(s), comprise the thesis committee until the student graduates.
- Satisfactory completion of the teaching requirement (unless delayed until the third year).
- The Grad Committee evaluates the progress of each student at the end of the second year. Continuation in the program is decided based on successful defense of the Qualifying Exam, a grade in all courses of B- or better, satisfactory teaching performance, and progress in thesis research. Students who perform below the minimum expectations as outlined above may not be re-admitted for the third year.

Year 3 and Continuing Years:
- Students are expected to have all course and teaching requirements fulfilled before the start of their fourth year; exceptions should be discussed with the Graduate Committee.
- Beginning in the third year, each student is required to present a research talk in the Friday "Pizza Talks" and have an Annual Progress Meeting shortly afterward to discuss progress toward the completion of the dissertation. Special attention will be paid to progress on data collection at this and subsequent meetings. Students are required to hold at least one thesis committee meeting per year to remain in good standing with the program, but meetings can be held more frequently at the discretion of the student and thesis committee. These meetings must be documented with a form signed by the thesis committee members and turned in to the Division of Science Graduate Affairs Office by the student. Progress will be reviewed by the graduate committee at the end of each year, and a student may be asked to leave the program if their progress is found to be unsatisfactory.

Thesis:
- The student submits the completed thesis, gives a seminar, and is examined by a panel consisting of at least three faculty members. The thesis committee must contain one faculty member from outside the university and the thesis advisor.

Probation:

Students may be placed on program-level probation as early as the end of the 1st semester (pending unsatisfactory grades in both course work and rotations), and then asked to leave at the end of Year 1 if sufficient progress (as determined by the graduate committee) is not made in semester 2.

Students may also be placed on probation at the end of the 1st year for failing to satisfactorily complete any of the above requirements. Students placed on probation by the program will also be issued an Academic Alert with the graduate school.

Students on probation must pass all of their elective courses with a grade of **B-** or better, MUST complete their courses by the end of the second year (with the exception of NBIO 207), and must receive a unqualified pass on the Second Year Qualifying Exam. In addition, these students must adequately perform their teaching duties, must be in a thesis lab, and must be making acceptable progress on their thesis work. The student's standing in the program will be reassessed at the end

of their second year **and if they have not displayed satisfactory progress they may be dismissed from the program.**

Return from a Leave of Absence (LOA)

In the event that a student requests and is granted a LOA from the program within their first two years, the following conditions must be met in order for the student to be re-admitted to the program:

- Demonstration of appropriate progress made during LOA (letter from doctor or therapist, description of time spent, etc.).
- Demonstration that the student has a thesis lab.
- All class work must be successfully discharged within two semesters of re-admittance to the program with a grade of B- or higher.
- The Second Year "Inside" Qualifying Exam must be passed without revision required.

Graduate Teaching Assistant Information

Training:

All students who are scheduled to TA for the first time must attend the Teaching Practicum for teaching fellows, which is held during Orientation events in August.

Assignments:

Over the course of the graduate program, usually in the second year, each Ph.D. student is required to serve as a teaching assistant in TWO courses or labs.

Teaching assistant (TA) assignments are decided on by an interdepartmental graduate committee based on faculty request, course enrollment, training grant requirements, and graduate student expertise. For the 2023- 2024 academic year, the faculty member in charge of TA assignments in the MCB and Neurobiology courses is Prof. Avi Rodal (arodal@brandeis.edu).

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, cancellations or additions of courses, or inequities in work load, assignments may be changed with short notice. If there is a likelihood that such a change will be made, the TA Committee will notify those teaching assistants as soon as possible to permit ample preparation time.

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.).

In order 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 TA and faculty member will consult each other 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 TAs 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, and expectations for student writing ability), and an expected range of grades.

TAs may be required to hold at least two weekly office hours up to 2 hrs. each), usually in the evenings.

TAs may be asked to tutor students requiring additional help. If tutoring is expected and one 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 TAs on policies for academic honesty and sexual harassment at the beginning of the term. At this time, procedures for alerting the proper university officers and dealing with such matters will be agreed upon.

Evaluation/Oversight/Professional Development:

TAs are encouraged to discuss teaching with the professor or with a member of the Graduate Committee.

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

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

Every attempt should be made to resolve any difficulties experienced between a TA and faculty member. If such resolution is impossible, official grievances should be made per the stated procedures in the student handbook.

TAs 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.

At the end of the semester, students enrolled in courses will complete a "TA evaluation report" where they will provide feedback of several aspects of their TAs performance. After the course is completed, TAs can retrieve these reports from sage. A copy of this record will also be stored in the student's file in the Graduate Affairs Office.

Questions:

If you have questions you can contact a member of the graduate committee:

Gina Turrigiano (turrigiano@brandeis.edu)
Leslie Griffith (griffith@brandeis.edu)
Sebastian Kadener (skadener@brandeis.edu)
James Howard (jameshoward@brandeis.edu)

You may also contact your program administrator in the Division of Science Graduate Affairs Office:

Jane Theriault (jtheriault@brandeis.edu)
To reach the entire Graduate Affairs Office team, email scigradoffice@brandeis.edu

Resources for graduate students and ways to get help

At many points during your graduate career, you will probably have questions you'd like to ask someone, great ideas you'd like to share, or concerns you'd like someone to address. Please know that there are many people here on campus to answer those questions, help, and support you. Before we go into specifics of who to ask for help, please know that the majority of people on campus are "responsible reporters." This means that they are obligated to share any information that has been disclosed to them regarding discrimination, harassment, or sexual misconduct with the Office of Equal Opportunity. If you are hoping to have a confidential conversation about one of these topics, you will find a list of confidential resources later in this section.

Most issues can be best addressed by those closely associated with your graduate program or with Division of Science staff and faculty, so we encourage you to seek assistance from this group first. We recognize that sometimes there may be a particular person that you are more comfortable speaking with or that one faculty member may be holding multiple roles/positions, but we suggest that you reach out for assistance in the following general order (see schematic at the bottom as well):

- **Your PI/Advisor:** Your first stop will most often be your PI/advisor, if you have chosen one by this point. Your advisor will have the most intimate knowledge of your research/program progress and career goals, and is here to help train and guide you. PIs usually have regular meetings with their students and you can talk about issues that concern you, in addition to discussing your research project. If you are still rotating, you should feel comfortable talking to your rotation PI.
- **A member of your committee (once you have one):** You are always welcome to reach out to any faculty member on your committee. While not tied to your progress as closely as your PI/advisor, they will be familiar with your progress in your program and will have sufficient background knowledge on your project and your

goals to provide personalized support. Committee members will be especially good resources if you have concerns about some aspect of your project design or results and may have useful ideas about your professional development. Keep in mind also that while annual meetings with your committee are required, you can call additional meetings at any time.

- **DGS (Director of Graduate Study, or chair of your grad program):** This faculty member oversees your grad program as a whole, and is here to support all students in the program. They will be extremely knowledgeable in the program's requirements and are also tuned in to the current GSAS and University policies. Early in your grad career when you have not yet chosen an advisor, the DGS's job to support you. Later on, the DGS may be a good person to contact if a few students from different labs have shared concerns. The specific faculty member who fills this role may change from year-to-year, so check with your program administrator or check your program website for the current DGS first. ***In academic year 2023-2024, your DGS is Gina Turrigiano.***
- **Your program's Chair:** This faculty member oversees the program that your grad program falls under and is a step above your DGS. If you have concerns that aren't necessarily specific to your grad program but are relevant to the department as a whole, the chair may have good insight. Chairs are good to talk to if concerns are shared with other populations in the department such as staff, postdocs, or undergraduates. The specific faculty member who fills this role may change from year-to-year, so check with your program administrator or check your program website for the current Chair. ***In academic year 2023-2024, your program chair is Paul Miller.***
- **The Head of the Division of Science:** This faculty member oversees the entire Division of Science, and works to support all of the departments and graduate programs within the sciences. The head of the Division of Science has frequent meetings with individual program and department chairs, as well as with leaders across the University, so they will be knowledgeable about current Division and University practices. They are here to support and advocate for the entire science community. Talk to them if people from different graduate programs or departments have a shared concern or to raise. In particular, concerns about research integrity should be brought to the attention of the Head of the Division of Science. As with the DGS, the faculty member in this role can change from time-to-time. ***In academic year 2023-2024, the chair of the Division of Science is Bulbul Chakraborty.***

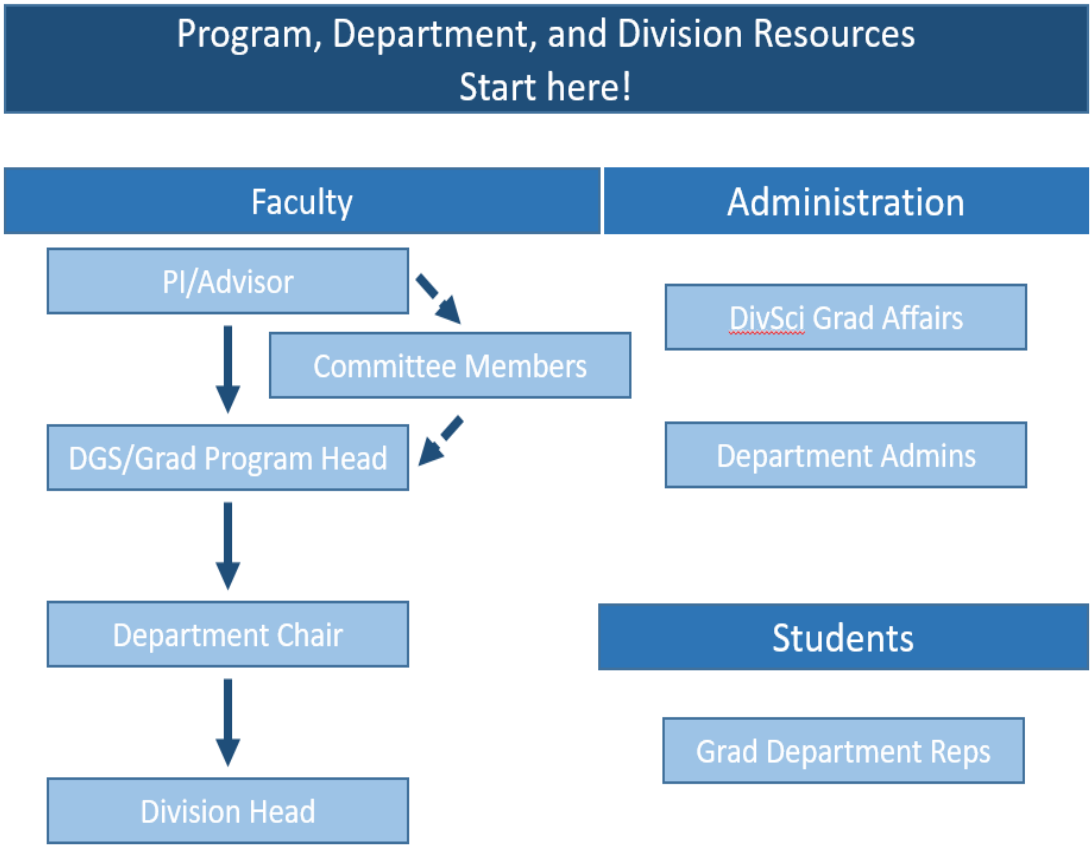
In parallel to these program-level and Division-level faculty resources, there are non-faculty resources within the Division who you can go to for help. The following are good places to go to for help:

- **The Division of Science Grad Affairs Office:** This office is the administrative home for most of the graduate programs within the Division of Science, including yours. The staff here work closely with grad students and faculty administratively oversee those graduate programs and student progress. The staff in this office know your

program's faculty, are well-versed in your program's requirements and policies, and are up-to-date with the other sources of support on-campus. If you are unsure about who to talk to first, the DivSci is often a good place to start as they can help you decide who to approach and how to have that conversation. Within this office, ***Jane Theriault is the primary contact for your graduate program.*** You should also feel free to contact Maryanna Aldrich, who oversees this group.

- **Your Department Administration:** These staff work in your department's office and are here to help their entire department community. These staff may be a bit less familiar with your graduate program requirements, but they know your department's faculty and any non-grad-program details about your department well.
- **The DivSci Pre-Award Office:** If you are applying for grants or fellowships, please loop these staff in. They may be able to provide guidance and help you navigate the submission process.
- **Your program's Grad Department Representatives (GDRs):** These graduate students were elected to represent the student body. One of the roles of the GDR is to bring concerns from students as a whole to the program faculty or to GSAS, so if you have a concern that you are comfortable discussing with your GDR it's a good idea to let them know. They cannot bring these concerns to the faculty to advocate for all students if they don't know about them, and there may be other students with similar concerns. Your GDRs may hold a student "town hall" once a semester or year to bring up issues, and this is a good forum to discuss some topics that may be weighing on your mind. New GDRs are elected each year early in the fall semester.

- Below is a flow chart demonstrating the general hierarchy of sources of support:



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- Outside of the general hierarchy of Division of Science places to go to for help, that are various other entities on campus here to support students. These resources on campus are dedicated to supporting graduate students:

- **The Graduate School of Arts and Sciences (GSAS):** GSAS oversees all graduate programs within the school of Arts & Sciences at Brandeis and is invested in the success of all graduate students in these programs. If you have a topic that you'd rather discuss with someone outside of the Division or want a non-DivSci perspective on, the staff in this office are a great resource for graduate students. GSAS is also a good resource if you are uncomfortable discussing a topic with any of the resources mentioned so far or if you have not made sufficient progress in those discussions. Depending on the topic that you have raised with faculty or administrative staff, they may have already contacted GSAS for advice/assistance on how to help or to handle the next steps. GSAS and your program/department faculty or the Head of the Division of Science frequently work together to support students, resolve problems, and enact positive changes. Please visit their staff directory to explore the areas GSAS can help with. If you are in a research group with limited funding, GSAS provides conference and research awards for PhD students and Master's students. They also strongly encourage students to apply for external fellowships and grants.

- **The Office of Graduate Affairs:** This office is a home and source of support for all graduate students at Brandeis, including those studying at the Heller School, the Rabb School, or the International Business School. Graduate Student Affairs provides students with information and events about graduate life at Brandeis and community resources.
- **The Graduate Student Association (GSA):** Supported by The Office of Graduate Affairs, the GSA is an independent student body that represents all graduate students and provides a platform for graduate students to raise issues and concerns and build community. If you have a concern about an issue affecting graduate students that extends past your program, department, and the Division of Science, the GSA is a good group to talk to. To connect with them, visit their website to see the current year's grad student executive committee.
- There are some offices on campus that specialize in specific topics and who will almost always be the best resource for those topics:
- **The Office of Research Administration (ORA)**: ORA, which reports to the Vice Provost for Research, can help with issues related to research integrity and compliance. If you want to discuss the possibility of research misconduct, you may wish to report things there directly.
- **The International Students and Scholars Office (ISSO):** ISSO supports all of Brandeis' international students and scholars. This office determines visa eligibility and prepares and issues visa documents. If you ever have any questions about your Visa or any of the associated regulations (e.g., travel, CPT, OPT), you should reach out to your ISSO advisor. They can advise students on rights and responsibilities and provide guidance regarding issues that may impact their legal status. Their website also has a collection of useful information for international students.
- **Student Accessibility Support**: If you are a student with a disability and in need of academic or non-academic accommodations, this office can support you and help you navigate this process. The definition of a person with a disability is broad, and many students who do not think of themselves as students with disabilities may qualify for support under the law. Even if are you not sure if you will qualify, you are encouraged to reach out to SAS.
- As mentioned at the start of this section, there are some topics that responsible reporters on campus cannot keep confidential, and those are issues of discrimination, harassment, or sexual misconduct. The office on campus that addresses these issues is the **Office of Equal Opportunity (OEO).** OEO provides information regarding support resources, information about taking action (internal resolution processes and criminal action), inquiries and investigations into concerns, processes to address grievances, and training for the Brandeis community. Please visit their website for contact information and steps (and an online form) to file a report. You are welcome

to contact a resource listed above for support or advice about these topics, but they will be obligated to share the issue with OEO.

- If you would like to have a *confidential* conversation with someone on campus, the following are our on-campus confidential resources:
- **The Brandeis Counseling Center (BCC)**
- **The Brandeis Health Center**
- **The Prevention, Advocacy, and Resource Center (PARC)**
- **The University Ombuds**
- **The Chaplains in The Center for Spiritual Life**