

Handbook

PhD Graduate Program in Biochemistry and Biophysics

Brandeis University
2020-2021 Academic year

The purpose of this handbook is to help students navigate the various requirements and expectations of the Graduate Program in Biochemistry and Biophysics. It describes the requirements for the Ph.D. degree and contains general information about the procedures to be followed in satisfying these requirements. These are also summarized in the "Pocket Handbook" on the final page of this handbook. You will need to consult the instructions and forms contained here at various times during your graduate studies, so please save your copy or select "Student handbook" on the [website](#).

The Biochemistry & Biophysics Graduate Program is an interdepartmental graduate training program with faculty drawn from the Biochemistry, Biology, Chemistry, and Physics departments. Progress of students in the program is monitored mainly by faculty of the Biochemistry Department and the Biochemistry & Biophysics Graduate Program Chair. An up-to-date list of faculty associated with this program is posted on the Biochemistry & Biophysics Graduate [program webpage](#).

****Important Note Regarding COVID-19:** Due to the uncertain direction of COVID-19, please note that the contents in this handbook may be subject to change. If there are any changes, we will notify you as soon as possible by email. Please make sure you check your Brandeis email regularly, at least once a day. **In addition, all talks, rotation talks, seminars, progress meetings, defenses and propositions will be held virtually via Zoom until further notice.** This handbook contains both general program guidelines that mostly stay the same from year to year and COVID-19 specific guidelines for 2020-2021 (e.g. guidelines for setting up Zoom progress meetings and propositions). For GSAS COVID-19 updates, [please consult their website](#).

Program Chairs* (For all program-related approvals, you may seek approval of one or both Chairs):

Dan Oprian, Volen 407, oprian@brandeis.edu, 781-736-2322 and
Doug Theobald, Kosow 308, dtheobald@brandeis.edu, 781-736-2303

Program administration and record keeping:

Emily Palmer, Ros/Kos 3-RK02, scigradoffice@brandeis.edu, ext. 781-736-2369. Available by appointment via Zoom.

The graduate affairs office also consists of:

Maryanna Aldrich, maldrich@brandeis.edu 781-736-4850

Anne Lazerson, lazerson@brandeis.edu 781-736-2327

Jane Theriault, jtheriault@brandeis.edu, 781-736-2302

The biochemistry office also consists of:

Maryanna Aldrich, maldrich@brandeis.edu 781-736-4850

Jennifer Roy, jroy@brandeis.edu, 781-736-2353

Laura St. Clair, lstclair@brandeis.edu, 781-736-2308

Graduate Student Representatives:

Koe Inlow kinlow@brandeis.edu

Michelle Langton mlangton@brandeis.edu

Degree requirements -- General Information

To obtain the Ph.D. degree, students must satisfy both the general requirements of the graduate school and the specific requirements of the Biochemistry & Biophysics Graduate Program. Both sets of requirements are summarized in the [Brandeis catalog](#).

The following sections contain additional details about the program requirements.

The student is responsible for fulfilling each requirement before the relevant deadline. Students failing to complete requirements on time may, at the discretion of the faculty, be required to leave the Program.

Students in the Biochemistry & Biophysics Graduate Program are expected to work full-time towards the degree throughout the entire calendar year. Students should be aware that scientific research is a demanding occupation and that researchers often find it necessary to do work on nights, weekends, and holidays in addition to that during "normal working hours." This precludes students undertaking outside employment or outside academic activities that would require a significant amount of time.

The Graduate School requires that "Students who enter the Graduate School of Arts and Sciences must earn the doctorate within eight years, exclusive of leaves of absence (pro-rated for part-time study). PhD students who were enrolled during the Spring 2019 term must earn their doctorate within nine years. Students who have passed the terminal point for the degree may apply to the Graduate School of Arts and Sciences for an extension and, if approved, may be eligible for additional federal financial aid."

However, the Biochemistry & Biophysics Graduate Program expects students to complete Ph.D. thesis research before year 5.5.

Requirements for the Ph.D. degree

1. Courses

To fulfill the course requirement for the Ph.D. degree, the student must complete each course with a letter grade of B- or higher. To make any subsequent modifications to the Required Program of Study, the student must obtain, in advance, written approval from one of the Program Chairs. All elective courses must be chosen with consultation of one of the Program Chairs.

The required Program of Study consists of seven one-semester courses. The student will meet with the Program Chairs during orientation to discuss the selection of courses before registering for courses. The only explicitly required course is BCBP 200b, *Readings in Macromolecular Structure-function Analysis*, but all courses must be approved by one of the Graduate Program Chairs. In addition, students must complete one year of laboratory rotations, BCBP 300a and BCBP 300b, and attend the Division of Science Responsible Conduct of Scientific Research (RCR) Mini-course, which do not count towards the seven courses required. For the 2020-2021 academic year, the RCR Mini-course date/time will be announced in the Fall (during 2019-2020 academic year, it was held on Jan. 8th and 9th 2020). All graduate students beyond the first year must register for BCBP 401 *Biochemical Research Problems*, the official designation for Ph.D. thesis research. This course also does not count toward the seven course requirement. The following is a typical program of study:

Year 1, Fall Semester

BCHM 101a Advanced Biochemistry: Enzyme Mechanism
BCHM 102a Quantitative Approaches to Biochemistry
BCBP 300a Laboratory rotations

Year 1, Spring Semester

BCHM 104b Physical Chemistry of Macromolecules
BCBP 200b Readings in Macromolecular Structure-function Analysis
BCBP 300b Laboratory rotations
Responsible Conduct of Scientific Research Mini-course

Year 2 and 3

BCBP 401 Biochemical Research Problems (all four semesters of years 2-3)

Three additional elective courses, often including one or more of these (although, not limited to these courses):

BCHM 103 Advanced Biochemistry: Information Transfer Mechanisms
CHEM 235 Advanced NMR Spectroscopy
BCHM 171b X-ray crystallography
PHYS 105a Biological Physics

QBIO 110a Numerical Modeling of Biological Systems
QBIO 120b Quantitative Biology Instrumentation Laboratory
BIOL 107a Data Analysis and Statistics Workshop
BCBP 266a Advanced Topics in Protein Folding
BCBP 233a Advanced Topics in NMR and Protein Dynamics
BIBC 126b Molecular Mechanisms of Disease
BCHM 104a Classical and Statistical Thermodynamics
BCHM 145a How to Decide: Bayesian Inference and Computational Statistics
BCBP 240A 1 Advanced Topics in Single-molecule Biophysics

Year 4 and beyond

BCBP 401 Biochemical Research Problems (every semester)

Note that the passing grade for Biochemistry & Biophysics Ph.D. students is a B-. Students failing to earn a passing grade will be required to re-take that course (or equivalent). In addition to passing the formal course requirements, all students should endeavor to keep abreast of current developments in Biochemistry & Biophysics and related fields. To accomplish this, we urge students to attend the following seminars weekly during the academic year:

- 1) The Biochemistry & Biophysics Friday Pizza Talks
- 2) One or more departmental colloquia or specialty journal clubs according to the student's interest.

The research talks sponsored by the students from the MSM and QB training programs are mandatory for all 2nd year and above students to present a talk once per year.

These Tuesday evening talks are an important component of the BCBP graduate education and are essential to the training grants. Presenting scientific results and open scientific discussions with peers of different background are very important components for a successful scientific career.

All students in years 2+ will be required to present once per year in the series. **The talk must be about a student's own work.** Attendance at the talks is not mandatory, but strongly encouraged for each student's benefit, and will be recorded and monitored by the faculty.

Biochemistry & Biophysics Ph.D. with Specialization in Quantitative Biology (QB)

In order to receive a Ph.D. in Biochemistry & Biophysics with a specialization in Quantitative Biology, students must complete the requirements defined above for the Biochemistry & Biophysics Ph.D. degree and, in addition, must satisfy the course requirements for the QB specialization that are described in the [quantitative biology section of the *Bulletin*](#). Any alteration to the QB course requirements must be approved

by the QB program faculty advisory committee. With the approval of one of the graduate Program Chairs, courses taken to satisfy the QB specialization requirements can be used to satisfy course requirements of the Biochemistry & Biophysics Ph.D. degree.

Students wishing to obtain the specialization must first gain approval of the graduate Program Chair or QB liaison (Prof. Oprian, Prof. Theobald or Prof. Gelles). This should be done as early as possible, ideally during the first year of graduate studies. For information on how to apply to the QB program, [see “How to Apply”](#).

2. Rotations and acceptance by dissertation advisor

All first year students are required to register for the research rotations (BCBP 300a,b). Every student is required to complete four rotations of 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 may choose advisers from any department within the Division of Science. The complete list of faculty research interests can be found on the [Life Sciences website](#).

During orientation week, students will attend a three-night faculty bazaar where faculty members will introduce their work. After, students will turn in a list of their top choices for the first rotation, and the faculty will make the final decision about the first rotation assignments. More details will be provided via email.

The remaining three rotations are the responsibility of the student to arrange with the appropriate faculty member ahead of time. We recommend that you arrange your rotations as early as possible. At the end of each rotation, the student will give an oral presentation of their research project to the Biochemistry Department.

By the end of each rotation, the student will also submit a written rotation report. One electronic copy should be sent to the program administrator in the Division of Science Graduate Affairs Office, one should be provided to the laboratory head in which the rotation was completed, and one should be given to the Rotation Committee Chair ([Julia Kardon](#)).

Rotation Schedule:

| | Start | End | Presentation Given |
|-----------------|--------------|-------------|---------------------------|
| 1 st | Tues, Sept 8 | Fri, Nov 6 | Fri, Nov 6 |
| 2 nd | Mon, Nov 9 | Fri, Jan 15 | Fri, Jan 22 |
| 3 rd | Mon, Jan 18 | Fri, Mar 19 | Fri, Mar 19 |
| 4 th | Mon, Mar 22 | Fri, May 21 | Fri, May 21 |

After the first year, research for the PhD dissertation is carried out under the supervision of a faculty adviser. Advisors can be chosen from any department within the Division of

Science. The complete list of faculty research interests can be found on the [Life Sciences website](#).

Dissertation advisors can be chosen ONLY during the specified time period at the close of the 4th rotation: May 17-28, 2021. Choices must be made by Friday, May 28th. It is Biochemistry tradition/policy that both students AND professors are forbidden to discuss dissertation advising issues until the specified period.

Ordinarily, students choose a research laboratory immediately upon completion of the fourth laboratory rotation in May of the first year. However, some students elect to do a fifth rotation during the summer after the first year's courses are completed. In that case, the Ph.D. advisor must be selected before the beginning of the student's second year. Students unable to find an advisor willing to accept them by the beginning of the second academic year will not be permitted to continue in the Ph.D. program.

If you have any questions about rotations, please contact Julia Kardon (kardon@brandeis.edu).

3. Teaching

All Ph.D. candidates are required to serve as teaching assistant for two courses, sections, or labs. This is usually done in the student's second year of study.

4. Propositions

Propositions are research proposals that the student writes and then defends in an oral exam. Each student must pass *two* propositions in order to obtain the Ph.D. degree. Each proposition is an original research proposal based on an understanding of current literature in specific fields of research. The student should identify an interesting and experimentally tractable question at the forefront of biochemistry or biophysics, and should design a plan to attack this question (and maybe even to answer it!).

The Inside Proposition should be in the general field of the student's dissertation research. And should have the format of a research proposal. The Outside Proposition is a proposal for research that does not cover the field of the student's Ph.D. research. Students may choose to complete either the inside or outside proposition first. At the time of exam scheduling, the faculty committee and Graduate Affairs Office must be notified of which exam is being taken.

Important Proposition Deadlines:

The 1st proposition MUST be completed by **January 6th of your second year**. The 2nd proposition MUST be completed by **June 15th of your second year**. Students that fail to meet this deadline may not be readmitted into the program for the next year. (Note: 2nd year students in year 2020-2021 had a different deadline for their first prop due to COVID-19).

Before the Oral Exam:

For both propositions, the chosen topic should be approved by the thesis advisor well in advance. **The examining committee, consisting of three faculty members including the thesis advisor, should be assembled in advance by the student and must be approved by the Chair of the Biochemistry & Biophysics Program.** Please fill out the “Proposition Committee Approval Form” in the Appendix, have it signed by the Chair(s), and return it to Emily in the Grad Affairs/Biochemistry Office. *To allow for greater flexibility during COVID-19 (in academic year 2020-2021), you may email (instead of submitting a form) one of the Program Chairs and copy scigradoffice@brandeis.edu your committee and date for approval.* Please receive approval well in advance of your exam. The propositions are defended orally before the committee. **The Chair of the committee should NOT be the advisor.**

The student must inform the Grad Affairs Office of the dates of the proposition exams in advance. **Each member of the committee must be given a final copy of the written proposition no later than three days before the examination date.** *Special COVID-19 2020-2021 guidelines: The student will also email the Zoom link for the Proposition to the Committee. When the student starts the Zoom meeting, the student will want to make another Committee member (not their PI) the “host”. This will allow the student and PI to focus solely on the presentation. The faculty host can place the student in the waiting room at the end of the presentation, if the Committee wants to meet independently before asking the student to return to the meeting. [Please review detailed Zoom recommendations here.](#)*

Oral Exam Information:

The student should prepare a 30-minute chalk talk presentation, which will in practice end up as a one-hour discussion. The student should bring a copy of the “Proposition Defense Form” (see Appendix) to the oral exam for the signatures of the committee.

After the Oral Exam:

The student will hand in the completed “Proposition Defense Form” to Emily in the Grad Affairs/Biochemistry Office and will keep a copy. *Special COVID-19 2020-2021 guidelines: The Chair of the Committee will email the student, the rest of the Committee and scigradoffice@brandeis.edu to report on the results of the written exam: pass / fail / pass with revisions, and the results of the oral exam: pass / fail. The Committee Chair will provide additional comments or instructions as needed (e.g. information about the types of revisions and timeline for revisions).* Students receiving a failing grade are ordinarily given the opportunity to repeat the defense within five weeks of the initial defense and the Committee Chair will provide an updated grade for this defense.

It is the responsibility of the student to choose the proposition committee (and get it approved by a Program Chair), to schedule the oral presentation, to reserve a room through the Biochem Office and to submit the written exam to the committee and scigradoffice@brandeis.edu. *Special COVID-19 2020-2021 guidelines: The student will also need to create and share with the committee a Zoom link for the oral exam (instead of reserving a room).*

Written Proposition – Detailed Guidelines:

Proposition topics are original research proposals formulated by the student. The subject of each proposition must be approved by the student's dissertation advisor. Propositions are academic exercises only; students do not actually perform the research proposed. A proposition defines a specific current research problem and proposes the experimental means to investigate it.

The proposition should clearly and explicitly define a goal of the proposed research. Usually, the goal is to answer a single, specific scientific question.

The proposition should make a convincing case, using appropriate literature citations, that achieving the goal would be scientifically worthwhile and should summarize (with references) relevant work done by others.

The proposition should also describe a practical plan of experiments by which the goal could be achieved. The plan should explicitly state the experimental methods to be used and contain sufficient detail, including literature citations, to allow the reader to evaluate its feasibility.

The proposition should be in NIH format. Specific Aims (limit: 1 page) plus Background, Significance, Experimental plan (limit: 6 pages, single spaced, including figures and legends, but not including references). The Specific Aims page should make it clear what specific question(s) the project will try to address. This should include citation of pertinent literature relating to the project.

We strongly encourage students to submit their proposition as a NIH NRSA F31 fellowship grant by the **December 8th, 2020 deadline** ([Dept. of Health and Human Services](#)) and the NSF GRFP grant by the **October 19th, 2020 deadline** ([GRFP](#)). Please keep in mind that you will need to **submit your grant proposal to the Brandeis Pre-Award Office at least 3 weeks before the deadline** (scipre-award@brandeis.edu), but students applying for these fellowships should contact Pre-Award WELL in advance. In addition, the Program Chairs can help you throughout this process.

5. Progress Meetings

Starting with the third year of study, the student meets with a faculty committee of three members at least once every academic year to discuss progress towards completing research and the dissertation. The committee, which includes the dissertation advisor, is chosen by the student, and its makeup should approximate that of the intended dissertation committee. **Students should not view these meetings as exams!** Their sole purpose is to facilitate the student's trajectory towards a successful dissertation.

The student should bring to the meeting the required form (see Appendix) which the committee members sign to indicate whether the student is making satisfactory progress toward completion of an acceptable dissertation. *Special COVID-19 2020-2021*

guidelines: once you have held your committee meeting, please remind your committee to send an email to you and Emily (scigradoffice@brandeis.edu) verifying your progress or sharing any concerns to be related to the Program Chairs. This email can be used to report on your progress instead of the form in the Appendix.

For the first Progress Meeting, held in the third year, the student should submit a written description of the general aims of the thesis research-project and the progress made towards these aims. In subsequent years, the meetings are more informal and do not require a written report. However, students often find it helpful to prepare a written outline to bring to the meeting. Meetings typically consist of a PowerPoint or chalk-talk style presentation to help guide the discussion.

While students may arrange a progress meeting before the following deadlines, **students who fail to schedule their meeting by these deadlines are not considered to be making adequate progress toward their degree and may not be readmitted for the next academic year:**

-1st meeting: held April-June at the end of the 3rd year

-2nd meeting: held July- September at the end of the 4th year/beginning of 5th year

-3rd meeting: held October-November of the 6th year

Students who are within 9 months of defending are encouraged to schedule a final progress meeting.

Meetings must be held annually. However, if a student's progress is deemed to be unsatisfactory by their committee, the committee may require that they meet again sooner (after a certain number of weeks or months, as determined by the committee). If a student is not displaying satisfactory progress, their committee will indicate and convey to the student their expectations for their next meeting. At the discretion of the progress committee and the Graduate Program Chair, students who are not displaying satisfactory progress may be placed on probation or may not be re-admitted into the program during the annual re-admission process in the Spring/Summer.

Before or on the day of the Progress Meeting with their Committee, students should plan to meet with their advisor (or the Graduate Advisor, if a student does not feel comfortable speaking with their advisor) to review their Individual Development Plan (IDP). Please see section 6 for more information on the IDP.

Students should feel free to call a Progress Meeting at any time, i.e., before the scheduled time, if they feel that the advice of a committee would be helpful.

6. 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 changes over time.

Students in their third year and above will be required to complete an Individual Development Plan with their advisors before or on the day of their annual Progress Meeting. If the student does not feel comfortable speaking to their advisors about their career plans, they can meet with the Graduate Program Advisor instead. The student/advisor can choose the written IDP format that they prefer. The faculty must confirm by indicating on the Progress Meeting form that an IDP conversation has taken place and that a written document has been created or revised from the previous year. Example IDP forms can be found on the Brandeis Knowledge Base: <https://kb.brandeis.edu/display/SCI/IDP+Templates>. IDP's will be private documents between the student and advisor (or Graduate Program Advisor if this is whom the student met with).

7. Residency

The graduate school requires a student to have resident status at Brandeis (i.e., enrolled as an on-campus graduate student) for three years to receive the Ph.D. degree. Consult the Brandeis catalog and/or the Graduate Affairs Office if you need more information on the residency requirement.

8. Dissertation

The Ph.D. candidate must write a dissertation that summarizes the results of an original investigation of an approved subject and which demonstrates the competence of the candidate in independent research. In general, students are expected to have at least one first-author paper in a format ready to be submitted to a journal. The student must give a public seminar on the dissertation research.

A final oral examination based on the dissertation must be passed. The defense committee will be composed of 3-4 faculty members, one being the dissertation advisor. At least one of the members of the defense committee should be chosen from outside the Biochemistry & Biophysics Program (and is customarily from outside the University). The examination is open only to the student, the committee, and members of the Biochemistry & Biophysics Graduate Program faculty.

It is the responsibility of the student:

- to ensure that all graduate program requirements are satisfied before the dissertation exam.
- to ensure that the dissertation is in a form and format acceptable to GSAS and is submitted by the required deadlines (students should obtain specific instructions for the preparation of the dissertation directly from the Graduate Affairs Office and GSAS before starting to prepare the dissertation).
- to arrange a time and date for the Ph.D. defense at least two weeks in advance.

- *Special COVID-19 2020-2021 guidelines: to email Emily (scigradoffice@brandeis.edu) your committee members (as well as the dept. and school for your outside member), defense date/time, dissertation title and Zoom link at least two weeks before your defense. [Please view detailed Zoom guidelines here.](#)*
- to fill out and return the [GSAS Defense Calendar Submission Form](#) at least two weeks prior to the defense.
- to give a copy of the dissertation to each committee member, **as well as a copy to Biochemistry and Graduate Affairs office**, at least two weeks before the defense. You may retrieve the copy left in the office following the defense.
- to come to the examination with the form required by the university: PhD Dissertation Defense and Oral Exam form (obtained from the registrar's office).
- to obtain the signatures of the members of the dissertation defense committee and, as soon as possible after the defense, to email a copy of this form to the Biochemistry and Graduate Affairs office (scigradoffice@brandeis.edu) and to the Registrar's Office ([registrar@brandeis.edu](#)).

Students have not fulfilled the dissertation requirement until the final version of the dissertation, including any changes required by the committee and GSAS, is submitted to GSAS. The Report on PhD. Revisions form must be submitted to the Registrar before the dissertation is submitted. For theses that include copyrighted material (for example, text already published in journal articles), copyright permission must be obtained from each journal and submitted to GSAS with the dissertation. There is usually no need to get permission from co-authors, since it is usually the journal, not the authors, that owns the copyright.

The Graduate School requires that the oral exam be retaken if the final thesis is not submitted sufficiently soon after the exam; if delays are anticipated please consult the Graduate Affairs office.

Summary of deadlines for Ph.D. degree requirements

| Year | Requirement | Timeline/Deadline |
|---|--|-----------------------------|
| 1 | 1 st rotation (Sept 8, 2020 – Nov 6 2020) | Presentation Nov 6, 2020 |
| 1 | 2 nd rotation (Nov 9, 2020 – Jan 15, 2021) | TBD |
| 1 | 3 rd rotation (Jan 18, 2021 – Mar 19, 2021) | Presentation Mar 19, 2021 |
| 1 | 4 th rotation (Mar 22, 2021 – May 21, 2021) | Presentation May 21, 2021 |
| 1 | Pass first-year courses | End of the second semester |
| 1 | Be accepted by dissertation advisor | May 28 th , 2021 |
| 1 or 2* | <i>NSF grant</i> | <i>October 19, 2020</i> |
| 2* | <i>NIH fellowship</i> | <i>December 8, 2020</i> |
| 2 | 1 st proposition ('inside' or "outside") | January 6 |
| 2 | 2 nd proposition ("inside" or 'outside') | June 15 |
| 3 | 1 st progress meeting and IDP | April-June |
| end of 4 th , start of 5 th | 2 nd progress meeting and IDP | July-September |
| End of 5 th year | Finish 7 Course Requirement | End of second semester |
| 6 | 3 rd progress meeting and IDP | October-November |

***indicates a strongly encouraged but optional deadline.**

Note: For the purpose of program deadlines, "end of the second semester" refers to the date listed in the Brandeis academic calendar as the date final grades are due, and "before the start of year" means before the first day of classes.

Information for first-year students

First year students will be emailed information about orientation activities, registration, and class schedules. **It is mandatory that you attend the Orientation Meeting scheduled for your program.** Please note that when you are on campus, you will have a mailbox (located in the hallway outside the Biochemistry/Graduate Affairs Office). Your primary administrative contact in the graduate affairs office will be Emily Palmer, who will be working remotely from home until further notice and will be available by email, phone and Zoom appointment. When Emily returns to campus, her office will be in the Biochemistry and Graduate Affairs Office in Ros/Kos 3-RK02. Please also email the Biochemistry & Biophysics Graduate Program Chair (Doug Theobald or Dan Oprian) to discuss any questions related to your course selections. During orientation, Doug and Dan will review course selection and Julia Kardon will review rotations.

Miscellaneous information

As a graduate student, your only official affiliation with Brandeis is as a member of the

graduate program, not of a department (e.g., Biochemistry) or center (e.g., Volen).

The following is information from the Registrar's office which all students (both first-year and beyond) should be aware of:

"Every semester some graduate students completely overlook their obligations to enroll in classes, thinking it a matter of little importance which can easily be corrected at anytime. ***This is a false impression.*** We will make a concerted effort to reach unregistered and unenrolled students in advance of the deadline. But thereafter, we are not at liberty to enroll students in courses; we will presume they are not in attendance, and process their withdrawal from the University, which in turn will invalidate any financial support they may be receiving."

However, first-year students should not register until they discuss their academic program with the Program Chairs.

Transition from M.S. to Ph.D. Program:

Students who have earned a M.S. at another institution will be admitted as normal first-year students. Students in the Brandeis Biochemistry & Biophysics M.S. program who apply to and are accepted into our Biochemistry & Biophysics Ph.D. program may be transitioned into the program and considered as third year Ph.D. students. Master's students who plan to apply to our Ph.D. program should first talk to their Master's advisor in July after their first year. The Ph.D. program graduate chair will then meet with these applicants before the beginning of the semester of their second year to communicate their potential for our Ph.D. program. An admissions decision will be made as early as possible to expedite the transition to Ph.D. These students must complete the same requirements as students who enter directly as Ph.D. students, with the following alterations to their timeline:

Matriculation date:

M.S. students will enter the Ph.D. program during the summer after their M.S. year and matriculate as Ph.D. students that summer, typically with a start date of June or July 1st. 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:

Courses taken during the M.S. year may count towards the Ph.D. course requirement, if the program chair approves the courses. M.S. Students who are strong candidates for the Ph.D. program are encouraged to take BCHM102 in the fall of their second year at Brandeis, and with permission of the graduate chair and instructor, may take BCBP200 in the spring of their second year. These students are expected to complete the remaining classes as soon as possible after transitioning to the Ph.D. program.

Rotations and Selection of Dissertation Lab:

In most cases, M.S. students who transition to the Ph.D. program are expected to continue their research in the same lab in which their Master's Thesis was completed. Exceptions to this will be considered on a case-by-case basis. Should a lab change occur, the possibility of additional lab rotations before changing labs will be discussed on a case-by-case basis.

Teaching Obligations:

M.S. students who transition to the Ph.D. program will not be required to serve as teaching assistants.

Master's Thesis:

M.S. students will defend their master's thesis according to the requirements of the M.S. program handbook.

Outside and Inside Examinations:

For a master's student who transitions into our PhD program, the inside and outside propositions are required during their first year in the PhD program (their 3rd year at Brandeis). Students follow the same timeline and guidelines for these propositions that 2nd year Ph.D. students follow.

**Biochemistry & Biophysics Program
Proposition Committee Approval**

Proposition committee approval form for:

(student's name)

This inside/outside (please circle one) proposition defense date will be:

(date)

The committee will include:

_____ (thesis advisor)

Approval signature of Program Chair Dan Oprian or Doug Theobald:

Date: _____

Instructions for the student: Please give the completed form to the Biochemistry and Graduate Affairs Office, Ros/Kos 3-RK02.

**Biochemistry & Biophysics Program
Proposition Defense Form**

Proposition defense form for: _____
(student's name)

This inside/outside (please circle one) proposition defense took place on

(date)

The grades were:

Written proposition -- pass / fail / pass with revisions;

Oral examination – pass / fail;

(chair signature – NOT advisor)

(chair printed name)

(committee member signature)

(committee member printed name)

(dissertation advisor signature)

(dissertation advisor printed name)

Additional Comments (if applicable)

Instructions for the student: Give a copy of this form to the examination committee chair before the exam.

Instructions for the chair of the examination committee: Please give the completed form to the Biochemistry and Graduate Affairs Office, Ros/Kos 3-RK02.

**Biochemistry & Biophysics Program
Progress Meeting form**

1) The undersigned held a meeting with

_____ on _____
Student's name date

to discuss his/her progress toward the completion of the Ph.D. degree.

2) The student and advisor have had a conversation about the student's Individualized Development Plan and a document has been created or revised from last year.

Yes / No

Comments – If an IDP meeting with the advisor hasn't taken place, please indicate when this will take place:

(committee member signature)

(committee member printed name)

(committee member signature)

(committee member printed name)

(dissertation advisor signature)

(dissertation advisor printed name)

Instructions for the student. Photocopy and give original to the Biochemistry and Graduate Affairs Office, Ros/Kos 3-RK02. Please also keep a copy in your own files.

Graduate Teaching Assistants

Assignments. Over the course of graduate study, each Ph.D. student is required to teach undergraduate sections, courses, or labs. These are usually done in the second year. TA assignments are made before the summer prior to the commencement of teaching responsibilities. In rare cases of unexpected enrollment shifts, cancellation or addition of courses, or inequities in work loads, assignments may be changed with little notice. In such a case the teaching assistants concerned will be notified as soon as the changes are known.

Union Information. Students who are TA'ing as part of their stipend are part of the union for the time period of TA'ing only. For more information about the union, please consult the union contract, which can be found here:
<https://www.brandeis.edu/gsas/current/union-information.html>.

Responsibilities. Graduate teaching assistants and faculty members will discuss course requirements, attendance policies and the range of graduate responsibilities (e.g. in class or lab, outside class or lab, administrative duties, technical assistance).

If graduate teaching assistants are to grade undergraduate work, the faculty member and TA will discuss the number of assignments, grading procedures and standards and an expected range of grades.

Graduate teaching assistants should hold weekly office hours as needed for the course.

Graduate teaching assistants are seldom asked to tutor students requiring additional help. If regular tutoring is needed 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.

All students serving as TAs must attend GSAS TA and Title IX training, generally held at the start of the Fall semester. Faculty members will also advise graduate teaching assistants on policies for academic honesty 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.

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

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

Every attempt should be made to resolve difficulties arising between graduate teaching assistants and faculty members. 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.

Pocket Handbook - Graduate Program in Biochemistry & Biophysics

Here's what you have to do - and when:

First year

Mandatory attendance at the Orientation Meeting.

Meet with Program Chair (Dan Oprian and Doug Theobald) to plan out your academic courses.

Visit the Biochemistry and Graduate Affairs Office (Ros/Kos 3-RK02) with your student ID, so that Jenn Roy can give you the appropriate card access. *Special COVID-19 2020-2021 guidelines: because the Card Office at Brandeis is prioritizing students who need to be on campus right away, please wait to get your card until several days before you need to be on campus. Once you do get a card, you will want to email Jenn Roy (jroy@brandeis.edu) about card access.* The lab you will need access to will depend upon your rotation assignment; the Biochem/Grad Affairs Office can direct you to the appropriate department to obtain lab access. You will be required to **take online safety training** before being granted building access.

Register for classes.

Start completing your **course requirements**; **You must take:** BCBP 300a,b and BCBP 200b. Attend the RCR Mini-course. During the 4th rotation, choose a Ph.D. thesis advisor. In the summer, you will receive T.A. assignments for next year

Second year

Continue towards completing your **course requirements**.

Register for **BCBP 401** from this point forward.

Carry out **T.A. assignments**.

Prepare your **1st Proposition Defense** (written and oral), to be completed by Jan. 6th.

Prepare your **2nd Proposition Defense** (written and oral), to be completed by June 15th.

Third year

Continue towards completing your **course requirements**.

Choose **Progress-Meeting** committee and schedule meeting in April/May/June and IDP meeting with advisor. You will be prompted to do this, but it is your responsibility to schedule your meeting.

Succeeding years

Complete **course requirements**.

Yearly **Progress and IDP Meeting**: you will be prompted to arrange this, but it is your responsibility to schedule your meeting.

You should aim to have completed your Ph.D. research by the end of year 5. This does not always (or often) happen, but you should certainly be finished in year 6.

Hint: As you begin to see light at the end of the tunnel, start to think about where you want to do postdoctoral research *12-18 months in advance*. Contact prospective postdoc advisors and give them plenty of lead-time in knowing that you're interested in working

with them. An early-bird attitude will enhance the likelihood of your acceptance into your preferred postdoctoral lab.