Handbook
Master’s Graduate Program in Biochemistry and Biophysics

Brandeis University
August 2015

The purpose of this handbook is to help students navigate the various requirements and expectations of the Master’s Graduate Program in Biochemistry and Biophysics. It describes the requirements for the M.S. degree and contains general information about the procedures to be followed in satisfying these requirements.

The Biochemistry & Biophysics Graduate Program is an interdepartmental graduate 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:

http://www.bio.brandeis.edu/grad/bb/index.html

Program Chair: Dorothee Kern, Volen 444, dkern@brandeis.edu, 6-2354.

Program administration and record keeping:

Biochemistry and Graduate Affairs Office, scigradoffice@brandeis.edu, Ros/Kos 3-RK02, 6-2300

The primary administrative contact for Biochemistry & Biophysics graduate students is Elysha Schickel, eschickel@brandeis.edu, 6-2327

The graduate affairs office also consists of:
Maryanna Aldrich, maldrich@brandeis.edu 6-4850
Jena Pitman-Leung, jpitmanleung@brandeis.edu, 6-2302
Degree requirements -- General Information

The MS program in Biochemistry and Biophysics is a two-year program designed to accommodate students with previous academic majors in a wide range of fields, including biology, biochemistry, physical chemistry, engineering, and physics.

To obtain the Master’s 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:

http://www.brandeis.edu/registrar/bulletin/provisional/courses/subjects/510.html

All Biochemistry and Biophysics Master’s students must complete and pass four graduate level courses with a grade of B- or better. Students will rotate through two Brandis University labs in their first semester, after which point they will join a lab in which to carry out research towards a Master’s Thesis. In addition, students must register for Responsible Conduct of Science.

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.

Requirements for the M.S. degree

1. Courses

The required program of study consists of four one-semester courses (BCHM 101a, BCHM 103b, BCHM 104b, and one elective advanced-level course from the School of Science, approved in advance by the graduate program chair), passed with a grade of B- or higher. All students are required to take BCHM 101a in the first semester, and BCHM 103b and BCHM 104b in the second semester. To fulfill the course requirement for the Master’s 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 the Program Chair.

Starting in their second semester, students will join a research lab full-time and enroll in BCBP297, Master’s Lab Research, with their research advisor for the three remaining semesters and the intervening summer term. To earn the M.S. degree, students must also enroll in Bcbp299 in their fourth semester and write and submit a master's thesis deemed satisfactory by a committee of faculty appointed by the Program Chair. In addition, students must complete the non-credit course CONT 300b, Responsible Conduct of Science, which do not count towards the four courses required.

The following is a typical program of study:

Year 1, Fall Semester
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, students are urged to attend the following seminars weekly during the academic year:

1) The Biochemistry & Biophysics Friday Pizza Talks
2) The research talks sponsored by the students from the MSM and QB training programs.
3) One or more departmental colloquia or specialty journal clubs according to the student’s interest.

2. Rotations and acceptance by thesis advisor

All first semester students are required to register for the Master’s lab rotations (BCBP 296a). Every student is required to complete two rotations of 7-8 weeks each in two different laboratories during the first semester. 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 School of Science. The complete list of faculty research interests can be found at: [www.bio.brandeis.edu](http://www.bio.brandeis.edu).

During orientation week, students will attend a three-night faculty bazaar where faculty members will introduce their work. After, students will approach faculty of interest and discuss the possibility of rotating in their lab. Advisors can be chosen from any department within the Division of Science. The complete list of faculty research interests can be found at: [www.bio.brandeis.edu](http://www.bio.brandeis.edu).

It is the responsibility of students to contact faculty members and find their rotations labs. The first lab rotation will begin on September 7th, 2015. 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.
At the end of each rotation, the student will give a 10-minute oral presentation of the research project at the group-meeting of the lab in which the rotation was performed.

**Rotation Schedule:**

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<thead>
<tr>
<th>Rotation</th>
<th>Start</th>
<th>End/Presentation Given By</th>
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<tbody>
<tr>
<td>1st</td>
<td>Mon. 9/7/15</td>
<td>Fri. 10/23/15</td>
</tr>
<tr>
<td>2nd</td>
<td>Mon. 10/26/15</td>
<td>Fri. 12/18/15</td>
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</tbody>
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After the first semester, research for Master’s Thesis is carried out under the supervision of a faculty adviser. Students must choose a research laboratory immediately upon completion of the second laboratory rotation. Starting in their second semester, students will join a research lab full-time and enroll in BCBP297, Master’s Lab Research, with their research advisor for the three remaining semesters and the intervening summer term.

3. Thesis

To qualify for the M.S., a student must submit a thesis reporting a substantial piece of original research carried out under the supervision of a research adviser or advisers. During the final semester in the program (typically the fourth semester), the student will register for Bchm 299a Master’s Thesis while finishing research work and writing the MS thesis.

The thesis must be approved by the Thesis Advisor and a committee of two additional faculty selected by the student and approved by the program chair. Deadlines and guidelines for submission and acceptance of the Master’s thesis are set by the graduate school and the registrar each semester. Once accepted, the student must submit the Certification of Master’s Thesis Acceptance to the graduate school and publish the thesis with Brandeis University by the posted deadlines. Please see the graduate school’s Master’s Thesis Guide for more information on submitting and publishing the thesis.

Students have not fulfilled the program and thesis requirements until the final version of the thesis, including any changes required by the advisor and the Graduate School, is submitted to the Graduate School office. 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 the Graduate School office 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.

4. Residence

The residence requirement is two years.

**Progress**

Students’ progress will be reviewed by the chair of the program at the end of each semester, particularly after the end of their first year. Students may be asked to leave the program at the end of a semester if their progress is found to be unsatisfactory at the discretion of the graduate committee. Satisfactory progress includes receiving grades of B- or higher in all courses, successfully joining a lab after the student’s first semester, and demonstrating adequate research progress thereafter as determined by the graduate committee.
Information for first-year students

Upon arrival on campus, first-year students should stop by the Biochemistry Department Office (Ros/Kos 3-RK02) check your mailbox (located in the hallway outside the Biochemistry office) for information about orientation activities, registration, and class schedules. **It is mandatory that you attend the Orientation Meeting scheduled for your program.** Your primary administrative contact in the graduate affairs office will be Elysha Schickel, who can be found in the Biochemistry and Graduate Affairs office in Ros/Kos 3-RK02. Please also contact the Biochemistry & Biophysics Graduate Program Chair (Dorothee Kern, Volen 444) to set up an appointment to discuss your course selections. It is best not to register for classes until after this meeting.