Brandeis University
Biochemistry and Biophysics M.S. Program Handbook

Effective Fall Semester 2025-26

The purpose of this handbook is to help students navigate the various requirements and expectations of the Master's of Science (MS) Program in Biochemistry and Biophysics. It summarizes the requirements for the MS degree and provides general information about the procedures to be followed in satisfying these requirements. You will need to consult the instructions 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 (BCBP) is an interdepartmental graduate training program with training faculty drawn from the Biochemistry, Biology, Chemistry, Mathematics and Physics departments. An up-to-date listing of Training faculty associated with the program are listed on the Biochemistry & Biophysics Graduate program webpage. Please note that the similarly named Brandeis **Biochemistry BS/MS** program is an undergraduate degree program; the **BCBP MS** program described here is a graduate program, with different requirements and procedures.

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Program administration

The program is directed by the BCBP Director of Graduate Study (DGS), who is appointed by the Dean of the Graduate School of Arts and Sciences (GSAS) on

advice from the Biochemistry Dept. Chair.

BCBP DGS: Jeff Gelles, Kosow 208 gelles@brandeis.edu, 781-736-2377.

Biochemistry Chair: Douglas Theobald, Kosow 308, dtheobald@brandeis.edu, 781-736-2303.

Faculty responsible for various aspects of BCBP operation (e.g., Admissions) are appointed jointly by the DGS and Biochemistry Department Chair.

Program administration and record keeping are the responsibility of the Division of Science Graduate Affairs Office, scigradoffice@brandeis.edu, Ros/Kos 3-RK02, 6-2369

The Graduate Affairs Office consists of:

Maryanna Aldrich, maldrich@brandeis.edu 6-4850
Anna Miamis, aesposito@brandeis.edu, 6-2311
Anne Lazerson, lazerson@brandeis.edu 6-2327
Jane Theriault, jtheriault@brandeis.edu 6-2302
Anna Miamis is the primary administrative contact for BCBP, but feel free to contact other members of the Graduate Affairs Office if she is not available and an immediate response is needed (scigradoffice@brandeis.edu)

Students in the BCBP program elect Graduate Department Representatives (GDRs). The 2025-26 GDRs are:

Matt Copeland mcopeland@brandeis.edu
Brendan Earley brendanearley@brandeis.edu

BCBP MS degree requirements

The Brandeis Bulletin is the authoritative document that describes Brandeis academic regulations. If anything in this handbook contradicts the Bulletin, the Bulletin will take precedence.

To obtain the MS 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 Bulletin.

The Handbook sections that follow contain additional details about the program requirements and how to satisfy them.

The student is responsible for fulfilling each requirement before the stated deadline. Students failing to complete requirements on time may be required to leave the Program.

Required courses

When the degree is to be completed in one year, this will be done at a rate of four courses per semester for two semesters. However, some students may instead elect to finish the degree in two years if they are accepted into a research lab and introduce a formal research component such as completing an acceptable MS thesis. Students completing a

thesis may, with the permission of their research advisor and the Program Chair, take some of the required classes in their second year. In all cases, admission into the second year is not guaranteed and is based on research and class performance.

BCBP MS students must complete the following eight one-semester courses, all completed with a grade of B- or higher:

- BCHM 101a Advanced Biochemistry: Enzyme Mechanisms (F)
- BCHM 103b Advanced Biochemistry: Cellular Information Transfer Mechanisms (S)
- BCHM 104b Physical Chemistry of Macromolecules II (S)
- One other advanced level course from the School of Science, approved in advance by the Director of Graduate Studies. (F or S)
- BIOL 251a Project Laboratory in Protein Biochemistry (S) -OR- BCBP 297a Master's Lab Research I -OR- BCBP297b Master's Research Lab II (see Research Requirement section later in this handbook)
- BIOL 205 Masters Proseminar (F)
- BCBP 350a (F) and 350b (S) Biochemistry and Biophysics Research Seminar (offered pass/fail only).

F and S above designate courses typically offered in the Fall and Spring semesters, respectively.

With the written prior approval of the Director of Graduate Studies, other courses can be substituted for BCHM 101a, BCHM 103b, and/or BCHM 104b in order to tailor the program of required courses to the academic needs and interests of the particular student. However, transfer credit or credit for courses previously taken at Brandeis is not accepted to reduce course load.

Communications and first-year orientation

All students will be assigned a brandeis.edu email account. This is the official way that the university and the program communicate with you; please check your email daily. You will also have a postal mailbox located in the hallway outside the Biochemistry/Division of Science Graduate Affairs Office; please also check this regularly.

It is mandatory that first-year students arrive on campus in time to attend the first-year BCBP Orientation Meeting. The orientation meeting will be well before classes start; please plan your travel so that you can be on campus on the day of the meeting.

Training courses

All students in the program are required by the university to complete specified workshops and on-line courses on such essential topics as Responsible Conduct of

Research and Laboratory Safety. Courses must be completed at the times specified and completion must be documented as required by the university. You will be notified by email when you are required to do this training; please read and heed these emails.

Research seminars

To satisfy the BCBP 350a and 350b requirement, all first-year students in the program attend the **Biochemistry & Biophysics Friday Pizza Talks,** in which we invite accomplished scientists from outside the university to present their latest research results. A few of the talks each year are given not by outside speakers but by Brandeis faculty and by the first-year PhD students (as a part of their research rotations).

BCBS PhD students present a seminar on their research at least once a year in the **BCBP/MSM Student Talks** series (informally called "Tuesday talks"). MS students are encouraged to attend these talks but are not required to give a seminar.

Research requirement

There are two options for completion of the research requirement:

1. Complete **BIOL 251a Project Laboratory in Protein Biochemistry** with a grade of B- or better. The project laboratory provides a semi-independent, guided research project experience. In some cases, a student may complete a project lab and also complete BCBP 297a or BCBP 297b. In this case, BCBP 297a or b will fulfill the research requirement and the project lab will fulfill the elective course requirement.

2. Complete one semester of **Master's Lab Research (BCBP 297a or BCBP 297b)** with a grade of B- or better. The Master's Lab Research course offers students an opportunity to engage in biochemistry and/or biophysics research by working in the research group of a Faculty Advisor for at least 15 hours/week for one semester. Faculty Advisor and DGS approval is required to register for either of these courses. Students who choose to do Master's Lab Research should register for the section of BCBP 297a or BCBP 297b that lists the advisor as instructor. The choice of laboratory is made jointly by the student and the Faculty Advisor in whose lab the research is to take place. Students may choose from any faculty member listed as BCBP Training Faculty in the Brandeis Bulletin.

It is the responsibility of the student to arrange for their Master's Research Lab, if any. Please note that the availability of a Master's Lab Research opportunity in a given research lab depends on factors outside of the control of the BCBP program, including the availability of funding, lab space, and sufficient mentoring capability. Therefore, BCBP MS students are not guaranteed the availability of Master's Lab Research.

To find a research advisor, we recommend that students define a list of potential advisors using the Bulletin's list of BCBS training faculty and faculty web sites. Potential Master's Lab Research students should also attend the "Faculty Bazaar" held during orientation week in order to get a view of the full range of research subjects available. Once you have a short list, email and speak with the professors in whose research groups you are most interested. The DGS is available to give advice

on research advisors. Students who might wish to do Master's Lab Research in their first semester are encouraged to wait to contact faculty regarding Master's Lab Research positions until they arrive on campus for orientation. Students who wish to complete Master's Lab Research in their second semester are encouraged to reach out to faculty approximately six weeks prior to the start of the semester.

Only one semester of BCBP 297A/B will be counted toward program requirements. Additional semesters of BCBP 297A/B will be counted in GPA calculations and will be listed on transcripts but will not count towards the eight courses required for graduation.

To successfully complete the course, all BCBP 297A/B students will submit a written research lab report at the end of the semester and may also be required by the research advisor to deliver a research seminar. Research lab reports are due to the research advisor, DGS and the Graduate Affairs Office no later than one week before the first day of Final Exams.

Optional Master's thesis

Completion of an MS thesis is an option to students in the BCBP MS program. An Master's Thesis continues research initiated during one or two semesters of Master's Lab Research (BCBP 297A/B), in the same lab. The research faculty advisor and DGS must approve whether a student may continue in the lab as a year 2 extended student to complete a thesis. To be readmitted into the MS program as an extended MS student, students must perform satisfactorily in first-year research and coursework.

The MS thesis will require more work than can be reasonably accomplished in the first year. Students who complete a Master's thesis extend their total time in the program to a third or fourth semester. After first completing one or two semesters of Master's Research Laboratory (BCBP 297A/B) in the first year, students doing an MS thesis will continue a research project in the same lab into their third or third and fourth semesters, taking the BCBP 299 Master's Thesis course in their final semester and also taking BCBP 297a or b in the third semester if it is not their final semester. . A tuition credit is applied for students who *only* register for BCBP 299 (along with BCBP 350). The thesis must be completed in the semester that the student registers for BIOL 299.

Submission of a Master's thesis requires mutual agreement between the student, advisor, and DGS. Students who wish to complete a Master's thesis should indicate their interest to their research advisor at the beginning of the semester that they first register for the Master's Lab Research BCBP 297A/B. A student who plans to do an MS thesis in the second year must submit a Thesis Intent Form to the Program Chair and the Graduate Affairs Office no later than March 1st of their first year. Expressing the intent to complete a thesis does not guarantee the ability to do so. Admission into the second year will be determined based on research performance and performance in coursework.

Deadlines and guidelines for submission and acceptance of the Master's thesis are set by the Graduate School and the Registrar. Please see the Graduate School website for details. A complete draft of the thesis is due by 5pm to the research advisor, the Program Chair and the Graduate Affairs Office no later than two weeks before the deadline to submit the Certification of Master's Thesis

Acceptance Form. Students should ask their research advisor how far in advance of the deadline the advisor will need to review the thesis draft.

Summer

Extended MS students (e.g., students completing a thesis) or students who matriculate in the Spring semester have three options for the Summer between semesters:

- Leave Brandeis (to go home, work, etc.).
- Stay at Brandeis and continue to work in their thesis lab as a volunteer or for pay if the PI is able.
- Stay at Brandeis and register for BCBP 296A/B in the summer. NOTE: this may not be possible for all labs or students; this option should be discussed with and approved by the DGS and the research advisor. There will be a tuition cost for the summer.

Residency

The graduate school requires a student to have resident status at Brandeis (i.e., enrolled as an on-campus graduate student) for two semesters to receive the BCBP MS degree. Consult the *Bulletin* and/or the Graduate Affairs Office if you need more information on the residency requirement.

Affiliation

As a graduate student, your only official affiliation with Brandeis is as a member of the BCBP graduate program, not of a department (e.g., Biochemistry) or center (e.g., Volen). The student's affiliation in published papers should be listed as "Biochemistry and Biophysics Graduate Program, Brandeis University".

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

Second-year BCBP MS students who apply to and are accepted into the Brandeis BCBP PhD program may be transitioned into the PhD program at the end of their second year as an MS student and then considered as third-year Ph.D. students. MS students who wish to transition into the PhD program should consult the pertinent section of the BCBP PhD Handbook for more information.

Resources for graduate students and ways to get help

At 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. For information on sources of answers, help, and support, please consult the Graduate Student Resources web page.