MASTER OF ARTS IN MOLECULAR BIOLOGY AND BIOCHEMISTRY

The Molecular Biology and Biochemistry (MB&B) Department program focuses on the molecular basis of life—on mechanisms by which cells process, integrate, and act on information to create and propagate living organisms.

The MB&B department offers graduate work leading to the degree of Master of Arts through Wesleyan's BA/MA program. The MB&B Department may also grant the degree of Master of Arts to students in the PhD program who do not complete the PhD.

Undergraduate students interested in the BA/MA program may declare their interest as early as their sophomore year—and no later than early in their senior year—to permit the design of an acceptable program with a research advisor.

The program has a strong research orientation, supplemented by advanced coursework, seminars, and, sometimes, teaching. MA candidates continue the research they began as undergraduate students, including#at least one summer of full-time research.#Students will develop expertise in cutting-edge methodologies in molecular biology and biochemistry, extensively read the literature relevant to their thesis project, produce a scholarly thesis document, and present their results at a departmental seminar. While not a formal requirement, MA students often contribute their data towards the publication of a co-authored, peer-reviewed journal article.

COURSES

Masters students are required to complete six credits. A typical schedule for five of the six credits can be found in the chart below. With permission from the department, students who received credit in 300-level MB&B electives that were not used to fulfill major requirements for their BA degree (in MB&B or another major) may apply them towards the MA degree requirements. BA/MA students are expected to give an oral presentation on their research as part of our graduate seminar series.

First Year		
Fall		**Hours**
MB&B 500-LEVEL ELECTIVE		1.0
MB&B549	Advanced Research Seminar, Graduate	1.0
MB&B585 or MB&B507	Molecular Biology Journal Club I or Molecular Biophysics Journal Club I	.5
MB&B557	Research Seminars in Molecular Biology	0.25
MB&B338	Biology and MB&B Symposium I	.25
	Hours	**3**
Spring		
MB&B 500-LEVEL ELECTIVE		1.0
MB&B550	Advanced Research Seminar, Graduate	1.0
MB&B586 or MB&B508	Molecular Biology Journal Club II or Molecular Biophysics Journal Club II	.5
MB&B558	Research Seminars in Molecular Biology	0.25
MB&B539	Biology and MB&B Symposium II	.25
	Hours	**3**
	Total Hours	**6**

All degree-seeking graduate students are required to register for at least one credit in each semester that they are enrolled in the university.

PROGRESS AND QUALIFYING EXAMS

There are no qualifying exams. BA/MA students will select a thesis committee in the first semester of the MA year. The thesis committee will consist of their research advisor and two additional faculty members, including at least one from the MB&B department. At the student or advisor's discretion, the student may convene a committee meeting in the fall of their BA/MA year.

TEACHING

There are no requirements to TA for the BA/MA program.

RESEARCH

MA students will continue research they began as undergraduate students. This includes at least one summer of full-time research. MA students will pursue a thesis topic that addresses important scientific questions in the field. MA students will develop expertise in cutting edge methodologies in molecular biology and biochemistry, extensively read the literature relevant to their thesis project, and present their results at a departmental seminar. MA students often contribute their data towards publication of a co-authored, peer-reviewed journal article, but this is not a formal requirement for the degree.

CONCENTRATIONS

Students in the BA/MA program in MB&B may petition the department to pursue a concentration in Molecular Biophysics. To complete their certification in Molecular Biophysics, the student must engage in research under the mentorship of one of the program faculty, choose elective courses within the field (https://www.wesleyan.edu/molbiophys/Graduate%20Program/courses.html), and participate in the Molecular Biophysics Journal Club.

THESIS AND DEFENSE

MB&B's BA/MA and terminal MA students are expected to submit and orally defend a formal thesis document that describes the research they have carried out in partial fulfillment of the Master's degree requirements. Upon completing the research goals for the thesis, and in consultation with their thesis committee, students will complete their MA thesis document and schedule an oral defense. The thesis committee serves as the final examination committee that must approve the final written document and its defense.

ADDITIONAL INFORMATION

Students may declare their interest in the program as early as their sophomore year. They should discuss it with their faculty mentor/Principal Investigator and their major advisor in order to prepare for the graduate program while an undergraduate. Students are admitted to the BA/MA program in the home

department of their faculty mentor/PI regardless of their undergraduate major. Admission is based on faculty sponsorship and a comprehensive evaluation of academic performance.

Application requirements include a research proposal, proposed program of study, personal statement, academic transcript, and two letters of recommendation. The application is online. There is one application period of Sep 1 – Jan 13 for both fall and spring entry terms. The online application opens on Sep 1 and closes on Jan 13. More information is available on the Graduate Studies webpage (https://www.wesleyan.edu/grad/graduate-programs/bama_program.html).