BACHELOR OF SCIENCE/ MASTER OF SCIENCE IN BIOLOGY (BS/MS 4+1 PROGRAM)

Department: Biology (https://catalog.bradley.edu/graduate/liberal-arts-sciences/biology/)

Admission

Bradley University Biology undergraduates may enroll in the BS/MS program while completing their bachelor's degree. They must meet the following requirements and follow the procedures described below:

Students will be considered for the BS/MS program following nomination by a Biology Department faculty member during the spring of the student's junior year (preferred date: April 1). By nominating a student the faculty member agrees to become the student's thesis advisor and confirms that the student has the necessary research background, including thesis research plan, to be successful in the program. Nominations will be accepted the fall of the student's senior year given a reasonable need for accommodation. Students will not be admitted to the program after the first day of spring semester their senior year. After nomination the student must follow the application procedures consistent with application to Graduate Education and Biology Graduate Program with the following exceptions. The student:

1. does not need to have completed the bachelor's degree to be admitted to the program,
2. has greater than a 3.2 GPA (in biology) and overall greater than 3.2 GPA,
3. has a minimum of 85 hours completed at time of admission to program if admitted before completion of junior year, or 99 if admitted at the beginning of the senior year.
4. already has a thesis advisor
5. will have the GRE score waived.

Graduation Requirements

Students admitted to the graduate program in biology pursuing an MS degree in biology as an undergraduate as stipulated above will need to complete 30 semester hours of graduate work. A minimum of 26 hours will be biology; the remaining hours may include cognate courses (e.g., in chemistry, education, or computer science). Cognate courses will be deemed appropriate if they contribute to a student's content knowledge or skill level in an area that directly complements the area of research or study. The cognate course must be approved by the department graduate coordinator to be placed on the program of study. The entire program of study must be approved by the department graduate coordinator. Of the total 30 hours, fifteen hours must be classroom courses (i.e., non-independent study), one hour must be in the Thesis Proposal Preparation course (BIO 500 Thesis Proposal Preparation) taken spring of the senior year, twelve hours must be taken at the 600 level, and six hours of Thesis (BIO 699 Thesis) are required. The graduate coordinator must approve the entire course of study.

Undergraduates will apply for graduation for their bachelor's degree the semester that they will achieve 120 credit hours and receive their degrees at Commencement. Following graduation with the BS degree, students will be considered graduate students. Students who are admitted to the BS/MS program will have up to nine graduate hours taken during the final year of the bachelor's degree dual counted for the BS and MS Degrees. Students admitted to this program will be required to have sufficient research already completed to have reasonable expectations of passing their oral comprehensive exams in their first semester as a graduate student and of finishing and defending their thesis research in their fifth year at Bradley University.

An oral comprehensive exam and thesis are required. The student must pass a comprehensive oral exam focusing on basic biology content, the science content of the research proposal, and the science content necessary for the student to successfully complete the proposed research. The student will be given specific information on the exam format and content before the exam. The student must prepare a thesis based on a research project as approved by the thesis committee, give a public seminar, and defend the thesis to the thesis committee.

We will also enforce the following policies with regard to the necessary timelines: students must enroll in the thesis proposal development course the spring of their fourth year at BU. The oral comprehensive exam will be scheduled for the BS/MS students during this course as for the MS students in our department; however the exam will not take place until their first semester as graduate students. The exam must be taken within the first month of their first academic semester as a graduate student. Oral comprehensive exams must be successfully completed before the student will be allowed to enroll in the second semester of their fifth year.

All biology graduate students must complete an independent research thesis and enroll in six hours of thesis (BIO 699 Thesis). In the student's fourth year at BU, a committee of three members of the graduate faculty (including the thesis advisor) will be chosen in consultation with the graduate coordinator. A majority of committee members must be from the faculty of the department of Biology at Bradley University. This committee will advise the student in his or her thesis research. The student must also submit a thesis proposal to his or her thesis committee at the end of the fourth year of the BS/MS program. The student will be permitted to enroll in BIO 699 Thesis (thesis) only upon written acceptance of the proposal by the thesis committee. Upon completion of the thesis, a student will present a departmental seminar. The student must then successfully defend the thesis to the committee members.

The following sequence of courses is suggested for the first two years of the undergraduate curriculum.

Course	Title	Hours
First Year		
Semester 1		
BIO/BMS 150	Introduction to Biology	2.0
CHM 110	General Chemistry I	3.0
CHM 111	General Chemistry I Lab	1.0
MTH 115	Brief Calculus With Applications I	4.0
ENG 101 or COM 103	English Composition or The Oral Communication Process	3.0
Elective		1.0-3.0
	Hours	**14-16**
Semester 2		
BIO 151	Molecules to Cells	3.0
BIO 152	Molecules to Cells Laboratory	1.0
CHM 116	General Chemistry II	3.0
CHM 117	General Chemistry II Laboratory	1.0

BIO 260	Biological Statistics I	1.0
MTH 116	Brief Calculus With Applications II (depending on major, or elective)	3.0
ENG 101 or COM 103	English Composition or The Oral Communication Process	3.0
	Hours	**15**
Sophomore		
Semester 1		
BIO 251	Ecology, Evolution and Biodiversity	3.0
BIO 252	Ecology, Evolution and Biodiversity Laboratory	1.0
BIO 261	Biological Statistics II	2.0
CHM 252 & CHM 253	Organic Chemistry I and Organic Chemistry Laboratory I	5.0
Electives		3.0-5.0
	Hours	**14-16**
Semester 2		
BIO 250	Organismal Biology	4.0
CHM 256 & CHM 257	Organic Chemistry II and Organic Chemistry Laboratory II (depending on major)	4.0
Electives		6.0-8.0
	Hours	**14-16**
	Total Hours	**57-63**