

# BIOCHEMISTRY AND MOLECULAR BIOLOGY (MS)

## Curriculum

### Graduate Committee

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The Master of Science in Biochemistry & Molecular Biology program provides an opportunity for individuals desiring careers in health sciences, industry, education, or research to prepare themselves for either professional studies or positions demanding mastery of science beyond the baccalaureate level. Students will experience seminars and comprehensive exams that are tailored to their expected careers, as well as unique experiences in bench science with training in basic and advanced laboratory techniques used in the field of biochemistry and molecular biology.

### MS Curriculum

Students pursuing the MS in Biochemistry & Molecular Biology must choose either the Non-Thesis Track or the Thesis Track. Each track consists of required courses and the opportunity to take elective courses. The number of graduate-level electives (and the specific elective courses to be taken) will vary with each student. Individual Programs of Study will be designed for each student by their Advisory Committee with the approval of the Biochemistry & Molecular Biology Master's Program Graduate Committee.

The Non-Thesis Track is a 12-month program with an emphasis on coursework and experiences that will prepare the students for careers other than independent research. Students will experience seminars and comprehensive exams that are tailored to their expected careers, as well as unique experiences in bench science with training in basic and advanced laboratory techniques used in Biochemistry and Molecular Biology.

The Thesis Track generally requires full-time enrollment for a minimum of 2 years. The emphasis of this track is on research and development of independent hypothesis and critical reasoning skills. For this track only, a part-time graduate assistantship and tuition waiver may be available after joining a laboratory.

### Coursework (Non-Thesis Track)

Code	Title	Credit Hours
<b>Required Courses</b>		
BMB 801	FUNDAMENTALS OF BIOMOLECULES	3
BMB 815	METABOLISM	2
BMB 840	SEMINAR WITH DISCUSSION (Taken each semester of full-time enrollment and no less than twice.)	2
IPBS 805	FUNDAMENTALS OF CELLULAR PROCESSES	3
IPBS 860	SUCCESS SKILLS FOR GRADUATE STUDENTS	1
BMB 843	LABORATORY TRAINING IN BIOCHEMISTRY & MOLECULAR BIOLOGY: BASIC	3

BMB 844	ADVANCED LABORATORY TRAINING IN BIOCHEMISTRY & MOLECULAR BIOLOGY	5-10
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### Electives (9 credits)

These elective credits may include up to 5 additional hours of BMB 844.

### Coursework (Thesis Track)

Code	Title	Credit Hours
BMB 801	FUNDAMENTALS OF BIOMOLECULES	3
BMB 815	METABOLISM	2
BMB 840	SEMINAR WITH DISCUSSION (Taken each semester of full-time enrollment.)	2
IPBS 805	FUNDAMENTALS OF CELLULAR PROCESSES	3
IPBS 860	SUCCESS SKILLS FOR GRADUATE STUDENTS	1
BMB 899	MASTERS THESIS	1-9
BMB 980	CRITICAL THINKING IN ADVANCED METABOLISM	1