

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 seminar and comprehensive exams that are tailored for 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 Masters Program Graduate Committee.

The [Non-Thesis Track](#) is a 12 month program with an emphasis on course work and experiences that will prepare the students for careers other than independent research. Students will experience seminar and comprehensive exams that are tailored for 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
Required Courses		
IPBS 801	FUNDAMENTALS OF BIOMOLECULES	3
IPBS 802	MOLECULAR CELL BIOLOGY	2
BMB 815	METABOLISM	2
BMB 915	PROTEINS & NUCLEIC ACID	3
BMB 840	SEMINAR WITH DISCUSSION (Taken each semester of full-time enrollment and no less than twice.)	2
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 (8 credits)

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

Coursework (Thesis Track)

Code	Title	Credit Hours
IPBS 801	FUNDAMENTALS OF BIOMOLECULES	3
IPBS 802	MOLECULAR CELL BIOLOGY	2
BMB 815	METABOLISM	2
BMB 915	PROTEINS & NUCLEIC ACID	3
BMB 840	SEMINAR WITH DISCUSSION (Taken each semester of full-time enrollment.)	2
BMB 899	MASTERS THESIS	1-9