Biochemistry and Molecular Biology, BA

Requirements

The Bachelor of Arts with a major in biochemistry and molecular biology requires a minimum of 120 s.h., including at least 58 s.h. of work for the major. Students must maintain a grade-point average (GPA) of at least 2.00 in all courses for the major and in all UI courses for the major. They must also complete the College of Liberal Arts and Sciences GE CLAS Core.

The biochemistry and molecular biology major for the Bachelor of Arts degree provides a rigorous education in biochemical concepts and practice in the laboratory while giving students flexibility to specialize in additional disciplines and to obtain clinical volunteer experience. The BA program is intended for most students majoring in biochemistry and molecular biology, including those with pre-medicine, pre-pharmacy, pre-dental, and other pre-health professions interests. It also is appropriate for students earning more than one major.

Qualified students may graduate with honors in the biochemistry and molecular biology major; see "Honors in the Major" under Honors [p.] in this section of the catalog.

The BA with a major in biochemistry and molecular biology requires the following coursework.

Requirements	Hours
Common Requirements	52-53
Additional Requirements	6

Common Requirements

Students complete the following during their first three years.

Course #	Title	Hours
All of these:		
BMB:3120 & BMB:3130	Biochemistry and Molecular Biology I and Biochemistry and Molecular Biology II	6
BMB:3140	Experimental Biochemistry	3
BMB:4240	Biophysics and Advanced Biochemistry	3
BIOL:1411 & BIOL:1412	Foundations of Biology and Diversity of Form and Function	8
CHEM:1110 & CHEM:1120	Principles of Chemistry I and Principles of Chemistry II	8
CHEM:2210	Organic Chemistry I	3
or CHEM:2230	Organic Chemistry I for Majors	
CHEM:2220	Organic Chemistry II	3
or CHEM:2240	Organic Chemistry II for Majors	
CHEM:2410	Organic Chemistry Laboratory	3
or CHEM:2420	Organic Chemistry Laboratory for Majors	
MATH:1850	Calculus I	4
or MATH:1550	Engineering Calculus I	
or MATH:1460	Calculus for the Biological Sciences	
PHYS:1511	College Physics I	4
or PHYS:1611	Introductory Physics I	
PHYS:1512	College Physics II	4
or PHYS:1612	Introductory Physics II	
One of these:		
BIOS:4120	Introduction to Biostatistics	3
MATH:1560	Engineering Calculus II	4
MATH:1860	Calculus II	4
STAT:3510	Biostatistics	3

If students take PHYS:1612 Introductory Physics II, they must take the course with the lab component.

Additional Requirements

In addition to the common requirements listed, students must complete the following.

Course #	Title	Hours
Advanced science electives, as listed in the student handbook.		6

Students intending to earn advanced degrees in the biological or health sciences are advised to enroll in BMB:3993 Undergraduate Biochemistry Research or BMB:4999 Advanced Undergraduate Biochemistry Research for independent research. There are no prerequisites for BMB:3993. The course involves experience in an active biochemistry and molecular biology research lab, which must be arranged ahead of time with a supervising faculty member. Students may make arrangements directly with the faculty member, or they may request assistance from an undergraduate advisor. Credit earned in BMB:3993 does not count toward the major, but it does count toward the minimum of 120 s.h. required to graduate.

Before students register for BMB:4999 Advanced Undergraduate Biochemistry Research, they must have completed BMB:3120 Biochemistry and Molecular Biology I, BMB:3130 Biochemistry and Molecular Biology II, BMB:3140 Experimental Biochemistry, and BMB:3150 Development of Senior Research Project, with a grade of B-minus or higher in each course. Students are required to have prior research experience, such as in BMB:3993 Undergraduate Biochemistry Research, URES:3992 Undergraduate Research and Creative Projects, URES:3994 Undergraduate Research and Creative Projects, or HONR:3994 Honors Research Practicum, and permission of the instructor.

Teacher Licensure

Students interested in teaching in elementary and/or secondary schools should seek admission to the Teacher Education Program (TEP) in the College of Education.

To qualify for licensure in secondary teaching, students in the TEP complete a degree in education as well as a related College of Liberal Arts and Sciences degree. See Apply on the College of Education website for details on requirements and deadlines for applying to the College of Education and about TEP choices of majors leading to licensure.