

Biochemistry • Bachelor of Arts

Why Choose Biochemistry?

The Bachelor of Arts (BA) degree in Biochemistry at Ferris provides a core of chemistry courses that includes organic, inorganic, physical chemistry, and biochemistry. These courses take the student through the atomic and molecular nature of matter and ultimately focus on the behaviors of matter in living systems. The chemistry is supported by solid coursework in mathematics, physics and biology. It stresses breadth with fewer required chemistry courses than a Bachelor of Science degree but good scientists also need to be exposed to the arts, the social sciences, and humanities. Biochemistry students should have a particular interest in and aptitude for science, especially as it pertains to living systems, and a desire to explore the connections with other fields of knowledge. Advanced students may participate in independent study and undergraduate research projects.

Professional Opportunities

In these days of rapid advances in the biosciences—from genetically engineered agricultural products to artificial photosynthesis to DNA fingerprinting—there are few careers that have no connection to chemistry and biochemistry. A BA in Biochemistry can prepare a student for a number of professional schools including medical, dental, veterinarian, even law school. Biochemists are often employed as research assistants in industry, government, education and health service. It can also be a very useful degree for individuals who are considering careers in interdisciplinary fields, for example, marketing new technologies, technical writing/communication, forensic analysis and so on. A major in biochemistry provides an education in a dynamic field with applications to suit a wide variety of personal career goals.

Admission Requirements

First year student admission is open to high school graduates (or equivalent) who demonstrate academic preparedness, maturity and seriousness of purpose with educational backgrounds appropriate to their chosen program of study. High school courses and grade point average, ACT composite score, and ACT reading and mathematics subscores will be considered in the admission and placement process. Transfer students must have at least 12 credits at the time of application with a minimum 2.0 overall GPA including an English and mathematics course, or they must provide their high school records and ACT scores for admission review.

Graduation Requirements

In order to graduate with a Bachelor of Arts in Biochemistry, a student must complete a minimum of 122 credit hours including the Biochemistry major, the BA core, an academic minor in another field of study, and all general education requirements for the Bachelor of Arts degree. No grade lower than 'C' will count toward the major.

Required Courses

Credit Hours

General Education

This degree requires completion of the General Education requirements for a Bachelor of Arts degree. Details of these requirements are delineated on the General Education website. Courses listed below as program/major required courses with the indicators: C, S, Z, R, G, may also be used to satisfy some of these general education requirements.

BIOL 121	General Biology 1 *Z	4
BIOL 122	General Biology 2 *Z	4
BIOL 375	Principles of Genetics*Z	4
CHEM 121	General Chemistry 1 *Z	5
CHEM 122	General Chemistry 2 *Z	5
CHEM 321	Organic Chemistry 1*Z	5
CHEM 322	Organic Chemistry 2*Z	5
CHEM 332	Biochemistry Lab 1*Z	2
CHEM 333	Biochemistry Lab 2*Z	2
CHEM 364	Biochemistry*Z	4
CHEM 451	Intro to Physical Chemistry*Z	4
CHEM 474	Advanced Biochemistry *Z	3
MATH 220	Analytical Geometry & Calculus 1	5
Choose one PHYS sequence:		
PHYS 211	Introductory Physics	4
AND		
PHYS 212	Introductory Physics 2*Z	4
OR		
PHYS 241	General Physics 1 *Z	5
AND		
PHYS 242	General Physics 2 *Z	5

An academic minor of 18-24 credits is required. Any approved minor is allowed (except for teacher education minors). Students should consult their major advisor if uncertain as to an appropriate minor to select.

B.A. Core 3-15 Credits

The BA core consists of one COMM course and proficiency in a foreign language through the 201 level.



More Information

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C O L L E G E O F A R T S & S C I E N C E S