BIOCHEMISTRY MINOR

Contact

Amy Deveau, Ph.D.
Director, School of Molecular and Physical Sciences
adeveau@une.edu

Mission

Chemistry and physics are fundamental sciences that touch every aspect of our lives and the world around us. Chemistry is the study of matter — its chemical and physical properties, the chemical and physical changes it undergoes, and the energy changes that accompany those processes. Chemistry often is referred to as the central science, it rests upon the foundation of mathematics and physics and in turn, is the essential basis for the life sciences such as biology and medicine.

Chemistry is largely an experimental science and has applications in such diverse areas of research as the development of new drugs, the search for solutions to problems of environmental pollution, and the derivation of alternative energy sources. Much cutting-edge research in biology and medicine is being carried out at the level of atoms and molecules, the particles of matter upon which the study of chemistry is based.

Physics, too, is the study of matter and energy, viewed from a different perspective. Understanding living systems and the universe in which we live requires an understanding of the chemical and physical principles that operate within them.

In addition to offering majors in Chemistry, Biochemistry, and Laboratory Science, and minors in Chemistry, Biochemistry, and Biophysics, the School of Molecular and Physical Sciences fills a significant role for students in other programs through its introductory courses in chemistry and physics. Because of the fundamental roles of chemistry and physics in the biological, environmental, and health sciences, students in these programs benefit from the conceptual, quantitative, problem-solving, and communication skills stressed in the introductory courses, which form the foundation for later courses in the students' majors.

Program Description

The minor in Biochemistry, with its balanced curriculum, assures that each student will gain a solid biochemical foundation, while securing a substantial foundation in the other major chemical subdisciplines, including analytical chemistry, organic chemistry, inorganic chemistry, and physical chemistry.

This minor is an excellent choice for students who are especially interested in studying the infrastructure and applications of chemistry in biological systems.

Transfer Credit

See Undergraduate Admissions (https://catalog.une.edu/undergraduate/admissions/) for more information.

Admissions

See Undergraduate Admissions (https://catalog.une.edu/undergraduate/admissions/) for more information.

Financial Information

Tuition and fees for subsequent years may vary. Other expenses include books and housing. For more tuition and fee information, please consult this catalog's Financial Information (https://catalog.une.edu/undergraduate/financial-information-undergraduate-programs/) section.

Curricular Requirements

Code	Title	Hours
Program Required Courses		
BIO 370	Cell & Molecular Biology	3
CHE 307 & 307L	Quantitative Analysis and Quantitative Analysis Lab	5
or CHE 450	Advanced Biochemistry Lab	
CHE 350 & 350L	Biochemistry I: Proteins and Biochemistry I Proteins Lab	5
CHE 351	Biochemistry II: Metabolism/Bioenergetics	3
Minimum of One Program Specific Elective		2-5
Total Hours		**18-21**

Program Specific Electives

Code	Title	Hours
BIO 232 & 232L	Microbiology and Microbiology Lab	4
BIO 254	Medicinal Plant Biology	3
BIO 306	Virology	3
BIO 318	Nutrition through the Life Cycle	3
BIO 365	Immunology	3
BIO 404 & 404S	Neuroscience and Neuroscience Recitation [1]	4
BIO 407	Developmental Biology	3
CHE 280 & 280L	Intermediate Inorganic Chemistry and Intermediate Inorganic Chemistry Lab	3
CHE 307 & 307L	Quantitative Analysis and Quantitative Analysis Lab [2]	5
CHE 320	(Mechanistic Organic Chemistry)	3
CHE 327	Applied Physical Chemistry	3
CHE 371	(Physical Chemistry II)	3
CHE 375	Advanced Laboratory	2
CHE 405	Medicinal Chemistry	3
CHE 417 & 417L	Instrumental Methods of Analysis and Instrumental Methods Lab	4
CHE 420	(Spectroscopic Methods of Structural Analysis)	3
CHE 450	Advanced Biochemistry Lab [2]	3
MAR 326	(Experimental Animal Physiology)	3
NEU 205 & 205L	Introduction to Neurobiology and Intro to Neurobiology Lab	4

[1] Enrollment eligibility is dependent upon availability and requires permission.
[2] If not chosen as a required course.

Additionally, selected topics courses may be acceptable. Contact the director of the School of Molecular and Physical Sciences for more information.

There are no restrictions on counting a course towards this minor and other program requirements.