

Biology

University of Wisconsin-River Falls
www.uwrf.edu/biology

Biology encompasses a wide range of disciplines that use many different approaches to accomplish “the study of life.” From molecules to ecosystems, from microorganisms to people, biologists use the methods of science to gain a better understanding of the nature of the living world. This knowledge can then be applied to solve problems in agriculture, medicine and the environment.

Goals

- to support the select mission of UW-RF to provide quality undergraduate programs in natural science to meet regional needs. This includes providing students with a working knowledge of scientific methods, hypothesis formulation and experimental analysis as well as an understanding of current theories and concepts in biological science. Students will have hands-on experience with laboratory techniques and field research. They will have the ability to communicate scientific ideas in verbal and written forms and to employ electronic technology used in disseminating scientific information. Students will have gained an appreciation for the ethical and social implications of advances in science and technology and the critical thinking skills necessary to evaluate these issues.
- to prepare its graduates to make significant contributions as scientists and citizens.

Curriculum The biology department offers a 34-credit major and a 22-credit minor. Students completing a biology major can obtain a bachelor of science or bachelor of arts degree. The general biology option is appropriate for students who want to be broadly educated in biology or who plan to teach biology. The biomedical sciences option is intended for students going on to professional schools or into biomedical laboratory jobs. The field biology option will be useful for students interested in ecological research or jobs with agencies such as the U.S. Fish and Wildlife Service. A degree with a biology major also requires completion of a minor and additional supporting courses in chemistry, physics and math. The two most common biology degree programs are the bachelor of science with a minor in chemistry, which is usually chosen by students interested in laboratory biology or medical careers; and the bachelor of science with a minor in conservation, which is often selected by those interested in field biology areas.

Faculty The biology department currently has ten full-time faculty, all of whom hold a doctoral degree. Their diverse educational and research backgrounds provide a broad spectrum of expertise in various biological disciplines. They are committed to actively engaging students in the learning process in the classroom, in the laboratory, and in the field. In addition to formal coursework, many students have the opportunity to work with biology faculty in exciting and important research projects.

Career Opportunities Biology majors are prepared to enter a wide variety of career paths. The 2002-03 Occupational Outlook Handbook from the Department of Labor Statistics projects that jobs for biological scientists will grow faster than the average for all occupations through 2010. Biology majors work as laboratory scientists in industry, agriculture, medicine and academia. They work as naturalists and as field and laboratory researchers for state and federal agencies such as the Department of Natural Resources, the Department of Agriculture and the U.S. Fish and Wildlife Service. Some find employment in sales and service jobs or in management and administration for pharmaceutical or other companies using chemical and biological techniques. Biology is often the major of choice for students planning to progress to professional schools in human or veterinary medicine.



BIOLOGY MAJOR/GENERAL BIOLOGY OPTION, CHEMISTRY MINOR

Department of Biology
414 Agriculture Science Hall
(715) 425-3591



Bachelor of Science Degree. Academic Advising Plan.

Semester 1 (Fall)

BIOL 150	General Biology	3
BIOL 110	Freshman Colloquium in Biology	1
ENGL 111	Academic Reading and Writing.....	3
MATH 147	College Algebra and Trigonometry.....	3
CHEM 121	General Chemistry I and Lab.....	5
	Total semester credits	15

Semester 2 (Spring)

ENGL 112	Persuasive Reading and Writing	3
CHEM 122	General Chemistry II and Lab.....	5
MATH 216	Elementary Statistical Concepts.....	3
P ED 108	Health and Fitness	1
	General education fine arts course.....	3
	Total semester credits.....	15

Semester 3 (Fall)

BIOL 230	General Zoology.....	3
CHEM 231,236	Organic Chemistry I and Lab.....	4
PHYS 151,156	General Physics I and Lab	5
	General education social/behavioral science course	3
	Total semester credits	15

Semester 4 (Spring)

BIOL 240	Cell and Molecular Biology	3
CHEM 232,237	Organic Chemistry II and Lab	4
ENGL 241-245	Sophomore literature course	3
	Biology elective course	3
	General education social/behavioral science course	3
	Total semester credits	16

Semester 5 (Fall)

BIOL 210	General Botany	3
CHEM 361	Biochemistry I.....	3
SCTA 101	Fundamentals of Oral Communication.....	3
	Biology elective course	3
	Liberal arts course	3
	Physical education activity course.....	.5
	Total semester credits	15.5

Semester 6 (Spring)

BIOL 350	Genetics and Evolution.....	3
CHEM 362	Biochemistry II.....	3
	Biology Elective Course	3
	Liberal Arts Course	3
	General education social/behavioral science course	3
	Physical education activity course5
	Total semester credits	15.5

Semester 7 (Fall)

BIOL 360	Ecology	3
BIOL 481	Seminar	1
IHUM 498	Humanities.....	2
	Biology elective course	3
	Diversity course	3
	General elective course	3
	Total semester credits	15

Semester 8 (Spring)

BIOL 410	Senior Colloquium in Biology.....	1
	Biology Elective Course	3
	Liberal Arts Course	3
	General elective courses (2).....	6
	Total semester credits	13

Summary of Degree Requirements

General Education	39-51 cr.
Core	21 cr.
Required Supporting Courses	21-22 cr.
Directed Electives	13 cr.
Credits to Degree.....	120 cr.