

DEPARTMENT OF BIOLOGY

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MAJORS (P. 4)

- Biology Major (Non-emphasis), B.S. (<http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/biology/nonemphasis-bs/>)
- Biology Comprehensive Major, B.S. (<http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/biology/comprehensive-bs/>)
 - Botany Emphasis
 - Cytotechnology Emphasis
 - Ecology Emphasis
 - Health Sciences Emphasis
 - Molecular/Genetics Emphasis
 - Secondary Education Emphasis
 - Zoology Emphasis

MINORS (P. 4)

- Biology (Non-Teaching) (<http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/biology/minor/>)
- Biology (Teaching) (<http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/biology/teaching-minor/>)
- Biotechnology (<http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/biology/biotechnology-minor/>)

PURPOSE STATEMENT

The UW-Platteville Biology Program provides students with foundational knowledge in the biological sciences via its core curriculum. From this foundation, students pursue advanced topics related to subdisciplines of biology, including health sciences, organismal biology, ecology, molecular biology, biotechnology, genetics, and computational biology. The program provides students numerous opportunities to participate in hands-on research and guided investigations of special topics in collaboration with faculty and staff members. Our primary goal is to provide a learning environment and curriculum that make our students competitive for higher-level opportunities such as graduate and professional schooling, jobs in industry, careers in education, and service in government agencies. In addition, the Biology program provides general education courses in the category of natural science that introduce students pursuing other degrees to science as one approach to interpreting the world, fundamental biological concepts, and the interplay between biology and human society. Finally, many Biology courses support the needs of other programs at UW-Platteville, including Agriculture, Chemistry, Criminal Justice and Forensic Investigation, Data Science, Education, Engineering, and Health and Human Performance.

Student Learning Goals

1. Our world is filled with a dazzling array of life; these seemingly unique and different organisms have shared features due to their common origin. Our biology majors will **demonstrate knowledge** of the characteristics that unify all living organisms, the forces that shape their diversity, and the structures and functions inherent to different living organisms.
2. Because science is a process used to explore and understand the world around us, our biology majors will **observe, question, hypothesize, test, analyze and develop conclusions** about natural phenomena.
3. Life is complex; understanding this complexity requires interdisciplinary training. As they investigate the natural world, our biology majors will appropriately **integrate knowledge and skills** from chemistry, mathematics, and other liberal arts and sciences.
4. Although some contributions to science are achieved by individual effort alone, most are accomplished when people with diverse perspectives and skills work together. Our biology majors will **engage in scientific inquiry both as individuals and as effective team members**.
5. Without communication, science has no impact. Our biology majors will **use a variety of oral and written means** to convey information to a wide range of audiences.
6. The advancement of scientific knowledge happens within a societal context. Our biology majors will **evaluate interactions between science and society** and the ethical issues surrounding those interactions.

CULTIVATING ATTITUDES

The members of our department feel, as with any endeavor, correct attitudes provide an important complement to a sound knowledge base and skill set. As a department, we hope to instill in our students a set of attitudes we feel are important for all biologists. We do our best to model the following:

- **enthusiasm** for the science of biology and an **appreciation** for the multitude of ways that biology permeates our society
- a strong **curiosity** for the world around us
- a **respect** for the instruments and objects of our research
- and **integrity**, because without integrity, there is no trust of the individual and, taken to its natural ends, no trust in the field of biology and the process of science.

BIOLOGY REQUIREMENTS AND ACADEMIC STANDARDS

ELIGIBILITY FOR THE BIOLOGY COMPREHENSIVE MAJOR

Any student (new college student, external or internal transfer student) may declare a Biology Major (Non-emphasis) upon entering the program. Students may select an emphasis and pursue a Biology Comprehensive Major only after earning a C- or better in the following foundational courses (or their equivalents): BIOLOGY 1020, BIOLOGY 1650, and BIOLOGY 1750. Students who have specific biology interests, plan on a particular biology career, or those who plan to enter a graduate or professional school generally pursue the Biology Comprehensive Major with an area emphasis, thereby focusing their educational experiences. Students who seek a wider range of biology experiences than defined by an emphasis area may elect to not choose an emphasis area, and instead create their own set of electives that better align with their current or future interests.

ELIGIBILITY FOR SELECT PRE-PROFESSIONAL PROGRAMS

Enrollment in the Pre-Nursing option is open to any entering student (or internal transfer student). To declare any other option, a student must be eligible for pursuing the Biology Comprehensive Major and must have a minimum overall GPA of 3.0. If a student's overall GPA drops below a 3.0, he or she will automatically be removed from the Pre-Professional Program; if this occurs, a student may appeal one time to the department for re-enrollment in the Pre-Professional Program.

PROGRAM GRADE REQUIREMENTS

A grade of C- or higher is required in all courses taken to fulfill specific requirements of the biology major. This includes ENGLISH 1130 and ENGLISH 1230, as well as courses taken in other disciplines toward an emphasis.

Prerequisite Courses

In order to maintain enrollment in any biology course with identified prerequisite requirements, a student must successfully complete the required prerequisite(s). Students who register for a biology course that includes prerequisite requirements will be automatically un-enrolled from the course if they do not successfully complete the prerequisites.

BIOLOGY CORE REQUIREMENTS

ALL biology majors must complete core courses in the following three areas:

Course	Title	Credits
Required Biology Core Courses		
BIOLOGY 1020	BioQuest: Foundations for College Success	1
BIOLOGY 1650	The Unity of Life	5
BIOLOGY 1750	The Diversity of Life	5
BIOLOGY 2420	Fundamentals of Biological Investigations	3
BIOLOGY 3330	Genetics	3
BIOLOGY 3450	Ecology and Evolution	3
Required Biology Capstone Experience		
BIOLOGY 4970 or BIOLOGY 4990	Senior Thesis Capstone Course: From Atoms to Ecosystems - The Study of Life	1
Required Supporting Courses		
One semester of Chemistry		4-5
CHEMISTRY 1140 or CHEMISTRY 1050 or CHEMISTRY 1150 or CHEMISTRY 1240 or CHEMISTRY 1450	General Chemistry I Survey of General Chemistry General Chemistry I with Math Development General Chemistry II Chemistry for Engineers	

A second course (or set of courses) in STEM, outside of BIOLOGY

4-5

CHEMISTRY 1240	General Chemistry II	3
or PHYSICS 1050	Principles of Physics	
or PHYSICS 1350	Introductory Physics I	
or PHYSICS 1450	Introductory Physics II	
or PHYSICS 2240	General Physics I	
or PHYSICS 2340	General Physics II	
or ASTRON 1300/1310	Survey of Astronomy	
or ASTRON 1340/1310	Introductory Astronomy: Stars and Galaxies	
or ASTRON 1350/1310	Introductory Astronomy: The Solar System	
or GEOGRPHY 1040	Planet Earth	
or GEOGRPHY 1370	The Land Ethic	
or GEOLOGY 1140	Physical Geology	
or SCSCI 2230	Soils	
MATH 1830	Elementary Statistics	

Total Credits**32-34**

Students who expect to enter professional or graduate school should consider taking additional courses in mathematics, chemistry, physics, sociology, psychology and philosophy. Academic advisers will guide you in the selection of these courses.

PRE-PROFESSIONAL PROGRAMS

The following pre-professional programs are administered and advised through the UW-Platteville Biology Department:

PRE-CHIROPRACTIC

Lauren Prister
336 Gardner Hall
608.342.1664

PRE-CYTOTECHNOLOGY

Mark Levenstein
240 Gardner Hall
608.342.1331

PRE-DENTISTRY

John Peterson
242 Gardner Hall
608.342.7329

PRE-MEDICAL TECHNOLOGY

Mark Levenstein
240 Gardner Hall
608.342.1331

PRE-MEDICINE

Rich Dhyanchand
340 Gardner Hall
608.342.6155

PRE-NURSING

Amanda Trewin
241 Gardner Hall
608.342.1527

PRE-OCCUPATIONAL THERAPY

Lauren Prister
336 Gardner Hall
608.342.1664

PRE-OPTOMETRY

John Peterson
242 Gardner Hall
608.342.7329

PRE-OSTEOPATHY

Rich Dhyanchand
340 Gardner Hall
608.342.6155

PRE-PHYSICAL THERAPY

Lauren Prister
336 Gardner Hall
608.342.1664

PRE-PHYSICIAN ASSISTANT

Rich Dhyanchand
340 Gardner Hall
608.342.6155

PRE-PODIATRY

Rich Dhyanchand
340 Gardner Hall
608.342.6155

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 - Zoology Emphasis

RELATED MAJOR

- Computer Science + Computational Biology (<http://catalog.uwplatt.edu/undergraduate/engineering-mathematics-science/computer-science-software-engineering/computer-science-bs/#computational-biology>)

MINORS

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- Biology Teaching Minor (<http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/biology/teaching-minor/>)
- Biotechnology Minor (<http://catalog.uwplatt.edu/undergraduate/business-industry-life-science-agriculture/biology/biotechnology-minor/>)

FACULTY AND LECTURERS

Additional information about the Faculty and Lecturers below may be found in the Faculty and Academic Staff (<http://catalog.uwplatt.edu/faculty-academic-staff/>) section of this catalog.

Cornett, Catherine A.

Dhyanchand, Richard

Doyle-Morin, Rebecca

Frieders, Elizabeth M.

Haasl, Ryan

Huebschman, Jeffrey J.

Klavins, Sharon D.

Levenstein, Mark E.

Olson, David J.

Peterson, John

Stankovich, Wendy S.

Trewin, Amanda L.

Weber, Wayne C.

Wright, Kristopher K.