

# BIOLOGY (BIOLOGY)

## **BIOLOGY/ZOOLOGY 101 – ANIMAL BIOLOGY**

3 credits.

General biological principles. Topics include: evolution, ecology, animal behavior, cell structure and function, genetics and molecular genetics and the physiology of a variety of organ systems emphasizing function in humans.

**Requisites:** Not open to students with credit for BOTANY/BIOLOGY/ZOOLOGY 151 or 152

**Course Designation:** Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Elementary

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Spring 2025

## **BIOLOGY/ZOOLOGY 102 – ANIMAL BIOLOGY LABORATORY**

2 credits.

General concepts of animal biology at an introductory level emphasizing the evolutionary relationships between animals. Learn about general body plans and strategies used to accomplish the basic tasks of staying alive in major animal groups using preserved and live animals. Study the diversity within each group of animals by integrating the body plans with the lifestyle and ecology of animals. Dissections of earthworm, freshwater mussel, squid, sea star, and rat aid the study of these general principles.

**Requisites:** Not open to students with credit for BOTANY/BIOLOGY/ZOOLOGY 151 or 152

**Course Designation:** Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Elementary

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Spring 2025

## **BIOLOGY/BOTANY 130 – GENERAL BOTANY**

5 credits.

Introduction to the basic principles and concepts of the biology of plants. an integrative approach stressing evolutionary sequences and the relationship between structure and function at succeeding levels of organization: molecule, cell, organism, population, community. Correlated lectures, laboratories, and discussions.

**Requisites:** None

**Course Designation:** Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Elementary

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Spring 2025

## **BIOLOGY/BOTANY/ZOOLOGY 151 – INTRODUCTORY BIOLOGY**

5 credits.

Topics include: cell structure and function, cellular metabolism (enzymes, respiration, photosynthesis), information flow (DNA, RNA, protein), principles of genetics and selected topics in Animal Physiology.

**Requisites:** Not open to students with credit for BIOLOGY/ZOOLOGY 101, 102 or BIOLOGY/BOTANY 130

**Course Designation:** Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Elementary

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Spring 2025

## **BIOLOGY/BOTANY/ZOOLOGY 152 – INTRODUCTORY BIOLOGY**

5 credits.

Topics include: selected topics in plant physiology, a survey of the five major kingdoms of organisms, speciation and evolutionary theory, and ecology at multiple levels of the biological hierarchy.

**Requisites:** ZOOLOGY/BIOLOGY/BOTANY 151

**Course Designation:** Gen Ed - Communication Part B

Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Elementary

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Spring 2025

## **BIOLOGY 299 – DIRECTED STUDIES**

1-4 credits.

Introductory directed study as arranged with a faculty member. Open only to students declared in Biology.

**Requisites:** Consent of instructor

**Course Designation:** Level - Elementary

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Fall 2024

## **BIOLOGY 375 – SPECIAL TOPICS**

1-5 credits.

Introductory special topics on contemporary issues relevant to studying biology.

**Requisites:** None

**Course Designation:** Level - Elementary

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Spring 2023

**BIOLOGY 399 – INTERNSHIP/FIELD EXPERIENCE**

1-8 credits.

An internship under guidance of a faculty or instructional academic staff member and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor. Open only to students declared in Biology.

**Requisites:** Consent of instructor

**Course Designation:** Level - Intermediate

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Spring 2022

**BIOLOGY/GENETICS 522 – COMMUNICATING EVOLUTIONARY BIOLOGY**

2-3 credits.

Exposure to diverse topics in contemporary evolutionary biology and development of critical thinking and communication skills. Most weeks guest lecturers present their own primary research on a specialized topic in evolutionary biology. Seminars include perspectives from genetics, ecology, geoscience, zoology, botany, microbiology, systematics, molecular biology, and integrative research. Some weeks feature special topics and discussions on pedagogical, legal, outreach, or other issues in evolutionary biology. Includes thinking critically about methodology, experimental design and interpretation, and how conclusions are reached in evolutionary biology by reading primary and secondary literature, attending seminars, discussing topics with speakers and other students, and preparing a written report. The 3-credit version of the course delves deeper into communication of evolutionary biology to researchers, undergraduates, K-12 students, and the general public.

**Requisites:** GENETICS 466, 468, ZOOLOGY/ANTHRO/BOTANY 410, or BIOCORE 381, or concurrent enrollment

**Course Designation:** Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Spring 2025

**Learning Outcomes:** 1. Demonstrate the ability to critically read and comprehend primary scientific literature from diverse areas of evolutionary biology.

Audience: Undergraduate

2. Comprehend and critically evaluate oral research presentations in the field of evolutionary biology.

Audience: Undergraduate

3. Participate effectively in discussions of scientific research in the field of evolutionary biology.

Audience: Undergraduate

4. Write a clear and concise review of a selected topic in evolutionary biology and a critique of a research seminar in that area.

Audience: Undergraduate

5. Synthesize and apply knowledge from other didactic courses and personal experiences in discussions of scientific research.

Audience: Undergraduate

**BIOLOGY 681 – SENIOR HONORS THESIS**

2-3 credits.

Individual study for seniors completing theses as arranged with a faculty member for an Honors program. Open only to students declared in Biology.

**Requisites:** Consent of instructor

**Course Designation:** Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Honors - Honors Only Courses (H)

**Repeatable for Credit:** No

**Last Taught:** Fall 2024

**BIOLOGY 682 – SENIOR HONORS THESIS**

2-3 credits.

Individual study for seniors completing theses as arranged with a faculty member for an Honors program. Open only to students declared in Biology.

**Requisites:** Consent of instructor

**Course Designation:** Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

Honors - Honors Only Courses (H)

**Repeatable for Credit:** No

**Last Taught:** Spring 2025

**BIOLOGY 691 – SENIOR THESIS**

2-3 credits.

Individual study for seniors completing theses as arranged with a faculty member. Open only to students declared in Biology.

**Requisites:** Consent of instructor

**Course Designation:** Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Spring 2023

**BIOLOGY 692 – SENIOR THESIS**

2-3 credits.

Individual study for seniors completing theses as arranged with a faculty member. Open only to students declared in Biology.

**Requisites:** Consent of instructor

**Course Designation:** Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Fall 2023

**BIOLOGY 699 – DIRECTED STUDIES**

1-4 credits.

Advanced directed study as arranged with a faculty member. Open only to students declared in Biology.

**Requisites:** Consent of instructor

**Course Designation:** Level - Advanced

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Spring 2022