



Syllabus

BIO 119 Contemporary Biology II

General Information

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Author Jennifer Carney

Department Science and Technology

Course Prefix BIO

Course Number 119

Course Title Contemporary Biology II

Course Information

Catalog Description Part II of an introductory laboratory biology course with for non-science majors. Topics covered in part II include: Evolution, biodiversity, plant and animal anatomy and physiology, ecology, and environmental science. The emphasis is on application of basic biological principles to contemporary issues and problems. Students will achieve basic scientific literacy with a goal of improved critical thinking, writing, and problem-solving skills.

Credit Hours 4

Lecture Contact Hours 3

Lab Contact Hours 2

Other Contact Hours 0

Grading Scheme Letter

Prerequisites

BIO 118

Co-requisites

None

First Year Experience/Capstone Designation

This course DOES NOT satisfy the outcomes applicable for status as a FYE or Capstone.

SUNY General Education

This course is designated as satisfying a requirement in the following SUNY Gen Ed categories

Natural Sciences and Natural Sciences (and Scientific Reasoning)

FLCC Values

Institutional Learning Outcomes Addressed by the Course

Vitality and Inquiry

Course Learning Outcomes

Course Learning Outcomes

1. Students will describe and apply the basic principles of biology (evolution, biodiversity, plant and animal anatomy and physiology, ecology, and environmental science) in relation to contemporary issues
2. Students will apply the methods and process of science, and be able to critically evaluate scientific articles in the popular press
3. Students will demonstrate the ability to make informed scientific decisions as necessary in their personal life as well as their role as educated citizens
4. Students will access information needed to make informed scientific decisions as necessary in their personal life as well as their role as educated citizens.

Outline of Topics Covered

Theme 1: Evolution

- a. Who thought of that? - The theories and the evidence
- b. The force of change - microevolution
- c. The product of change - speciation
- d. The human story: Evidence from our past

Theme 2: Life's Diversity

- a. Who's who? - Organizing Life's Diversity
- b. It's a Small World - Microbes
- c. A Green Earth - Plant Diversity
- d. Life's Zoo - Animal Diversity
- e. Preserving Diversity - Conservation and Sustainability Characteristics of Life

Theme 3: Plant Anatomy and Physiology

- a. Building a Plant: Form and Function
- b. Plants on a Diet: Nutrition and growth
- c. A Plant World: Reproduction and Dispersal

Theme 4: Animal Anatomy and Physiology

- a. A Life in Balance: Homeostasis

- b. Animal Communication: Nervous and Endocrine System
 - c. Finding Oxygen: Blood, Cardiovascular and Respiratory
 - d. Animals in Motion: Skeletal and Muscular System
 - e. Animal Defenses: The immune System
 - f. Finding Food: Nutrition and Digestion
 - g. Becoming Human: Human Reproduction and Development
- Theme 5: Ecology and Environment
- a. The Behavior of Animals
 - b. Living Together: Populations and Community Interactions
 - c. Life is Connected: Environment and Ecosystem Interactions