

Biology for Non-Science Majors 2

Class

BIOL 1409

This course will provide a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology. Laboratory activities reinforce these principles.

Course Learning Objectives

Upon successful completion of this course, students will be able to:

1. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
2. Describe phylogenetic relationships and classification schemes.
3. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
4. Describe basic animal physiology and homeostasis as maintained by organ systems.
5. Compare different sexual and asexual life cycles noting their adaptive advantages.
6. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.
7. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
8. Use critical thinking and scientific problem solving to make informed decisions in the laboratory.
9. Communicate effectively the results of scientific investigations.
10. Define modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
11. Describe phylogenetic relationships and classification schemes.
12. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
13. Describe basic animal physiology and homeostasis as maintained by organ systems.
14. Compare different sexual and asexual life cycles noting their adaptive advantages.
15. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.

Required Textbooks

Houtman, Scudellari, and Malone. *Biology Now with Physiology*; 3rd edition, Norton, 2021 (with online access code)

Evaluation Standards

1. Lecture exams and quizzes (50%)
2. Online tutorial assignments (15%)
3. Research project, group project, or other special assignment (10%)
4. Laboratory activities (25%)

A = 90 – 100%

B = 80 – 89%

C = 70 – 79%

D = 60 – 69%

F = 0 – 59%

Disabilities

ADA Statement:

Any student with a documented disability (e.g. learning, psychiatric, vision, hearing, etc.) may contact the Office on the Weatherford College Weatherford Campus to request reasonable accommodations. *Phone:* 817-598-6350
Office Location: Office Number 118 in the Student Services Building, upper floor. *Physical Address:* Weatherford College 225 College Park Drive Weatherford, TX.

Academic Integrity

Academic Integrity is fundamental to the educational mission of Weatherford College, and the College expects its students to maintain high standards of personal and scholarly conduct. Academic dishonesty of any kind will not be

tolerated. Academic dishonesty includes, but is not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials including unauthorized use of Generative AI. Departments may adopt discipline specific guidelines on Generative AI usage approved by the instructional dean. Any student who is demonstrated to have engaged in any of these activities will be subject to immediate disciplinary action in accordance with institutional procedures.

Lab Fee

\$24