

Course discipline/number/title: BIOL: 2200: General Zoology

A. CATALOG DESCRIPTION

1. Credits: 4
2. Hours/Week: 3 Lecture, 2 lab
3. Prerequisites (Course discipline/number): BIOL 1220 or BIOL 1230
4. Other requirements: None
5. MnTC Goals (if any): Goal 3/Natural Sciences

B. COURSE DESCRIPTION: This course is a survey course of the classification, evolution, ecology, anatomy and physiology of animals. The lab portion of this course reemphasizes lecture concepts and offers hands-on experience with representative members of organisms studied in lecture.

C. DATE LAST REVISED (Month, year): February, 2019

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Evolution of animal diversity
2. Animal architectural patterns and development
3. Taxonomy, classification, and phylogeny of animals
4. Unicellular eukaryotes
5. Porifera
6. Radiates: Cnidarians and Ctenophores
7. Acoelomate animals
8. Pseudocoelomate animals
9. Mollusca
10. Segmented worms
11. Ecdysozoans and Arthropoda
12. Echinodermata
13. Hemichordata
14. Chordata origins and hallmark characteristics
15. Fishes
16. Tetrapod origins and modern amphibians
17. Amniote origins and nonavian reptiles
18. Avian reptiles
19. Mammalia

E. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Explain that any group of organisms are related by descent from a common ancestor.
2. Compare and contrast the basic architecture of major animal groups.
3. Identify major animal groupings and be able to classify them within a phylogenetic framework.
4. Compare and contrast ancestral and derived characteristics of major animal groups
5. Identify representative organisms to taxonomic classification
6. Identify defining characteristics on representative animal dissections.

F. LEARNING OUTCOMES (MNTC):

Goal 3/Natural Sciences: The student will be able to:

1. Demonstrate understanding of scientific theories.
2. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
3. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to:

1. Lecture and lab exams
2. Lecture and lab quizzes
3. Lab reports
4. Lecture assignments

- H. RCTC CORE OUTCOME(S). This course contributes to meeting the following RCTC Core Outcome(s):
Critical Thinking. Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.
- I. SPECIAL INFORMATION (if any):
The initial lab session explains and familiarizes the student with general safety hazards and safety equipment in the lab. During the pre-lab discussion, the hazardous characteristics of any materials used during the lab are discussed. In addition, if the lab involves any potentially infectious material, the students will be instructed about the proper use and disposal. The instructor will direct all students to wear necessary protective equipment while working with any hazardous chemicals. Safety Data Sheets for chemicals used are available online.