JAMESTOWN COMMUNITY COLLEGE
State University of New York

INSTITUTIONAL COURSE SYLLABUS

Course Title: Biology of Amphibians/Reptiles

Course Abbreviation and Number: BIO 1515 **Credit Hours:** 1 credit hour. **Course Type:** Lecture

Course Description: Students will learn the basic organismal biology, anatomy and physiology, evolutionary history, classification, behavior, and ecological relevance of amphibians and reptiles. In addition to basic amphibian and reptile biology topics highlighting unique features of these charismatic and often poorly-understood animals will be discussed. Students will examine amphibians and reptiles as part of our environment including inter and intra-specific interactions, environmental pressures and conservation issues. Students will explore the biomedical relevance of amphibians and reptiles to mankind as biological indicators, sources of medically relevant pharmacological agents as well as significant threats to human health in some parts of the world (snake bite, crocodile attacks). Current conservation issues surrounding global decline in amphibian species and other future threats to the continued survival of these groups will be discussed.

Eligibility: ENG 1510 without supports or Corequisite: ENG 1510 with supports.

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Identify amphibians and reptiles and compare their respective morphologies to those of other animals.
2. Explain the principle of evolution and demonstrate an understanding of the morphological, physiological, behavioral, and ecological processes that arise from evolutionary pressures on these animals.
3. Identify environmental influences on survival, reproduction, and evolutionary pathways as seen in amphibians and reptiles.
4. Apply a basic knowledge of conservation issues pertaining to amphibians and reptiles worldwide and in the region.
5. Formulate a deeper understanding and appreciation for the interactions and interdependence between humanity and these organisms.
6. Demonstrate an understanding of the methods scientists use to explore natural phenomena, including observation, hypotheses development, measurement and data collection, experimentation, evaluation of evidence, and employment of data analysis or mathematical modeling. [SUNY Gen Ed – Natural Sciences]
7. Application of scientific data, concepts, and models in one of the natural sciences. [SUNY Gen Ed – Natural Sciences]

Topics Covered

- Origins and evolution of amphibians and reptiles
- General characteristics of amphibians and reptiles – Anatomy; Adaptations
- Ectothermy
- Foraging and feeding strategies – Evolution of venom
- Reproduction and territoriality
- Intraspecific communication
- Antipredator mechanisms
- Conservation Issues and Current Research – Amphibians
- Conservation Issues and Current Research – Reptiles
- Common Misconceptions

Information for Students

- Expectations of Students
  - Civility Statement
  - Student Responsibility Statement
  - Academic Integrity Statement
- Accessibility Services
  Students who require accommodations to complete the requirements and expectations of this course because of a disability must make their accommodation requests to the Accessibility Services Coordinator.
- Get Help: JCC & Community Resources
- Emergency Closing Procedures
- Course grade is determined by the instructor based on a combination of factors, including but not limited to, homework, quizzes, exams, projects, and participation. Final course grade can be translated into a grade point value according to the following:

A=4.0	B+=3.5	B=3	C+=2.5	C=2	D+=1.5	D=1	F=0

- Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, VA appointments) are welcome and encouraged to communicate these to the instructor.

Effective Date: Fall 2023