

COURSE SYLLABUS

Department: Science and Technology

Date: November 2008

I. Course Information

A. Course Prefix and Number: BIO 214

B. Course Name: Herpetology

C. Credit and Contact Hours: 4 Credit Hours / 5 Contact Hours

D. Catalog Description including pre- and co-requisites:

An investigation of amphibians and reptiles including, but not limited to ecology, behavior, life histories, structure & function, environmental impact and evolutionary relationships. Amphibian and reptile identification and sampling methods will be integrated into the course. Herps of New York State will be emphasized. There is a two hour laboratory component and some field work is involved. **Prerequisites:** General Biology II (BIO 122)

II. Course Outcomes and Objectives

A. Learning Outcomes:

Upon completion of this course students will be expected to have a greater comprehension and hence appreciation of:

1. the evolutionary relationship of amphibians and reptiles to other taxon
2. the basic anatomical and physiological adaptation unique to amphibians and reptiles
3. the reproductive strategies allied with amphibians and reptiles
4. adaptive behavior of amphibians and reptiles
5. the ecology of amphibians and reptiles
6. the application of the scientific method to field studies of organisms
7. the critical analysis and interpretation of data collected in field projects

B. Relationship to Academic programs and curriculum:

This course is a second year course that will serve as an general elective for an LAAS student.

C. College competencies addresses by the course:

Writing - reports in the format of a professional scientific journal

Oral Communications - presentations on relevant topics using PowerPoint

Reading — assigned textbook readings as well as relevant professional journal articles

Mathematics-statistical analysis of data

Problem-Solving - formulating question/hypothesis and critically analyzing and interpreting data to answer said question/hypothesis

Global Concerns - scrutinizing environmental concerns and the potential impact these concerns have on herps

Information Resources - searching for relevant articles in professional journals as well as on the internet

Computer Literacy - students will gain a greater proficiency in computer use through PowerPoint presentations, literature searches, data management and analysis using spread sheets, and data presentation using graphing programs

EQL Methods of Instruction

A. Types of Course Materials:

Herpetology Text Book (Required)

Journal of Herpetology Copeia

B. Methods of Instruction:

This is designed to be technically a lecture course, but there will be a component of field work involved for the purpose of sampling and identification.

C. Assessment Measures:

Assignments and activities will assess the students' ability to comprehend and understand the detailed information discussed in lecture, their ability to critically interpret information, form a testable hypothesis, construct a scientifically sound methodology to test the hypothesis, and analyze and interpret data.

D. Methods of Evaluations:

Students will be evaluated throughout the course using a variety of methods including but not limited to lecture examinations, oral presentations, and written reports.

IV. General Outline of Topics covered:

- A. Evolution of Amphibians and Reptiles
- B. Systematics and Diversity of Amphibians
- C. Systematics and Diversity of Reptiles
- D. Temperature and Water Relations
- E. Energetics and Performance
- F. Reproduction and Life Histories of Amphibians
- G. Reproduction and Life Histories of Reptiles
- H. Behavior and Ecology of Amphibians and Reptiles I.
- I. Conservation of Amphibians and Reptiles