Effective Fall 2001 Effective Spring 2008, with revisions

# Eastern Illinois University Revised Course Proposal BIO 1003G -- Life of Animals

### 1. Catalog Description

a. Course level: BIO 1003Gb. Title: Life of Animals

c. Credit: 2-2-3
d. Term to be offered: (F, S, Su)
e. Short title: Life of Animals

f. Course description: An introduction to the study of animals and animal diversity with

emphasis on behavioral, functional and structural adaptations as they relate to specific habitats. Does not count toward the Biological Sciences major or minor. Credit for BIO 1003G will not be granted if the student already has credit for or registration

in BIO 1093G or BIO 1300G.

g. Prerequisite: noneh. Course is writing active

### 2. Student Learning Objectives

Students will:

- learn the various ways by which different animal groups deal with similar problems of life (respiration, reproduction, communication, etc.) and gain an appreciation for the idea that the "human way" is not necessarily the only way or even the best way. (critical thinking, citizenship).
- be able to explain, in oral & test formats, how evolutionary mechanisms and natural selection are the driving force for the generation of the diversity of life on earth. (critical thinking).
- compare the evolutionary and biological links of humans to other animals. (critical thinking, citizenship).
- discuss the importance of habitat diversity as related to maintenance of animal diversity, particularly the conservation and preservation biology of threatened and endangered animal species and effects of human impact on these habitats. (citizenship and speaking).
- gain skills in library usage and internet web site evaluation by researching a topic for a paper or oral report. (critical thinking).
- 3. Course Outline (based on 100 minutes of lecture and 100 minutes of lab per week for 15 weeks)
  - I. Evolution of Animal Life (weeks 1 and 2)
    - Fundamental Properties of Life
    - Zoology as Part of Biology
    - Principles of Science
    - Evolutionary Mechanisms

Lab 1: Introduction to the Microscope

Lab 2: Animals and Their Environment - Fundamental Problems of Animals

- II. Animal Form and Function (weeks 3 and 4)
  - Reproductive Process
  - Principles of Development
  - Architectural Pattern of an Animal
  - The Naming of Things

Lab 3: Evolution

#### Lab 4: Cell structure and reproduction

#### **Examination 1**

#### III. The Animals

- Ecology and Conservation Biology (week 5 and 6)
- Lab 5: Field Trip to Douglas-Hart Nature Center
- Animal-like Protista (week 6)
- Lab 6: Protista, Porifora, and Cnidaria
- Porifera (week 7)
- Cnidaria (week 7)

Lab 7: Worms

- Platyhelminthes (week 8)

#### **Examination 2**

Lab 8: Mollusca

- Nematoda (week 9)
- Annelida (week 9)

Lab 9: Arthropoda Í

- Mollusca (week 10)
- Arthropods (week 10 and 11)

Lab 10: Arthropoda II

- Echinoderms (week 11)

Lab 11: Echinoderms

- The chordates (week 12)

#### **Examination 3**

Lab 12: Field Trip to Fox Ridge State Park

- Fishes (week 12)

Lab 13: Fish, Amphibians, Reptiles

- Amphibians (week 13)

Lab 14: Birds. Mammals

- Reptiles (week 13)
- Birds (week 14)
- Mammals (week 15)

Lab 15: Field Trip to local natural area

## 4. Evaluation of Student Learning

- a. Four exams and quizzes (75%), as well as lab reports and writing assignments (25%) will determine grades in this class.
- b. Students will write laboratory reports designed to assess understanding of form and function relationships of organisms and their environment. Lecture exams will include short answer and essay questions. One paper is required.

#### 5. Rationale

- a. Life of Animals is a course with strong evolutionary, ecological and general biology themes. As a biology course, it belongs in the biological sciences component of the scientific awareness segment of the general education core. It helps students to better understand the workings of the world around them, and the interrelationships and interdependency of humans with the rest of the animal kingdom.
- b. It is a freshmen level course, which is appropriate, given the course content and requirements. There are no prerequisites.
- c. This course is a revision of BIO 1003C and should maintain the same curriculum ID as BIO 1003C. The diversity component of this course overlaps BIO 1300G (Animal Diversity). However, while BIO 1300G emphasizes the characteristics and systematics

of individual animal taxa, BIO 1003G looks at fundamental life processes in terms of how major groups deal with them. In addition, the non-majors version does not require the introductory Biology course (BIO 1100) that is required for BIO 1300G. BIO 1003G cannot substitute for BIO 1300G for Biology majors.

d. BIO 1003G is currently required for Geology majors.

## 6. Implementation

- a. Faculty members to whom the course will be assigned initially: Any qualified Biological Sciences faculty
- b. Text: Hickman, Roberts and Larson. <u>Animal Diversity</u> 2<sup>nd</sup> ed. (2000) De Graaff and Crawley, A Photographic Atlas for the Zoology Laboratory, 3<sup>rd</sup> ed. (1998), Morton Publishing Company
- c. Additional costs to students: \$10.00 laboratory fee and field trip fee previously approved by President's Council
- d. Term to first be offered: Spring 2001

## 7. Community College Transfer

A community college course may be judged equivalent to this course.

8. Date approved by the department: March 24, 2000

9. Date approved by the college curriculum committee: April 14, 2000

10. Date approved by the CAA: October 19, 2000

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