

General Education Course Proposal

Proposed Course: Zool 10 Animal Biology Units 3
Prefix No. Title

Department: Biology School: Natural Sciences

GE Category (Indicate one category only):

Foundation: A1___; A2___; A3___; B4___
Breadth: B1___; B2 X; C1___; C2___; D___; E___
Integration: B___; C___; D___; International/Multicultural___

Existing Course X; Revised Course___; New Course___

Course Included in Current GE Program X

New courses require the Undergraduate Course Proposal form in addition to this form.

Revised courses require the Undergraduate Course Change Request in addition to this form.

Proposed catalog description: Limit course description to 40 words using succinct phrases. Include prerequisites, limitations, lecture/lab hours. Indicate former course number, e.g., (Former Biol 105)

10. Animal Biology (3)

Not open to students with credit in BioSc 1B. Structural and functional comparison of animals; principles and human implications of inheritance, evolution, and ecology; physiology as applied to man. (General Education BREADTH, B2. (2 lecture, 2 lab hours)

Enrollment limit per section: 120

Expected number of sections per semester – Year 1 1; Year 3 1

Attachments:

1. A statement presenting the ways in which this course meets the Specifications provided in the appropriate section of the General Education Policy as well as in the Policies for Inclusion and Evaluation of General Education Courses.
2. A statement of elements common to all sections of this course, identifying content, objectives, required student activities, grading policy, representative texts, and an approximate schedule for the course. Required student activities include such things as papers, research projects, homework, laboratory and/or studio performance, recitations, participation, attendance, and exams.
3. A typical syllabus for a particular offering of the course.
4. Any special cost factors associated with this course.

Approval for Inclusion in General Education

Sharon C. Melley 3/10/98 Quamser 3/13/98
Department Chair Date School Curriculum Committee Date

Kim W. Boy 3/13/98 _____
School Dean Date General Education Subcommittee Date

Associate Provost Date

1/14/98

Dr. Stephen Ervin
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ANIMAL BIOLOGY

ZOOLOGY 10

3 Units
Fall 1998

Course Description: This course is a general review of the organisms referred to as "Animals" in the phyla, Protocista and Animalia.

Course Goals: Students will gain knowledge of the origin and evolution of the "Animals." Major Phyla will be discussed and the methods of science presented. Emphasis will be on evolutionary approaches in lecture sections and on hands-on examination of groups in laboratory.

Prerequisite: None

Equipment and Materials: Access to computer based word-processing equipment and to the Internet (available at CSUF). Students may also wish to purchase minimal dissection equipment from the CSU, Fresno Bookstore.

Exams and Dates:

Midterm I October TBD

Midterm II November TBD

Final Exam December TBD

Tests and Grades The final grade in this class will be based on your scores on two midterms, papers, the labs and the final exam. The midterms and final are mostly multiple choice with the possibility of some short answer or fill-in. The midterms and the final exam are all comprehensive! Grades will be based on the following point distribution:

Labs	200
Papers	100
Midterms	(2) 200
Final	200

Total	700

It is my policy to keep all exams after they are graded. Exams will be available to you to see during office hours. I will keep you informed about your approximate position relative to letter grades, however, I do not assign letter grades until the end of the session. The scale for the final grades in the class will be A = 85+, B = 75+, C = 65+, D = 55+. I reserve the option to lower, but not raise the scale. Two papers will be assigned in accordance with University GE requirements. Paper scores are incorporated into laboratory grades and will entail laboratory reports that expand on the processes and organisms investigated in lab.

Makeup Exams: If you miss a midterm exam for any reason, you must take the makeup exam. The makeup will be given only during the same two hour period as the final exam. You should be able to finish both exams in the two hour period. The makeup exam will be essay. There is no makeup for the final exam. Students who miss the final (if passing and they qualify for an Incomplete) will be permitted to take the final during the normal final exam period in a following semester. An Incomplete Grade will be assigned only according to published University regulations.

Laboratory quizzes have no makeup. We will drop the two lowest quiz grades.

Attendance: Students will be expected to regularly attend class and to participate in discussion and class activities. Students are expected to utilize the full laboratory time.

Students With Disabilities: Students with disabilities should inform the instructor in accordance with University policies.

Readings: Hickman et al., *The Biology of Animals* 7th edition

Other Considerations:

PLEASE REVIEW THE UNIVERSITY POLICY ON CHEATING AND PLAGIARISM IN YOUR CATALOG!!!

A number of problems have become more common in recent years and I request your assistance in their resolution.

1. Please do not bring **beepers or portable phones** to class. If you do, make sure that they are turned off.
2. Please **do not bring small children** to class. If you anticipate this problem, make sure you have plans made in advance. While I cannot prevent you from doing so, remember the impact on others in the classroom.
3. Please try to be in class on time. If you are late please enter quietly. People entering late are a great disturbance to other students in the course.

4. I do permit tape recorders except during any review days or times when old sample or exam questions might be discussed.

5. Please do not bring non-enrolled guests to class without my prior approval.

The above schedule and procedures for this course are subject to change in the event of extenuating circumstances.

This packet contains information that you will need for laboratory each week. Page numbers refer to pages in the seventh edition of Hickman et al., Biology of Animals. Please make any errors or typographic problems known to your instructor or teaching assistant.

Contents:

Reading List

Introduction

Laboratory Schedule

Systematic List

Laboratory Exercises

Additional Handouts

Version F-98

Zoology 10 Reading List

For: Biology of Animals - Seventh Edition

The following are the **approximate** readings for the three lecture exams. You are expected to refer to these chapters for clarification as necessary and/or to follow along.

Midterm I

Chapter

1. Life
2. The Cell as a Basic Unit of Life
3. Genetic Basis of Evolution
4. Evolution of Animal Diversity
6. Animal Architecture
14. Classification and Phylogeny of Animals
15. Animal-like Protista
16. Porifera
17. Radiate Animals
18. Acoelomate Animals

Midterm II

Chapter

19. Pseudocoelomate Animals (Rotifera and Nematoda only)
20. Molluscs
21. Segmented Worms
22. Arthropods
24. Echinoderms and Lesser Deuterostomes
25. Vertebrate Beginnings

Final Exam

Chapter

26. Fishes
27. Early Tetrapods and Modern Amphibians
28. Reptiles
29. Birds
30. Mammals
5. Earth's Environment
4. Evolution of Animal Diversity

Zoology 10 Laboratory

INTRODUCTION

The laboratory is the hands-on portion of Animal Biology. Lab is intended to complement and expand on the topics and material from lecture and you should attempt to integrate the two as much as possible. We expect you to put some effort into this integrative process. This may be difficult at times as **labs will not always correspond in time to lecture topics**. Lecture will start out behind lab, catch up, and then pass lab. As you work through the laboratory each week, we *suggest* that you make drawings. Use at least half a page and be sure to label the important parts. Don't worry about aesthetics as we will not be grading these. They are to help you remember what you saw. We will be doing microscope work at the beginning of the semester and dissections at the end. Some labs are longer than others so there is ample time to review. Most of the time material from the previous week's lab will be available. You do not, however, have time to make up a missed lab.

LAB TEXTS

You will need your lecture text each week (Hickman, et al.). Use the diagrams and photos in the text to supplement laboratory handouts and your own drawings. There are optional laboratory manuals available. Check with the teaching assistant. These are strictly optional and many other manuals will help as well.

HANDOUTS and QUIZZES

You have all of the laboratory handouts for the semester. You should read these and use the text to familiarize yourself with the subject. (Please note the word "read" not "memorize"). There will be a quiz at the start of most laboratory periods that will cover the previous weeks' materials and the general information on the current lab. We treat everything as **comprehensive** to insure that you continuously review. While this may seem like a pain, you will be better prepared for the final exam. Nothing in life comes in discrete packages.

Your point total for the lab will be included with the lecture points to determine your grade in the class. You do not receive a separate laboratory grade. Points in laboratory will be determined by three things:

1. Quizzes.
2. Lab Practicals (2ea).
3. Written Assignment (1ea).

We will be giving you enough quizzes to allow us to drop the two lowest scores. There will be no quiz makeups so if you miss lab or come in late for any reason, that week's quiz will be a zero. During the lab practicals, you will move around the room to stations where there will be specimens and questions that will require you to identify items and/or answer questions appropriate to the specimen.

MATERIALS and SAFETY

You are required to buy very little for the lab. We supply almost everything. The bookstore sells simple dissection kits that will make life a little easier. You may also want to invest in surgical gloves to protect your hands during dissections. We caution people who wear contact lenses to avoid wearing them to lab if they have sensitive eyes. Please do not come to lab barefoot.

TEACHING ASSISTANTS

Your teaching assistant is your best friend in this course. On occasion a faculty member may be doing labs. Treat them well! Each teaching assistant holds office hours for your benefit. If you have questions about lecture or lab, contact a teaching assistant first (it does not have to be the one you have lab with). They will also see you by appointment if necessary, but please try to make one of their posted office hours if at all possible. They are students like you. They have tests to study for, and papers to write just as you do, so their time is precious and limited. Please feel free to ask questions in lab as well. The teaching assistants will not have the time to offer you individual tutoring on a continuing basis. If you feel you need a tutor for extended periods of time, please see the Tutorial Center in the Keats Campus Building (Phone 278-3052).

For this semester my Teaching Assistant's Office Hours will be:
(Fill in)

Hours:

Location:

Phone:

Dr. Ervin's hours are:

Zoology 10 Laboratory Schedule

Spring 1995

DATE	SUBJECT	QUIZ
Sept. 1-2	Introduction to the Microscope	N
Sept. 8-9	Classification schemes - Animals vs. Everything else	Y
Sept. 15-16	Protista, Porifera	Y
Sept. 22-23	Cnidaria, Platyhelminthes	Y
Oct. 1-2	Nematoda, Annelida	Y
Oct. 8-9	Review	N
Oct. 15-16	Lab Practical # 1	N
Oct. 22-23	Mollusca	Y
Oct. 29-30	Arthropoda	Y
Nov. 5-6	Echinodermata	Y
Nov. 19-20	Chordata, Osteichthyes/Chondrichthyes/ Agnatha	Y
Nov. 26-27	Chordata, Amphibia/Reptilia	Y
Dec. 3-4	Biodiversity and Key (Skin Room) Chordata, Mammalia/Aves	Y
Dec. 10-11	Review all labs for practical	N
Dec. 17-18	Lab Practical # 2	N

Systematic List - Zoology 10

Kingdom Protista

- Phylum Sarcomastigophora
 - Mastigophora (Know as groups only)
 - Sarcodina
- Phylum Apicomplexa
- Phylum Ciliophora

Kingdom Animalia

- Phylum Porifera
 - Class Calcarea
 - Class Hexactinellida
 - Class Demospongiae
- Phylum Cnidaria (Coelenterata)
 - Class Hydrozoa
 - Class Scyphozoa
 - Class Anthozoa
- Phylum Ctenophora
- Phylum Platyhelminthes
 - Class Turbellaria
 - Class Trematoda
 - Class Cestoda
- Phylum Rotifera
- Phylum Nematoda
- Phylum Mollusca
 - Class Polyplacophora
 - Class Gastropoda
 - Class Bivalvia (Pelecypoda)
 - Class Cephalopoda
- Phylum Annelida
 - Class Polychaeta
 - Class Oligochaeta
 - Class Hirudinea
- Phylum Arthropoda
 - Subphylum Trilobita
 - Class Merostomata (Note that this and the following classes are not in the subphylum Trilobita)
 - Class Arachnida
 - Class Crustacea
 - Class Diplopoda
 - Class Chilopoda
 - Class Insecta

Phylum Echinodermata

Class Asteroidea

Class Ophiuroidea

Class Echinoidea

Class Holothuroidea

Class Crinoidea

Phylum Hemichordata

Phylum Chordata

Subphylum Urochordata

Subphylum Cephalochordata

Subphylum Vertebrata

Superclass Agnatha

Ostracodermi

Cyclostomata

Superclass Gnathostomata

Class Placodermi

Class Chondrichthyes

Class Osteichthyes

Crossopterygii

Dipnoi

Actinopterygii

Class Amphibia

Labyrinthodontia

Caudata (Urodela)

Anura (Salientia)

Class Reptilia

Cotylosauria

Testudines (Chelonia)

Ichthyosauria

Pterosauria

Saurischia

Ornithischia

Therapsida

Crocodylia

Squamata

Class Aves

Archaeornithes

Neornithes

Non-passerines

Passerines

Class Mammalia

Monotremata (Egg laying mammals)

Marsupialia (Pouched mammals)

All below are placental mammals

Insectivora

Chiroptera

Carnivora

Rodentia

Lagomorpha

Cetacea

Proboscidea

Perissodactyla

Artiodactyla

Primates

Phylum Echinodermata

Class Asteroidea

Class Ophiuroidea

Class Echinoidea

Class Holothuroidea

Class Crinoidea

Phylum Hemichordata

Phylum Chordata

Subphylum Urochordata

Subphylum Cephalochordata

Subphylum Vertebrata

Superclass Agnatha

Ostracodermi

Cyclostomata

Superclass Gnathostomata

Class Placodermi

Class Chondrichthyes

Class Osteichthyes

Crossopterygii

Dipnoi

Actinopterygii

Class Amphibia

Labyrinthodontia

Caudata (Urodela)

Anura (Salientia)

Class Reptilia

Cotylosauria

Testudines (Chelonia)

Ichthyosauria

Pterosauria

Saurischia

Ornithischia

Therapsida

Crocodylia

Squamata

Class Aves

Archaeornithes

Neornithes

Non-passerines

Passerines

Class Mammalia

Monotremata (Egg laying mammals)

Marsupialia (Pouched mammals)

All below are placental mammals

Insectivora

Chiroptera

Carnivora

Rodentia

Lagomorpha

Cetacea

Proboscidea

Perissodactyla

Artiodactyla

Primates