

Course Outline of Record

1. Course Code: BI-007

2. a. Long Course Title: Biology of Mammals

b. Short Course Title: BIOLOGY OF MAMMALS

3. a. Catalog Course Description:

This course covers classification, development, physiology, and regulation of mammals. Additional topics covered include zoogeography, echolocation, domestication, conservation ethics, and diseases and zoonoses. This course is primarily designed for students pursuing careers in science, veterinary medicine, and other fields requiring a strong foundation in biology.

b. Class Schedule Course Description:

A course for science majors covering mammals and related topics

c. Semester Cycle (if applicable): spring or fall

d. Name of Approved Program(s):

- LIBERAL ARTS with emphasis in Math and Science

4. Total Units: 3.00 Total Semester Hrs: 54.00

Lecture Units: 3 Semester Lecture Hrs: 54.00

Lab Units: 0 Semester Lab Hrs: 0

Class Size Maximum: 28 Allow Audit: No

Repeatability No Repeats Allowed

Justification 0

5. Prerequisite or Corequisite Courses or Advisories:

Course with requisite(s) and/or advisory is required to complete Content Review Matrix (CCForm1-A)

Advisory: BI 004

Advisory: ENG 001A

6. Textbooks, Required Reading or Software: *(List in APA or MLA format.)*

a. Vaughan, T.A, Ryan, J. M., Czablewski, N.J. (2015). *Mammalogy* (6th/e). Burlington, MA Jones and Bartlett Publishers.

College Level: Yes

Flesch-Kincaid reading level: *N/A*

7. Entrance Skills: *Before entering the course students must be able:*

a.

Demonstrate an understanding of basic biological concepts.

- BI 004 - Demonstrate an understanding of the concepts and principles of basic biology.

b.

Describe the basic diversity of living systems.

- BI 004 - Identify and explain basic anatomical and physiological characteristics of life systems.

c.

Demonstrate an understanding of the fundamental form and function of organismal systems.

- BI 004 - Identify and explain basic anatomical and physiological characteristics of life systems.

d.

Demonstrate the ability to select, develop, and organize ideas in a structured format.

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- ENG 001A - Find, read, analyze, evaluate, interpret, and synthesize outside sources, including online information.
- ENG 001A - Develop ideas coherently in writing through the drafting process.

8. Course Content and Scope:

Lecture:

The diversity within the different orders of mammals.

How reproduction and reproductive cycles occur and differs among mammals.

Distribution of mammals (zoogeography) based on dispersal, evolution, climate, and the island syndrome.

Anatomy and physiology of mammals.

Echolocation in mammals such as bats and whales and dolphins.

Behavior of mammals including activity, foraging, shelter-building, communication, defensive, mating, parental care, and social.

Mammalian conservation and domestication.

Mammalian diseases and zoonoses.

Lab: *(if the "Lab Hours" is greater than zero this is required)*

9. Course Student Learning Outcomes:

1.

Apply the scientific method concept including the designing and conducting experiments and testing their hypotheses.

2.

Demonstrate the ability to read, understand, and critically review scientific papers.

3.

Distinguish the relationship between structure and function at all levels of mammals, molecular, cellular, and organismal.

4.

Evaluate the ecological relationships between mammals and their environments.

5.

Describe the relationship between genetics and evolutionary biology.

6.

Evaluate the principles of evolutionary biology and identify the taxonomy and phylogenetic relationships of representative groups of mammals.

10. Course Objectives: *Upon completion of this course, students will be able to:*

a. Describe various mammalian classifications and their phylogenetic relationships.

b. Explain Darwinian evolution including the origins of Darwinian evolution.

c. List and describe the signs of evolution including zoogeography, the fossil record, comparative anatomy, comparative

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embryology, and molecular biology.

d. Evaluate the adaptive nature of organismal systems in various environments and understand the ecological role of several taxons of mammals.

e. Explain the physiology of mammals and how homeostasis is maintained.

f. Describe the body systems, anatomy, and functional physiology of several taxons of mammals.

11. Methods of Instruction: (*Integration: Elements should validate parallel course outline elements*)

a. Activity

b. Discussion

c. Lecture

12. Assignments: (*List samples of specific activities/assignments students are expected to complete both in and outside of class.*)

In Class Hours: 54.00

Outside Class Hours: 108.00

a. In-class Assignments

1. Lecture quizzes and exams.

2. Student presentations.

b. Out-of-class Assignments

1. Reading assignments in preparation for lecture including textbook and journal articles.

2. Researching organisms and writing report.

13. Methods of Evaluating Student Progress: *The student will demonstrate proficiency by:*

- Term or research papers
- Presentations/student demonstration observations
- True/false/multiple choice examinations

14. Methods of Evaluating: Additional Assesment Information:

15. Need/Purpose/Rationale -- *All courses must meet one or more CCC missions.*

PO-GE C1-Natural Sciences

Explain concepts and theories related to physical, chemical, and biological natural phenomena.

Apply the scientific process and its use and limitations in the solution of problems.

Draw a connection between natural sciences and their own lives.

Make critical judgments about the validity of scientific evidence and the applicability of scientific theories.

IO - Scientific Inquiry

Identify components of the scientific method.

Analyze quantitative and qualitative information to make decisions, judgments, and pose questions.

Recognize the utility of the scientific method and its application to real life situations and natural phenomena.

16. Comparable Transfer Course

| University System | Campus | Course Number | Course Title | Catalog Year |
|-------------------|-------------------|---------------|---|--------------|
| CSU | CSU San Bernadino | BIOL 202 | Biology of Populations | 2014-15 |
| UC | UC Riverside | BIOL 211 | Introduction to Evolution and Diversity | 2014-15 |
| UC | UC Riverside | BIOL 213 | Introduction to Ecology and Physiology | 2014-15 |

17. Special Materials and/or Equipment Required of Students:

18. Materials Fees: Required Material?

Material or Item

Cost Per Unit

Total Cost

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19. Provide Reasons for the Substantial Modifications or New Course:

This course will provide students with experience in a biology course beyond the core of BI 005 and BI 006. It is also offered without a lab component.

20. a. Cross-Listed Course (Enter Course Code): N/A
b. Replacement Course (Enter original Course Code): N/A

21. Grading Method (choose one): Letter Grade Only

22. MIS Course Data Elements

- a. Course Control Number [CB00]: CCC000559806
b. T.O.P. Code [CB03]: 40700.00 - Zoology, General
c. Credit Status [CB04]: D - Credit - Degree Applicable
d. Course Transfer Status [CB05]: B = Transfer CSU
e. Basic Skills Status [CB08]: 2N = Not basic skills course
f. Vocational Status [CB09]: Not Occupational
g. Course Classification [CB11]: Y - Credit Course
h. Special Class Status [CB13]: N - Not Special
i. Course CAN Code [CB14]: N/A
j. Course Prior to College Level [CB21]: Y = Not Applicable
k. Course Noncredit Category [CB22]: Y - Not Applicable
l. Funding Agency Category [CB23]: Y = Not Applicable
m. Program Status [CB24]: 1 = Program Applicable

Name of Approved Program (if program-applicable): LIBERAL ARTS with emphasis in Math and Science
Attach listings of Degree and/or Certificate Programs showing this course as a required or a restricted elective.)

23. Enrollment - Estimate Enrollment

First Year: 28
Third Year: 28

24. Resources - Faculty - Discipline and Other Qualifications:

- a. Sufficient Faculty Resources: Yes
b. If No, list number of FTE needed to offer this course: N/A

25. Additional Equipment and/or Supplies Needed and Source of Funding.

N/A

26. Additional Construction or Modification of Existing Classroom Space Needed. (Explain:)

N/A

27. FOR NEW OR SUBSTANTIALLY MODIFIED COURSES

Library and/or Learning Resources Present in the Collection are Sufficient to Meet the Need of the Students Enrolled in the Course: Yes

28. Originator Robert Rosteck Origination Date 10/31/14