

Course Outline of Record

1. Course Code: BI-007L
2.
 - a. Long Course Title: Biology of Mammals Lab
 - b. Short Course Title: BIO. OF MAMMALS LAB
3.
 - a. Catalog Course Description:

This course covers classification, development, physiology, and regulation of mammals. Additional topics covered include: zoogeography, evolution, identification of mammals based on skulls and teeth, and anatomy. This course is designed for students obtaining a general elective in natural science, as well as students pursuing careers in science, veterinary medicine, and other fields requiring a strong foundation in biology.
 - b. Class Schedule Course Description:

A lab course for non-majors as well as science majors covering mammals and related topics.
 - c. Semester Cycle (*if applicable*): Spring and Fall
 - d. Name of Approved Program(s):
 - BIOLOGY Associate in Science for Transfer Degree (AS-T)
4. Total Units: 1.00 Total Semester Hrs: 54.00
 Lecture Units: 0 Semester Lecture Hrs: 0
 Lab Units: 1 Semester Lab Hrs: 54.00
 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)

 Prerequisite: BI 007 or
 Corequisite: BI 007
 Advisory: BI 004
 Advisory: ENG 001A
6. Textbooks, Required Reading or Software: (*List in APA or MLA format.*)
 - a. Martin, R.E., Pine, R.H., DeBlase, A.F. (2011). A Manual of Mammalogy: With Keys to Families of the World (3rd/e). Waveland Press, Inc.. ISBN: 978-157766768
 College Level: Yes
 Flesch-Kincaid reading level: 12
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.
 - BI 007 - List and describe the signs of evolution including zoogeography, the fossil record, comparative anatomy, comparative embryology, and molecular biology.
 - BI 007 - Evaluate the adaptive nature of organismal systems in various environments and understand the ecological role of several taxons of mammals.
 - b.
 Describe the basic diversity of living organisms.
 - BI 007 - Describe various mammalian classifications and their phylogenetic relationships.
 - BI 004 - Identify and explain basic anatomical and physiological characteristics of life systems.

c.

Demonstrate the ability to operate fundamental biology laboratory instrumentation (e.g. microscopes) and work independently when following laboratory protocol.

- BI 004 - Use the microscope and other laboratory instruments.

d.

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.
- BI 007 - Explain the physiology of mammals and how homeostasis is maintained.
- BI 007 - Describe the body systems, anatomy, and functional physiology of several taxons of mammals.

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

- 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:

N/A

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

The diversity within different orders of mammals based on identification of skulls and dentition (teeth).

How reproduction and reproductive cycles differ among mammals.

Distribution of mammals (zoogeography) based on skulls and dentition.

Anatomy and physiology of mammals.

Mammalian conservation and domestication.

How locomotion differs among mammals based on anatomy and physiology.

9. Course Student Learning Outcomes:

1.
Distinguish the relationship between structure and function of all levels of mammals, cellular, organismal, and environmental.
2.
Evaluate the principles of evolutionary biology and identify the taxonomy and phylogenetic relationships of representative groups of mammals.
3.
Develop laboratory techniques (e.g. light microscopy), perform dissections, and develop an understanding of principles of laboratory safety.

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

- a. Describe various mammal 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, and comparative anatomy.
- d. Evaluate the adaptive nature of organismal systems in various environments and understand the ecological role of several

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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. Laboratory
- c. Observation
- d. Participation

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: 0

a. Out-of-class Assignments

None

b. In-class Assignments

Laboratory quizzes and lab practical exams.
Laboratory exercises.
Laboratory manual assignments.

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

- Laboratory projects
- Presentations/student demonstration observations
- True/false/multiple choice examinations

14. Methods of Evaluating: Additional Assessment Information:

Lab practical exams covering material presented during lab to assess understanding and comprehension of material (skull and skeleton anatomy, microscopy, and other formats of presentation). Lab quizzes to assess understanding and comprehension of material covered daily. Writing projects to assess students' abilities to understand material while thinking logically and creatively.

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

CSU/UC Transfer Course

A. Transfers to CSU;UC

Biology of Populations; Introduction to Evolution and Diversity and Introduction to Ecology and Physiology

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 Bernardino	BIOL 100	Topics in Biology	2014-15
UC	UC Riverside	BIOL 2	Cellular Basis of Life	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:

Adding lecture (BI 007) as a prerequisite or corequisite for transfer approval.

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]: CCC000570137
- b. T.O.P. Code [CB03]: 40700.00 - Zoology, General
- c. Credit Status [CB04]: D - Credit - Degree Applicable
- d. Course Transfer Status [CB05]: A = Transfer to UC, 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*): BIOLOGY

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 06/19/17