

BI 007L: BIOLOGY OF MAMMALS LAB

Originator

toaguilar

Justification / Rationale

Adding a supplemental lab manual to the course designed specifically for the course, while using the current lab manual as a reference guide for mammals.

Effective Term

Fall 2022

Credit Status

Credit - Degree Applicable

Subject

BI - Biology

Course Number

007L

Full Course Title

Biology of Mammals Lab

Short Title

BIO. OF MAMMALS LAB

Discipline**Disciplines List**

Biological Sciences

Modality

Face-to-Face

Catalog 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.

Schedule Description

A lab course for non-majors as well as science majors covering mammals and related topics. Prerequisite: BI 007 or concurrent enrollment Advisory: BI 004 & ENG 001A IGETC: 5C

Lecture Units

0

Lab Units

1

Lab Semester Hours

54

In-class Hours

54

Out-of-class Hours

0

Total Course Units

1

Total Semester Hours

54

Prerequisite Course(s)

BI 007 or concurrent enrollment

Advisory: BI 004 & ENG 001A

Required Text and Other Instructional Materials**Resource Type**

Book

Author

Martin, R.E., Pine, R.H., DeBlase, A.F.

Title

A Manual of Mammalogy: With Keys to Families of the World

Edition

3rd

Publisher

Waveland Press, Inc.

Year

2011

College Level

Yes

Flesch-Kincaid Level

12

ISBN #

978-157766768

Resource Type

Manual

Open Educational Resource

No

Author

Robert Rosteck

Title

Biology of Mammals

Publisher

College of the Desert

Year

2020

For Text greater than five years old, list rationale:

Due to the nature of the subject, the material changes little over time and this is the most recent publication of this textbook. There are only two textbooks published that cover this material.

Class Size Maximum

28

Entrance Skills

Demonstrate an understanding of basic biological concepts.

Requisite Course Objectives

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

Entrance Skills

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

Requisite Course Objectives

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

Entrance Skills

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

Requisite Course Objectives

ENG 001A-Develop ideas coherently in writing through the drafting process.

ENG 001A-Write thesis statements, topic sentences, and ideas in an organized way in essays.

Entrance Skills

Describe the anatomy and physiology of various orders of mammals.

Requisite Course Objectives

BI 007-Describe the body systems, anatomy, and functional physiology of several taxons of mammals.

Entrance Skills

Describe how the anatomy and physiology of mammals determines their ecological role in various environments.

Requisite Course Objectives

BI 007-Evaluate the adaptive nature of organismal systems in various environments and understand the ecological role of several taxons of mammals.

Course Content

See lab content.

Lab Content

1. The diversity within different orders of mammals based on identification of skulls and dentition (teeth).
2. How reproduction and reproductive cycles differs among mammals.
3. Distribution of mammals (zoogeography) based on skulls and dentition.
4. Anatomy and physiology of mammals.
5. Mammalian conservation and domestication.
6. How locomotion differs among mammals based on anatomy and physiology.

Course Objectives

	Objectives
Objective 1	Describe various mammal classifications and their phylogenetic relationships.
Objective 2	Explain Darwinian evolution including the origins of Darwinian evolution.
Objective 3	List and describe the signs of evolution including zoogeography, the fossil record, comparative anatomy.
Objective 4	Evaluate the adaptive nature of organismal systems in various environments and describe the ecological role of several taxons of mammals.
Objective 5	Explain the physiology of mammals and how homeostasis is maintained.
Objective 6	Describe the body systems, anatomy, and functional physiology of several taxons of mammals.

Student Learning Outcomes

Upon satisfactory completion of this course, students will be able to:

Outcome 1 Evaluate the principles of evolutionary biology and identify the taxonomy and phylogenetic relationships of representative groups of mammals based on their anatomical and physiological features.

Methods of Instruction

Method	Please provide a description or examples of how each instructional method will be used in this course.
Activity	Using skulls, skeletons, and microscopy to determine differences in various genera.
Participation	Working singly, in pairs, or in groups to demonstrate an understanding of the material covered during lab
Observation	Using skulls, skeletons, and microscopy to determine differences in various genera.
Laboratory	Using skulls, skeletons, and microscopy to determine differences in various genera.

Methods of Evaluation

Method	Please provide a description or examples of how each evaluation method will be used in this course.	Type of Assignment
Laboratory projects	Evaluating laboratory projects through quizzes and exams.	In Class Only
Tests/Quizzes/Examinations	Lab practical exams and quizzes requiring short answer and fill in the blanks.	In Class Only
Presentations/student demonstration observations	Presentations - either individually or group - based on the material covered during lab.	In Class Only

Assignments

Other In-class Assignments

1. Laboratory quizzes and lab practical exams.
2. Laboratory exercises.

Other Out-of-class Assignments

1. Reading assignments in preparation for lab including lab manual and journal articles.

Grade Methods

Letter Grade Only

Comparable Transfer Course Information

University System

CSU

Campus

CSU San Bernardino

Course Number

BIOL 2020

Course Title

Principles of Biology II

Catalog Year

2021-22

Rationale

Biology of Mammals will cover the same material as Principles of Biology II (organisms, ecology, and evolution) with an emphasis on mammals.

University System

UC

Campus

UC Riverside

Course Number

BIOL 005C

Course Title

Introduction to Evolution and Ecology

Catalog Year

2021-22

Rationale

Covers evolution and ecology of mammals.

COD GE

C1 - Natural Sciences

CSU GE

B3 - Laboratory Activity

IGETC GE

5C - Science Laboratory

MIS Course Data**CIP Code**

26.0701 - Zoology/Animal Biology.

TOP Code

040700 - Zoology, General

SAM Code

E - Non-Occupational

Basic Skills Status

Not Basic Skills

Prior College Level

Not applicable

Cooperative Work Experience

Not a Coop Course

Course Classification Status

Credit Course

Approved Special Class

Not special class

Noncredit Category

Not Applicable, Credit Course

Funding Agency Category

Not Applicable

Program Status

Program Applicable

Transfer Status

Transferable to both UC and CSU

General Education Status

Y = Not applicable

Support Course Status

N = Course is not a support course

Allow Audit

No

Repeatability

No

Materials Fee

No

Additional Fees?

No

Approvals**Curriculum Committee Approval Date**

11/02/2021

Academic Senate Approval Date

11/11/2021

Board of Trustees Approval Date

12/17/2021

Chancellor's Office Approval Date

01/13/2022

Course Control Number

CCC000570137

Programs referencing this course

Liberal Arts: Math and Science AA Degree (<http://catalog.collegeofthedesert.eduundefined/?key=29>)