



COURSE OUTLINE: BIOL 131
D Credit – Degree Applicable
COURSE ID 005351
Cyclical Review: JUNE 2019

COURSE DISCIPLINE: BIOL
COURSE NUMBER: 131
COURSE TITLE (FULL): Regional Natural History
COURSE TITLE (SHORT): Regional Natural History

CATALOG DESCRIPTION

BIOL 131 offers individual and group investigation of the biological environment and the impact of human activities upon it. Students examine the inter-relationship between living organisms and their habitats by special projects. Library research, a scientific paper, and/or an oral presentation may be a part of the course. Field studies will investigate a variety of world localities. When taught in Baja California, Mexico, the field portion of the course is based at the Glendale College Field Station in Bahia de los Angeles.

Total Lecture Units: 2.00

Total Laboratory Units: 1.00

Total Course Units: 3.00

Total Lecture Hours: 36.00

Total Laboratory Hours: 54.00

Total Laboratory Hours To Be Arranged: 0.00

Total Contact Hours: 90.00

Total Out-of-Class Hours: 72.00

Recommended Preparation: A biology or ecology course in high school or college.



ENTRY STANDARDS

	Subject	Number	Title	Description	Include
1				Discuss general concepts in biology;	Yes
2				provide a fundamental description of evolutionary theory as the central paradigm of the biological sciences.	Yes

EXIT STANDARDS

- 1 Discuss the climate, geology and bio-geography of the study area;
- 2 describe the predominant ecological characteristics of the major ecosystems visited by the class on field trips;
- 3 identify and discuss the basic principles of ecology;
- 4 describe some of the potential adaptations that allow organisms in the study area to survive and reproduce;
- 5 identify the major phylogenetic groups of organisms in the study area and describe some of the
- 6 evolutionary trends within them;
- 7 identify human impacts on the study environment and current conservation efforts in the area.

STUDENT LEARNING OUTCOMES

- 1 recognize and/or explain the main ecological characteristics of the particular location/ecosystems in which the class is taking place
- 2 identify the major organisms of the particular location/ecosystems in which the class is taking place
- 3 describe and/or explain the impact that humans have had on the location/ecosystems in which the class is taking place.

COURSE CONTENT WITH INSTRUCTIONAL HOURS

	Description	Lecture	Lab	Total Hours
1	Course area introduction <ul style="list-style-type: none"> • The climate and biogeography of the study area • The major plant communities of the study area • The geologic history of the study area • An introduction to food webs • Trophic levels and transfer efficiency • Productivity • Population ecology • Biological zonation • Symbiosis 	8	0	8



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2	<p>The biology of major vertebrate animal groups in the study area</p> <ul style="list-style-type: none"> • Characteristics of the major vertebrate groups • The evolutionary history of vertebrates • Fish • Reptiles • Birds • Mammals • Island biogeography and evolutionary patterns of insular species 	18	0	18
3	<p>Human impacts on the environment</p> <ul style="list-style-type: none"> • Global climate change and ocean acidification • Persistent organic pollutants in food webs • Bio-magnification • Habitat destruction • Extinction and loss of biodiversity • Conservation of resources 	10	0	10
4	Field trips to complement topics in geology, ecology, biology and human impacts	0	29	29
5	Binocular and dissecting microscope use	0	5	5
6	Use of a dichotomous key and field guides	0	5	5
7	Creating biological drawings and a field journal	0	5	5
8	Reading a scientific paper for content and broader implications	0	10	10
				90

OUT OF CLASS ASSIGNMENTS

- 1 daily notations in a field journal;
- 2 preparation of a 10 minute presentation summarizing a scientific paper.

METHODS OF EVALUATION

- 1 active participation in laboratory activities, field trips, and discussions;
- 2 assessment of field journal;
- 3 field trip practical examinations;
- 4 lecture examinations.

METHODS OF INSTRUCTION

- Lecture
- Laboratory
- Studio



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- Discussion
- Multimedia
- Tutorial
- Independent Study
- Collaboratory Learning
- Demonstration
- Field Activities (Trips)
- Guest Speakers
- Presentations

TEXTBOOKS

Title	Type	Publisher	Edition	Medium	Author	ISBN	Date
National Geographic Guide to Birds of North America	Required	National Geographic	7		Dunn, J., et al.	1426218354	2017
Field Guide to Marine Mammals of the Pacific Coast	Required	California Natural History Guide	1		Allen, S., et al.	0520265459	2011
Reef Fish Identification: Baja to Panama.	Required	New World Publications			Humann, P.	1878348388	2004