MRSC A121: MARINE INTERTIDAL ECOLOGY

Item	Value
Curriculum Committee Approval Date	12/08/2021
Top Code	030100 - Environmental Science
Units	1 Total Units
Hours	36 Total Hours (Lecture Hours 9; Lab Hours 27)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)

Course Description

Marine intertidal habitats are among the most dynamic, diverse and accessible of all marine ecosystems. They typically exhibit a high species abundance and diversity, and consist of many species that display remarkable adaptations for living in a constantly-changing environment. This class is a field-methods based course that is intended for both marine science majors and non-major students interested in learning more about local intertidal communities. Enrollment Limitation: ESEC A121; students who complete MRSC A121 may not enroll in or receive credit for ESEC A121. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Demonstrate knowledge of intertidal organism's life histories.
2. List the physical and biological factors that affect organisms in the marine intertidal environment.
3. Describe the various intertidal habitats and the communities that exist within them.

Course Objectives

- 1. Identify common marine intertidal plants and animals.
- 2. Identify the major physical factors that affect organism distribution.
- 3. Identify ecological interactions in marine intertidal systems.
- 4. Define the human influence on marine intertidal systems.

Lecture Content

A. Review of general ecological concepts B. Introduction to concepts in Intertidal Ecology C. Physical Intertidal Zonation D. Biological Intertidal Zonation E. Types of Intertidal Habitats F. Factors that affect and ecology of Rocky Intertidal G. Factors that affect and ecology of Sandy Beach Intertidal H. Factors that affect and ecology of Estuary, Bay, and Harbor Intertidal

Lab Content

Rocky Intertidal Identification Species abundance Species diversity Sandy Intertidal Identification Species abundance Species diversity Estuaries Identification Species abundance Species diversity

Method(s) of Instruction

- Lecture (02)
- Lab (04)

Instructional Techniques

Lectures, demonstrations, short video/animations, field exercises assignments, data collection and interpretation, basic statistical analyses, and summaries.

Reading Assignments

Assigned text reading. : 0.75 hours per week

Writing Assignments

Students are required to keep a journal documenting their learning in class, reading of the text, and field studies. : 1 hour per week

Out-of-class Assignments

Research for presentations: 0.5 hour per week

Demonstration of Critical Thinking

Written and oral reports, weekly quizzes, and exams.

Required Writing, Problem Solving, Skills Demonstration

Students are required to keep a journal documenting their learning in class, reading of the text, and field studies.

Eligible Disciplines

Biological sciences: Masters degree in any biological science OR bachelors degree in any biological science AND masters degree in biochemistry, biophysics, or marine science OR the equivalent. Masters degree required. Ecology: Masters degree in ecology or environmental studies OR the equivalent OR see interdisciplinary studies. Masters degree required.

Textbooks Resources

1. Required Tway, L.. Tidepools: Southern California: A Guide to 92 Locations from Point Conception to Mexico, 2nd ed. Wilderness Press, 2011