BIOL 0023 - WILDFLOWER IDENTIFICATION

Catalog Description

Hours: 26 (13 lecture, 13 activity)
Description: Plant identification, terminology, keying, uses, and ecology. Field trips may require ability to hike moderate distances on unlevel ground. (CSU)

Course Student Learning Outcomes

- CSLO #1: Analyze plant characteristics to identify common wildflowers and plant families using keys and current taxonomic nomenclature.
- CSLO #2: Accurately document and interpret botanical observations made during a fieldtrip.

Effective Term

Fall 2022

Course Type

Credit - Degree-applicable

Contact Hours

26

Outside of Class Hours

33

Total Student Learning Hours

59

Course Objectives

Course objectives are linked to items in the Course Content Outline (parentheses).
Lecture Objectives:
1. Identify necessary preparation/protocols for field trips (#3,4)
2. Differentiate the eight parts of a flower's reproductive system and describe their role in reproduction (#1, 2)
3. Outline general taxonomy and nomenclature within the plant kingdom (#3,4)
Activity Objectives:
1. Distinguish at least 10 different flowering plant families (#3, 4, 5)
2. Describe characteristics and identify by sight at least 15 local wildflowers (#1, 2, 3, 4, 5)
3. Distinguish plant species based upon taxonomy (#3, 4, 5)
4. Using dichotomous keys, identify 10 wildflower species in the field (#3, 4, 5)

General Education Information

- Approved College Associate Degree GE Applicability
- CSU GE Applicability (Recommended-requires CSU approval)
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)

Articulation Information

- CSU Transferable

Methods of Evaluation

- Reports
  - Example: To assess lecture course objective #2, "Differentiate the eight parts of a flower's reproductive system and describe their role in reproduction", students might be asked to identify and describe the structures involved in floral reproduction in either a written or oral report or in a class discussion. Students could be evaluated on participation, accuracy of information, attention to detail, and completeness.
- Skill Demonstrations
  - Example: To assess activity course objective #4, "Using dichotomous keys, identify 10 wildflower species in the field", students might be asked to use a dichotomous key to correctly identify an unknown wildflower. Students could be evaluated on accuracy of identification and their ability to correctly use a dichotomous key.

Repeatable

No

Methods of Instruction

- Activity
- Lecture/Discussion

Activity:

1. To address activity course objective #2, "Recognize characteristics and identify by sight at least 15 local wildflowers", the instructor might demonstrate the identification of key diagnostic characteristics of local wildflower species. Students will then use these characteristics to correctly determine the identity of an unknown specimen.
2. To address activity course objective #4, "Using dichotomous keys, identify 10 wildflower species in the field", the instructor might guide students through the use of the dichotomous key using a known wildflower species.

Lecture:

1. To address lecture course objective #2, "Differentiate the eight parts of a flower's reproductive system and describe their role in reproduction", the instructor might lead an in-class discussion of floral reproduction, asking students to identify the key structures involved and to discuss the role of those structures.
2. To address lecture course objective #3, "Outline general taxonomy and nomenclature within the plant kingdom", the instructor might prepare a lecture that explains the role of taxonomy, summarizes the major taxonomic groups of plants, and describes the general characteristics of nomenclature. The lecture could include local examples of plant taxa, supplemented by images and/or videos where appropriate. Students will then make and record their own observations of plant species using current taxonomy.

Typical Out of Class Assignments
Reading Assignments

1. Read plant identification section in text on shapes of plant leaves and be prepared to use this information to describe and identify plant species. 2. Using an unfamiliar wildflower, read and utilize the dichotomous key to determine the species.

Writing, Problem Solving or Performance

1. Keep legible field notes in a journal. 2. Using a dichotomous key, determine the identification of 5 species in the field.

Other (Term projects, research papers, portfolios, etc.)

Term portfolio containing field notes, photographs and/or drawings, and a map showing locations of all sites.

Required Materials

- A Field Guide to Pacific States Wildflowers
  - Author: Niehaus, Ripper
  - Publisher: Houghton/Mifflin
  - Publication Date: 2005
  - Text Edition:
  - Classic Textbook?:
  - OER Link:
  - OER:
- Wildflowers of Placer and Nevada Counties
  - Author: Redbud Chapter, CNPS, editors
  - Publisher: CNPS Press
  - Publication Date: 2018
  - Text Edition: 2nd
  - Classic Textbook?:
  - OER Link:
  - OER:
- Wildflowers of Table Mountain
  - Author: Bills, Mackey, Montgomery
  - Publisher: CSU Chico
  - Publication Date: 2018
  - Text Edition: 2nd
  - Classic Textbook?:
  - OER Link:
  - OER:

Other materials and-or supplies required of students that contribute to the cost of the course.