

BTNY 40 Course Outline as of Summer 2025**CATALOG INFORMATION**

Dept and Nbr: BTNY 40 Title: FIELD BOTANY
 Full Title: Field Botany
 Last Reviewed: 5/13/2024

Units	Course Hours per Week	Nbr of Weeks	Course Hours Total
Maximum 4.00	Lecture Scheduled 3.00	17.5	Lecture Scheduled 52.50
Minimum 4.00	Lab Scheduled 3.00	8	Lab Scheduled 52.50
	Contact DHR 0		Contact DHR 0
	Contact Total 6.00		Contact Total 105.00
	Non-contact DHR 0		Non-contact DHR 0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 210.00

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: BOTANY 60

Catalog Description:

Students will be introduced to the vegetation and flora of California with an emphasis on the identification and ecology of species that are representative of local plant communities. Field trips required.

Prerequisites/Corequisites:**Recommended Preparation:****Limits on Enrollment:****Schedule of Classes Information:**

Description: Students will be introduced to the vegetation and flora of California with an emphasis on the identification and ecology of species that are representative of local plant communities. Field trips required. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended:

Limits on Enrollment:

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area		Effective:	Inactive:
	C	Natural Sciences	Fall 1981	
CSU GE:	Transfer Area		Effective:	Inactive:
	B2	Life Science	Fall 1981	
	B3	Laboratory Activity		
IGETC:	Transfer Area		Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Fall 1981	Inactive:
UC Transfer:		Effective:		Inactive:

CID:

Certificate/Major Applicable:

Both Certificate and Major Applicable

COURSE CONTENT

Student Learning Outcomes:

At the conclusion of this course, the student should be able to:

1. Use vegetative and reproductive morphology to identify selected families, genera, and species of seedless vascular plants, gymnosperms, and angiosperms.
2. Synthesize knowledge of evolution, ecology, and natural history with distribution of local flora and vegetation types.
3. Evaluate the ecological role of plants and their contributions to the health of local and regional ecosystems.
4. Collect and identify plants for the preparation of herbarium specimens using standard collecting and preserving techniques.

Objectives:

At the conclusion of this course, the student should be able to:

1. Use principles of plant classification.
2. Describe basic vegetative and reproductive morphology of seed plants using scientific vocabulary.
3. Evaluate the environmental factors influencing plant distribution.
4. Describe the physiography and climate of California.
5. Describe the geological history, evolution, and adaptation of California flora and vegetation.
6. Examine the principles of ecological succession.
7. Identify the major plant communities of California, including the ecology and taxonomy of the dominant component species.
8. Recognize major plant families represented in California flora.
9. Demonstrate methods of vegetation classification, plant identification, and vegetative survey assessment.

Topics and Scope:

I. Introduction

- A. Scientific inquiry and the scientific method
- B. Plant diversity and classification

II. Anatomical Features of Plant Groups

- A. Nonvascular plants
 - 1. Gametophytes
 - 2. Sporophytes
- B. Seedless vascular plants
 - 1. Gametophytes
 - 2. Sporophytes
 - 3. Spore production
- C. Gymnosperms
 - 1. Leaf and needle structure
 - 2. Ovulate and pollen cones
 - 3. Pollination systems
- D. Angiosperms
 - 1. Leaf and stem structure
 - 2. Flower structure
 - 3. Fruit structure
 - 4. Pollination and seed dispersal systems

III. California Ecology

- A. California environment: physiography, climate, geology, and disturbance
- B. Factors influencing plant distribution in California
 - 1. Environmental tolerances
 - 2. Evolutionary history
- C. Major evolutionary trends in California flora and vegetation
- D. Development of current vegetation patterns: role of ecological succession
- E. Major Northern California vegetation types
 - 1. Coastal grasslands and scrublands
 - 2. Coastal forests
 - 3. Woodlands
 - 4. Chaparral
 - 5. Riparian and wetland
 - 6. Montane

IV. California Flora

- A. Principal families of California flora
- B. Identification of dominant species of perennials and wildflowers
 - 1. Sonoma County
 - 2. The North Bay

V. Major Methods of Floristic Study

- A. Floristic and vegetational analysis
- B. Plant identification
 - 1. Herbaria
 - 2. Dichotomous keys

VI. Laboratory Exercises

- A. Plant identification
- B. Plant collection
- C. Field survey
- D. Field safety

All topics are covered in the lecture and lab portions of the course.

Assignment:

Lecture-Related Assignments:

1. Quizzes (10-14)
2. Exams (2)

Lab-Related Assignments:

1. Quizzes (10-14)
2. Lab practical exams, including plant identification (2)
3. Preparation of plant collection and completion of field journal
4. Field survey and analysis

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because skill demonstrations are more appropriate for this course.

Writing
0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

None

Problem solving
0 - 0%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Field survey and analysis, plant collection, field journal, and plant identification practical

Skill Demonstrations
30 - 60%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes and exams

Exams
40 - 70%

Other: Includes any assessment tools that do not logically fit into the above categories.

None

Other Category
0 - 0%

Representative Textbooks and Materials:

Plants of the San Francisco Bay Region: Mendocino to Monterey. 3rd ed. Beidleman, Linda and Kozloff, Eugene. UC Press. 2014. (classic).

California Plants: A Guide to Our Iconic Flora. Ritter, Matt. Pacific Street Publishing. 2018. (classic).

Introduction to California Plant Life. Revised ed. Ornduff, Robert, Faber, Phyllis M., Keeler-

Wolf, Todd. UC Press. 2003. (classic).

The Jepson Manual: Vascular Plants of California. 2nd ed. Baldwin, Bruce, Goldman, Douglas, Keil, David J., Patterson, Robert, Rosatti, Thomas J., Wilken, Dieter. UC Press. 2012. (classic).

Instructor prepared materials

All texts apply to both the lecture and lab/field portions of this course.