



NR 12 - Dendrology/Native Plant Identification

Catalog Description

Transfer Status: CSU/UC
Unit(s): 3.00
Lecture: 34.00 Contact hours/68.00 Out of class hours/102.00 Total hours/2.00 Unit(s)
Lab: 51.00 Contact hours/0.00 Out of class hours/51.00 Total hours/1.00 Unit(s)
Total: 85.00 Contact hours/68.00 Out of class hours/153.00 Total hours/3.00 Unit(s)
Course Description: This course is the study of botanical characteristics, taxonomy, physiology, and community relationships of the major trees and shrubs in the Western United States. Discussion of commercial uses and geographic ranges of these plants.

Objectives

- Upon successful completion of this course, the student should be able to:
- 1. Identify the major tree and shrub species found in California forests.
 - 2. Use a dichotomous key and typical field guides to identify specimens.
 - 3. Recognize the common forest community types of the Western United States with particular emphasis on California.
 - 4. Determine basic ecological requirements of common forest trees.
 - 5. Use library, internet, and other resources to research and write a scientific paper illustrating the silvical characteristics of an assigned tree species.
 - 6. Identify the distinguishing characteristics and describe the value, uses, and geographic range of common trees and shrubs in the Western United States.
 - 7. Demonstrate ability to work, collect, mount, identify, and compile plant collections.
 - 8. Describe the physiology common to all plants.

Course Content

Topic Titles / Suggested Time Topic	
Lecture	
Topics	Lec Hrs
Introduction to Tree and Plant Morphology	2.00
Phylogeny and Taxonomy	2.00
Introduction to Field Guides and Plant Keys	2.00
Klamath Region Plant Communities	2.00
Pinyon-Juniper Communities	2.00
Subalpine Forest Communities	2.00
Red Fir/Lodgepole Pine Communities	2.00
Redwood Forest Community	2.00
North Coast Coniferous Community	2.00
Douglas Fir Community	2.00
Closed Cone Forest Community	2.00
Valley Riparian Community	2.00
Foothill Woodland Community	2.00
Chaparral Communities	2.00
Mixed Conifer Communities	2.00
Giant Sequoia Community	2.00
Summary & Testing	2.00
Total Hours: 34.00	
Lab	
Topics	Lab Hrs
Morphological Features of Trees and Shrubs	3.00
Phylogenetic Trees and Taxonomy	3.00
Dichotomous Keys and Field Guide Use	3.00
Klamath Region Plant and Tree Species	3.00
Total Hours: 51.00	

Topics	Lab Hrs
Pinyons and Junipers	3.00
Subalpine Plants and Trees	3.00
Red Fir and Lodgepole Pine Species	3.00
Redwood Forest Species	6.00
North Coast Species	3.00
Douglas Fir	3.00
Closed Cone Forest Species	3.00
Valley Riparian Species	3.00
Foothill Woodland Species	3.00
Chaparral Species	3.00
Mixed Conifer Species	3.00
Giant Sequoias	3.00
Total Hours: 51.00	

Methods of Instruction

- A. Class Activities
- B. Discussion
- C. Field Trips
- D. Guest Speakers
- E. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- F. Lecture
- G. Multimedia Presentations
- H. Natural Resources Management

Methods of Evaluation

- A. Exams/Tests
- B. Quizzes
- C. Class participation
- D. Written Assignments
- E. Mid-term and final examinations
- F. Essays and research papers

Examples of Assignments

Reading Assignments

1. Read an article on the management of redwoods in California State Parks and write a three page report detailing the management objectives and their outcomes.
2. Read a report on restoration in valley riparian communities and be prepared to discuss in class their increased value due to the restoration efforts.

Writing Assignments

1. Use the Library to research and write a 3-page paper on the ecology of a California plant community.
2. Use the Journal of Forestry to research and write a 1500 word essay describing what clear cut logging does to the ecology of a Douglas fir forest.

Out-of-Class Assignments

1. Create a notebook with pressed samples, pictures, and a brief description of the natural history of 30 trees native to California. Be prepared to present it to the class during the last laboratory of the semester.
2. Utilize the Internet to research plant communities of California and discuss your findings with your group.

Recommended Materials of Instruction

Lanner, R.M. (2013). Conifers of California. *Cachuma Press, 4th.*

Stuart, J.D., Sawyer, J.O. (2001). Trees and Shrubs of California (California Natural History Guides).. *University of California Press.*

Bills, A., Mackey, S. (2011). Wildflowers of Table Mountain, a Naturalist's Guide. *Sheridan Books Inc..*

Watts, T. (2004). Pacific Coast Tree Finder, a Pocket Manual for Identifying Pacific Coast Trees. *Nature Study Guide Publishers, 2nd.*

Other Learning Materials

Online Plant Reference: www.Calflora.org

Minimum Qualifications

Forestry/Natural Resources

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