NRM 51 Course Outline as of Spring 2005

CATALOG INFORMATION

Dept and Nbr: NRM 51 Title: WILDLND TREE/SHRUBS
Full Title: Wildland Trees and Shrubs
Last Reviewed: 12/12/2023

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	2.00	3	Lab Scheduled	35.00
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00 Total Student Learning Hours: 192.50

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:	FOR 51

Catalog Description:
A study of the taxonomy, physiology, community and ecological relationships of trees and shrubs of the United States, with particular emphasis on California species. Analysis of the botanical and anatomical characteristics of these plants.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: A study of the taxonomy, physiology, community and ecological relationships of trees and shrubs of the United States, with particular emphasis on California species. Analysis of the botanical and anatomical characteristics of these plants. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended: Eligibility for ENGL 100 or ESL 100
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

Outcomes and Objectives:
Upon successful completion of this course, the student will be able to:
1. Identify approximately 100 trees and shrubs from various morphological features.
2. Use a dichotomous plant key and typical field guides effectively to identify specimens.
3. Describe the physiology of various plant parts and their functions.
4. Classify and identify trees and shrubs based on the binomial method of plant nomenclature.
5. Compare and contrast the various plant genus and species within the North Coast Range and Sierra Nevada.
6. Evaluate the intrinsic and economic value of trees and shrubs and their role in forest sustainability.
7. Distinguish among common forest community types of the Western United States, with particular emphasis on California.
8. Determine basic ecological requirements of common forest trees and shrubs.
9. Collect, mount, and identify plants in order to compile a plant collection.

Topics and Scope:

I. Physiology and Morphology of Trees and Shrubs
   A. Plant morphology
   B. Physiology of various plant parts and their function
   C. Morphology and physiology of flowering parts
II. Plant Communities and Succession
   A. Autoecology of plants and its effect upon plant distribution

B. Synecology and key plant indicators
C. The effect of the environment on the distribution of plant communities

III. Tree Growth and Function
A. Photosynthesis and the effect of light upon growth and regeneration
B. Measuring trees
C. Dendrochronology
D. Leaf morphology and characteristics
E. Taxonomy and Physiological Growth of Habits of Trees
F. Climatic effect upon trees and growth habits
H. Physiological effect upon plant communities
I. Taxonomy
1. Trees
2. Branches without leaves (fall)

IV. Taxonomy and Physiological Growth Habits of Shrubs
A. Environmental courses of shrub communities
B. Soil and moisture effects upon shrubs
C. The effect of succession on shrub communities
D. Physiological effect upon plant communities
E. Taxonomy of shrubs

V. Soils
A. Soil analysis
B. Moisture and its effects upon distribution of plants

VI. Composition and Distribution of California Ecosystems
A. Wetlands
B. Riparian Woodlands
C. North Coast forest
D. Klamath Region
E. Pinyon-Juniper
F. Sub-alpine forests
G. Oaks
H. Chaparral
I. Redwood forest
J. Douglas Fir forest
K. Closed cone forest
L. Valley Riparian
M. Foothill woodland
N. Mixed conifer
O. Giant Sequoia groves

VII. Species Identification
A. Plant keys
1. Introduction to plant taxonomic system and botanical nomenclature
2. Classification
B. Compiling a collection

Assignment:

Representative assignments:
1. Assigned textbook readings, 15 -20 pages per week.
2. Field work: including tree & shrub species identification.
3. Compile a plant collection consisting of at least 50 properly identified and labeled specimens.

4. Field notes from field trips.
5. Six quizzes; three lab plant identification tests; midterm and final exam.

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.

Field notes.	Writing 10 - 20%

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

Field work	Problem solving 10 - 15%

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

Compile and label plant collection.	Skill Demonstrations 10 - 15%

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

True/false, Matching items, Completion, Lab identification.	Exams 60 - 70%

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

None	Other Category 0 - 0%

Representative Textbooks and Materials:
How to Identify Plants. Harrington, H.D. Ohio University Press, 1997.
Introduction to California Plant Life. Ornduff, Robert. University of California Press, 2003.
North American Trees, Fifth Edition. Preston Jr., Richard and Braham, Richard. Iowa State Press, 2002.
Familiar Trees of North American, Western Region (Audubon Society Pocket Guides). Franklin, Jerry N., contributor. Knopf, 1987.
Trees and Shrubs of California. Stuart, John and Sawyer, John. University of California Press, 2001.