NRM 103 Course Outline as of Summer 2017

CATALOG INFORMATION

Dept and Nbr: NRM 103 Title: RESTORING NATIVE HABITAT
Full Title: Restoring Native Habitats
Last Reviewed: 10/24/2016

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	0.50	Lecture Scheduled	3.00	4	Lecture Scheduled	12.00
Minimum	0.50	Lab Scheduled	2.00	2	Lab Scheduled	8.00
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	20.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 24.00 Total Student Learning Hours: 44.00

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:	

Catalog Description:
Hands-on approach to restoring local habitats using native plants in the landscape. Overview of natural plant communities as models for restoration. Course includes study of dominant and typical plant constituents of major plant communities in Sonoma County, focusing on species currently used in restoration. Students will do field work at Shone Farm for other Sonoma County locations, matching plant species to local conditions for successful restoration/reforestation.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: Hands-on approach to restoring local habitats using native plants in the landscape. Overview of natural plant communities as models for restoration. Course includes study of dominant and typical plant constituents of major plant communities in Sonoma County, focusing

on species currently used in restoration. Students will do field work at Shone Farm for other Sonoma County locations, matching plant species to local conditions for successful restoration/reforestation. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended: Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Effective:	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. Students will be able to:
Demonstrate skills in planning and planting techniques for restoring, monitoring, and maintaining a restoration project.

Objectives:
Upon successful completion of this course, students will be able to:
1. Perform a site analysis.
2. Describe procedures used in site preparation.
3. Demonstrate knowledge of maintenance requirements for re-vegetation projects.
4. Identify exotic and invasive plants and strategies to control them.
5. Discuss the importance of native plant habitat for wildlife.
6. Preserve and maintain a native habitat.
7. Differentiate between restoration and natural landscaping.
8. Demonstrate skill at restoration planting techniques.
9. Select appropriate species of and sources for plants.

Topics and Scope:

I. Overview
  A. Defining landscape restoration
  B. Geographic profile of a watershed
  C. Local plant communities and associations*
II. Site analysis

- A. Physical factors*
  - 1. Soils
  - 2. Exposure
  - 3. Climate
- B. Desired vegetation type*
  - 1. Analysis
  - 2. Species selection
- C. Invasive and exotic species

III. Project Planning and Goals
- A. Natural versus restoration landscaping
  - 1. Human needs
    - a. Recreation
    - b. Flood control areas
  - 2. Ecological needs
    - a. Importance of native plant habitat for wildlife
    - b. Requirements for encouraging wildlife
- B. Materials
  - 1. Selecting appropriate species
  - 2. Sources for plants

IV. Restoring healthy soils
- A. Mycorrhizae
- B. Weeds
- C. Mulches

V. Invasive species*
- A. Identification techniques
- B. Removal
- C. Pesticides

VI. Out-planting requirements and techniques*
- A. Site preparation for planting
- B. On site layout techniques for materials
- C. Plant protection strategies
- D. Efficient labor techniques
- E. Tools used in restoration
- F. Field monitoring practices
- G. Record keeping

VII. Maintenance of revegetation projects*
- A. Irrigation
- B. Weed control
- C. Grazing
- D. Fire
- E. Pest control
- F. Thinning and replanting

VIII. Ecological restoration resources
- A. Books
- B. Web
- C. Government agencies
- D. Community based projects
  - 1. Environmental groups
  - 2. Landowners

* This part of the course will also be covered during lab time.

Assignment:

1. Weekly reading assignment: 5-10 pages.
2. Restoration planning and project
3. Field work: restoration planning at Shone Farm or other lands in Sonoma County.
4. Lab activities
    a. Plant identification techniques
    b. Planting techniques
    c. Invasive species removal

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.

Field work, Restoration planning and project	Problem solving 20 - 40%

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

Lab activities and field techniques	Skill Demonstrations 40 - 60%

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

None	Exams 0 - 0%

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

Attendance and participation	Other Category 10 - 20%

Representative Textbooks and Materials:
A Guide to Restoring Native Riparian Habitat in the Russian River Watershed. Gaffeny, Karen. Sonoma County Water Agency and Circuit Rider Productions: 1998 (classic)
Know Your Natives. Wrysinski, Jeanette. Yolo County Resource Conservation District: 2000 (classic)
Instructor prepared materials