

CATALOG INFORMATION

Dept and Nbr: BIO 89

Title: ECOLOGICAL RESTORATION

Full Title: Ecological Restoration

Last Reviewed: 2/1/2010

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	17.5	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:

**Catalog Description:**  
Introduction to the history, methods and practice of ecological restoration in California, with emphasis on Sonoma County natural communities. Includes restoration planning, site evaluation, revegetation techniques, weed control methods, erosion control methods, site maintenance and monitoring. Term project includes participation in local restoration project. Recommended for those planning a career or doing volunteer work involving habitat restoration.

**Prerequisites/Corequisites:**

**Recommended Preparation:**

**Limits on Enrollment:**

**Schedule of Classes Information:**  
Description: Study of ecological restoration: planning, site evaluation, revegetation, weed and erosion control. Emphasis on Sonoma County communities, includes participation in local restoration projects. Recommended for career or volunteer workers in habitat restoration. (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:**

<b>AS Degree:</b>	<b>Area</b>			Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>			Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>			Effective:	Inactive:
<b>CSU Transfer:</b>	Transferable	Effective:	Fall 2002	Inactive:	Fall 2010
<b>UC Transfer:</b>		Effective:		Inactive:	

**CID:**

**Certificate/Major Applicable:**

Not Certificate/Major Applicable

## **COURSE CONTENT**

### **Outcomes and Objectives:**

The students will:

1. Define ecological restoration.
2. Describe the reasons for restoring natural ecosystems.
3. Analyze projects that have played a critical role in the development of restoration practice in California.
4. Describe and identify some natural communities of Sonoma County, including dominant plant species.
5. Describe the components of a restoration plan.
6. Demonstrate the skills required to conduct a site assessment.
7. Summarize the actions required to prepare a site for restoration.
8. Compile a list of appropriate native plant materials for restoration.
9. Demonstrate the ability to install and protect native plant materials at a restoration site.
10. Identify ecologically sound methods of controlling invasive non-native plants at restoration sites.
11. Design methods of irrigation suitable for restoration projects.
12. Evaluate site monitoring methods.
13. Demonstrate the ability to plan a small-scale restoration project.
14. Describe the legal regulations and restrictions that apply to restoration projects.

### **Topics and Scope:**

1. History of ecological restoration in California.
2. Reasons to carry out ecological restoration and its relationship to habitat conservation.

3. Characteristics of selected natural communities of Sonoma County.
4. Principles and methods of restoration planning, including setting goals and selection of reference sites.
5. Principles and methods of restoration implementation, including setting goals and selection of reference sites.
6. Overview of the potential for, and need for, ecological restoration in selected natural communities in Sonoma County, such as dune and coastal scrub, grassland, chaparral, oak woodland, freshwater marsh and vernal pools.
7. Special needs in restoring habitat for endangered species.
8. Laws and regulations that apply to restoration projects.
9. Survey of completed and in-progress restoration projects in Sonoma County and the North Bay.

### Assignment:

The student may be required to complete:

1. Reading assignments totaling 200 pages.
2. Site evaluation data sheets totaling 10 pages.
3. Restoration Project Summary and Evaluation forms totaling 10 pages.
4. Restoration Plan totaling not more than 20 pages.

### 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.

Written homework, Reading reports, Term papers

Writing  
10 - 25%

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

Homework problems, Field work, Quizzes, Exams

Problem solving  
10 - 25%

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

Class performances, Field work

Skill Demonstrations  
15 - 25%

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

Multiple choice, Matching items, Completion

Exams  
15 - 30%

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

Attendance, participation

Other Category  
5 - 10%

**Representative Textbooks and Materials:**

1. ENVIRONMENTAL RESTORATION: Throop, W. Humanity Books, Prometheus Press, 2000