EVSP506

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Course Summary

Course : EVSP506 Title : Restoration Ecology Length of Course : 8 Prerequisites : N/A Credit Hours : 3

Description

Course Description: This course will examine the concept of restoration ecology, which employs science, applied techniques, and environmental design principles to restore ecological processes and biological communities on disturbed, degraded, or altered landscapes. Students will conduct scientific study and explore techniques used in restoring endangered species, native prairie, rare plants, riparian areas, streams, rivers, lakes, wetlands, watersheds, woodlands, and wildlife habitat. Course Objectives: • Explain the philosophy, scientific foundation, and challenges of restoration ecology. • Apply the principles of restoration ecology through the development of a detailed restoration plan. • Analyze habitat requirements, ecosystem function, and anthropocentric influences to determine the restoration approach for a species or population. • Assess the various scales of restoration (organism to landscape) to develop a holistic approach to ecosystem restoration and management. • Analyze the impacts and threat of climate change on ecosystems.

Course Scope:

This course will give students a broad overview of the science of restoration ecology and the practice of ecological restoration. Drawing from a central text, published scientific articles, and numerous case studies, we will examine all phases of restoration planning. The primary learning methods will be student investigation and discussion, analysis of restoration case study, and preparation of an initial restoration plan.

Objectives

The successful student will fulfill the following learning objectives:

LO-1. Explain the philosophy, scientific foundation, and challenge of restoration ecology.

LO-2. Apply the principles of restoration ecology through the development of a detailed restoration plan.

LO-3. Analyze habitat requirements, ecosystem function, and anthropocentric influences to determine the restoration approach for a species or population.

LO-4. Assess the various scales of restoration (organism to landscape) to develop a holistic approach to ecosystem restoration and management.

LO-5. Analyze the impacts and threat of climate change on ecosystems.

Outline

Week 1: Essential Background on Ecological Restoration

Learning Objectives

LO-1 Explain the philosophy, scientific foundation, and challenge of restoration ecology.

Readings and Other Resources

Identified in the Weekly Lesson

Assignments

Forum 1

Week 2: Theories and Considerations in Ecological Restoration

Learning Objectives

LO-1 Explain the philosophy, scientific foundation, and challenge of restoration ecology.

Readings and Other Resources

Identified in the Weekly Lesson

Assignments

Forum Week 2

Restoration Overview

Week 3: Ecological Attributes of Restored Systems

Learning Objectives

LO-4 Assess the various scales of restoration (organism to landscape) to develop a holistic approach to ecosystem restoration and management.

Readings and Other Resources

Identified in the Weekly Lesson

Assignments

Forum Week 3

Wetland Mitigation

Week 4: Models of Ecosystem Restoration

Learning Objectives

LO-2 Apply the principles of restoration ecology through the development of a detailed restoration plan. LO-4 Assess the various scales of restoration (organism to landscape) to develop a holistic approach to

ecosystem restoration and management.

Readings and Other Resources

Identified in the Weekly Lesson

Assignments

Forum Week 4

Plan Outline

Week 5: Planning, Management, and Evaluation

Learning Objectives

LO-3 Analyze habitat requirements, ecosystem function, and anthropocentric influences to determine the restoration approach for a species or population.

LO-4 Assess the various scales of restoration (organism to landscape) to develop a holistic approach to ecosystem restoration and management.

Readings and Other Resources

Identified in the Weekly Lesson

Assignments

Forum Week 5

Week 6: Values and Ethics in Ecological Restoration

Learning Objectives

LO-1 Explain the philosophy, scientific foundation, and challenge of restoration ecology. LO-3 Analyze habitat requirements, ecosystem function, and anthropocentric influences to determine the restoration approach for a species or population.

Readings and Other Resources

Identified in the Weekly Lesson

Assignments

Forum Week 6

Endangered Species Restoration

Week 7: Global climate change of the future of ecological restoration

Learning Objectives

LO-5 Analyze the impacts and threat of climate change on ecosystems.

Readings and Other Resources

Identified in the Weekly Lesson

Assignments

Forum Week 7

Restoration in the Age of Climate Change

Week 8: The profession and practice of ecological restoration

Learning Objectives

LO-2 Apply the principles of restoration ecology through the development of a detailed restoration plan. LO-4 Assess the various scales of restoration (organism to landscape) to develop a holistic approach to ecosystem restoration and management.

Readings and Other Resources

Identified in the Weekly Lesson

Assignments

Final Restoration Plan

Evaluation

Grading:

Name	Grade %
Forums	24.00 %
Week 1 Forum	3.00 %
Week 2 Forum	3.00 %
Week 3 Forum	3.00 %
Week 4 Forum	3.00 %
Week 5 Forum	3.00 %
Week 6 Forum	3.00 %
Week 7 Forum	3.00 %
Week 8 Forum	3.00 %
Essays/Case Studies	55.00 %
Restoration Overview Essay - Week 2	11.00 %
Wetland Mitigation - Week 3	11.00 %
Restoration Plan Outline - Week 4	11.00 %
Endangered Species - Week 6	11.00 %
Restoration in the Age of Climate Change - Week 7	11.00 %
Final Restoration Plan	21.00 %
Final Project: Restoration Plan - Week 8	21.00 %

Materials

Book Title: Ecological Restoration, Second Edition: Principles, Values, and Structure of an Emerging Profession, 2nd ed.

Author: Clewell, A and Aronson, J

Publication Info: Island Press

ISBN: 9781610911689

We will draw from web resources, many of which are accessible through the Global Restoration Network Portal (<u>www.globalrestorationnetwork.org</u>). Students will also need to access the journal *Restoration Ecology*, as well as other academic resources, through the APUS Library.

Other readings as identified in the Lessons

Additional Resources: Please go to the program guides in the APUS Library for additional resources:

Environmental Policy and Management: http://apus.campusguides.com/environmental_policy_management?hs=a

Software Requirements

- Microsoft Office (MS Word, MS Excel, MS PowerPoint) American Public University System provides Microsoft Office 365 to AMU/APU students and faculty at no cost
- Adobe Acrobat Reader

Course Guidelines

Citation and Reference Style

• Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

Tutoring

• <u>Tutor.com</u> offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours* of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

Late Assignments

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each Assignment.
- Generally speaking, late work may result in a deduction up to 15% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

Turn It In

• Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the

Assignments area of the course.

Academic Dishonesty

• Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

Submission Guidelines

• Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

Disclaimer Statement

• Course content may vary from the outline to meet the needs of this particular group.

Communicating on the Forum

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the forum. The purpose of the forums is to actively participate in an on-going discussion about the assigned content.
- "Substantive" means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says "I agree" is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

University Policies

Student Handbook

- Drop/Withdrawal policy
- Extension Requests
- <u>Academic Probation</u>
- Appeals
- Disability Accommodations

The mission of American Public University System is to provide high quality higher education with emphasis on educating the nation's military and public service communities by offering respected, relevant, accessible, affordable, and student-focused online programs that prepare students for service and leadership in a diverse, global society.

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