

**GRADUATE STUDIES
SUMMARY OF PROPOSED CATALOG CHANGES**

PROGRAM: Environmental Science

FOR CATALOG YEAR: 2018-2019

PROGRAM MODIFICATIONS (revised program description or admission requirements, change to total required credits, change in program course lists, revised faculty list)

NONE

NEW COURSES

ES 483/583, Restoration Ecology

MODIFIED COURSES (titles, descriptions, credits)

NONE

DELETED OR SUSPENDED COURSES

NONE

ATTACHMENTS:

ES 483/583 New Course Proposal

ES 583 Split-Level form

Course Proposal

Submit completed form electronically

1. **Course prefix and course number:** ES 483
2. **Course title:** Restoration Ecology
3. **Abbreviated title for class schedule (30 characters or less):** Restoration Ecology
4. **Credit hours:** 4
(note: if credits are variable, list range of credits (e.g. 1-8 credits))
5. **Catalog description:** *This course is designed to provide you with an overview of the broad field of Restoration Ecology. You will be introduced to basic principles including analysis and discussion of concepts and theories of restoration ecology and the practice of ecological restoration. Focus will be on applications to restoring composition, structure and processes of ecosystems. We will explore these areas through in class lecture, reading assignments, and class discussions throughout the term.*
- 6.
7. **Prerequisites (to add each additional prerequisite, start a new line):**
(See attached Note for samples)
 - A. **(course prefix, (space) and number)** BI 340 or ES 340 or or or
 - B. **(course prefix, (space) and number)** or or or or
 - C. **(course prefix, (space) and number)** or or or or
8. **Co-requisites (including labs, if any):**
 - A. **(course prefix, (space) and number)** ES 483L or or or or
9. **Major/Class restrictions:** Please indicate any class or major restrictions:
10. **Is course repeatable?** Yes No **If Yes, list maximum credits:**
11. **Labs requirements:** If course includes a lab: # of hours lecture: 3 ; # of hours lab: 3
12. **Fees:** List any course fees: \$25.00 (3 van trips during lab periods)
13. **Grade Mode:** Graded only: Pass/No Pass only: Option:
14. **CIP Code:** Six-digit CIP code (check with your Division Director): 03.0104
15. **Special qualifications; Is course proposed for (yes/no):**
 - A. **University Studies?** If yes, list Strand(s)

B. Honors?

15. **Cross-listing:** List any cross-listing: ES 583 and and and and

16. Strategic justification for proposed course:

A. **Rationale:** What is the overall strategic rationale for offering this course? The environmental science & policy program has conducted meaningful program assessments over the past several years. Those program assessments have included findings that our students struggle to apply concepts in field situations. The intent of this course is to apply concepts introduced in BI 340 in the field. For the past two years we have additionally surveyed students to request additional information about potentially meaningful classes. Restoration ecology has been frequently requested. Last year we taught this course as a 399 and will teach it again this year as a 399. With the hire of Dr. Rob Strahan, we would like to hard number this course.

B. **Alignment:**

1. How does this course align with the unit's mission plan? Our mission states, "the Environmental Science & Policy program effectively prepares its students for success in a broad range of environmental careers and fosters in them, by example, a commitment to serving the community. The program curriculum provides students with the interdisciplinary academic knowledge and the practical experiences necessary for them to successfully address complex environmental issues, both regional and global. The program serves as a resource to our community by providing student and faculty expertise for specific projects affecting the environmental health of our region." The ongoing restoration efforts in the Ashland Watershed along with upcoming restoration efforts along the Klamath provide students unique opportunities to partner with national leaders in this field to achieve our mission.

2. How does the course fit into the rest of the unit's curriculum? Students are already introduced to ecology through BI 340 (Intro to Ecology). Furthermore, we teach an upper-division course ES 480 (Fire Ecology). This course will serve to add breadth to our ecological science offerings at the upper-division level. This course will be one of several courses students can take to earn their required 28 credits of upper-division course work.

C. **Enrollment:** What is the new course's estimated enrollment each time it is offered over a three-year period? Year 1 25; Year 2 25 ; Year 3 25

D. **Resource evaluation:** What resources – faculty, equipment, lab space, etc. -- will be needed to offer this course and how will those resources be obtained?

1. *Faculty:*

- a. Who will teach the course? Dr. Robert T. Strahan
- b. Evaluate unit's faculty availability and/or needs and the impact on other teaching obligations. Dr. Strahan joined the SOU faculty this year as a joint hire with Biology. This course was one of the courses he was hired to teach along with several other courses in the ecological sciences. He will teach this course as an ES 399 this year.
- c. If additional faculty members are needed, how will that need be met?

2. *Facilities:* Cite any additional need for classrooms, equipment or lab space; explain how that need(s) will be met. The environmental science & policy program continues to work with the STEM Division to gain access to labs for our teaching needs. This courses labs will largely be taught outside making lab needs minimal.

3. *Other:*

- a. Are Hannon Library resources sufficient to meet the needs of this course?
Yes
- b. Are any other resources needed to support this course?
If so, please explain how they will be obtained.

E. External impact:

1. What is the expected effect of this course on existing programs elsewhere in the university? We anticipate this course serving the needs of both environmental science & policy students as well as biology students. Dr. Roden was on the search committee that hired Dr. Strahan as a joint appointment to teach this course. The hope is that this course will serve both programs.

NOTE: Please document your contact with other academic programs which may be affected by this new course and the response you received.

2. Will any of your prerequisites affect other academic programs? Yes, however, all ES students and BI students are already required to take the BI 340 prerequisite course. The growing demand on this course is partly what led to the hire of Dr. Strahan who will also be teaching the BI 340 course.

NOTE: Please document your contact with other academic programs which may be affected by this new course and the response you received.

17. Syllabus (condensed)

*(Attach an accompanying, condensed syllabus, which should include the following items. Schedules and similar details are **not** required.)*

- A. Course description (same as Catalog description, above)
- B. Learning objectives of the course
- C. Required texts
- D. Course format
- E. Other – any other relevant materials needed to explain the goals and teaching methods of this course.

Approvals:

Katie Pittman – approved via e-mail on 10/27/17

Signature of Division Director

Date

4/29/16

Restoration Ecology

ES 483/583- 4 credits

Instructor: Robert T. Strahan
Phone: 552-6686
Email: strahanr@sou.edu

Text: Galatowitsch, S.M. 2012. Ecological Restoration. 2012; Sinauer; USA

Course description

This course is designed to provide you with an overview of the broad field of Restoration Ecology. You will be introduced to basic principles including analysis and discussion of concepts and theories of restoration ecology and the practice of ecological restoration. Focus will be on applications to restoring composition, structure and processes of ecosystems.

Topics

Degradation of ecosystems
Ecosystem functions
Biodiversity
Theories of succession
Community assembly
Invasive species
Soils
Management of restoration projects

Course structure: Two lectures and one 3-hr laboratory. We will explore the topic areas through weekly class lectures, reading assignments, class discussions and laboratory projects.

Course Objectives/Goals:

- 1) Explain key principles, practices and approaches used for ecological restoration
- 2) Relate restoration ecology to the larger field of natural resource management
- 3) Explain the importance of natural disturbance regimes to ecological restoration
- 4) Evaluate restoration alternatives in terms of ecological, economic, and social measures.
- 5) Describe the role of reference ecosystems for ecological restoration.
- 6) Interpret scientific concepts in terms of restoration applications

Grading

Lecture and lab are equally weighted: each accounts for 50% of your course grade. Your lab grade will be determined by lab projects. Your lecture grade will be determined by performance on unscheduled quizzes/exercises, take-home and in-class assignments attached to readings, and exams

Grading System

Unscheduled exercises and problems	15%
Exams (2)	20%
Final Exam	15%
Lab	50%

A	90-100%
B	80-89.9%
C	70-79.9%
D	60-69.9%
F	<60%

SOU Cares

SOU has a wide range of resources to help you succeed. Our faculty, staff, and administration are dedicated to providing you with the best possible support. The SOU Cares Report allows us to connect you with staff members who can assist with concerns, including financial, health, mental health, wellbeing, legal concerns, family concerns, harassment, assault, study skills, time management, etc. You are also welcome to use the SOU Cares Report to share concerns about yourself, a friend, or a classmate at <http://www.sou.edu/ssi>. These concerns can include reports related to academic integrity, harassment, bias, or assault. Reports related to sexual misconduct or sexual assault can be made anonymously or confidentially. Student Support and Intervention provides recourse for students through the Student Code of Conduct, Title IX, Affirmative Action, and other applicable policies, regulations, and laws.

Academic Honesty Statement and Code of Student Conduct

Students are expected to maintain academic integrity and honesty in completion of all work for this class. According to SOU's Student Code of Conduct: "Acts of academic misconduct involve the use or attempted use of any method that enables a student to misrepresent the quality or integrity of his or her academic work and are prohibited".

Such acts include, but are not limited to: copying from the work of another, and/or allowing another student to copy from one's own work; unauthorized use of materials during exams; intentional or unintentional failure to acknowledge the ideas or words of another that have been taken from any published or unpublished source; placing one's name on papers, reports, or other documents that are the work of another individual; submission of work resulting from inappropriate collaboration or assistance; submission of the same paper or project for separate courses without prior authorization by faculty members; and/or knowingly aiding in or inciting the academic dishonesty of another. Any incident of academic dishonesty will be subject to disciplinary action(s) as outlined

in SOU's Code of Student Conduct:
<https://inside.sou.edu/assets/policies/CodeofStudentConduct.pdf>

In case of loss, theft, destruction or dispute over authorship, always retain a copy of any work you produce and submit for grades. Retain all written work that has been graded and handed back to you.

Statement on Title IX and Mandatory Reporting

Federal law requires that employees of institutions of higher learning (faculty, staff and administrators) report to a Title IX officer any time they become aware that a student is a victim or perpetrator of gender-based bias, sexual harassment, sexual assault, domestic violence, or stalking. Further, Oregon law requires a mandatory report to law enforcement of any physical or emotional abuse of a child or other protected person, including elders and people with disabilities, *or* when a child or other protected person is perceived to be in danger of physical or emotional abuse. If you are the victim of sexual or physical abuse and wish to make a confidential disclosure please use the confidential advising available at

<http://www.sou.edu/ssi/confidential-advisors.html>, or use Southern Oregon University's

Anonymous Harassment, Violence, and Interpersonal Misconduct Reporting Form:

https://jfc.qualtrics.com/form/SV_7R7CCBciGNL473L

SOU Academic Support/Disability Resources:

To support students with disabilities in acquiring accessible books and materials, and in planning their study and time management strategies, SOU requires all professors to include information regarding Academic Support and Disability Resources on course syllabi. It is the policy of Southern Oregon University that no otherwise qualified person shall, solely by reason of disability, be denied access to, participation in, or benefits of any service, program, or activity operated by the University. Qualified persons shall receive reasonable accommodation/modification needed to ensure equal access to employment, educational opportunities, programs, and activities in the most appropriate, integrated setting, except when such accommodation creates undue hardship on the part of the provider. These policies are in compliance with Section 504 of the Rehabilitation Act of 1974, the Americans with Disabilities Act of 1990, and other applicable federal and state regulations that prohibit discrimination on the basis of disability.

If you are in need of support because of a documented disability (whether it be learning, mobility, psychiatric, health-related, or sensory) you may be eligible for academic or other accommodations through Disability Resources. See the Disability Resources webpage at www.sou.edu/dr for more information or to schedule an appointment. If you are already working with Disability Resources, make sure to request your accommodations for this course as quickly as possible to ensure that you have the best possible access.

Southern Oregon University Graduate Council

Program Request to Offer Split-Level (400/500) Coursework

Submit with proposed syllabus clearly delineating graduate/undergraduate expectations.

Program Environmental Science & Policy _____ Chair Vincent M. Smith

Course # ES 483/ES583 Course Title Restoration Ecology

1. Describe the expectations for learning outcomes in the graduate-level component of this course as they relate to analysis, critical thinking, synthesis and/or evaluation.

Overall course objectives include:

- 1) Explain key principles, practices and approaches used for ecological restoration
- 2) Relate restoration ecology to the larger field of natural resource management
- 3) Explain the importance of natural disturbance regimes to ecological restoration
- 4) Evaluate restoration alternatives in terms of ecological, economic, and social measures.
- 5) Describe the role of reference ecosystems for ecological restoration.
- 6) Interpret scientific concepts in terms of restoration applications

In addition to performing at the graduate level in all of the identified learning objectives above, graduate students will be expected to further synthesize findings for application in field settings.

7.) Apply scientific findings in the application of restoration principles and management.

2. Indicate and describe the activities/requirements that will be expected of graduate students in this class that are beyond or in place of activities/requirements of undergraduate students. Explain how each activity will provide opportunities to assess student development in the outcomes detailed above.

Additional class or seminar session(s) required. Describe:

No additional classes or seminars anticipated. However, instructor will regularly meet with graduate students to clarify additional requirements and promote an awareness of the synthesis and management skills needed to apply restoration ecology in field settings.

X Additional readings required. Describe: Graduate students will receive additional readings that outline principles of application and management. These management principles will be applied in the assignment indicated below.

Additional written assignments required. Describe:

X Other activities/requirements. Describe:

This lab-based course will require students to work collaboratively toward applied restoration efforts taking place in the region. Graduate students will be asked to take ownership over a specific component of an applied research study. Graduate students will develop a proposal based on literature review findings, develop a management plan, and outline research and monitoring to determine impact of application. These plans/outlines will be presented to class and collaborators for potential inclusion in applied management in the region.

