

Docket Item:

University Program Approval: Oregon State University, Bachelor of Science (B.S.) in Environmental Science

Summary:

Oregon State University proposes a new degree program leading to a B.S. in Environmental Science. The statewide Provosts' Council has unanimously recommended approval. Higher Education Coordinating Commission (HECC) staff completed a review of the proposed program. After analysis, HECC staff recommends approval of the program as proposed.

Staff Recommendation:

The HECC recommends the adoption of the following resolution:

RESOLVED, that the Higher Education Coordinating Commission approve the following program:
B.S. in Environmental Science at Oregon State University



Prospectus

Institution: **Oregon State University**
College: **College of Earth, Ocean, and Atmospheric Sciences**
Location: **OSU – Cascades Campus**
Delivery: **On Campus**
Program: **BS in Environmental Sciences**

The entire proposal can reviewed at the following website:

CPS Tracking # 99417

<https://secure.oregonstate.edu/ap/cps/proposals/view/99417>

May 2019



Proposal for Delivery of an Existing Program to a New Location

Institution: Oregon State University

College/School: Earth, Oceanic, and Atmospheric Sciences

Degree and Program Title: BS in Environmental Sciences

1. Program Description

- a. Program title, level, and delivery sites.

CIP Code 03.0104

Environmental Sciences, BS Level, adding to OSU-Cascades in Bend

Definition: A program that focuses on the application of biological, chemical, and physical principles to the study of the physical environment and the solution of environmental problems, including subjects such as abating or controlling environmental pollution and degradation; the interaction between human society and the natural environment; and natural resources management. Includes instruction in biology, chemistry, physics, geosciences, climatology, statistics, and mathematical modeling.

- b. Department and school/college that would offer the program. Include the name of the institution program coordinator.

Delivery of the program would be by OSU-Cascades. Coordination for the offering at OSU-Cascades will be by Dr. Ron Reuter, currently program lead for the Natural Resources degree program.

- CIP (Classification of Instructional Program)#:03.0104
- CPS#: 99417
- Degree Type: Bachelor of Science in Environmental Sciences
- Program Type: Undergraduate
- Academic Home: OSU-Cascades Branch Campus
 - College of Earth Atmospheric and Oceanic Sci
- Location: OSU-Cascades Branch Campus
- Undergraduate Specialization:
- Undergraduate Minor:
- Course Designator: ENSC
- Credit Hours: 180
- Pre-/Pro-Model: No
- Delivery Mode: On-campus
- Enrollment Limitations:
- Accreditation: NONE
- Proposed Effective Date: AY 2019

c. Briefly describe the academic program. List all course titles, including number of credits.

The Environmental Sciences degree builds on the interdisciplinary strengths in the natural and social sciences at OSU. Our students learn broadly about environmental sciences from a variety of perspectives, while deeply exploring one area of specialization. Experiential learning is a key part of the degree program since participating in research or an internship provides an opportunity to actively engage in the field of environmental sciences outside the classroom.

The table below documents the minimum requirements for the degree and courses that exist or will be offered at OSU-Cascades to complete the degree program. Other courses may be offered at OSU-Cascades and have potential to fill one or more degree requirements. The Baccalaureate Core portion of the degree is not included here; several courses in the ENSC core sections and options will also satisfy sections of the Bacc Core.

ENVIRONMENTAL SCIENCES BS AT OSU-CASCADES (* indicates new course at Cascades)

SCIENCES AND MATH

MATH (8 CREDITS)

MTH251	DIFFERENTIAL CALCULUS	4
MTH252	INTEGRAL CALCULUS	4

CHEMISTRY (15 CREDITS)

CH231/261	GENERAL CHEMISTRY + LAB	5
CH232/262	GENERAL CHEMISTRY + LAB	5
CH233/263	GENERAL CHEMISTRY + LAB	5

BIOLOGY (12 CREDITS)

BI211	PRINCIPLES OF BIOLOGY	4
BI212	PRINCIPLES OF BIOLOGY	4
BI213	PRINCIPLES OF BIOLOGY	4
PHYSICS (8-10 CREDITS)		
PH201 OR 211	GENERAL PHYSICS OR GENERAL PHYSICS W/ CALCULUS	5
PH202 OR 212	GENERAL PHYSICS OR GENERAL PHYSICS W/ CALCULUS	5
STATISTICS (8 CREDITS)		
ST351	INTRODUCTION TO STATISTICAL METHODS	4
ST352	INTRODUCTION TO STATISTICAL METHODS	4
<u>CORE (28-38 CREDITS)</u>		
ORIENTATION		
ENSC101*	ENVIRONMENTAL SCIENCES ORIENTATION	1
ATMOSPHERE		
ATS201	CLIMATE SCIENCE	4
BIOSPHERE		
BI370	ECOLOGY	3
HYDROSPHERE		
GEOG340	INTRO TO WATER SCIENCE AND POLICY	3
GEOSPHERE		
SOIL205/206	SOIL SCIENCE + LAB	4
HUMANS AND THE ENVIRO (15-20 CREDITS)		
ECONOMICS		
ECON201	INTRO TO MICROECONOMICS	4
ETHICS		
GEO309	ENVIRONMENTAL JUSTICE	3
HUMAN ENVIRO		
ENSC479	ENV CASE STUDIES	3
or SUS102	INTRODUCTION TO ENVIRONMENTAL SCIENCE AND SUSTAINABILITY	4
or SUS350	SUSTAINABLE COMMUNITIES	4
or Z349	BIODIVERSITY: CAUSES, CONSEQUENCES AND CONSERVATION	3
ENVIRO LAW/POLICY		
AEC352	ENV ECONOMICS AND POLICY	3
or PS475	ENV POLITICS AND POLICY	4
ENVIRO MANAGEMENT		
FES365	ISSUE SIN NATURAL RESOURCES	3
or NR455	NR DECISION MAKING	4
or RNG341	RANGELAND ECO AND MNGMT	3
or RNG355	DESERT WATERSHED MNGMT	3
or RNG455	RIPARIAN ECOHYDRO	4
EXPERIENTIAL LEARNING (3-12 CREDITS)		
	STUDENT SELECTED	3
<u>APPLIED ECOLOGY OPTION</u>		
ECOLOGICAL STUDIES (Select a minimum of 1 course from below)		
FES 341	FOREST ECOLOGY	3
RNG 341	RANGELAND ECOLOGY AND MANAGEMENT	3

FIELD METHODS (Select a minimum of 1 course from below)		
BI371	ECOLOGICAL FIELD METHODS	3
BI375	FIELD METHODS IN ECO REST	4
RNG 353	WILDLAND PLANT ID	4

GEOGRAPHIC METHODS (Select 1 to 3 courses from below)		
GEOG 360	GISCIENCE I: GEOGRAPHIC INFO SYSTEMS AND THEORY	4

ELECTIVES: Select 9-17 credits from below.

FES 342	FOREST TYPES OF THE NORTHWEST	3
FES/FW 445	ECOLOGICAL RESTORATION	4
FW 311	ORNITHOLOGY	3
FW 312	SYSTEMATICS OF BIRDS	2
FW 317	MAMMALOLOGY	3
FW 320 I	INTRODUCTORY POPULATION DYNAMICS	4
FW 481	WILDLIFE ECOLOGY	4
RNG 355	DESERT WATERSHED MANAGEMENT	3
RNG 455	RIPARIAN ECOLOGY AND MANAGEMENT	4
SOIL 366	ECOSYSTEMS OF WILDLAND SOILS	3
Z 477	AQUATIC ENTOMOLOGY	4

CONSERVATION, RESOURCES, AND SUSTAINABILITY OPTION

Conservation

Choose at least 3 courses from below:

FES/FW 445	ECOLOGICAL RESTORATION	4
FW 320	INTRODUCTORY POPULATION DYNAMICS	4
FW 370	CONSERVATION GENETICS	4

Resource Management and Policy

Choose at least 3 courses from below:

AEC/ECON 352	ENVIRONMENTAL ECONOMICS AND POLICY	3
FW 323	MANAGEMENT PRINCIPLES OF PACIFIC SALMON IN THE NORTHWEST	3
GEOG 360	GISCIENCE I: GEOGRAPHIC INFORMATION SYSTEMS AND THEORY	4
PS 475	ENVIRONMENTAL POLITICS AND POLICY	4
RNG 341	RANGELAND ECOLOGY AND MANAGEMENT	3
SUS 304	SUSTAINABILITY ASSESSMENT	4

Society and Values

Choose at least 1 course from below:

FES 485	CONSENSUS AND NATURAL RESOURCES	3
GEO 309	ENVIRONMENTAL JUSTICE	3
NR 455	NATURAL RESOURCE DECISION MAKING	4
SUS 350	SUSTAINABLE COMMUNITIES	4

FOUR YEAR SAMPLE PLAN: SEE ATTACHMENT

d. Indicate in what ways the proposed program at the new location(s) will differ from the one

~~campus~~ Corvallis program.

Other than location and only offering the Applied Ecology and the Conservation, Resources, and Sustainability options, ENSC at OSU-Cascades will be the same as OSU-Corvallis.

- e. List any special requirements or prerequisites for admission to the program at the new location(s).

None

- f. Is there an accrediting agency or professional society that has established standards for this program? If so, is the program currently accredited? If accredited, what steps would be needed to accredit the program at the proposed new location(s)?

None

- g. Provide evidence of consultation with other public universities regarding non-duplication of similar programs offered in the same region, or ones that will cause undue hardship to another public university.

Program leads for environmental science at Portland State, environmental science at OIT, and environmental science and policy at SOU have been contacted (see attached emails). Initial impression is that development of ENSC at OSU-Cascades may have some small impact on enrollment at these institutions because of geographical interest, but in the long run, ENSC at all institutions will remain strong due to increasing needs for resource professionals in the public and private sectors.

2. Demand

- a. List any similar programs offered at the proposed or nearby location(s).

Portland State University offers a BS (major and minor) and a master's program in Environmental Science. Oregon Institute of Technology offers a BS in Environmental Science. Southern Oregon University offers a BS in Environmental Science and Policy.

- b. Provide evidence of need for the program at the new location(s).

OSU-Cascades provides undergraduate education in support of the 40-40-20 governor's initiative. OSU-Cascades is expected to grow enrollment to 3,000 – 5,000 students in the next decade. To support this enrollment, OSU-Cascades needs to increase program offerings. Environmental Sciences is a popular undergraduate degree at OSU (Corvallis) with strong post-graduation job placement. ENSC and Natural Resources (NR) share a suite of core courses, but diverge in the science and math requirements for graduation. Offering ENSC at OSU-Cascades will attract students interested in a more science-based study of earth resources and issues while NR will continue to provide a degree path for students interested in a broader policy and application-based degree. Recruiters and advisors at Cascades are asked by prospective students about the availability of the Environmental Sciences degree at OSU-Cascades. The Natural Resources Program Lead has also been approached by prospective students and employers about when an ENSC degree would be available at OSU-Cascades. The demand for this program appears strong.

- c. Estimate enrollment and number of graduates over the next five years. Will any enrollment limitation be imposed? If so, how will those to be enrolled be selected?

Estimates of enrollment are below. We expect the first full class of graduates to complete their programs of study by 2023. At this point, no enrollment limitations are planned. While the four-year program will begin in AY2019, we anticipate some students from community college transfers or from major changes to graduate in the second year.

Academic year	New students	Graduating students
2020	5	
2021	8	3
2022	12	5
2023	12	10
2024	15	12

3. Personnel

- a. List qualifications of faculty (regular and/or adjunct) who will be involved in delivering the program to the proposed location(s).

- **Ron Reuter, PhD, Associate Professor of Natural Resources.** Reuter has been program lead for NR at OSU-Cascades since 2003 and will serve as lead for the ENSC program as well, as there is topical overlap. Reuter is a multidisciplinary scientist with specialization in soil science, landscape ecology, and restoration ecology. PhD Soil Science, University of Minnesota 1999; MS Soil Science, University of Idaho 1995; BS Environmental Resource Management, Penn State 1992.
- € **Matthew Shinderman, Ph.D., Senior Instructor I Natural Resources.** Shinderman has been an instructor at OSU-Cascades since 2006 and is also program lead for the sustainability double degree at OSU-Cascades. He teaches courses ranging from endangered species ecology to rangeland ecosystem management, and his scholarly interests include sustainability in brewery and vineyard settings, ecological assessment of urban landscapes, ecological restoration and species adaptation to climate change. PhD Ecosystem Management, Colorado State University; MS Rangeland Science, Utah State University. He created and directs the HERS (Human and Ecosystem Resilience and Sustainability) Lab at OSU-Cascades, a trans-disciplinary unit focused on triple-bottom-line approaches to human community development and ecosystem management. Under the HERS umbrella, Matt is working with the National Park Service to develop a park studies unit at OSU-Cascades which will serve as a nexus for research, management recommendations and curricula related to management of U.S. national parks.
- € **Seth Ganzhorn, Ph.D., Instructor.** Ganzhorn was hired in Fall 2017 in support of the existing Natural Resources program and in anticipation of implementation of the Environmental Sciences program. Prior to his hire, Seth was a postdoctoral research fellow and instructor at Fordham University in New York. PhD Tropical Forest Ecology, Fordham University; MS Ecology, Fordham University
- € **Matt Orr, PhD., Assistant Professor of Biology.** Matt Orr has a BA in Biology from Amherst College and a Ph.D. in Population Biology from the University of California, Davis. His students examine questions in terrestrial and restoration ecology in forest,

- field, and stream habitats in Central Oregon. Orr delivers the ecology and genetics classes for the biology program that ENSC students will use in their degree program.
- € **Other OSU-Cascades faculty in Science, Social Sciences, and Liberal Studies will complement the dedicated faculty listed above (not an exhaustive list).**
- Dr. Pat Ball (biology)
 - Dr. Ann Petersen (biology)
 - Dr. Kristina Smith (biology)
 - Dr. Jeff Gautchi (chemistry)
 - Dr. Scott Geddes (chemistry)
 - Silas Rowne, MS (chemistry)
 - Ryan Scheirer, MS (physics)
 - Pablo Baldivieso, MS (statistics)
 - Dr. Beth Marino (anthropology)
 - Dr. Nick Dahl (communications)
 - Dr. Natalie Dollar (communications)

- b. Estimate the number and type of support staff needed to provide the program at the new location(s).

Advisors: Advising for this program will fall under the duties for the existing NR advisor at OSU-Cascades and will not require another hire during the first five years of the program.

4. Other Resources

- a. Describe facilities (e.g., buildings, labs, equipment) necessary to offer the program at the new location(s).

Facility requirements for this program are classroom, lab space, and transportation for field components. These are met by the OSU-Cascades campus and current equipment available to the NR program. Field vehicles are rented from the Central Oregon Community College fleet on an as-needed basis. (See space evaluation letter)

- b. Indicate how library needs will be met.

OSU-Cascades has established a Library Learning Center with an instructional librarian and a staff member. A small physical collection as well as course reserves are managed by the Learning Center. Students will have access to the digital collections of OSU. The OSU Library has reviewed the resources and determined that current resources are adequate: the assessment is included. (The assessment was completed in AY2017).

- c. Indicate how students at the new location(s) will receive student services (e.g., academic advising, financial aid assistance, course registration, access to book/text purchases).

Students are a part of the existing OSU-Cascades campus and the campus has those services in place.

5. Alternative Delivery Methods/Formats

- a. Are alternative delivery methods being used (e.g., distance learning or technology-enhanced)? Please describe.

Courses required to complete the degree will be offered face to face on the OSU-Cascades campus. In addition, occasional opportunities for live video cross-campus courses will be available, enhancing learning opportunities for students. For example, in Winter 2017, AGRI 438 Exploring World Agriculture, was broadcast to OSU-Cascades and OSU-Eastern Oregon. Faculty member Reuter is a participant in the cross-campus delivery.

- b. Will this program be delivered in an alternative format (e.g., weekend, evening, on-site)? Please describe.

There is no intent to make this program a weekend or evening program. Some courses, such as Bacc Core, may be offered as evening classes at OSU-Cascades.

6. 40-Mile Radius Rule

“Significant change” to a university’s academic program includes, but is not limited to, any new undergraduate or graduate degree program, or any existing undergraduate or graduate degree program that will be offered more than 40 miles from the site at which it is currently offered. “Significant change” to a university’s academic program does not mean a new undergraduate or graduate certificate program, new minor, or a new name for an existing degree program.

Source: Oregon Administrative Rules (OAR) 715-013-0020(1)

Revised May 2016

APPENDICES

A – Executive Summary

B – Transmittal Sheet

C – Accessibility Form

D – Library Evaluation

E – Letters of Support

F – Liaison Comments

A – Executive Summary



OSU-Cascades
1500 SW Chandler Ave.
Bend, Oregon 97702

P 541-322-3123
OSUcascades.edu

New Location Undergraduate Degree Program Proposal: Environmental Science (ENSC)

College of Earth, Ocean, and Atmospheric Sciences
Proposed Effective Term: Fall 2019
CPS Tracking #:

The purpose of this proposal is to extend the existing BS Environmental Sciences degree program (ENSC), sponsored by the College of Ocean, Earth, and Atmospheric Sciences, to the OSU-Cascades Campus in Bend. OSU-Cascades is expanding the offering of 4-year programs to increase campus enrollment and to help meet the goals of the Oregon's 40-40-20 initiative.

The Environmental Sciences degree builds on the interdisciplinary strengths in the natural and social sciences at OSU. Our students learn broadly about environmental sciences from a variety of perspectives, while deeply exploring one area of specialization. Experiential learning is a key part of the degree program since participating in research or an internship provides an opportunity to actively engage in the field of environmental sciences outside the classroom.

ENSC will complement the existing Natural Resources, Biology, and Sustainability programs at OSU-Cascades while building capacity for new students at the campus. Bringing the ENSC degree with two options requires the addition of only one to two courses. Enrollment expectations for the first year, Fall 2019, will be around 5 and increase to 15 by year five. Environmental Sciences is a strong undergraduate program at OSU-Corvallis. Initial consultation with other state institutions (SOU, OIT, PSU) with similar programs indicate that impact on those programs will be minor.

B – Transmittal Sheet



Proposal Transmittal Sheet
Full Category I and Abbreviated Category I Proposals

Submit proposals to: Office of Academic Programs, Assessment, and Accreditation
314 Waldo Hall – Oregon State University

Attach Transmittal Sheet; Proposal; Library Evaluation (performed by the Library for Full Category I proposals), Letters of Support (external to OSU); Liaison Correspondence (internal to OSU), External Review (new graduate program proposals), and Budget Information (both OSU and HECC budget sheets for Full Category I proposals and OSU budget sheets for Abbreviated Category I proposals)

Full Category I Proposals: New Programs

Final Approval--for new degrees, extension to OSU's branch campus, and substantive changes: Higher Education Coordinating Commission (HECC)

Final Approval-- for new certificate programs: OSU Provost

Check one:

- New Degree Program
New Certificate Program
[X] Extend Program to OSU Branch Campus
Substantive Change

Abbreviated Category I Proposals: Other Proposals

Final Approval--for new academic units, renames, reorganizations, and, suspensions: OSU Provost

Final Approval-- for terminations: OSU Board of Trustees

Check one:

- Establish: new college, school, department or program
Rename: change the name of an existing academic program or academic unit
Reorganization: move the responsibility of an academic program from one academic unit to another; reorganize existing academic unit(s), including mergers and splits
Suspension (or Reactivation): suspend an academic program (maximum period: three years)
Termination: terminate an academic program or academic unit

Title of Proposal:

Proposed Effective Term:

Existing Environmental Science program to OSU-Cascades

Fall 2019

Ronald Reuter

9/17/2018 | 09:14:03 PDT

School/Department/Program:

College:

Environmental Sciences

OSU-Cscades

I certify that the above proposal has been reviewed by the appropriate Program, Department, School, and College administrators and committees. I approve this proposal.

Signature of Laurence Becker

13 Sept. 2018

Dr. Laurence Becker

Sign (ENSC Program Lead) Date

Print (ENSC Program Lead)

DocuSigned by:

Roberta Marinelli

9/18/2018 | 20:01:39 PDT

Roberta Marinelli

Sign (CEOAS Dean)

Date

Print (CEOAS Dean)

B – Transmittal Sheet

<i>Julie Gess-Newsome</i> _____ Sign (OSU-Cascades Dean)	8/15/18 _____ Date	Dr. Julie Gess-Newsome _____ Print (OSU-Cascades Dean)
<i>Rebecca Johnson</i> _____ Sign (OSU-Cascades Vice President)	_____ _____ Date	Dr. Rebecca Johnson _____ Print (OSU-Cascades Vice President)

Source: Office of Academic Programs, Assessment and Accreditation (2-10-15; rev 1-8-16)

C – Accessibility Form



ACCESSIBILITY

New Program Proposal (Degree or Certificate)

Guidelines for Addressing Accessibility

Sections 503 and 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990 (ADA), as amended by the ADA Amendments Act of 2008 prohibits discrimination on the basis of disability. The Rehabilitation Act and the ADA require that no qualified person shall, solely by reason of disability, be denied access to, participation in, or the benefits of, any program or activity operated by the University. Each qualified person shall receive the reasonable accommodations needed to ensure equal access to employment, educational opportunities, programs, and activities in the most integrated setting feasible.

*For questions and assistance with addressing access, please contact:
the Office of Disability and Access Services (737-4098), or
the Office of Affirmative Action and Equal Opportunity (737-3556).*

Title of Proposal:

Date:

Expansion of ENSC to OSU-Cascades

3/1/18

School/Department/Program:

College:

Enviro Science at OSU-Cascades

CEOAS

- Accessibility (<http://oregonstate.edu/accessibility/policies>)
- Faculty Guidelines (<http://ds.oregonstate.edu/facultyguidelines>)
- Information Technology Guidelines (<http://oregonstate.edu/accessibility/ITpolicy>)

By signing this form, we affirm that at we have reviewed the listed documents and will apply a good faith effort to ensure accessibility in curricular design, delivery, and supporting information.

Digitally signed by ronald J Reuter
DN: cn=ronald J Reuter, o=Oregon State University, ou=OSU -
Cascades / College of Forestry,
email=ron.reuter@oregonstate.edu, c=US
Date: 2018.02.27 15:11:20 -08'00'

Sign (School/Department/Program Director/Chair/Head)

Ron Reuter, OSU-Cascades ENSC and NR lead

3/1/18

Print (School/Department/Program Director/Chair/Head)

Date

Source: Office of Academic Programs, Assessment, and Accreditation (glb/ch; 4-26-16)

D – Library Evaluation

Library Support for the Proposed Environmental Sciences Program on Cascades Campus

This report is an analysis of the capacity of the OSU Cascades local library collection and services, in combination with access to the resources of the whole of OSU Libraries and Press (OSULP), to support the proposed Environmental Sciences degree on the OSU Cascades campus. The Environmental Science degree curriculum will be identical to the one on main campus in Corvallis.

Print Monographs and E-Books

Due to the size restrictions of the OSU Cascades Library, support for this program will depend on the OSU Valley Library in Corvallis and OSULP e-book collections. The print collection at the Valley Library is available to OSU Cascades students by request and are received within 3 working days. The print collection is adequate to support the program.

The growing availability of e-books makes it possible to expedite access to more information from various locations. This immediate access serves the OSU Cascades students and faculty well. Students at the OSU Cascades campus have access to the e-books purchased centrally, which includes over 27,000 titles in environmental science, in a collection of almost 400,000 titles. OSULP has a growing collection of streaming videos, and currently has over 750 on environmental science topics.

OSU is served well by the OSULP investment in the Orbis/Cascades Alliance, whose combined collection is substantial. Students and faculty can order from the collections of all the libraries in the Orbis Cascade Alliance through the Summit catalog. University of Oregon, Portland State University, University of Washington and Washington State University are some of the larger research libraries represented in the Summit catalog. Books requested through Summit are delivered within three to five working days.

Serials/Journals

As determined by the 2008 program review for the Environmental Sciences program, OSU Libraries maintains an adequate collection of journals that support the existing program on the Corvallis campus. In the review, it was determined that OSULP subscribes to 18 of the top 20 environmental sciences journals as listed by impact factor in ISI's Journal Citation Reports. The majority of journal subscriptions are for electronic access to the articles, so OSU Cascades students have immediate access to the content. For journals held in print format, OSULP offers the Scan and Deliver service, which provides PDF copies of articles requested.

D – Library Evaluation

Indexes and Databases

The core indexes to the relevant information for this program are shown in Table 1. The OSULP maintain access to these databases as they are core to a number of OSU’s primary research and teaching areas.

Table 1: Indexes and Databases for Environmental Sciences

Databases	Years Covered	Subject Coverage
Environmental Sciences & Pollution Management	1967-present	Index to research articles in all fields of environmental science
Web of Science	1970-present	Multidisciplinary index to thousands of scholarly journals
Aquatic Sciences & Fisheries Abstracts	1978-present	Index to all aspects of marine and freshwater environments
Wildlife & Ecology Studies Worldwide	1935-present	Index to all areas of wildlife research
Environment & Energy Publishing	2007-present	News publications on energy, environmental and climate policy
GreenFile		Collection of scholarly, government and general-interest titles includes content on the environmental effects of individuals, corporations and local/national governments
PAIS International	1977-present	Index to public policy materials
GREENR		Reference content in the area of the environment, energy and natural resources

Key library services & librarian expertise

Expertise at OSU-Cascades is covered by Sara Q. Thompson, the Cascades Librarian. In that capacity, she provides instruction as requested either in-class or via the web, responds to reference inquiries, and develops materials to assist faculty members and students in their research.

The Primary Contact for the Environmental Sciences is Mary Markland. Primary Contacts serve as the major contact for faculty, staff and students, monitors trends in curriculum and research, attends relevant college, departmental and program events to gain insight, and identifies how OSULP expertise and resources can be most effectively used. The promote OSULP expertise and collaborate with the Expert Leads to integrate and leverage that expertise throughout the OSU Community. .

Providing access to items not owned by OSULP is the domain of the Interlibrary Loan and Summit staff both at OSULP and at lending libraries. Print articles located in the OSU Libraries’ collections may be requested via the Scan and Deliver service, which provides PDFs of the requested articles.

D – Library Evaluation

Summary

OSU Libraries' collections are adequate to support the proposed Environmental Sciences degree at OSU-Cascades campus.

Respectfully submitted,

Laurel Kristick
Collection Assessment and Science Librarian
February 23, 2017

E – Letters of Support: PSU

Tuesday, December 19, 2017 at 9:08:26 AM Pacific Standard Time

Subject: Re: ENSC at OSU-Cascades

Date: Wednesday, December 7, 2016 at 3:39:54 PM Pacific Standard Time

From: John Rueter

To: Reuter, Ronald

CC: carlsonm@pdx.edu, beckerla@science.oregonstate.edu

Ron,

Thanks for including me in this discussion.

I'll look over your curriculum and give you a formal answer soon, but I agree that competition for undergraduate students should not be a big issue. Don't quote me until I look it over though.

John

On Wed, Dec 7, 2016 at 3:30 PM, Reuter, Ronald <Ron.Reuter@oregonstate.edu> wrote:

Hi John –

Been a long time (inter-institutional faculty senate a long while back). You have hopefully heard about our expanding campus here in Bend. Last year we started offering our degrees on a four-year basis, getting away from the 2+2 model we had with Central Oregon Community College. This past summer we moved onto our new campus. As part of meeting the needs of Oregon for education and OSU's role in that task, OSU-Cascades needs to grow programs to meet our enrollment projections of 3000 students by 2025.

Our Natural Resources program has been relatively successful over the years, being in the top five lately and the top three before that. An easy lift for adding dimension to the natural and earth sciences here is bringing over the Environmental Sciences degree from Corvallis. Larry Becker is the program director there. To bring over ENSC, we are completing a Higher Education Coordinating Commission proposal for delivering an existing program to a new location. One of the requirements is to liaise with other state institutions that offer similar programs and check on impact to those institutions.

So I am checking in with you at PSU (and cc'ing Matt Carlson) to get your impression of the impact on PSU of OSU-Cascades offering Environmental Science as a BS degree, potentially also offering the minor as well. We do not have capacity to step into graduate level offerings anytime soon.

The OSU ENSC curriculum can be found at <http://ceoas.oregonstate.edu/enysci/>. We would be offering the Applied Ecology specialization area. While I don't envision a large impact, other than maybe one or two students choosing Bend over Portland, you may have a different impression.

Hope you get a chance to think about this and respond before the holidays. If you have questions about anything, please let me know.

Cheers.

Ron

Ron Reuter

Assistant Dean OSU-Cascades

Natural Resources Program Lead

[\(541\) 322-3109](tel:5413223109)

--

John Rueter
Professor and Chair
Environmental Sciences and Management
Portland State University
rueterj@pdx.edu

E – Letters of Support: SOU

Subject: Re: ENSC at OSU-Cascades

Date: Monday, January 28, 2019 at 8:11:27 AM Pacific Standard Time

From: Vincent Smith

To: Reuter, Ronald

Ron, Thank you for sharing your progress and curriculum. I am excited for you and for your program. Yes, there will undoubtedly be competition between our programs but I do not see that as a reason for concern. OSU -Cascades and SOU have a great deal to offer students. I'm hopeful this will create a broader range of options for students. I also look forward to finding ways our programs can work together given the similar environmental issues we face. If you have questions or simply want to converse on any subject, please just let me know. I'm on sabbatical at the moment, but certainly happy to chat.

Vincent M. Smith, PhD

Associate Professor, Environmental Science & Policy, Sociology & Anthropology

Chair, Environmental Science & Policy

Faculty Advisor, The Farm at SOU, A Center for Sustainability

Southern Oregon University | 1250 Siskiyou Blvd | Ashland OR 97520
541-552-6802 | Science Hall 069

Why I'm at SOU: <https://www.youtube.com/watch?v=Ski0MzPd5IM>

On Thu, Jan 24, 2019 at 1:39 PM Reuter, Ronald <Ron.Reuter@oregonstate.edu> wrote:

Vincent,

Hope you are enjoying the smoke-free season there in Ashland!

After about 2 years, I am finally getting the ENSC program for OSU-Cascades into the approval process. It will go through the OSU Curriculum approval and then eventually make it into the HECC process. I am attaching a bit of informational liaison letter and the draft curriculum of the program we will offer at OSU-Cascades. I do acknowledge that there may be some competition for students, but we expect slow growth for the first few years.

If you have any concerns that you think we should be addressing, please let me know. Here's hoping to a full and productive Shakespeare festival this year without much smoke!

Ron

Ron Reuter

OSU Cascades Natural Resources

From: Vincent Smith <smithv3@sou.edu>
Date: Monday, December 12, 2016 at 2:48 PM
To: "Reuter, Ronald" <Ron.Reuter@oregonstate.edu>
Cc: "beckerla@science.oregonstate.edu" <beckerla@science.oregonstate.edu>
Subject: Re: ENSC at OSU-Cascades

Ron,

Thank you for forwarding your vision for an expanding environmental science program at OSU-Cascades. I am delighted to see environmental science programming expanding throughout higher education. To be frank, I suspect you will compete for more than a few of our current students. We have many students who join us from Bend/Sisters and surrounding areas. That said, I also see numerous opportunities for collaboration between our institutions and look forward to those opportunities in the future. As you are aware, OSU, SOU, and other institutions across Oregon will need to think carefully about how we grow and fund ourselves in the future. I express my concern for the future of both of our programs as resource limitation and changing demographics impact our programs. I wish you the very best in your process moving forward and hope you will reach out regularly to your colleagues down here in Ashland as we work together to impact the future of our state and planet!

Vincent M. Smith, PhD

Associate Professor, Environmental Science & Policy, Sociology & Anthropology

Chair, Environmental Science & Policy

Green House "Learning Community"

Southern Oregon University | 1250 Siskiyou Blvd | Ashland OR 97520

541-552-6802 | Taylor Hall 218

Why I'm at SOU: <https://www.youtube.com/watch?v=Ski0MzPd5IM>

On Wed, Dec 7, 2016 at 3:42 PM, Reuter, Ronald <Ron.Reuter@oregonstate.edu> wrote:

Hi Vincent,

You have hopefully heard about our expanding OSU-Cascades campus here in Bend. Last year we started offering our degrees on a four-year basis, getting away from the 2+2 model we had with Central Oregon Community College. This past summer we moved onto our new campus. As part of meeting the needs of Oregon for education and OSU's role in that task, OSU-Cascades needs to grow programs to meet our enrollment projections of 3000 students by 2025.

Our Natural Resources program has been relatively successful over the years, being in the top five lately and the top three before that. An easy lift for adding dimension to the natural and earth sciences here is bringing over the Environmental Sciences degree from Corvallis. Larry Becker is the program director there. To bring over ENSC, we are completing a Higher Education Coordinating Commission proposal for delivering an existing program to a new location. One of the requirements is to liaise with other state institutions that offer similar programs and check on impact to those institutions.

So I am checking in with you at SOU (and cc'ing Larry Becker) to get your impression of the impact on SOU of OSU-Cascades offering Environmental Science as a BS degree, potentially also offering the minor as well. We do not have capacity to step into graduate level offerings anytime soon.

The OSU ENSC curriculum can be found at <http://ceoas.oregonstate.edu/envsci/>. We would be offering the Applied Ecology specialization area. While I don't envision a large impact, other than maybe one or two students choosing Bend over Ashland, you may have a different impression.

Hope you get a chance to think about this and respond before the holidays. If you have questions about anything, please let me know.

Cheers.

Ron

Ron Reuter

Assistant Dean OSU-Cascades

Natural Resources Program Lead

| [\(541\) 322-3109](tel:(541)322-3109)

E – Letters of Support: SOU

Subject: Re: ENSC at OSU-Cascades

Date: Monday, December 12, 2016 at 2:48:56 PM Pacific Standard Time

From: Vincent Smith

To: Reuter, Ronald

CC: beckerla@science.oregonstate.edu

Ron,

Thank you for forwarding your vision for an expanding environmental science program at OSU-Cascades. I am delighted to see environmental science programming expanding throughout higher education. To be frank, I suspect you will compete for more than a few of our current students. We have many students who join us from Bend/Sisters and surrounding areas. That said, I also see numerous opportunities for collaboration between our institutions and look forward to those opportunities in the future. As you are aware, OSU, SOU, and other institutions across Oregon will need to think carefully about how we grow and fund ourselves in the future. I express my concern for the future of both of our programs as resource limitation and changing demographics impact our programs. I wish you the very best in your process moving forward and hope you will reach out regularly to your colleagues down here in Ashland as we work together to impact the future of our state and planet!

Vincent M. Smith, PhD

Associate Professor, Environmental Science & Policy, Sociology & Anthropology

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Why I'm at SOU: <https://www.youtube.com/watch?v=Ski0MzPd5IM>

E – Letters of Support: OIT

Monday, January 28, 2019 at 10:30:03 AM Pacific Standard Time

Subject: RE: ENSC at OSU-Cascades

Date: Monday, January 28, 2019 at 9:51:54 AM Pacific Standard Time

From: Jherime Kellermann

To: Reuter, Ronald

Hi Ron,

Thanks for reaching out. It is surprising our paths have not crossed earlier!

I reviewed the proposed curriculum for the new OSU-Cascades ENSC program. While we will undoubtedly have a bit of competition, I don't think this new program will intensify that which already exists, considering the relatively comparative NR program there and honestly just the reality of the looming OSU presence in the far hipper city of Bend (there are regularly OSU-Cascades billboard ads as you enter/exit Klamath Falls). I think the inherent differences in our curricula, locations, student profiles, and project opportunities will continue to distinguish the programs. Also, perhaps we can work together to enhance general interest and funding in Environmental Sciences and Natural Resources work and research in eastern Oregon for the benefit of all! I'd be happy to chat more in this regard at any time.

Cheers

Jherime

Jherime Kellermann, PhD
Associate Professor
Environmental Sciences Program Director
Oregon Tech

Office phone: 541-851-5156

Office: DOW 208

Personal Website: <https://jherimekellermann.weebly.com/>

Mailing address: 3201 Campus Dr., Klamath Falls, OR 97601

From: Reuter, Ronald <Ron.Reuter@oregonstate.edu>

Sent: Thursday, January 24, 2019 10:57 AM

To: Jherime Kellermann <Jherime.Kellermann@oit.edu>

Subject: ENSC at OSU-Cascades

Jherime,

First, as I was trying to find out who at OIT to send this to, I was looking at your background, to see if I could come up with something to riff about before getting down business. We have a lot of commonalities that are pretty bizarre! I learned to ski at Shawnee and loved driving through the DWG. As I got older I have always thought I would have loved to spend more time there in my youth, especially after reading John McPhee's discussion of geology through the water gap. I grew up in Allentown NJ (exit 7a). I went to Penn State too! Did two years at Hazleton before heading to State College. And I taught in RRWS at Humboldt for 2.5 years before moving to Oregon. And I like looking at birds in tropical areas (Costa Rica though, not Jamaica! See – so much common in background.

Second, to the business. Two years ago I wrote then program lead Michael Hughes (see below) about OSU-Cascades wanting to bring the OSU Environmental Sciences program to Cascades. I finally have that in the approval process. It will go through the OSU process and eventually make it to HECC. I am attaching a liaison letter and our planned base curriculum for the program here in Bend.

Page 1 of 3

If you and your group have any concerns or comments on bringing ENSC to Cascades, please let me know.
Thanks.

Ron

*Ron Reuter
OSU Cascades Natural Resources*

From: Michael Hughes <Michael.Hughes@oit.edu>
Date: Thursday, December 8, 2016 at 1:42 PM
To: "Reuter, Ronald" <Ron.Reuter@oregonstate.edu>
Cc: "beckerla@science.oregonstate.edu" <beckerla@science.oregonstate.edu>, Rosalind McClure <Rosalind.McClure@oit.edu>, LeAnn Maupin <LeAnn.Maupin@oit.edu>
Subject: Re: ENSC at OSU-Cascades

Hi Ron,

Thank you for reaching out...

I realize this is more of a requirement than a courtesy, but I nonetheless appreciate the info and imagine some mutual benefits in contemplating and discussing the impacts of your proposal.

Would you like to schedule a meeting or conference call? I would invite our Natural Sciences Chair, Rose McClure, and our HAS Dean and Interim Provost, LeaAnn Maupin, both copied here...

It's indeed too bad we haven't been able to connect on wetlands, although maybe we shouldn't give up just yet...:-)

Michael L. Hughes
Director of Environmental Sciences
Oregon Institute of Technology
3201 Campus Drive
Klamath Falls, OR 97601
541-885-1642
<http://www.oit.edu/faculty/mhughes>

From: Reuter, Ronald <Ron.Reuter@oregonstate.edu>
Sent: Wednesday, December 7, 2016 3:35 PM
To: Michael Hughes
Cc: beckerla@science.oregonstate.edu
Subject: ENSC at OSU-Cascades

Page 2 of 3

Hi Michael,

I think a long while ago we were supposed to get together and work on a field course in wetlands. Funny how busy life gets and opportunities slip by. You have hopefully heard about our expanding campus here in Bend. Last year we started offering our degrees on a four-year basis, getting away from the 2+2 model we had with Central Oregon Community College. This past summer we moved onto our new campus. As part of meeting the needs of Oregon for education and OSU's role in that task, OSU-Cascades needs to grow programs to meet our enrollment projections of 3000 students by 2025.

Our Natural Resources program has been relatively successful over the years, being in the top five lately and the top three before that. An easy lift for adding dimension to the natural and earth sciences here is bringing over the Environmental Sciences degree from Corvallis. Larry Becker is the program director there. To bring over ENSC, we are completing a Higher Education Coordinating Commission proposal for delivering an existing program to a new location. One of the requirements is to liaise with other state institutions that offer similar programs and check on impact to those institutions.

So I am checking in with you at OIT (and cc'ing Larry Becker) to get your impression of the impact on OIT of OSU-Cascades offering Environmental Science as a BS degree, potentially also offering the minor as well. We do not have capacity to step into graduate level offerings anytime soon.

The OSU ENSC curriculum can be found at <http://ceoas.oregonstate.edu/envsci/>. We would be offering the Applied Ecology specialization area. While I don't envision a large impact, other than maybe one or two students choosing Bend over Klamath Falls, you may have a different impression.

Hope you get a chance to think about this and respond before the holidays. If you have questions about anything, please let me know.

Cheers.

Ron

*Ron Reuter
Assistant Dean OSU-Cascades
Natural Resources Program Lead
(541) 322-3109*

E – Letters of Support: Notification to WOU with No Response



Oregon State University – Cascades
1500 SW Chandler Avenue, Bend, Oregon 97702
T 541-322-3109 | ron.reuter@oregonstate.edu

Dr. Ron Reuter
Assoc. Professor of Natural Resources
Program Lead Natural Resources

DATE: January 23, 2019

Dr. Jeffrey Templeton
Western Oregon University
Earth Science

RE: Environmental Sciences Program at OSU-Cascades

Dear Dr. Templeton,

OSU-Cascades is proposing to offer the existing OSU Environmental Science (ENSC) undergraduate degree program in Bend. We have worked with the ENSC program leadership and the leadership of College of Earth Ocean and Atmospheric Sciences (CEOAS) to develop the proposal. The process to approve delivering an existing OSU program at a new location >40 miles from current offering requires an OSU Category I curriculum proposal and review by Oregon's Higher Education Coordinating Commission.

OSU-Cascades currently offers over 20 academic programs, including Natural Resources. Our proposed version of ENSC falls under the existing program in CEOAS. The curriculum of ENSC at OSU-Cascades will have oversight by CEOAS. Our campus program lead will run the program as approved by the program lead in Corvallis. We are initially proposing to offer the "Applied Ecology" and "Conservation and Sustainability" options at OSU-Cascades as those tracks fit well with existing curriculum, faculty teaching and research interests, and demand from prospective students and communities.

Western Oregon University offers earth sciences with a specialty in environmental studies as an undergraduate degree. We recognize that offering ENSC at OSU-Cascades may cause some initial competition for students with WOU, however, we expect the impact to be minimal, especially since students could already choose the Natural Resources program at Cascades, which has been offered since 2000. The attached document shows the proposed OSU-Cascades ENSC curriculum for the initial offering. Our growth projections for the program are:

Academic year	New students	Graduating students
2020	5	
2021	8	3
2022	12	5
2023	12	10
2024	15	12

This letter serves as liaison about the proposal to include ENSC at OSU-Cascades. If you have questions, concerns, or would like to provide a letter of support for the proposal, please let me know. Feel free to contact me if you have questions going forward.

Sincerely,

A handwritten signature in black ink, appearing to read "Ron Reuter".

E – Letters of Support: University of Oregon

From: Feser, Edward <ed.feser@oregonstate.edu>
Sent: Thursday, June 6, 2019 11:19 AM
To: Gitelman, Alix I <Alix.Gitelman@oregonstate.edu>
Cc: Lopez Gonzalez, Romeo <Romeo.LopezGonzalez@oregonstate.edu>
Subject: FW: Feedback on OSU-Environmental Studies

Alix,

UO would like the language below added to our BS Environmental Science proposal before it is forwarded on to HECC.

“The University of Oregon offers a BA and BS in Environmental Science. UO was not contacted prior to this proposal but they provided feedback prior to discussion at the Statewide Provosts Council. UO stated that while the proposed major at OSU-Cascades substantially overlaps with UO’s, and that UO’s program similarly emphasizes interdisciplinarity and includes a practical learning experience, UO is not concerned that the new major will impact UO’s enrollments given the existing program in Corvallis and the suggested small size of the new major on OSU’s Bend campus.”

Thanks,

Ed

F – Liaison Comments

Subject: Environmental Science Program at OSU-Cascades - Liaison
Date: Thursday, January 24, 2019 at 9:01:55 AM Pacific Standard Time
From: Dugger, Bruce
To: Reuter, Ronald
CC: Diebel, Penelope L, Heppell, Scott, Heppell, Selina S

Hey Ron,

Thanks for the heads up; this is consistent with what you and I discussed earlier. I let Selina know this was coming. I've also cc'd her on this email as a reminder. I've also cc'd Scott Heppell, chair of our Curriculum Committee to broaden the circle.

I do need to follow up with you regarding our discussion last term about how FW courses at Cascades correspond with our offerings in Corvallis. As you may recall, I sent the syllabi for the Cascades offerings of our courses to our faculty and asked for input. A number of folks had concerns about course content so some follow up conversation is needed. I think we also should set something up that guarantees your folks and our folks who teach the same FW course interact more regularly to minimize mission creep. Recall we had the same problem with FW340. Some cross pollination would likely be productive for all involved. No need to go into details here, but I suggest you and I have a follow up phone call to talk about this.

Thanks,
Bruce

Bruce Dugger
Assoc Prof and Assoc Department Head
Dept of Fisheries and Wildlife
Oregon State University
Corvallis, OR 97331
ph: 541-737-2465
website: <http://labs.fw.oregonstate.edu/labs/dugger/>

F – Liaison Comments

Subject: Re: Environmental Science Program at OSU-Cascades - Liaison
Date: Thursday, January 24, 2019 at 9:49:21 AM Pacific Standard Time
From: Kate Lajtha
To: Reuter, Ronald
CC: Diebel, Penelope L, Scheerer, Ann M

Hi Ron,

I spoke with Matt last week about ENSC coming to Cascades, and that is terrific news! Please do use any and all of the SUS classes for the major, and let us know how we can help this new program thrive. Coincidentally, I met with the ENSC advisors here in Corvallis, with Ann Scheerer, and we outlined some plans to make it easier for ENSC students to get a minor or a double major in SUS. A goal is to write a clear 4-year sample program of study that students could use as an example blueprint. When we get that done I'll pass it along - there will certainly need to be some modifications made, but it might be a useful starting point.

Cheers,

Kate

Kate Lajtha
Dept. Crop and Soil Sciences
ALS 3059
Oregon State University
Corvallis, OR 97331

Institution: Oregon State University
Program: BS in Environmental Sciences

Action: At the **June 6, 2019** meeting, the Statewide Provosts Council approved a new program for **Oregon State University, BS in Environmental Sciences**, to move forward to the Oregon Higher Education Coordinating Commission for its review and approval. The **Oregon State University** Board of Trustees approved the program at its **April 4, 2019** meeting.

Eastern Oregon University

Sarah Witte, provost

Approved
 Opposed
 Abstained



Oregon Health & Science University

Elena Andresen, interim provost

Approved
 Opposed
 Abstained



Oregon State University

Ed Feser, provost

Approved
 Opposed
 Abstained



Oregon Tech

Gary Kuleck, provost

Approved
 Opposed
 Abstained



Portland State University

Susan Jeffords, provost

Approved
 Opposed
 Abstained



Southern Oregon University

Susan Walsh, provost

Approved
 Opposed
 Abstained



University of Oregon

Jayanth Banavar, provost

Approved
 Opposed
 Abstained



Western Oregon University

Rob Winningham, provost

Approved
 Opposed
 Abstained

