

# Environmental Case Studies (ENSC 321)

Winter 2024, Corvallis Campus, Oregon State University

3 credits, WIC course

Tuesdays / Thursdays 8:30 – 9:50 in WLKN 235

Instructor: Tyler McFadden  
Instructor and Program Coordinator,  
Environmental Sciences Undergraduate Program  
College of Earth, Ocean, and Atmospheric Sciences

Contact: Email: [tyler.mcfadden@oregonstate.edu](mailto:tyler.mcfadden@oregonstate.edu)  
Office: 250 Wilkinson Hall  
Phone: 541-737-9164

Office hours: TBA or by appointment. Meetings in Wilkinson 250 and via [Zoom](#).

## OSU CATALOG COURSE DESCRIPTION

Develops professional and scientific writing abilities through the analysis of current issues in environmental science. Integrates and applies multiple aspects of environmental problem solving, including diagnosis of issues, articulation of solutions, and communication of recommendations in a policy or management context.

**Attributes:** CWIC – Bacc Core, Skills, Writing Intensive Course

**Recommended:** WR 121 and one year of college biology

## FULL COURSE DESCRIPTION

This course focuses on developing the critical thinking and writing skills needed to understand and address complex environmental challenges. Most modern-day environmental challenges are about much more than just the environment – they may involve elements of ecology, biology, geology, chemistry, statistics, social science, culture, politics, law, ethics, and more. Environmental professionals\* must be able to communicate effectively with experts in many different disciplines, as well as members of the public, the media, and decision makers. Effective writing is an essential skill for navigating this multidisciplinary arena.

\* Note: by environmental professionals, I am referring to anyone pursuing careers in environmental science, natural resources, fisheries and wildlife, marine biology, rangeland science, botany, and other related fields.

In this course, students will hone their written communication skills through the analysis of current issues in environmental science, conservation, and natural resource management. This course fulfills the Baccalaureate Core requirement for the WIC category for students majoring in Environmental Science. It does so through the frequent practice of both formal and informal writing styles commonly used in environmental professions. All the assignments and activities are designed to reflect real types of writing that students will use in future careers. Course activities will ask students to actively engage in environmental problem solving and develop recommendations for addressing an environmental challenge of their choice.

Throughout the course, students will complete individual projects on a topic of their choice that is related to a broad theme (see below for details on this term's theme). Students will research the issue, identify relevant decision makers, and synthesize existing knowledge in a policy and management context. By the end of the course, students will produce a technical 'white paper' report and an associated public comment letter addressed to a relevant decision-making group. Students are encouraged (but not required) to share their final product with their chosen decision-making group and thus participate in the environmental policymaking process. Periodic assignments will help students narrow in on a topic, investigate the issue, and draft portions of their final paper. Students will receive regular feedback on their writing via these assignments and on a draft of their final paper.

### **COURSE THEME: 30X30**

30x30 (or 30 by 30) is a global initiative aimed at conserving 30% of land and water by the year 2030. First proposed in 2019, 30x30 has quickly gathered support as an ambitious way to prevent biodiversity loss, mitigate and adapt to climate change, and expand equitable access to nature. More than [100 countries](#) (including the United States) have pledged their support for 30x30, as have several states, including California, Nevada, and Maine.

Despite this growing support, numerous challenges and criticisms remain. Reaching 30% in the next eight years would require doubling the current amount of area protected on land and quadrupling the amount of ocean area protected. Critics have argued that such a vast expansion of the world's protected areas could lead to green gentrification, government land grabs, human rights abuses, and the displacement of indigenous people. Others argue that conserving large areas of land and water is necessary for addressing the extinction and climate crises, and that if done right, 30x30 could actually address historic inequities in nature access.

This term, we will take a deep dive into 30x30 and area-based conservation. Each week we will cover a different aspect of the science and policies underlying 30x30. In parallel, students will investigate a topic of their choice and develop their own recommendations for how to best implement 30x30 in their own geographic area.

### **LEARNING OUTCOMES**

Please carefully review these learning outcomes. These are the skills I expect you to develop throughout the term and they will be the basis for grading your final report.

1. *Evaluate* the state of knowledge on a current environmental topic to identify challenges, opportunities, and knowledge gaps.
2. *Assess* the relevance and impacts of a current environmental topic for local stakeholders or decision makers.
3. *Compile and analyze* information from diverse interdisciplinary sources, including but not limited to peer-reviewed literature.
4. *Synthesize* data and theory on human and natural systems to *appraise* conservation and management actions.
5. *Formulate* environmental policy recommendations.

6. *Communicate* written information in a manner that is that is compelling, precise, evidence-based, and appropriate for the audience.

Specific learning outcomes related to this term’s theme:

7. *Describe* the pros and cons of area-based conservation.
8. *Apply* concepts and theory from ecology to the design of natural protected areas.

### WRITING INTENSIVE COURSE (WIC) OUTCOMES

This course fulfills the Baccalaureate Core requirement for the WIC category for students majoring in Environmental Sciences.

1. Develop and articulate content knowledge and critical thinking in the discipline through frequent practice of informal and formal writing.
2. Demonstrate knowledge/understanding of audience expectations, genres, and conventions appropriate to communicating in the discipline.
3. Demonstrate the ability to compose a document of at least 2000 words through multiple aspects of writing, including brainstorming, drafting, using sources appropriately, and revising comprehensively after receiving feedback on a draft.

### ALIGNMENT OF WIC LEARNING OUTCOMES WITH COURSE ASSIGNMENTS

WIC Learning Outcome	How does the course align with or meet this specific outcome?	How is student achievement of this outcome measured?
#1 - Develop and articulate content knowledge and critical thinking in the discipline through frequent practice of informal and formal writing.	<p><b>Informal Writing</b> Weekly discussion boards have students reflect on current topics in environmental sciences, seek peer feedback on paper ideas or drafts, and self-reflect on career interests and professional development</p> <p><b>Formal Writing</b> Students produce a final paper containing a technical report and public comment letter on a topic of their choice related to the course theme. Five assignments help students identify a topic, investigate the issue, and write sections of the paper. Feedback is provided on all assignments and substantial revision is required.</p>	<p><b>Informal Writing</b> Marked complete or incomplete.</p> <p><b>Formal Writing</b> Assignments will be graded for content with feedback provided. Feedback for the draft and final papers is provided in a rubric and via detailed comments and edits. Grades for the final paper are based on this rubric.</p>

<p>#2 - Demonstrate knowledge/understanding of audience expectations, genres, and conventions appropriate to communicating in the discipline.</p>	<p>The final paper contains two parts (a technical report and a public comment letter), each of which is a writing genre commonly used by a wide variety of environmental science professionals. Content, formatting, and style requirements for the final paper align with conventions in our field. Students are asked to identify a relevant stakeholder or decision-making group to whom they will target their final paper. Student writing must be tailored to the intended audience.</p>	<p>Assignments are graded for content with feedback provided on adherence to discipline- and audience-relevant genres, conventions, language, and content. Feedback for the draft and final papers is provided in a rubric and via detailed comments and edits. Grades for the final paper are based on this rubric.</p>
<p>#3 - Demonstrate the ability to compose a document of at least 2000 words through multiple aspects of writing, including brainstorming, drafting, using sources appropriately, and revising comprehensively after receiving feedback on a draft.</p>	<p>The discussion boards and five assignments lead students through multiple stages of writing, including brainstorming, drafting sections, research, and revisions. Word count of the final paper exceeds 2,000. Feedback is provided on all assignments (including a complete draft of the final paper) and substantial revision is required.</p>	<p>The final paper is graded based on a rubric that includes a length requirement and substantial revisions based on previously given feedback. Building block assignments assess student progress on multiple aspects of writing and are graded with substantial feedback.</p>

## ASSIGNMENTS AND POINT VALUES

Item	Word Count	Points
<p><b>Quick Writes (submitted through the Discussion Board)</b> (10 weeks x 10 pts, one “bye” week or extra-credit if all 10 weeks are completed)</p>	<p>150 X 10 = 1,500</p>	<p>90</p>
<p><b>Assignments 25 pts. x 5 assignments</b> Assignment #1: Data Exploration Assignment #2: Issue Statement &amp; Project Proposal Assignment #3: Decision Maker Identification Assignment #4: Annotated Bibliography Assignment #5: Annotated Outline</p>	<p>#1: 300 #2: 400 #3: 500 #4: 500 #5: 1,000</p>	<p>125</p>
<p><b>Draft Paper</b> (2 parts: Public Comment Letter &amp; Technical Report)</p>	<p>3,000</p>	<p>50</p>
<p><b>Final Paper</b> (2 parts: Public Comment Letter &amp; Technical Report)</p>	<p>3,000</p>	<p>150</p>

<b>TOTALS</b>	<b>10,200</b>	<b>415</b>
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### TEXTBOOKS / LEARNING RESOURCES

There is no required textbook. All readings and resources will be posted on Canvas or made available in class.

### LATE-WORK POLICY

Assignments are due by the end of the day on Monday so that you will be ready to engage in the new week's material and class discussions. I will accept late work for most \*\* assignments with a slight penalty:

- Work turned in within 8 hours of due date – no penalty
- Work turned in within 3 days of due date – 10% penalty
- Work turned in >3 days after due date – 25% penalty

\*\* I will not accept late work for the Draft Paper or Final Paper. I also will not accept Quick Write Discussion Board posts submitted after Monday. Please reach out if you need accommodations or if there are serious circumstances that will prevent you from turning work in on time. I am generally flexible and will try to offer reasonable extensions if you discuss the need with me in advance.

### GRADING

Percentage Grade

100-93	A	79-77	C+	62-60	D-
92-90	A-	76-73	C	59-0	F
89-87	B+	72-70	C-		
86-83	B	69-67	D+		
82-80	B-	66-63	D		

### COMMUNICATION

Key course activities and logistics will be communicated through the Canvas modules in the 'Overview' sections. Changes or additional course announcements may be communicated through Canvas Announcements. Please post all course-related questions in the Q&A Discussion board so the whole class may benefit from our conversation. Please email your instructor ([tyler.mcfadden@oregonstate.edu](mailto:tyler.mcfadden@oregonstate.edu)) for personal or grade-related questions. I will strive to reply to course-related questions and emails within 24 hours during the work week; however, I generally do not check email Saturdays and Sundays. I will strive to return your assignments and grades for course activities to you within 1 week of the due date.

### ACADEMIC CALENDAR

All students are subject to the registration and refund deadlines as stated in the Academic Calendar: <https://registrar.oregonstate.edu/osu-academic-calendar>

### **STUDENTS WITH DISABILITIES:**

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at <http://ds.oregonstate.edu>. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

### **EXPECTATIONS FOR STUDENT CONDUCT:**

Students are expected to maintain proper academic conduct in this class. This includes treating peers with respect and meeting the conduct expectations of Oregon State University regarding cheating or other behaviors. To review these expectations, please visit the following Web site: <https://beav.es/codeofconduct>

### **STUDENT BILL OF RIGHTS**

OSU has twelve established student rights. They include due process in all university disciplinary processes, an equal opportunity to learn, and grading in accordance with the course syllabus: <https://asosu.oregonstate.edu/advocacy/rights>

### **REACH OUT FOR SUCCESS\***

University students encounter setbacks from time to time. If you encounter difficulties and need assistance, it's important to reach out. Consider discussing the situation with an instructor or academic advisor. Learn about resources that assist with wellness and academic success at [oregonstate.edu/ReachOut](http://oregonstate.edu/ReachOut). If you are in immediate crisis, please contact the Crisis Text Line by texting OREGON to 741-741 or call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255)

### **RESOURCES AT OSU**

There are many people and resources at OSU that are eager to help you succeed in your academic path. If you're unsure where to start, check out these free academic support resources: [Academic Coaching](#), [Supplemental Instruction](#), [the Writing Center](#), [the Learning Corner](#), and [UESP](#). If none of these resources is the right fit, get in touch with someone: talk to me, to your academic advisor, or to a [Strategist](#) in the [Academic Success Center](#). OSU provides free counseling and mental health services to students through [CAPS](#). Crisis services are available 24/7 [here](#), or you can call or text 988 for the national Suicide & Crisis Lifeline.

### **CALENDAR**

Weekly modules containing resources and an overview of that week's activities will be posted on Canvas. Each weekly module will be published by 5pm Pacific time on the Friday before the start of that week so that you have an idea of the week to come. Assignments are always due by the end of the day Monday the week after.

<b>Week</b>	<b>Readings and Resources</b>	<b>Assignments</b>
<b>Before class (Week 0)</b>	<ul style="list-style-type: none"> <li>- Review Canvas Home page and 'Start Here' Module</li> <li>- Read syllabus</li> <li>- Review Final Paper Assignment</li> </ul>	None
<b>Week 1</b> 30x30 and area-based conservation	<ul style="list-style-type: none"> <li>- Protected areas lecture</li> <li>- National Geographic <i>America the Beautiful</i> article</li> <li>- Mongabay article on 30x30 and indigenous rights</li> </ul>	<ul style="list-style-type: none"> <li>- Discussion Board (DB)</li> </ul> <p><i>(Each week the 1<sup>st</sup> post is due Thursday @ 11:59 pm PST; the 2<sup>nd</sup> post is due Monday @ 11:59 pm PST)</i></p>
<b>Week 2</b> Habitat and Biodiversity; Protected areas in your region	<ul style="list-style-type: none"> <li>- Habitat &amp; Biodiversity lecture</li> <li>- Pg. 23-33 from <i>California Pathways to 30x30</i></li> <li>- Explore geospatial data and maps of protected areas, biodiversity, and socioeconomics</li> </ul>	<ul style="list-style-type: none"> <li>- DB</li> <li>- Data Exploration Assignment, due <i>Monday DATE @ 11:59 pm</i></li> </ul>
<b>Week 3</b> Connectivity; Project proposal	<ul style="list-style-type: none"> <li>- Connectivity lecture</li> <li>- IUCN connectivity guidelines</li> <li>- And, But, Therefore writing technique</li> <li>- Randy Olsen Ted Talk on creating a narrative</li> </ul>	<ul style="list-style-type: none"> <li>- DB</li> <li>- Issue Statement &amp; Project Proposal Assignment due <i>Monday DATE @ 11:59 pm</i></li> </ul>
<b>Week 4</b> Ecosystem services; Choosing your audience	<ul style="list-style-type: none"> <li>- Ecosystem services lecture</li> <li>- Díaz et al. 2018</li> <li>- Discussion on nature &amp; world views</li> <li>- Review example technical reports</li> <li>- Review example public comment letters</li> </ul>	<ul style="list-style-type: none"> <li>- DB</li> <li>- Decision Maker Identification Assignment due <i>Monday DATE @ 11:59 pm</i></li> </ul>
<b>Week 5</b> Conservation Prioritization; Research skills	<ul style="list-style-type: none"> <li>- Conservation prioritization lecture</li> <li>- Wyborn and Evans 2021</li> <li>- Chaplin-Kramer et al. 2021</li> <li>- How to read a scientific paper</li> </ul>	<ul style="list-style-type: none"> <li>- DB</li> <li>- Annotated Bibliography Assignment due <i>Monday DATE @ 11:59 pm</i></li> </ul>
<b>Week 6</b> 30x30 in the United States; Putting your paper together	<ul style="list-style-type: none"> <li>- Excerpts from <i>Conserving and Restoring America the Beautiful</i></li> <li>- Excerpts from <i>California's Pathways to 30x30</i></li> <li>- Scientific voice and writing styles</li> </ul>	<ul style="list-style-type: none"> <li>- DB</li> <li>- Annotated Outline Assignment due <i>Monday DATE @ 11:59 pm</i></li> </ul>

<b>Week 7</b> International 30x30 efforts	<ul style="list-style-type: none"> <li>- The Guardian article on COP15</li> <li>- Post-2020 Global Biodiversity Framework</li> <li>- Discussion on 'fortress conservation'</li> </ul>	<ul style="list-style-type: none"> <li>- DB</li> <li>- Work on your draft paper</li> </ul>
<b>Week 8</b> Other types of environmental writing	<ul style="list-style-type: none"> <li>- Scientific journals and publishing process</li> <li>- Environmental Impact Statements</li> </ul>	<ul style="list-style-type: none"> <li>- DB</li> <li>- <b>Draft Paper due <i>Monday DATE @ 11:59 pm</i></b></li> <li>- <b>Feedback on draft provided by <i>Thursday of Week 9 @ 5:00 pm</i></b></li> </ul>
<b>Week 9</b> Environmental science careers	<ul style="list-style-type: none"> <li>- Cover letter and resume writing</li> <li>- Applying to graduate school</li> <li>- Job search tools</li> </ul>	<ul style="list-style-type: none"> <li>- DB</li> </ul>
<b>Week 10</b> Work on final papers	<ul style="list-style-type: none"> <li>- Tips for editing</li> <li>- Peer review of writing</li> </ul>	<ul style="list-style-type: none"> <li>- DB</li> <li>- FINAL PAPERS DUE <i>Monday DATE @ 11:59 pm</i></li> </ul>
<b>FINALS WEEK</b>		<ul style="list-style-type: none"> <li>- No final exam</li> <li>- Complete your SLEs (student learning experience evaluations)</li> </ul>