Environmental Science 2

EVS 3500 Class# 24072 (3 credit hours) – Fall 2025
T period 7 (1:55 – 2:45), R periods 7-8 (1:55 – 3:50)
Classroom: Mechanical & Aerospace Engineering A, Room 327

Syllabus

Instructor: Dr. Danny Coenen, Instructional Associate Professor & Undergraduate Coordinator
Email: dcoenen@ufl.edu
Office Location: McCarty D, Room 2047
Drop-in office hours: W 1:00 – 3:00, or by appointment

Teaching Assistant: Shelby Kucharski, Interdisciplinary Ecology PhD candidate
Email: shelbykucharski@ufl.edu
Office Location: McCarty D, Room 2053
Drop-in office hours: T 12:00 – 1:00, R 11:00 – 12:00, or by appointment

We are here for you! Please don't hesitate to ask for assistance!

Course Description
Advanced environmental science topics with a focus on methods and applications to develop reasoned solutions to the complex social-ecological issues impacting society.

Prerequisites
EVS3000 & EVS3000L, or instructor permission.

Place in Curriculum
EVS3500 is the second part of the two-semester Environmental Science foundation course sequence offered by the School of Natural Resources and Environment (SNRE). The goal of this course is to expose students to additional and emerging topics in environmental science and provide them with practice in career-relevant skills in science communication and collaboration.

- If you are an Environmental Science major, you should take EVS3500 during the semester after you complete EVS3000, if possible (as early as semester 4, i.e. the second semester of your sophomore year and no later than semester 6, i.e. the second semester of your junior year). For students admitted to UF prior to Fall 2025, this course will count as an elective credit towards your Environmental Science degree (you may choose any elective category other than B.A. Communication & Leadership). For students admitted Fall 2025 or later, this course will count towards your Foundation Core requirement.
- If you are an environmental science minor or interested in taking this course as a free elective or for credit towards a non-SNRE major or minor after having completed EVS3000, please contact SNRE's undergraduate advisor Ali Goetz at a.goetz@ufl.edu as early as possible for enrollment information.

Student Learning Outcomes
By the end of the semester, you will be able to:

1) recall and apply additional key terminology and definitions important in environmental science practice and research.
2) examine social-ecological problems through the lenses of complex adaptive systems and environmental social science theories.
3) review and critique current and emerging technology-based solutions to environmental problems.
4) create a literature review paper that comprehensively assesses the state of knowledge on and proposed solutions to a social-ecological problem.
5) collaborate with peers to create and deliver a presentation appraising the feasibility of emergent environmental technologies and practices through the lenses of ecological, social, and economic sustainability.

Course Structure
EVS3500 is an in-person lecture course with three periods of instruction per week. There are currently no plans for online lectures, although this may change depending on how the semester progresses.

Textbooks and readings
There two *recommended* textbooks for this class.

Pontius, J. & McIntosh, A. (2020). *Critical skills for environmental professionals: Putting knowledge into practice*. Springer Nature Switzerland. https://doi.org/10.1007/978-3-030-28542-5

Cunningham, W.P. & Cunningham, M.A. (2023). *Environmental science: A global concern* (16th ed.). McGraw Hill.

 It is available as an eBook through UF All Access at a discounted price. See https://businessservices.ufl.edu/services/uf-bookstore/uf-all-access/ for information and support. Please note: It may take several days after the start of the semester for you to receive access to the textbook.

Additional required readings will be made available on Canvas or UF library electronic reserves.

Grading

Grading is based on how well you apply the learned material as outlined by assignment-specific rubrics provided on Canvas and the student learning outcomes listed in the syllabus. Your grades rate the *quality* of the work submitted and are not an assessment of the quantity of effort invested.

To avoid losing points, you must verify that all assignments are successfully uploaded to Canvas by the deadline. Missing, corrupt, or incompatible files may result in grade penalties up to a score of zero for the assignment. You are responsible for maintaining duplicate copies of all work submitted in this course until the end of the semester.

In case of a grading dispute, you must notify me by email within one week of the date the grade is posted to Canvas. Please include an explanation of what aspect of your grade you disagree with. End-of-semester requests for grade bumps, assignment do-overs, additional extra credit, etc. will be denied.

Please do not wait until the end of the semester to discuss problems with the course material or your performance in class. Your wellbeing and success are important to me, SNRE, the College of Agricultural and Life Sciences, and the University of Florida, so please contact me to discuss any concerns as soon as they arise.

Grading scale

Grade	Points	Percent	Grade	Points	Percent
A:	930.0-1000	93.0-100.0%	C:	730.0-769.9	73.0-76.9%
A-	900.0-929.9	90.0-92.9%	C-	700.0-729.9	70.0-72.9%
B+:	870.0-899.9	87.0-89.9%	D+:	670.0-699.9	67.0-69.9%
B:	830.0-869.9	83.0-86.9%	D:	630.0-669.9	63.0-66.9%
B-	800.0-829.9	80.0-82.9%	D-	600.0-629.9	60.0-62.9%
C+:	770.0-799.9	77.0-79.9%	E:	0.0-599.9	0.0-59.9%

Your final grade for this course will be based on a 1000-point scale and will be weighted as follows:

Grade Component	Points	Percentage
Attendance	100	10.0%
Engagement	130	13.0%
Literature review proposal	30	3.0%
Literature review annotated bibliography	90	9.0%
Literature review paper	180	18.0%
Emerging technologies and practices presentation	150	15.0%
Exam 1	160	16.0%
Exam 2	160	16.0%
Total	**1000**	**100%**

Attendance: Attending class regularly is foundational to learning. Your attendance grade is based on the number of class sessions you are present for. Please arrive on time and be prepared to learn. You are permitted to miss up to three class periods without impact to your attendance grade, although any missed engagement activities will incur a score of zero. Additional unexcused absences and inappropriate or disruptive classroom behavior will result in a reduction of your attendance grade.

Absences will be excused:
- in case of illness or injury, upon receipt of a doctor's note or equivalent, or by following the procedure outlined here: https://care.dso.ufl.edu/instructor-notifications.
- in case of family emergencies, deaths, or other extenuating circumstances, by following the procedure outlined here: https://care.dso.ufl.edu/instructor-notifications.
- in case of religious holidays, by informing me via email ahead of time.
- in case of military duty, jury duty, participation in academic conferences, or participation in official university or UAA events, by providing appropriate evidence ahead of time.
- in all other cases, or if you are unsure, please email me as soon as feasible. Absences are generally not excused for personal non-emergency travel and vehicle problems.

If absent, it is your responsibility to make yourself aware of all due dates via the course e-learning site.

Engagement: Learning is an active process facilitated by reflecting on, critically thinking about, and applying readings, lecture material, and out-of-class experiences. Your engagement grade is based

on your contributions to formal and informal in-class discussions and activities. You are strongly encouraged to participate during each class meeting by asking relevant questions, engaging in discussion, or sharing personal experiences on the topic. Raise your hand at any time to participate! The precise number of engagement opportunities will vary depending on the needs and interests of this semester's cohort of students. Your engagement grade is aligned with course learning objectives 1 through 3.

Literature Review Paper: Peer-reviewed literature is the primary means through which scientific advances are publicized and critiqued. Evaluating what is known and what remains unknown about an issue of interest through synthesis of the professional literature is an essential preliminary step to any research project. This assignment allows you to practice this skill by producing a 1800-2200-word analytical synthesis of peer-reviewed literature in which you will comprehensively explore a social-ecological topic of your personal interest (subject to instructor approval) in detail. There are three graded submissions for this assignment: a proposal, an annotated bibliography, and the final paper. You will receive feedback on each submission before proceeding to the next. Grading will be by rubric posted on Canvas. A Turnitin.com score of less than 10% is expected. This part of your course grade is aligned with course learning objectives 1 through 4 with an emphasis on 4.

Emerging Technologies and Practices Presentation: Science is a collaborative process, thriving on the integration of knowledge held by contributors. For this presentation, you will work in groups of four to five students to research emerging environmental technologies and practices that are at least at the prototype or pilot stages of implementation, and critique them in terms of their social-ecological, political, and financial feasibility. You will present your findings by creating an engaging, professional presentation that will be reviewed by your instructor, TA, and your peers. Grading will be by rubric. This part of your course grade is aligned with course learning objectives 1 through 3 and 5, with an emphasis on 5.

Examinations: As a foundation course, acquisition and application of knowledge gained in this course will help you succeed in more advanced coursework and benefit your future careers. All information covered in readings and presented in class (incl. live and pre-recorded lectures, videos, discussions, and student contributions) is potential exam material. I emphasize questions that incorporate elements of critical thinking over rote memorization. Each exam consists of 40-50 multiple choice questions. This part of your course grade is aligned with course learning objectives 1 through 3.

University of Florida Academic Policies
Please visit https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/ for the latest academic policies.

Course Policies

Preamble
First and foremost, we want you to be successful in this class and in your degree program. Being a key foundation core course for your Environmental Science B.A. or B.S., we expect you to assign EVS3500 its due priority. **However, if at any point you experience extenuating circumstances that prevent you from performing to your full academic potential, please reach out to me for help!**

Non-Discrimination Policy
I support University of Florida regulation 1.006 on non-discrimination and Board of Governors regulation 2.003 on equal access and opportunity. This classroom is a place where you are valued and will be treated with respect. All members of this class are expected to contribute to a respectful and welcoming environment for every other member of the class. This does not mean that you are not allowed to disagree with others, but that such differences should be explored without *ad hominem* judgment. Considering different perspectives enriches our understanding of the variety of human-nature interactions and is imperative to developing just solutions to complex environmental problems.
Your instructor may utilize teaching tools such as "playing devil's advocate" or "putting yourself in the shoes of others" from time to time. Pursuant Florida Statute 760.10(8)(b), such pedagogical strategies should not be misconstrued as an *endorsement* of any position in conflict with Florida Statute 760.10(8)(a). Should I inadvertently make a statement offensive to you, please let me know so that I may learn and grow from the incident.

Make-up Policy
To maintain fairness, only work missed due to excused absences can be made up. For absences excused ahead of time, I will develop a make-up plan. In case of documented illnesses or emergencies, arrangements for completing make-up exams or assignments should be made upon your return to class. If experiencing truly extenuating circumstances resulting in longer absences, you should let me know as soon as possible. If you miss an exam for a non-excusable reason, a score of zero will be entered. Unfortunately, we are unable to accept assignment do-overs (resubmissions for a higher score) in this class. Missed extra credit opportunities cannot be made up.

Late Work
You are responsible for turning assignments in on time unless an extension has been requested by email prior to the deadline. In case of true documented emergencies, I may waive this requirement. Technical difficulties are not generally an excuse for missing an assessment or assignment; you should have contingency plans in case any such issues arise. I recommend storing your documents on a cloud service that can be accessed from any device (OneDrive is free for UF students), and having a plan for internet outages (such as identifying a source for public Wi-Fi near you or using your cell phone as a Wi-Fi hotspot). Try not to wait until the last minute to submit assignments!

Assignments submitted between one and four days late will incur a penalty of 10% of the possible points per day. Work submitted more than four days late will be assigned a score of zero.
I highly recommend starting on assignments early to preclude unexpected emergencies or late-semester stress that could compromise your grade. Deadline extensions may be available on certain assignments if requested at least 24 hours ahead of the deadline via email. If extended deadlines are not met, late penalties will be assessed based on the original, not the revised due date!

Academic Honesty and Plagiarism
This course follows the university's honesty policy regarding cheating, plagiarism, etc.
Many students are unaware of the seriousness of violating academic ethics. **PLAGIARISM, WHETHER INTENTIONAL OR UNINTENTIONAL, IS A SERIOUS AND POTENTIALLY CAREER-ENDING FORM OF ACADEMIC MISCONDUCT. Copying and pasting from external sources without attribution is never okay in academia**. Direct quotes are not commonly used in science writing; paraphrases accompanied by a proper in-text citation should be used instead. Inappropriate use of direct quotes in this class will result in a loss of credit.

Artificial Intelligence (AI) Statement
Artificial Intelligence is an amazing new technology that is revolutionizing the way we access and process information, just like computers, the internet, and mobile phones did in prior decades. AI can be a useful tool to aid (but NOT replace) writers when brainstorming, spellchecking, and editing. **However, all work submitted for credit in this class must be your own. Using AI to generate *content* for you, including but not limited to copying & pasting AI output in whole or part into work submitted for this class** (even if you subsequently edit or paraphrase the AI output), **constitutes academic dishonesty unless explicitly permitted by the instructor as part of the written assignment instructions.**
If you use any AI application for any part of an assignment (including brainstorming ideas or editing), you must state so as part of your submission and include the entire prompt(s) that you used with the AI tool(s) as part of your submission (below your list of references); **failure to do so will be considered academic dishonesty**.

Students should be cognizant that large language models (LLMs) and similar AI applications are not credible sources and should not be used as such. They are also ill-suited for finding scholarly sources.
Further, many web sites, online services, and software packages (e.g. Grammarly, Canva, many word processors) now feature AI integrations. These policies apply to these services the same way that they do for LLMs. It is your responsibility to determine if any tools you use contain AI components, and if so, disclose use of that AI. AI-generated images may not be used unless expressly approved in writing by your instructor for a specific assignment.

Paper Guidelines
All writing assignments will be submitted to Canvas and must be in **.docx** format, with the proper file extension. Other file formats will not be accepted. All assignments must include citations and references in APA 7th edition formatting. You do not need cover pages, running headers, etc.
If you experience difficulties in the writing process are encouraged to contact your TA or me for advice or visit the UF Writing Studio (see *Campus Helping Resources* below).
I strongly recommend watching the following video on academic honesty, citing sources, and proper paraphrasing by the end of the drop-add period:
https://www.youtube.com/watch?v=g81hPRKWsdM

Office Hours
Please take advantage of office hours to discuss any questions or concerns. Contact your teaching assistant for basic questions, help with assignments, and clarifications regarding grades and feedback. Contact me regarding absences, grading disputes, concerns about other students, and any other issues. If you cannot be present for the regularly scheduled help hours, we will attempt to accommodate you at an alternate time.

Course Communication
The preferred way to get ahold of me or your TA outside of drop-in office hours is via Canvas message or direct email from your official UF email account. You can expect a response within 24-48 hours on weekdays in most cases. Emails from outside providers, like Gmail, are not considered secure and will be deleted to protect student privacy. Note that it is against FERPA best practices for me to discuss grades through email.

All students are expected to check the course web site on Canvas (https://elearning.ufl.edu) each weekday. In addition, we may send specific communications directly to your UF email, which you should check daily as well. You should enable Canvas notifications for this class, so that you are notified immediately about grading, assignment feedback, due date changes, announcements, etc.

External Communication
You may use GroupMe or similar tools to communicate with other students about the class and environmental science-related topics. **You may not, however, discuss quiz and exam questions/answers with others, including quizzes and exams from prior semesters, or collaborate on any assignments intended to be worked on individually. Doing so constitutes academic dishonesty.**

Canvas Display Name Change
Canvas uses the "Display Name" as set in myUFL. The Display Name is what you want people to see in the UF Directory, such as "Ally" instead of "Allison." To update your display name, go to one.ufl.edu, click on the dropdown at the top right, and select "Directory Profile." Click "Edit" on the right of the name panel, uncheck "Use my legal name" under "Display Name," update how you wish your name to be displayed, and click "Submit" at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

Technical Difficulties
For help with technical issues or difficulties with Canvas, please contact the UF Computing Help Desk at https://helpdesk.ufl.edu .
352-392-HELP (4357)
Walk-in: HUB 132

While technical difficulties are not generally an acceptable excuse, any requests for make-ups (assignments, exams, etc.) due to technical issues should be accompanied by the ticket number received from the UF Computing Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You should email me within 24 hours of the technical difficulty if you wish to request a make-up.

Zoom Conference Privacy
Should it become necessary or convenient to hold classes virtually using zoom, those class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated. As in all courses, unauthorized sharing of recorded materials is prohibited.

Software Use
All UF faculty, staff and students are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Campus Helping Resources

Your wellbeing is important to me and the University of Florida community. If you experience a crisis or personal problem that interferes with your wellbeing, please utilize the university's

counseling resources. You are, of course, always welcome and encouraged to talk to me about any issues that interfere with your academic performance and wellbeing.

Please visit https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/ for the latest information on academic and health & wellness resources, including the Whole Gator app.

Course Outline
(subject to change – please check the Canvas calendar for the latest information)

Critical Dates

Literature Review Paper proposal	Friday, September 26
Exam 1	Tuesday, October 7
Annotated bibliography	Thursday, October 16
Literature Review Paper	Friday, November 7
Emerging technologies & practices presentation	Thursday, November 20
Presentation peer reviews	Monday, December 1
Exam 2	Tuesday, December 2

Unit & Module

4.1	Introduction
5.1	Complex adaptive system dynamics
5.2	Conserving biological resources
5.3	Environmental impacts of mining
5.4	Urban systems
6.1	Emerging and future technologies
6.2	Climate change adaptation & mitigation
6.3	Climate change ecology

Course Alterations
Due to unforeseen circumstances or to enhance class learning opportunities, it may be necessary to alter the information given in this syllabus during the semester. Such changes are not unusual and should be expected. All changes to the syllabus will be announced in class and posted to Canvas. It is your responsibility to keep up with any syllabus changes.