



Environmental Science 1

EVS 3000 Class# 12065 (3 credit hours) – Spring 2024
T 4th period (10:40 – 11:30), R 4-5th periods (10:40 – 12:35)
Classroom: CSE (across from Marston), Room E221

Syllabus

Instructor: Dr. Danny Coenen (he/him), Instructional Associate Professor

Email: dcoenen@ufl.edu

Office Location: McCarty D, Room 2047

Drop-in help hours: T 12:00 – 1:00, R 1:00 – 2:00, or by appointment

Teaching Assistant: Yiyang (Calvin) Kang (he/him)

Email: yiyangkang@ufl.edu

Office Location: McCarty D, Room 2053

Drop-in help hours: T 12:00 – 1:00, R 1:00 – 2:00, or by appointment

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

Catalog Description

Assess environmental issues arising from human-nature interactions, including biodiversity loss, overpopulation, degradation of ecosystems, and concerns associated with energy and water use. An interdisciplinary approach integrates natural and social science perspectives to explore causes, impacts, and solutions to these issues.

Prerequisites

BSC2005(C-) or BSC2010(C-) & CHM2045(C-) or CHM2047(C-) or CHM2095(C-), or equivalent. Having successfully completed BSC2005 or BSC2011 is recommended.

Place in Curriculum

EVS3000 is the first of two Environmental Science foundation courses offered by the School of Natural Resources and Environment (SNRE). The purpose of this two-semester sequence is to provide students with foundational knowledge for the environmental science baccalaureate degrees and minor offered by SNRE. EVS3000 covers specific science content in ecology, biodiversity, Earth's resources (biotic, mineral, energy & water), and climate change.

- If you are an Environmental Science major, you should take EVS3000 during semesters 4 or 5 (i.e., the second semester of your sophomore year or the first semester of your junior year). It is recommended to enroll in EVS3000L, the accompanying laboratory course, during the same semester. While not currently a degree requirement, I encourage you to take EVS4932 (Environmental Science 2) during the following semester. Schedule an appointment with SNRE undergraduate advisor Tracy Moorman at tracy.moorman@ufl.edu if you need help fitting this class into your plan of study.
- If you are an Environmental Science minor, you may take EVS3000 anytime during your junior or senior years. It is recommended to enroll in EVS3000L, the accompanying laboratory course, during the same semester. As a minor, you do not need to take the Environmental Science 2 course.

- If you are interested in taking this course as a free elective or for credit towards a non-SNRE major or minor, please contact Tracy Moorman at tracy.moorman@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 key terminology and definitions foundational to environmental science.
- 2) review how principles from biology, chemistry, physics, geosciences, and social sciences are integrated for the study of social-ecological systems.
- 3) recognize the scale dependency of environmental processes and issues in the dimensions of space, time, and organization (taxonomy or hierarchy).
- 4) compare biological, material, and energy resources, and associated environmental constraints.
- 5) relate the complex relationship between human demography, economics, and technological development to anthropogenic environmental impacts.
- 6) apply interdisciplinary approaches to evaluating and developing solutions for environmental problems, taking into account scientific and socioeconomic information, and political constraints.
- 7) review primary research articles and appraise how they contribute to the field's body of knowledge.
- 8) design an informative and engaging science outreach poster and accompanying lightning talk.
- 9) reflect on your environmental career goals and identify steps & skills needed to realize those goals.

Course Structure

EVS3000 is an in-person lecture course with three periods of instruction per week. In addition to the in-person lectures, a few online lectures will be assigned as homework.

Textbooks and readings

Purchasing or renting the textbook is recommended, especially if you have not taken EVR2001 Introduction to Environmental Science or AP Environmental Science.

Cunningham, W.P. & Cunningham, M.A. (2020). *Environmental science: A global concern* (15th 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.

Optionally, you may also want to consider purchasing the following book for general consultation as you progress through your Environmental Science degree program:

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>

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

Grading Policies

Grading is based on how well you apply the learned material as outlined by assignment-specific rubrics provided on Canvas and the student learning objectives listed in the syllabus. It is your responsibility to ensure that all assignments are successfully uploaded to Canvas. 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 your 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 well-being 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.

Information on current UF grading policies for assigning grade points can be found at <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>.

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	120	12.0%
Career aspirations reflection paper	100	10.0%
Article analysis paper	160	16.0%
Public outreach poster and lightning talk	160	16.0%
Exam 1	120	12.0%
Exam 2	120	12.0%
Exam 3	120	12.0%
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. Repeated unexcused absences and inappropriate or disruptive classroom behavior will result in a reduction of your attendance grade (see Course Policies for details).

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 the quantity and quality of your contributions to formal and informal in-class discussions and activities, as well as homework assignments. You are strongly encouraged to participate during each class meeting by asking relevant questions, engaging in discussion, or sharing personal experiences on the topic. 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 6, with emphasis on 4-6.

Career Aspirations Reflection Paper: Different career paths require different skills, and the process of applying for graduate school differs from finding a government job. This assignment will help you reflect on your career aspirations and identify steps to maximize your chance to realize your aspirations. This part of your course grade is aligned with course learning objective 9.

Article Analysis Paper: Science is an ongoing process through which our knowledge about the world around is advanced and refined. For your article analysis, you will identify and critically read a current primary research article on a course-related topic of your choosing and apply your critical thinking skills to analyze how the reviewed research advances or revises scientific understanding of said topic. This is a formal science writing assignment with a word count of 1000-1250 words. Grading will be by rubric. This part of your course grade is aligned with course learning objective 7.

Public Outreach Poster & Lightning Talk: Science is a collaborative process, thriving from the contributions of a diverse group of contributors. Likewise, effectively communicating science to the public is an important skill for any scientist to master. You will work in small groups of 2-3 students to design an engaging and informative public outreach poster along with a 2-3-minute lightning talk to explain an environmental issue or problem to a non-scientific audience. Grading will be by rubric and include a peer-review component. This part of your course grade is aligned with course learning objectives 5 through 8, with an emphasis on 8.

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 6.

Course Policies

Diversity and Inclusiveness Statement

Diversity is one of our biggest assets in the classroom and in environmental science. Different perspectives enrich our understanding of the variety of human-nature interactions and are imperative to developing just solutions to complex environmental problems. This classroom is a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities & races, genders, gender identities, gender expressions, national origins, religions (if any), sexual orientations, ability – and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming, and inclusive 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. It is my goal to present diverse societal perspectives on environmental issues. For pedagogical reasons, this may include strategies such as “playing devil’s advocate” or “putting yourself in the

shoes of others” from time to time. At no point should students misconstrue such pedagogical strategies as an endorsement of any position in conflict with CS/HB 7 as adopted by the 2022 Florida legislature.

Should I inadvertently make a statement offensive to you, please let me know so that I may learn and grow from the incident.

Attendance Policy

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies. [Click here to read the university attendance policies](#). Requirements specific to this class are outlined below:

On-time attendance is mandatory. 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.

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 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 case of family emergencies, deaths, or other extenuating circumstances, by following the procedure outlined here: <https://care.dso.ufl.edu/instructor-notifications>.
- 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.

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 and schedule. 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 notify me as soon as possible to develop a plan to make up missed work. Missed extra credit opportunities cannot be made up. Unfortunately, we are unable to accept assignment do-overs (resubmissions for a higher score) in this class.

If you miss an exam for a non-excusable reason, a score of zero will be entered.

Late Work

You are responsible for turning assignments in on time unless an extension has been requested via 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 ([Dropbox](#) and [OneDrive](#) are free to 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 from compromising 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!

Artificial Intelligence (AI) Statement

AI applications including natural language chatbots like ChatGPT are an amazing new technology that is revolutionizing the way we access information, just like computers, the internet, and mobile phones did in prior decades. AI can be a useful tool for tasks such as editing, spellchecking, organizing, and brainstorming. **Other uses, including copying & pasting chatbot output and representing as your own work, are not appropriate in college courses; doing so constitutes academic dishonesty.** 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. AI-generated images may not be used unless expressly approved by your instructor for a specific assignment.

Drop-in Help 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 help hours is via Canvas message or direct email from your official UF email account. You can expect a response within 24 hours on weekdays in most cases. Emails from outside providers, like Gmail, are not considered secure and will be deleted to protect student privacy.

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.

Paper Guidelines

All writing assignments will be submitted to Canvas and must be in **.docx** or **.pdf** format, with the proper file extension. Other file formats will not be accepted. All assignments must include citations and references formatted according to APA 7th edition.

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>

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.

CALS and University of Florida Policies

Academic Honesty and Plagiarism

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."* It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <https://sccr.dso.ufl.edu/process/student-honor-code/>.

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.

Grades and Grade Points

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at: <https://gatorevals.aa.ufl.edu/public-results/>.

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.

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation.

You must submit this documentation prior to submitting assignments or taking quizzes or exams. Accommodations are not retroactive; therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations. The DRC may be contacted by visiting 001 Reid Hall, calling 352-392-8565, or visiting their web site at www.dso.ufl.edu/drc/.

Student Complaints

Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>
Online Course: <https://pfs.tnt.aa.ufl.edu/state-authorization-status/#student-complaint>

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. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance. You are, of course, always welcome and encouraged to talk to me about any issues that interfere with your academic performance and wellbeing.

- *U Matter We Care*. 352-292-2273. UF's umbrella program for UF's caring culture. Provides students in distress with support and coordination of the wide variety of appropriate resources. <https://umatter.ufl.edu/>
- *University Counseling & Wellness Center*, 3190 Radio Road, 352-392-1575. Counseling Services, Groups and Workshops, Outreach and Consultation, Self-Help Library & Wellness Coaching. <https://www.counseling.ufl.edu/>
- *Gatorwell Health Promotion Services*, multiple locations on campus, 352-273-4450. GatorWell uses health promotion strategies to educate UF students about health and wellness topics relevant to the college experience. <https://gatorwell.ufsa.ufl.edu/>
- *Career Connections Center*, First floor Reitz Union, 352-392-1601, <https://career.ufl.edu/>
- Student Success Initiative, <https://studentsuccess.ufl.edu/>
- *Dean of Students Office*, 202 Peabody Hall, 392-1261. Among other services, the DSO assists students who are experiencing situations that compromises their ability to attend classes. This includes family emergencies and medical issues (including mental health crises). <https://care.dso.ufl.edu/>
- *CLAS Academic Resources*, Turlington Hall, 352-392-2010 or 352-392-6420. General study skills, tutoring, and supplemental instruction for select classes. <https://academicresources.clas.ufl.edu/>
- *Writing Studio*, 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers. <https://writing.ufl.edu/writing-studio/>
- *Field and Fork Pantry*. Food and toiletries for students experiencing food insecurity. <https://pantry.fieldandfork.ufl.edu/>
- *UF Help Desk*. 352-392-4357. Technical support for computer issues and UF web services. <https://helpdesk.ufl.edu/>
- *University Police Department*, 352-392-1111 (or 9-1-1 for emergencies). <https://www.police.ufl.edu/>
- *Library Support*. Various ways to receive assistance with using the libraries or finding resources. <https://uflib.ufl.edu/find/ask/>

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

Critical Dates

Career aspirations reflection paper	Friday, January 19
Exam 1	Tuesday, February 13
Article analysis paper	Friday, March 8
Exam 2	Tuesday, March 26
Public outreach poster & lightning talk	Friday, April 12
Poster peer reviews	Friday, April 19
Exam 3	Tuesday, April 23

Unit & Module

1.1	Introduction
1.2	Fundamental concepts, interdisciplinarity and social-ecological systems
2.1	Earth in the solar system, thermodynamics, biogeochemistry
2.2	Principles of ecology
2.3	Biodiversity – classification, evolution & extinction
3.1	Human population dynamics
3.2	Resource extraction and flow through society
3.3	Energy generation and use
3.4	Freshwater resources
3.5	Environmental dimensions of agriculture & agroecology
3.6	Fundamentals of climate change

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.