Introduction to Environmental Science: EVR 1001

Fall 2023

Meeting time and place:	MoWeFr, 9:30-10:20AM, BA1 0119
Office Hours:	Monday: 10:30-11:30 PM; Thursday 10-11 AM or by appointment, Biological Sciences Building, room 402C
Instructor Contact Information	Dr. Patrick Bohlen Email contact through Webcourses@UCF 407-823-1940 (office)

Please note that this syllabus is subject to change due to unforeseen circumstances. Any changes will be communicated as they are made, and a revised syllabus uploaded to Webcourses

Course Description:

This course examines scientific foundations needed for understanding the earth's environmental systems and human impacts on the environment. Topics covered in this course include: matter and energy, ecology and biodiversity, human population growth, agriculture and food supply, land and water resources, energy resources, water and air pollution, global climate change, and sustainability.

Course Requirements:

This course will require participation both in class and out of class. The course will include lectures, chapter review quizzes, and a mid-term and final examination. Class attendance is expected and will be evaluated through a class response systems and unannounced pop quizzes. Students are expected to be respectful to the instructor and their fellow students and behave in an adult and professional manner.

General Education Learning Objectives:

This course is part of UCF's **General Education Program (GEP)** science foundation learning objectives. **Knowledge Application** is its primary foundation outcome. Students completed requirements for this foundation are expected to be able to:

1. Characterize a scientific theory as a product of objective evidence and scientific methods.
2. Interpret, develop, and use visual representations of data to make and support inferences from scientific observations.
3. Identify observational data as the foundation of a scientific argument.
4. Employ scientific principles, techniques, or concepts to identify, explain, or address challenges facing society.

The secondary foundation for this course is **Interpretation and Evaluation**, which enables students to:

1. Demonstrate mastery of discipline specific vocabulary and concepts.
2. Recognize social, political, or economic problems and evaluate solutions to those problems.
3. Understand how to collect, evaluate, or interpret data to draw conclusions.
4. Recognize and interpret the impact of social, economic, and political institutions on the wellbeing of individuals in a country.
5. Employ social science principles, techniques, or concepts to identify, explain, or address challenges facing society.

Specific Course Learning Objectives:

At the completion of this course students will be able to:

1. Define the field of environmental science and explain importance and relevance to real-world environmental problems.
2. Explain how various scientific fields, such as chemistry, ecology, earth science, and other relevant scientific disciplines, contribute to the field of environmental science.

3. Analyze and interpret scientific evidence concerning environmental systems and problems in the context of real places, real people, real issues, and real data.
4. Think critically about environmental issues and distinguish between sound and unsound interpretations of scientific evidence concerning environmental issues.
5. Explain how environmental science relates to other important areas of human understanding and action, including environmental laws and policies, sustainability, equity, and environmental justice.

Required Reading Materials:

There is no textbook associated with this course. The primary source of course content will be lectures, and material provided in assignments.

Evaluation Procedures

Grade Category: Lecture Quizzes
Description of Requirements: Periodically during lectures, questions will be presented through "Top Hat" to evaluate student understanding. Quizzes will be graded equally for correctness and participation. These quizzes cannot be made up after class, except in the case of excused absences.
Total: 20% (20/100 points)

Grade Category: Homework assignments
Description of Requirements: Students will complete 5 assignments outside class through Webcourses during the semester. Assignments will focus on examining and interpreting various forms of data or information available online and applying or interpreting the information through an associated quiz.
Total: 20% (20/100 points)

Grade Category: Discussion Assignments
Description of Requirements: Students will be given prompts related to material covered in class or assigned out of class and will be asked to provide a 100-200 word response to the prompt and 30-150 word response to at least two other students posts. The goal is to generate connections related to course content and concepts. There will be 5 such discussion assignments, worth 4 points each.
Total: 20% (20/100 points)

Grade Category: Mid-term Exam
Description of Requirements: Students will complete a mid-semester exam covering material presented in class and in other assignments.
Total: 20% (20/100 points)

Grade Category: Final Exam
Description of Requirements: Students will complete a final exam covering material presented in class and in other assignments throughout the semester.
Total: 20% (20/100 points)

Grading Scale: A (100-95), A- (94-90), B+ (89-85), B (84-80), C+ (79-75), C (74-70), D (69-60), F (59-0)

Technology Requirements:

Technology	Expectations for Use
WebCourses:	WebCourses will be used for this class. This syllabus and the majority of graded homework assignments will be posted on Webcourses. **Please check WebCourses regularly for updates, quizzes and other class information.**
E-mail:	***ALL email communications with the instructor must be made through Webcourses.*** Grades will not be provided over email. Communication with classmates via email will be done at the students' discretion.
Top Hat Courseware **Join Code: 727672**	We will be using the Top Hat (www.tophat.com) classroom response system in class. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message. The midterm and final exams will be given through Top Hat. Top Hat requires a paid subscription, and a full breakdown of all subscription options available can be found at: www.tophat.com/pricing. Price for one semester is $33. More details on how we will use this system will be provided in class. **You need to enroll in Tophat prior to the first day of class! You have the option of getting 2-week free trial so please sign up even if you cannot pay right away, or even if you decide to drop the class by the drop/add period.** You will receive an e-mail invitation to sign up for Top Hat or you can sign up with this direct link: http://app.tophat.com/e/727672. You can get a brief overview from a getting started guide at https://success.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide. **Note: our Course Join Code is 727672** **Make sure to enter your first and last name when you register for Top Hat!**
Computer software	Students are expected to be able to use Microsoft Word, Excel, and Power Point.

Additional Policies

Grading and evaluation	Grades will be calculated according to the above evaluation procedures. Grades will not be distributed in class; an appointment must be made with an instructor to discuss grades. Grades will not be given over the phone, or via email.
Attendance and participation	Class attendance is required. Participation will be evaluated through Top Hat in-class quizzes, as described above. **Valid excuses for missing class are: illness (medical noted required); participation in university-sponsored events that specifically grant class waivers (a "Program Verification" form is required); religious observances (these must be requested by the 10th business day of the term); military duty; attending a funeral of an immediate family member; and court-imposed legal obligations.** If students cannot attend class, it is their responsibility to get notes or resources about for the missed lecture. Coming to class unprepared, arriving late and leaving early are strongly discouraged.
Religious Observances	Students must notify their instructor no later than the 10th business day of the term if they intend to miss class for a religious observance. For more information, see the UCF policy at https://regulations.ucf.edu/chapter5/documents/5.020ReligiousObservancesFINALJan19.pdf

Exam make-up	The mid-term and final exams will not be offered at any other time besides the specified date on this syllabus. Failure to take the exams without a valid documented excuse (e.g. doctors note) will result in 0 points issued.
Academic integrity	As stated in the UCF creed, integrity, scholarship, community, creativity, and excellence are the core values that guide our conduct, performance, and decisions as members of the UCF community. Plagiarism and cheating contradict these values, and are very serious academic offenses. Penalties can include a failing grade in an assignment or in the course, suspension, or expulsion from the university. Students should familiarize themselves with UCF's Rules of Conduct at <https://scai.sdes.ucf.edu/student-rules-of-conduct/>
Course Accessibility statement	The University of Central Florida is committed to providing access and inclusion for all persons with disabilities. Students with disabilities who need access to course content due to course design limitations should contact the professor as soon as possible. Students should also connect with Student Accessibility Services (SAS) http://sas.sdes.ucf.edu/ (Ferrell Commons 185, sas@ucf.edu, phone 407-823-2371). For students connected with SAS, a Course Accessibility Letter may be created and sent to professors, which informs faculty of potential course access and accommodations that might be necessary and reasonable. Determining reasonable access and accommodations requires consideration of the course design, course learning objectives and the individual academic and course barriers experienced by the student. Further conversation with SAS, faculty and the student may be warranted to ensure an accessible course experience.
First week academic assignment requirement	As of Fall 2014, all faculty members are required to document students' academic activity at the beginning of each course. In order to document that you began this course, please complete the Academic Assignment in Webcourses by the end of the first week of class. Failure to do so may result in a delay in the disbursement of, or decline of your financial aid.
Campus safety	Every UCF classroom contains an emergency procedure guide posted on a wall near the door. If there is a medical emergency during class, students may need to access a first-aid kit or AED (Automated External Defibrillator). To learn where those are located, see http://www.ehs.ucf.edu/AEDlocations-UCF. Students should know the evacuation routes from each of their classrooms and have a plan for finding safety in case of an emergency. To learn about how to manage an active-shooter situation on campus or elsewhere, consider viewing this video https://youtu.be/NIKYajEx4pk.
Deployed active duty military students	Students who are deployed active duty military and/or National Guard personnel and require accommodation should contact the instructors as soon as possible after the semester begins and/or after they receive notification of deployment to make related arrangements.
Make-up assignments for authorized University events or co-curricular activities	Students who represent the university in an authorized event or activity (for example, student-athletes) and who are unable to meet a course deadline due to a conflict with that event must provide the instructor with documentation in advance to arrange a make-up. No penalty will be applied. For more information, see the UCF policy at http://policies.ucf.edu/documents/4-401.1MakeupAssignmentsForAuthorizedUniversityEventsOrCocurricularActivities.pdf
Title IX policy	Title IX prohibits sex discrimination, including sexual misconduct, sexual violence, sexual harassment, and retaliation. If you or someone you know has been harassed or assaulted, you can find resources available to support the victim, including confidential resources and information concerning reporting options at https://letsbeclear.ucf.edu and http://cares.sdes.ucf.edu/.

Course Schedule, Critical Themes & Goals (subject to change)**:**

Class Schedule	
Monday, August 21	Introduction; Review syllabus, Discuss Webcourses and Tophat
Wednesday, August 23	Lecture: CH 1 Introduction to Environmental Science Concepts
Friday, August 25	Lecture: CH 1 Process of Science
Friday, August 25	**Add Deadline, Drop/Swap Deadline**
Monday, August 28	Lecture: CH 2 Chemistry Basics; **Must Have Tophat Active by Today**
Tuesday, August 29	**Homework Assignment 1 due by 11:59 PM**
Wednesday, August 30	Lecture: CH 2 Energy Basics
Friday, September 1	Lecture: CH 3 Energy Flows and Material Cycles
Monday, September 4	Lecture: CH 3 Energy Flows and Material Cycles
Tuesday, September 5	**Homework Assignment 2 due by 11:59 PM**
Wednesday, September 6	Lecture: CH 3 Global Climate Processes and Biomes
Friday, September 8	Lecture: CH 4 Evolution and Biodiversity (Part 1)
Monday, September 11	Lecture: CH 4 Evolution and Biodiversity (Part 2)
Tuesday, September 12	**Homework Assignment 3 due by 11:59 PM**
Wednesday, September 13	Lecture: CH 4 Population and Community Ecology
Friday, September 15	Lecture: CH 5 Human Population Growth 1
Monday, September 18	Lecture: CH 5 Human Population Growth 2
Tuesday, September 19	**Homework Assignment 4 due by 11:59 PM**
Wednesday, September 20	Lecture: CH 6 Geological Processes
Friday, September 22	Lecture: CH 6 Minerals and Soils
Monday, September 25	Lecture: CH 6 Mining
Tuesday, September 26	**Homework Assignment 5 due by 11:59 PM**
Wednesday, September 27	Lecture: CH 7 Land Resources and Use
Friday, September 29	Lecture: CH 7 Agriculture (Part 1)
Monday, October 2	Lecture: CH 7 Agriculture (Part 2)
Tuesday, October 3	**Homework Assignment 6 due by 11:59 PM**
Wednesday, October 4	Lecture: CH 8 Energy 1: Non-Renewable Energy
Friday, October 6	Lecture: CH 8 Energy 2: Renewable Energy
Monday, October 9	Lecture: CH 8 Energy 3: Our Energy Future
Wednesday, October 11	Lecture: CH 9 Water Resources and Human Use
Friday, October 13	**Mid-Term Evaluation (Chapters 1-8)**
Monday, October 16	Lecture: CH 9 Water Pollution 1
Tuesday, October 17	**Homework Assignment 7 due by 11:59 PM**
Wednesday, October 18	Guest lecture TBA
Friday, October 20	Lecture: CH 9 Water Pollution 2
Monday, October 23	Lecture: CH 10 Air Pollution 1
Tuesday, October 24	**Homework Assignment 8 due by 11:59 PM**

Wednesday, October 25	Lecture: CH 10 Air Pollution 2;
	Lecture: CH 10 Ozone Layer, Indoor Air Pollution
Friday, October 27	Lecture: CH 11 Reduce, Reuse, Recycle (3 R's) and Composting
Monday, October 30	Lecture: CH 11 Solid Waste and Hazardous Material
Tuesday, October 31	**Homework Assignment 9 due by 11:59 PM**
Wednesday, November 1	Lecture: CH 13 Conservation and Biodiversity 1; **Withdraw deadline**
Friday, November 3	Lecture: CH 13 Conservation and Biodiversity 2
	Lecture: CH 13 Conservation and Biodiversity 2
Monday, November 6	Lecture: CH 12 Assessing Human Health Risks
Tuesday, November 7	**Homework Assignment 10 due by 11:59 PM**
Wednesday, November 8	Lecture CH 12 Human Health, Infectious Disease, and Toxins
Friday, November 10	Lecture: CH 14 Climate Alteration and Global Warming 1
Monday, November 13	Lecture: CH 14 Climate Alteration and Global Warming 2
Tuesday, November 14	**Homework Assignment 11 due by 11:59 PM**
Wednesday, November 15	Lecture: CH 14 Climate Alteration and Global Warming 3
Friday, November 17	Lecture: CH 15 Sustainability and Economic Systems
Monday, November 20	Lecture CH 15 Equity and Environmental Justice
Tuesday, November 21	**Homework Assignment 12 due by 11:59 PM**
Wednesday, November 22	**Thanksgiving Holiday, No Class**
Friday, November 24	**Thanksgiving Holiday, No Class**
Monday, December 27	
Wednesday, December 4	
Final Exam (Chapters 1-15)	**Friday, December 6, 7:00 AM – 9:50 AM**