# ENVR 101: Introduction to Environmental Science

Instructor:	Dr. Drew Gower	Term:	Spring Semester 2025
Class Day/Time:	MWF $9:30$ am to $10:20$ am	<b>Class Location:</b>	MSB 11
Email:	drew.gower@fmarion.edu	Cell:	$864 - 420 - 3318^{1}$
Office Hours:	TTh $11:30$ am to $1:30$ pm	Office Location:	MSB 301A

### **Course Description**

This course gives students an introduction to the field of environmental science and its relevance to society. It will cover basic concepts in ecology and earth science, the increase in civilizational resource demand, the environmental and human consequences of resource extraction and use, and a range of technological and governmental remediation efforts. The course will emphasize examples from South Carolina to illustrate local environmental challenges that are relevant to students.

## Learning Objectives

At the end of the semester, students should be able to:

- Understand basic earth science concepts and terminology
- Identify the drivers, consequences of, and evidence for climate change
- Analyze the environmental impacts of agriculture, energy production, and urbanization
- Recognize and discuss forms of environmental decision-making, law, and governance
- Construct and interpret graphical data
- Describe the scientific method and use it to solve problems

#### **Course Format**

Environmental Science is an exceptionally broad topic with profound relevance in the modern world. I hope that after taking this course, you will be familiar with the field's most important concepts and be able to thoughtfully discuss contemporary environmental issues. I therefore prioritize in-class discussion over powerpoint lectures and will invite guest lecturers who can put course topics into a local, South Carolina context. To succeed in the course you will need to both complete the assigned readings and attend class. The former will give you the background necessary to engage in class discussions, while the latter will underscore the topics that will appear on exams. In return, I promise to make myself available to students outside of class, respond to emails and grade items promptly, and avoid overly-specific exam questions.

#### Textbook

The textbook for this course is *Environmental Science and Sustainability*,  $2^{nd}$  edition by Daniel Sherman and David Montgomery. You can purchase the book through the University bookstore or directly through Norton publishers in either the digital or paperback formats according to your preference; however, you will need to have access to a version of the textbook to pass the course.

#### Grading

Because this is a 4 credit course you must also be registered for an ENVR 101L lab section during the same semester you are taking the lecture. Lecture comprises 75% of your grade, and lab comprises 25%. Your lecture grade is made up of four midterm exams and a final exam (80%), and participation (20%). I will then assign letter grades based on the following ranges:

<sup>&</sup>lt;sup>1</sup>Please use sparingly

Letter Grade	Percentage Range
А	90 to $100%$
$B^+$	87 to $89%$
В	80 to $86%$
$C^+$	77 to $79%$
С	70 to $76\%$
$\mathrm{D}^+$	67  to  69%
D	60 to $66%$
F	below $60\%$

#### Exams

Exams will include multiple choice, true/false, and free response questions. The four midterm exams will only cover material since the previous exam, while the final exam will cover material from the entire course. Exams will be given during regular class time and must be taken on the assigned day, with exceptions made only with proper documentation. I will drop your lowest exam grade, either one of the midterms or the final.

## Participation

Participation will be graded out of twenty total points. At each lecture in which a reading is due, I will randomly select several students to answer relevant questions. You will receive five points for answering incorrectly, and zero points if you are not present. You will also receive five points for attending office hours at least once and up to ten points for regularly participating in class discussions.

## Extra Credit

You may turn in, up to the last day of class, one two-page, single-spaced summary and evaluation of a scientific article to receive up to an extra two percentage points on your final grade. The article should be published in a peer-reviewed journal, relevant to environmental science, and approved by me ahead of time. Lastly, I will award you an extra five percentage points on one exam if you can point out a previously unnoticed typo on this syllabus.

## **Electronic Devices**

I do not allow cell phone use during class time. If you need to have your phone on for some reason (say you are responsible for a family member), please set it to vibrate and take any relevant calls outside the classroom. You may use a laptop or tablet for notetaking but you will need a pen or pencil to take exams.

## Accommodations

I am happy to make accommodations for students with special needs. Please notify me of your needs as soon as possible and provide documentation from the Office of Counseling and Testing.

#### Academic Dishonesty

I take acts of academic dishonesty (as defined in the University student handbook) very seriously. The first violation of the academic integrity policy will result in a grade of 0 on the item in question. You will also be reported to the appropriate university office. The handbook further states that a second violation will result in suspension from the University for a term of no less than one fall or spring semester while a third offense will result in permanent expulsion from the University.

# Tentative Course $Outline^2$

Date	Topics	Readings
01/08	Course Introduction	
01/10	Matter and Energy	E.S.S. Ch. 3
01/13	Matter and Energy	
01/15	Life	E.S.S. Ch. 4
01/17	Life	
01/20	No class: MLK Jr. Day	
01/22	No class: Snow Day	
01/24	No class: Snow Day	
01/27	Water	E.S.S. Ch. 7
01/29	Water	
01/31	Land	E.S.S. Ch. 9
02/03	Land	
02/05	Exam 1	
02/07	Systems and Cycles	E.S.S. Ch. 10
02/10	Systems and Cycles	
02/12	Climate	E.S.S. Ch. 11
02/14	Climate	
02/17	Conservation	E.S.S. Ch. 5
02/19	Conservation	
02/21	Population	E.S.S. Ch. 6
02/24	Population	
02/26	Exam 2	
02/28	Food	E.S.S. Ch. 12
03/03	Food	
03/05	Fossil Fuels	E.S.S. Ch. 13
03/07	Fossil Fuels	
03/10	No class: Spring Break	
03/12	No class: Spring Break	
03/14	No class: Spring Break	
03/17	Energy Alternatives	E.S.S. Ch. 14
03/19	Waste	E.S.S. Ch. 15
03/21	Waste	
03/24	Urbanization	Ch. 16
03/26	Urbanization	
03/28	Exam 3	
03/31	Ethics, Environments, and Policy	E.S.S. Ch. 2
04/02	Ethics, Environments, and Policy	
04/04	Environmental Health and Justice	E.S.S. Ch. 17
04/07	Environmental Health and Justice	
04/09	Decision Making	E.S.S. Ch. 18
04/11	Decision Making	
04/14	Government	E.S.S. Ch. 20
04/16	Guest Speaker	
04/18	Government	
04/21	Exam 4	
04/25	Final Exam, 8:30am	

<sup>2</sup>May change according to guest lecturer availability