

# Managing for a Changing Climate - GEO3930/6938



This course will provide an integrative understanding of the components of the climate system including the range of natural climate variability and external drivers of climate change, in addition to impacts of a changing climate on multiple sectors such as the economy, policy, ecosystems, and indigenous populations.

**Time:** Wednesday 3.00-4.55pm (Periods 8 and 9) Spring 2020\*

\*Class will formally begin at **3.15pm**. This is because I am teaching another class in the period before across campus and will not make a 3pm start. Please arrive by 3.10pm.

**Location:** TUR 3018

## **Instructor**

Dr. Esther Mullens, [emullens@ufl.edu](mailto:emullens@ufl.edu)

Main office: Turlington Hall, Geography Department, Room 3138

**Office hours:** Tuesdays @1-2.30pm, Wednesdays @10-11.30am. I am willing to adjust based on class feedback. For individual appointments outside of these times, please email. I will try and accommodate you as my schedule permits. **In order that I may assess your learning in this class, and that you may provide feedback, I will be making it a requirement that you attend one 20 minute informal office hour session with me.**

**Teaching Assistants:** None

**Structure and Materials:** This is a 'hybrid course', which is split roughly 50/50 online/in-class. You will be expected to watch 2-6 instructor-developed videos per week, read assigned material, and interact with each other and the instructors through comments and discussion in Canvas. These activities will be in lieu of attending a regular lecture, and it is absolutely imperative that they are completed in a timely manner. Once per

week, students will meet for a 90 min session where we will connect course concepts to management decisions and students will participate in active learning via discussions, peer review, and project work. I **strongly recommend** that students create a weekly study schedule which includes meeting times, course content, and deadlines to help you on track. I will be managing the course primarily through the Canvas environment, and I will be sending regular emails to all attendees, therefore please check Canvas and email at least once daily.

There is no required text. All videos, assignment details, and additional information will be available on OR linked via the course site at <https://elearning.ufl.edu>. If you encounter problems accessing videos or other assessments, please contact me as soon as possible.

For online discussions, we will be trialing a new learning technology called ‘PackBack’ which is an interactive discussion platform superior to Canvas. The cost to use this platform is ~\$25 for the semester. We will discuss this technology in our first class. See more at: <https://www.packback.co/>.

**Prerequisite:** Familiarity with basics of physical geography and climate is preferred but not required.

**Corequisite:** None

### **Independent learning, attendance, and note-taking is key**

Because much of this course is online, **you will be responsible** for taking notes, engaging with the material in terms of gaining knowledge and understanding. The class activities and lectures is a time where we will review and apply what you have learned in each module. Attendance in class will be counted as part of your participation score, and I will be taking a class roll each week.

### **Overarching Goals**

- Students will become familiar with the basic science of our Earth system, including energy balance, carbon cycling, natural climate variability, and anthropogenic climate change. Students will be expected to be able to differentiate climate variability from climate change and critically evaluate tools, indicators, and scientific evidence that differentiate the two.
- Students should be able to describe in general terms how a climate model works, and how climate information is made accessible for regional decisions.

- Students should be able to describe and apply the concepts they have learned to determine how extreme weather and climate variability and change impact societies in their region (e.g., Florida), and elsewhere.
- Students should be able to demonstrate understanding of the far-ranging impacts of climate change throughout various human and natural systems.
- Students will become familiar with how the UN climate negotiations are structured and will demonstrate this through a group negotiation activity.

**Grading**                      The final grade will be calculated based on the following:

**Graduate students**

<b>Individual Writing Assignments</b> (Paper 1&4@5%, 2,3@10%)	<b>30%</b>
<b>Online Quizzes</b>	<b>5%</b>
<b>Online Discussion</b>	<b>10%</b>
<b>In-Class Participation.</b>	<b>10%</b>
<b>Semester Project</b> (Project 1@5%, 2,3 4 @10%)	<b>35%</b>
<b>Additional project</b>	<b>10%</b>

**Undergraduates:**

<b>Individual Writing Assignments</b> (Paper 1@5%, 2,3,4@10%)	<b>35%</b>
<b>Online Quizzes</b>	<b>10%</b>
<b>Online Discussion</b>	<b>10%</b>
<b>In-Class Participation.</b>	<b>10%</b>
<b>Semester Project</b> (Project 1@5%, 2,3 4 @10%)	<b>35%</b>
<b>—</b>	
<b>TOTAL</b>	<b>/100 %</b>

There are **NO OPPORTUNITIES FOR EXTRA CREDIT.**

Percentages necessary to earn a given final grade are as follows:

<b>A</b>	<b>&gt;=90%</b>	<b>D</b>	<b>60% (&lt; 63 D-, &gt;67D+)</b>
<b>B</b>	<b>80% (&lt; 83 B-, &gt; 87 B+)</b>	<b>F</b>	<b>&lt;60%</b>
<b>C</b>	<b>70% (&lt;73 C-, &gt;77 C+)</b>		

Grades will be supplied through Canvas as we work through the semester. I retain the right to adjust the final grades (e.g., ‘curve’) based on the distribution of scores from the class however they will always curve up if they curve at all. It is your responsibility to keep track of your grade and come to me if you are struggling with the material.

This course is cross-listed. Any graduate students present will have the following additional expectations:

- \* Graduate students will be assessed to a higher standard. In particular, they should demonstrate excellent verbal and written communication, and a thorough understanding of the material. They will be expected to draw substantially from peer-reviewed work and reports in their papers.
- \* As part of their participation. Graduate students will be required to direct at least one discussion each during this class, based on a topic and using material relevant to the course.
- \* Additional project - Graduate students will work as team(s) to design online-only formats for the semester project for future classes. This activity is tentative and more information will be provided in the spring.

### **Individual Writing Assignments**

Over the course of the semester, students will individually complete four short essay papers. Homework assignments are to be posted on to Canvas by midnight on the due date. Late assignments will be graded at a deduction rate of 10% per 24 hour period after the deadline. Late assignments will not be accepted more than 72 hours after a deadline. There will be no makeup homework exercises without prior approval. Each writing assignment will have a rubric that reflects how the assignment was scored.

### **Online Assignments and Quizzes**

Students will also complete online auto-graded assignments on Canvas. These include an online code of conduct, a course readiness quiz, and up to six additional short online quizzes addressing the content of the videos **and** readings. Each online assignment must be completed by midnight on the due date.

### **Participation**

Participation will be graded approximately every four weeks (5% per quarter) and will encompass student involvement online and the in-person sessions. Students have a responsibility to inform instructors prior to absences whenever possible. Students must obtain written notes for medical appointments. Instructors will make every effort

to reasonably accommodate students who miss class due to Provost-approved University- sponsored activities or legally required activities (ex: emergency military service, jury duty).

### **Semester Project**

Students will apply the knowledge learned in the course to a country that is active in the United Nations. At the start of the semester, students will be able to select a country from a list of options. Students will participate in group activities throughout the semester that will help them translate the course material into a real-world context. The project will encompass four assignments.

These group activities will culminate in a mock United Nations Framework Convention on Climate Change negotiation. Groups will debate each other about potential international policy actions, ending in a formal vote for policy adoption. Each student will be individually evaluated on their ability to synthesize the material from the semester into a successful negotiation strategy for their country team.

### **My Expectations of You**

You will read or view materials for a particular class period either before or shortly after class and should fully complete material online on the week that it is due.

Learning requires new connections to be established in your brain – a process that requires significant effort on your part. Per the nationwide standard for university scholarship, you will study (read, review, reflect, practice, do homework) at least 2 hours for every credit hour .

During class, you will turn off your cell phone. You will not text message, visit Facebook, web surf, etc. during class unless I approve you do so.

### **Web page**

The class web page can be found at: <https://elearning.ufl.edu/> . If you encounter any problems with the web page, please contact me.

### **Course Drop**

Should you decide to drop the course for whatever reason, you must submit the relevant forms to the Office of the Registrar by the appropriate date. Failing to do so will result in an F grade for the course. If at the time you withdraw from the course you are scoring a failing grade, you will receive an F grade. If not, you will receive a W for withdrawn.

## **Absences and Accommodations**

It is the policy of the University to excuse absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required classwork that may fall on religious holidays. Please contact me as soon as possible to make appropriate arrangements for classwork.

If you have an emergency or illness come up that means you are unable to take an assessment on their scheduled dates, please inform me as soon as you can. I will require that you have some form of documentation that confirms your situation, and will work with you to reschedule or skip if that is the only option.

The University is committed to providing reasonable accommodation for all students with disabilities. If you have a disability that may prevent your from fully demonstrating your abilities, contact us directly as soon as possible so that accommodations can be made. Students must be registered with the Disability Resource Center (<https://drc.dso.ufl.edu>). This office will provide documentation for the student, who will then provide this to me. You must submit this documentation before taking any quizzes or exams (so ideally before the start of class) because the accommodation is not retroactive.

Should you need modifications or adjustments to your course requirements because of documented pregnancy, childbirth, or childcare issues, please contact me as soon as possible to discuss. Generally, modifications will be made where necessary.

## **Student Conduct**

You are expected to be familiar with and abide by the UF student honor Code. <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>, Anything that appears to be cheating, plagiarism, or other forms of academic misconduct will not be tolerated. Apparent misconduct will be dealt with by immediate referral of the circumstances through the regular University channels.

## **Title IX**

For any concerns regarding gender-based discrimination, sexual harassment, sexual assault, dating/domestic violence, or stalking, there are resources available. To learn more or to report an incident, got to: <https://titleix.ufl.edu>. Also, please be advised that I am required to report instances of sexual harassment, sexual assault, or discrimination.

## Evaluations

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/>

## Other

I have the right to institute new policies and adjust class activities & assignments during the semester, to ensure safety and a positive learning environment for all students.

## Tentative Outline

**‘Week of’ refers to the Monday of each class week. For the first week, please consult the syllabus and any other material I email you about!**

Week of	Course Material	Assignment
6 Jan	Preliminaries and Introduction to Course	Code of conduct & course quiz due Jan 13
13 Jan*	1.1 Energy in the Climate System 1.2 Climate and Carbon	
20 Jan	1.3 Natural Climate Variability	Paper 1 due Jan 29, Quiz 3 due Jan 31
27 Jan	2.1 Modeling our global climate 2.2 Modeling our regional climate	Quiz 4 due Feb 7 Project goal 1 Feb 5
3 Feb	3.1 Using climate projections 3.2 Observing our climate	
10 Feb	3.3 Assessing climate change and impacts	Group presentations Feb 12 Quiz 5 due Feb 19
17 Feb	4.1 Intro to policy and economics	
24 Feb	4.2 Vulnerability and culture (1) & (2)	Paper 2 due Mar 13 Quiz 6 due Mar 18

2 Mar	NO CLASS (Spring Break)	
9 Mar	5.1 Impacts to climate systems	
16 Mar	5.2 Impacts to coast and marine systems	Policy Proposals due in Class Mar 18
23 Mar	5.3 Impacts to ecosystems	Quiz 7 due Apr 3
30 Mar	5.4 Impacts to health and security	
6 Apr	5.5 Adaptation strategies	Paper 3 due Apr 10 Quiz 8 due Apr 15
13 Apr	Speech preparation	
20 Apr	Mock UN debate prep	Team speeches Apr 22
FINAL <sup>^</sup>	Debate (date and time TBC.)	Last paper due <b>May 1</b>
4 May	<b>Grades Due</b>	

\*Dr Mullens will be away at a conference the week of Jan 13-17. I will provide instructions for your activities for this week.

<sup>^</sup>This activity is project 4, requires 120 minutes to complete, is held in lieu of a final exam, and held at the time of the scheduled final (this is a University requirement).