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: Thursday 12:50 pm to 1:40pm (Period 6); Spring 2019
Location: TUR 3018
Instructor
Dr. Esther Mullens, emullens@ufl.edu
Main office: Turlington Hall, Geography Department, Room 3138
Office hours: Mondays and Wednesdays at 2-3pm. 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, I will be making it a requirement that you attend at least one office hour session with me.
Teaching Assistants: None

Structure and Materials: This is a ‘hybrid course’. Two credit hours are online, and one credit hour is 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 50 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 them stay 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.

Prerequisite: None
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 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:

**Undergraduates**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Individual Writing Assignments</td>
<td>40%</td>
</tr>
<tr>
<td>Online Participation</td>
<td>15%</td>
</tr>
<tr>
<td>In-Class Participation + office hours visit</td>
<td>15%</td>
</tr>
<tr>
<td>Semester Project</td>
<td>30%</td>
</tr>
</tbody>
</table>

**TOTAL** 100%

For Graduate Credit*

<table>
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<td>In-Class Participation</td>
<td>15%</td>
</tr>
<tr>
<td>Semester Project</td>
<td>35%</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90%</td>
</tr>
<tr>
<td>B</td>
<td>80% (&lt;83 B-, &gt;87 B+)</td>
</tr>
<tr>
<td>C</td>
<td>70% (&lt;73 C-, &gt;77 C+)</td>
</tr>
<tr>
<td>D</td>
<td>60% (&lt;63 D-, &gt;67 D+)</td>
</tr>
<tr>
<td>F</td>
<td>&lt;60%</td>
</tr>
</tbody>
</table>

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.

* 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. Their assessments may also be slightly different than those of the 4938 cohort. A grading rubric will be supplied at the conclusion of each assignment.

**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
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 in Canvas 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 (e.g., 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 assigned to pre-selected countries. 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.

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 feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students following the conclusion of the semester at https://evaluations.ufl.edu/results.

Other
I have the right to institute new policies during the semester to ensure safety and a positive learning environment for all students.
GEO 4938/6938

Tentative Outline (Note that precise dates and deadlines may change, I will update as we go).

‘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!

<table>
<thead>
<tr>
<th>Week of</th>
<th>Course Material</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 Jan</td>
<td>Preliminaries and Introduction to Course</td>
<td>Code of conduct &amp; course quiz due Jan 14</td>
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<tr>
<td>14 Jan</td>
<td>1.1 Energy in the Climate System</td>
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<td>1.2 Climate and Carbon</td>
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<td>21 Jan</td>
<td>1.3 Natural Climate Variability</td>
<td>Paper 1 due Jan 29, Quiz due Jan 31</td>
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<tr>
<td>28 Jan</td>
<td>2.1 Modeling our global climate</td>
<td>Quiz 2 due Feb 4</td>
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<td></td>
<td>2.2 Modeling our regional climate</td>
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<tr>
<td>4 Feb</td>
<td>3.1 Using climate projections</td>
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<tr>
<td></td>
<td>3.2 Observing our climate</td>
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<tr>
<td>11 Feb</td>
<td>3.3 Assessing climate change and impacts</td>
<td>Group presentations scheduled for Feb 14 Quiz due Feb 18</td>
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<tr>
<td>18 Feb</td>
<td>4.1 Intro to policy and economics</td>
<td></td>
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<tr>
<td>25 Feb</td>
<td>4.2 Vulnerability and culture (1) &amp; (2)</td>
<td>Paper 2 due Mar 14 Quiz due Mar 18</td>
</tr>
<tr>
<td>4 Mar</td>
<td>Spring break! (NO CLASS)</td>
<td></td>
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<tr>
<td>11 Mar</td>
<td>5.1 Impacts to climate systems</td>
<td>Policy proposals due in class (Mar 21)</td>
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<tr>
<td>18 Mar</td>
<td>5.2 Impacts to coast and marine systems</td>
<td></td>
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<tr>
<td>25 Mar</td>
<td>5.3 Impacts to ecosystems</td>
<td>Quiz due Apr 1</td>
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<tr>
<td>1 Apr</td>
<td>5.4 Impacts to health and security</td>
<td></td>
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<tr>
<td>8 Apr</td>
<td>5.5 Adaptation strategies</td>
<td>Paper 3 due Apr 11 Quiz due Apr 15</td>
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<tr>
<td>15 Apr</td>
<td>Team speech prep for Apr 18</td>
<td>Speeches Apr 18</td>
</tr>
<tr>
<td>22 Apr</td>
<td>Mock UN Debate prep</td>
<td>Debate Apr 25*</td>
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<tr>
<td></td>
<td></td>
<td>Last paper due Apr 29</td>
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</tbody>
</table>

* In lieu of not having an exam, we will be meeting during reading day to conclude this course

8 May       Grades Due