

University of Florida
College of Public Health & Health Professions Syllabus
PHC 4309 Climate Change, the Environment, and the Future of Public Health (3 credit hours)
Fall: 2021
Delivery Format: Online
Course Website or E-Learning *via Canvas* and Zoom

Instructor Name: Rachel Yoho, CDP, PhD (pronouns: she/her)
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Office Hours: Thursdays, 9-10am, via Zoom, and by appointment
Teaching Assistants: N/A
Preferred Course Communications (e.g. email, office phone): email

Class meeting time: Mondays, 10:40-11:30am, via Zoom
Online Location: Canvas

Prerequisites

BSC 2005 or BSC 2010 and minimum of Junior standing or instructor approval

PURPOSE AND OUTCOME

Course Overview

As a complex and dynamic issue, climate change is impacting a vast number of environmental, socio-ecological, and human systems, including public health. This course unpacks key social, environmental, global health, justice, policy, and economic issues, as well as approaches to mitigation and adaptation at multiple scales.

Course Description

Currently, climate change is impacting or has the potential to impact a vast number of environmental, socio-ecological, and human systems. In this course, students will gain an understanding of the complexity of climate change and its dynamic impact on social, environmental, global health, justice, policy, and economic issues, especially as they relate to environmental health and public health. This course takes a local and global approach to understanding climate change, as well as approaches to mitigation and adaptation at multiple scales. Students will investigate the changing middle class in the United States and compare that experience to the experience of the world middle class as a means of unpacking the key issues of economic development, social development, human health, and public health impacted by climate change. Students interested in any aspect of climate change will find the course content relevant. Whether your interest is personal or professional, from the perspective of public health, the health professions and beyond, this course is appropriate for everyone (including the 0.01%, though they have the means and ability to build a rocket ship and find a new planet).

Relation to Program Outcomes

This course provides an undergraduate elective that connects to broader programmatic study outcomes through the following:

1. Dialogue about how climate change, as a complex and dynamic system, impacts diverse areas of environmental health, public health, economics, and societies at large.
2. Identification and critical evaluation of climate change-related issues in diverse sectors (i.e., energy, public health, water, transportation).
 - a. Conceptualization of the impacts of climate change on individual, community, national, and international health.
 - b. Critical evaluation of climate change-related policy and international laws, legal foundations, and agreements and their interactions with health and community function.
 - c. Proposal of solutions to climate change-related issues from the perspective of an evidence-based approach to adaptation and mitigation.
3. Communication via oral and written forms about environmental and climate change-related concepts, including relationships among policy, communities, organizations, interpersonal dynamics, and individual perspectives.
 - a. Provision of constructive peer feedback and critique of peer reports and presentations.
 - b. Identification of target audiences and resulting message design to maximize audience-specific impact of written and oral projects.
4. Appreciation of individual and community experiences related to climate change, including social and environmental justice, and diverse perspectives.

Course Objectives and Student Learning Outcomes

This course is designed to enable students to achieve a set of content, critical thinking, and communications objectives.

Content

Using academic literature and scientific evidence related to specific climate change and environmental health topics, *upon completion of the course students will be able to:*

1. Describe key causes of climate change at various scales (local, regional, global) in terms of socioeconomic, cultural, and environmental health outcomes.
2. Identify major risk factors for adverse impacts related to climate change at various scales (local, regional, global) in terms of socioeconomic, cultural, and environmental health outcomes.
3. Predict potential adverse impacts of climate change at various scales (local, regional, global) in terms of socioeconomic, cultural, and environmental health outcomes.
4. Identify key actors in addressing and mitigating climate change at the local, regional, national, and international levels.

Critical Thinking

5. Use data and evidence to assess priority focus areas related to climate change and environmental health in various contexts.
6. Identify and compare appropriate interventions, action plans, or solutions for specific climate change and environmental health threats in various contexts and scales.
7. Describe ethical and social justice implications of climate change and environmental health impacts as well as considerations affecting the design of interventions and solutions.
8. Analyze the factors that contribute to the success or failure of climate change and environmental health-related partnerships.

Communication

9. Identify key players and actors in climate change and target messages to specific audiences when developing environmental health-related communication strategies.

10. Assess, critique, and design behavior change communications for specific contexts related to climate change and environmental health topics.
11. Develop a targeted policy and advocacy communication plan to address a situation related to climate change and environmental health.

Relationship to CEPH Public Health Bachelor's Degree Foundational Domains

The course goals and content objectives in this elective course relate to the following CEPH Public Health Bachelor's Degree Foundational Domains:

Foundational Domains	Course Goals or Objectives, Course Activities
The history and philosophy of public health as well as its core values, concepts and functions across the globe and in society	Course Goal 2a Content Objectives 2, 3, 7
The concepts of population health, and the basic processes, approaches and interventions that identify and address the major health-related needs and concerns of populations	Course Goals 2a, 4 Content Objectives 1-8
The underlying science of human health and disease, including opportunities for promoting and protecting health across the life course the socioeconomic, behavioral, biological, environmental and other factors that impact human health and contribute to health disparities	Course Goals 2a, 2c, 4 Course Objectives 2, 3, 5-7
The fundamental concepts and features of project implementation, including planning, assessment and evaluation	Course Goal 3 Course Objectives 4, 8, 9, 11
The fundamental characteristics and organizational structures of the US health system as well as the differences between systems in other countries	Course Goal 2a Course Objectives 1, 3, 6, 7
Basic concepts of legal, ethical, economic and regulatory dimensions of health care and public health policy and the roles, influences and responsibilities of the different agencies and branches of government	Course Goal 2b, 3c Course Objective 11
Basic concepts of public health-specific communication, including technical and professional writing and the use of mass media and electronic technology	Course Goal 3 Course Objectives 6-11

Relationship to CEPH Public Health Bachelor's Degree Cross-Cutting Concepts and Experiences

The course activities in this elective course relate to the following CEPH Bachelor's Degree Cross-Cutting Concepts and Experiences:

Cross-Cutting Concepts and Experiences	Course Activities
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Advocacy for protection and promotion of the public's health at all levels of society	All course modules and activities
Community dynamics	All community-focused course activities, group term project
Critical thinking and creativity	Group term project, critical thinking in homework assignments, individual semester paper
Cultural contexts in which public health professionals work	Course homework on environmental justice and security, debate
Ethical decision making as related to self and society	Debate, homework assignments
Independent work and a personal work ethic	All independent work activities (semester creative project, homework assignments)
Networking	Group term project poster presentation
Organizational dynamics	Group project, debate
Professionalism	All course activities
Research methods	Independent semester creative project, team term project
Systems thinking	Team term project
Teamwork and leadership	Team term project, debate

Instructional Methods

The course will be divided into in-person synchronous class sessions via Zoom (one per week) and supplemented with online lectures and content through a partially blended learning approach. The online content delivery will be through the course's Canvas site.

Synchronous Class Sessions

This course is based on a community-oriented instructional approach, where students are encouraged and expected to be invested in their learning. We will be approaching the course content in a collaborative manner, working to build our understanding through the appreciation of individual lived experiences, cultural backgrounds, professional training, and personal and collective group interests.

The synchronous class sessions will focus on applying content knowledge from the module and expanding our discussion with invited guests. Students are expected to be engaged during the class and participate in pair, small group, and class discussions and learning activities. The content delivery will include invited speakers, activities such as short lectures, peer-peer interaction, small group activities, case studies, minute papers, debates, and similar.

We will have a number of guest speakers throughout the semester visiting us to share their knowledge in specific content areas or experiences related to our course content. These individuals are generously sharing their knowledge and experience with us and will conduct question-and-answer sessions. As such, the highest standards of behavior are expected, as we are representing ourselves, the college, and Gator Nation in these interactions. Inappropriate or unprofessional conduct may be a cause for immediate dismissal from the class session and proper procedures will be followed for accountability.

Blended Learning

What is blended learning and why is it important?

A Blended Learning class uses a mixture of technology and face-to-face instruction to help you maximize your learning. Knowledge content that, as the instructor, I would have traditionally presented during a live class lecture is instead provided online before the live class takes place. This lets me focus my face-to-face teaching on course activities designed to help you strengthen higher order thinking skills such as critical thinking, problem solving, and collaboration. Competency in these skills is critical for today's health professional.

What is expected of you?

You are expected to actively engage in the course throughout the semester. You must come to class prepared by completing all out-of-class assignments. This preparation gives you the knowledge or practice needed to engage in higher levels of learning during the live class sessions. If you are not prepared for the face-to-face sessions, you may struggle to keep pace with the activities occurring in the live sessions, and it is unlikely that you will reach the higher learning goals of the course. Similarly, you are expected to actively participate in the live class. Your participation fosters a rich course experience for you and your peers that facilitates overall mastery of the course objectives.

DESCRIPTION OF COURSE CONTENT

Topical Outline/Course Schedule

The course is divided into three main sections: drivers of, effects of, and approaches to climate change, environmental health, and public health. Course content will be in-person and online using a partially blended approach over the course of the 16 week semester using the following as a guide. Topics and guest speakers are tentative and subject to change. Advance notice will be provided to any changes in the course content or schedule as possible. Readings corresponding with each week are found in Course Syllabus Appendix A. Readings are tentative and may be adjusted as needed.

Week	Date(s)	Topic(s) and Objectives	Activities	Assignments
1	August 23-27	<p>Drivers: What are the drivers of climate change?</p> <ul style="list-style-type: none"> -Historical perspectives -Nature v. anthropogenic climate change -Climate change v. global warming – why terminology matters -Factors affecting climate change -Population growth -Rate of change for the climate -Modeling and projections -What ice cores reveal -Policy changes, legislative, behavioral, and social drivers <p>Other</p> <ul style="list-style-type: none"> -How to read a scientific article -What is “evidence?” 	<p>Discussion – course guidelines and introduction to course</p> <p>Discussion – activities and paper topics</p>	<p>Initial Reflection due August 29</p> <p>Quiz 1 due August 29</p>
2	August 30-September 3	<p>Drivers: Energy generation and current infrastructure</p> <ul style="list-style-type: none"> -Industrial revolution to present -Fossil fuels, nuclear energy, and sustainable energy generation -US power grid and energy distribution -Wastewater infrastructure 	<p>Class Debate: Are fossil fuels “bad?”</p> <p>See Canvas for details and team assignments.</p>	<p>Homework #1 Due September 5</p> <p>Quiz 2 due September 5</p> <p>Individual Creative Project Topic and Creative Plan due September 5</p>
3	September 7-10	<p>Effects: Climate Change and Human Health</p> <ul style="list-style-type: none"> -Communicable and noncommunicable diseases -Energy generation, emissions, and air quality -Environmental and social justice/injustices -Mental health 	<p>No synchronous session this week (Labor Day holiday)</p>	<p>Quiz 3 due September 12</p> <p>Term Project Team and Topic Due September 12</p>
4	September 13-17	<p>Effects: Food security</p> <ul style="list-style-type: none"> -Food and nutrition -Access to nutritious foods -Land use and agricultural changes -Alternative approaches to food production, food use and meatless movements, plant genetic modifications -Pollinators and food access -The human cost of agriculture (Case study: farmworkers) 	<p>Guest speaker: Dr. Andy Kane, researcher in environmental and aquatic systems</p> <p>Topic: Oysters, climate change, and Gulf Coast communities</p>	<p>Homework #2 Due September 19</p> <p>Quiz 4 due September 19</p>

5	September 20-24	<p>Effects: Biodiversity</p> <ul style="list-style-type: none"> -Biodiversity resources, ecosystem services -Land use, change, and development -US land use, deforestation and land use change internationally -International biodiversity and land use agreements (Case Studies: Amazon Rainforest; Indonesia) 	<p>Guest speaker: Dr. Katie Feilen, Primatologist and Anthropologist</p> <p>Topic: Biodiversity and Land Use Changes in Indonesia</p>	<p>Term Project Contract, Project Scope, and Outline Due September 26</p> <p>Quiz 5 due September 26</p>
6	September 27- October 1	<p>Effects: Environmental Justice and Natural Disasters</p> <ul style="list-style-type: none"> -Adaptation, mitigation, and resilience -Exposure to climate change impacts -Socioeconomic status and individual/community resilience -Indigenous populations 	<p>Guest Speaker: Dr. Song Liang?</p>	<p>Quiz 6 due October 3</p> <p>Individual Creative Project Background Research and Outline October 3</p>
7	October 4-7	<p>Effects: Economics, GDP, and the US and International Stock Markets</p> <ul style="list-style-type: none"> -Estimations of current economic losses -Ecosystem services -Impacts on Gross Domestic Product, world GDP losses -Money and more money – businesses, stock market, and “green” trends 	<p>Team Term Project Strategic Planning and Collaborative Work Session</p>	<p>Team Project First Progress Report Due October 10</p> <p>Homework #3 Due October 10</p> <p>Quiz 7 due October 10</p>
8	October 11-15	<p>Effects and Approaches: Community-based issues and solutions</p> <ul style="list-style-type: none"> -Impacts of climate change on communities -Community engagement strategies 	<p>Individual Creative Project Discussion and Planning</p>	<p>Quiz 8 due October 17</p>
9	October 18-22	<p>Effects and Approaches: Rights of Nature</p> <ul style="list-style-type: none"> -Does nature have rights? Should it? -Restoration of natural carbon sinks -Protection of natural resources using human or “people-focused” values (anthropocentric versus ecocentric approaches) 	<p>Class Debate – Rights of Nature</p> <p>See Canvas for details and team assignments.</p>	<p>Quiz 9 due October 24</p> <p>Individual Creative Project First Submission due October 24</p>
10	October 25-29	<p>Approaches: Climate Change Law and Policy</p> <ul style="list-style-type: none"> -Corporate subsidies, household, business carbon footprint reductions -Carbon capture and sequestration -The insurance industry as regulators -Corporate governance and securities regulation 	<p>Activity TBA – Guest Speaker</p>	<p>Homework #4 Due October 31</p> <p>Quiz 10 due October 31</p>

11	November 1-5	<p>Approaches: Why directions matter - top-down and bottom-up changes</p> <ul style="list-style-type: none"> -National and International policies, treaties -Administrative and executive decisions -Global consensus, mandatory pledges to reduce GHGs -International law for enforcing country pledges -Grassroots and community-based movements 	Peer Feedback Workshop – Strategies for Giving and Receiving Feedback	<p>Quiz 11 due November 7</p> <p>Individual Creative Project Peer Feedback due November 7</p>
12	November 8-10, 12	<p>Approaches: Dignity, human rights, and national security</p> <ul style="list-style-type: none"> -Dignity law -International human rights -Climate refugees and human health -Is climate change a national security issue? 	Team Term Project Strategic Planning and Collaborative Work Session	<p>Quiz 12 due November 14</p> <p>Term Project Team Second Progress Report due November 14</p>
13	November 15-19	<p>Approaches: Talking climate change</p> <ul style="list-style-type: none"> -Why climate change is political -Individual and collective action -How to (productively) talk about climate change and other contentious topics -Strategies for finding common ground with conversation partners, collaborators, and stakeholders 	Class activity: Talking about talking about climate change	<p>Quiz 13 due November 21</p> <p>Individual Creative Project Final Submission due November 21</p>
14	November 22-23	<p>Approaches: Putting it all together and where we go from here</p> <ul style="list-style-type: none"> -Alternative energy - nuclear fuels (Case study: Yucca Mountain) -Renewable energy – wind, water, solar -Environmental and health impacts of alternative and renewable energy sources -Preparing for the poster session 	Case Study: Planning for a climate change present and future	<p>Final Course Reflection due November 30</p> <p>Quiz 14 due November 29, 11:59pm</p>
15	November 29-December 3	<p>Approaches: Putting it all together and where we go from here, continued</p>	Team Term Project Strategic Planning and Collaborative Work Session	<p>Term Project Self and Peer Evaluation due December 5</p> <p>Term Project Final Submission Report due December 5</p>
16	December 6-8	<p>Approaches: Wrap-up and Poster Session for Term Projects</p>	<p>Term Project Presentations – Poster Session December 6</p>	<p>Term Project Poster due December 6</p>

Course Materials and Technology

Course Materials

Textbook. There is no required textbook for this course.

Additional required readings. Posted within each module on the course website. Readings are also listed in the topical outline/course schedule table above. These are subject to change.

Technology

Hardware. Webcam and Microphone may be required for out-of-class activities. We may use laptop built in webcams and students may be required to move camera during use. Additional technical requirements are outlined at <http://publichealth.php.ufl.edu/tech/>.

e-Learning in Canvas site. There will be an online site for this course in Canvas, the learning management system supported by the University. Log in at <https://lss.at.ufl.edu/> and go to course site for PHCXXX: Climate Change, the Environment, and the Future of Public Health, Fall 2021. Here, I will post the syllabus, out-of-class course content, assignments, and allow for discussions/chats among the students and course leaders. You will also turn in assignments through this site. Course-related emails are expected to be done through the Canvas system, not the instructor's or TA's @ufl.edu emails. This will eliminate any issues with students not getting emails due to connection problems. It will be your responsibility to check the site on a routine basis to keep up with announcements, emails, and course modifications.

For technical support for this class, please contact the UF Help Desk at:

- helpdesk@ufl.edu
- (352) 392-HELP - select option 2
- <https://helpdesk.ufl.edu/>

Additional Academic Resources

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: [Visit the Student Honor Code and Student Conduct Code webpage for more information.](#)

On-Line Students Complaints: [View the Distance Learning Student Complaint Process.](#)

ACADEMIC REQUIREMENTS AND GRADING

Assignments

The graded course assignments will include post-module quizzes, homework, a semester individual creative project, and a group term project. Each of these will contribute to the final grade as outlined below.

Post-Module Quizzes (14, quizzes, 280 points total, 28% of final grade, see table for due dates, all due 11:59pm)

Purpose and relationship to course goals: The quizzes are an opportunity for students to demonstrate course content and knowledge, apply their knowledge to new situations, and reflect on the key themes through a variety of question styles and types.

Quizzes will be done on the content modules. They will be administered in the online course site in Canvas using LockDown Browser. The quizzes will be due at 11:59pm on the due date. These quizzes are low-stakes assessments designed to reinforce the content from the weekly lesson and build upon the pre-work and previous lessons. These quizzes are based on the learning design philosophy that small, frequent reinforcement of course content builds over time and can lead to lasting gains. The format will be multiple choice, select multiple answers, fill-in, short answer, matching, and similar types of questions. The content of the quizzes will focus on the module content, including the content presented in the pre-reading, lectures, and by guest speakers, as well as any in-class activities.

Homework (50 points each, 20% of final grade)

Purpose and relationship to course goals: The written assignments are an opportunity for students to apply their knowledge gained in the readings and lectures. Each assignment takes a different approach to a selection of the modules with engaging activities, ranging from creating communication materials, to op-eds, to writing and analyzing fictional conversations.

Homework #1 helps students practice or meet course goals 1-4, 8, 10, 11.

Homework #2 helps students practice or meet course goals 2, 3, 5-7, 9-11.

Homework #3 helps students practice or meet course goals 1-4, 6-8, 11.

Homework #4 helps students practice or meet course goals 1, 2, 6-8, 10, 11.

Four homework assignments worth 50 points each will be assigned through the semester. Check the syllabus and Canvas for the most up-to-date information on the homework assignments. The purpose of the homework assignments is to demonstrate knowledge and apply the understanding of course concepts to new scenarios. The homework assignments will be case studies, writing assignments, problem-solving, and similar applications-based scenarios for students to apply the course concepts and demonstrate their learning. The homework will be submitted online through Canvas using text inputs or by uploading a Word Doc in Canvas.

Individual Creative Project (250 points, 25% of final grade, see table for due dates)

Purpose and relationship to course goals: The Individual Creative Project provides students with the opportunity to take ownership of their learning by exploring a topic of interest to them in greater depth and choose the method through which they will demonstrate their learning. The Individual Creative Project relates to and helps students meet the following course objectives: 1, 2, 5-7, 9, 10.

Individually, students will select a topic from the course content and conduct in-depth research on this topic through scholarly literature searches, interviews (with instructor approval), and news/media coverage (as applicable). The purpose of this activity is for students to take ownership of a topic of interest to them personally and/or professionally. For the final activity associated with the Individual Creative Project, they

will communicate their research and investigation of the topic using a creative method (for example, video, PowToon, social media campaign, etc., and not a standard classroom report). See Canvas for further details on this activity.

All activities within this Individual Creative Project should have all information attributed to its source (using in-text or in-presentation citations and a reference list). The style and type of references used can be adjusted to be appropriate to the medium of the presentation. Please reach out to the instructor (or Teaching Assistant, as applicable) with questions. The Individual Creative Project and earlier submissions will be submitted by uploading text, Word Doc, or other appropriate attachment or file type to Canvas.

The Individual Creative Project will be scaffolded into a number of assignments through the semester. The students will work individually on this project, but provide feedback to their colleagues to create a supportive community-based learning environment. The rubric for the final submission for the Individual Creative Project can be found in Course Syllabus Appendix B. The Individual Creative Project will be broken down into the following:

Individual Creative Project Activity (Individual Work)	Points	Due Date
Topic and Creative Plan due	0 Points	September 5
Background Research and Outline	50 points	October 3
First Submission	50 points	October 24
Peer Feedback	50 points	November 7
Final Submission	100 points	November 21
TOTAL	250 points (25% of final course grade)	

Through this course, students are expected to provide effective peer feedback and constructive criticism to their colleagues. They are also expected to receive this same type of feedback and use it to improve their own work. This is designed as part of a key learning goal to simulate professional interactions and future workplace collaborations. Guidelines and instruction on effective peer feedback will be included as part of the training development in this course.

Term Project (250 points, 25% of final grade, see table for due dates)

Purpose and relationship to course goals: The team term project allows students to collaborative, develop collaborative skills, define and implement a project, and communicate their accomplishments to a defined audience. This activity helps students practice and meet course objectives 1,2,4-6, 8-11.

Students will work in self-selected groups of 2-4 people on a project spanning the semester. This project is designed to be a creative and collaborative endeavor for the students on a topic of their choosing. With instructor approval, the students may design the project to be a report, communication strategy, policy analysis, community engagement activity, or similar. The length and format will depend on the activity and deliverable determined by the group and instructor at the time of the Team Contract, Project Scope, and Outline. For example, the community engagement activity may involve the implementation of an outreach project with a shorter write-up (3-5 pages) and supplemental materials (brochures, photos from activities, presentation slides, or similar), compared to a policy analysis, report, or communication strategy (generally

10-12 pages). The written portion of the project will be submitted through a text or Word Doc upload to Canvas.

This project is purposely open-ended for students to take ownership and creative direction of the work. Each group will work collaboratively with the instructor (and Teaching Assistant, if applicable) to design a suitable term project at an appropriate scale for completion during the semester.

The projects culminate in a two-part activity including a final report of activities conducted and a poster presentation. The poster presentation will occur during a scheduled class meeting, with invited university guests to view posters. The posters will be submitted as a Canvas upload and will be shared by the team in the Zoom poster session.

The term project will be scaffolded with project deliverables throughout the semester. These regular check-in points are designed so the students and instructor have regular contact and feedback to maintain communication throughout the semester. Rubrics for the final submission report and final submission poster session presentation can be found in Course Syllabus Appendix B.

Term Project Activity (Team Collaboration)	Points	Due Date
Team Members and Topic	0 points	September 12
Team Contract, Project Scope and Outline	25 points	September 26
First Progress Report	25 points	October 10
Second Progress Report	25 points	November 14
Self and Peer Evaluation	25 points	December 5
Final Submission Report	75 points	December 5
Final Submission Poster Session Presentation (includes poster and attendance/presentation at poster session)	75 points	December 6 (poster due), December 6 (poster session)
TOTAL	250 points	

Self-Evaluations - Initial and Final Course Reflections (due August 29 and November 30, 20 points total, 2% of final course grade)

Purpose and relationship to course goals: The reflection paper provides an opportunity for students to think critically about course content and themes, contextualize their knowledge, and develop reflective practices.

Reflection is essential to understanding ourselves and our professional abilities. As such, reflection is an emphasized part of this course and we will practice our skills in structured reflection through the semester. For these two reflections, students are expected to thoughtfully evaluate their present perspectives on the course, including the topics covered in the title – Climate Change, the Environment, and the Future of Public Health. For the initial course reflection, please use the following to guide your initial thoughts – what interests you in this course? What are your motivations? What are you hoping to gain from this course – specific skills, specific content knowledge, etc.? In what ways will these course topics be useful to you personally or professionally?

Letter Grade	A	A-	B+	B	B-	C+	C	D+	D	D-	E
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Please be aware that a C- is not an acceptable grade for graduate students. The GPA for graduate students must be 3.0 based on 5000 level courses and above to graduate. A grade of C counts toward a graduate degree only if based on credits in courses numbered 5000 or higher that have been earned with a B+ or higher. In addition, the Bachelor of Health Science and Bachelor of Public Health Programs do not use C- grades.

Letter Grade	Grade Points
A	4.0
A-	3.67
B+	3.33
B	3.0
B-	2.67
C+	2.33
C	2.0
C-	1.67
D+	1.33
D	1.0
D-	0.67
E	0.0
WF	0.0
I	0.0
NG	0.0
S-U	0.0

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at:

<http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

More information on UF grading policy may be found at:

<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

Grading and Rubrics

Several of the course assignments are graded using rubrics. An example for a single line of a rubric category is included below. Additional examples of full rubrics included in Syllabus Appendix B.

Criteria	Ratings				
Content Summarizes and analyzes points succinctly; demonstrates thoughtful	Exceptional (100%) Meets and exceeds assignment expectations	Accomplished (95%) Meets basic requirements of assignment	Emerging (85%) Meets some of assignment requirements	Partially Met (70%) Moves toward, but meets few of the	No Marks (0%) Assignment requirements, not met, not addressed,

presentation of content, research, and analysis; meets defined expectations for content outlined in assignment details.				assignment requirements	and/or no work submitted
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Please note that the “accomplished” category, scored at an “A,” is reflective of meeting the basic expectations or the bare minimum to follow the instructions. The “exceptional” category is reflective of those same expectations but doing well in meeting them. The scoring in the course for doing the bare minimum (for example, the minimum sources included, basic analyses, standard communication, and similar) may be scored in the rubric in the “accomplished,” not the “exceptional” category. The “exceptional” category, at a higher “A,” would reflect detailed research, advanced analyses, exceptional communication, and similar.

Late Assignments and Make Up Work

Course policies are a collaborative agreement between the students and the instructor. The course rules will be posted in Canvas.

Assignments and activities submitted up to 24 hours late will be deducted 10% automatically, unless otherwise noted for that assignment. Beyond 24 hours, the work will not be accepted and will not contribute points towards the final class score, unless special circumstances are applicable.

Assignment resubmissions are not accepted after grading. This includes when the assignment has been submitted, the deadline passed, and the grade has been posted, even if it is still during the late submission period. If the work is turned in, graded, and grade has been posted, it is final. Assignments may be submitted as many times as desired before the due date. This is specific to written assignments, not quizzes. Assignments may be resubmitted during the late period for the late discount if the work has not been graded and the grade posted.

Missed class sessions resulting in missed opportunities for work (peer reviews, reports, presentations) will be assigned makeup work and activities, when applicable, on a case-by-case basis. Please contact the instructor as soon as possible to make arrangements.

Special Circumstances. In the event of exceptional situations that may interfere with your ability to perform an assignment or meet a deadline, contact the instructor as soon in advance of the deadline as possible. Such cases will be dealt on an individual, case-by-case basis.

Absences should be discussed with the instructor in advance when possible. Communication should be done using the message system in Canvas, not the instructor’s ufl.edu email address. Late arrivals and early

departures are discouraged. However, extenuating circumstances occur and sometimes these things are necessary.

Please note: Any requests for make-ups due to technical issues should be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail the instructor and TA, as applicable, within 24 hours of the technical difficulty if you wish to request a make-up.

Policy Related to Make up Quizzes or Other Work

Make-up quizzes and other work will be determined on a case-by-case basis. Please send an email to the instructor through Canvas.

Please note: Any requests for make-ups due to technical issues should be accompanied by the UF Computing help desk (<http://helpdesk.ufl.edu/>) correspondence. You MUST e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

Policy Related to Required Class Attendance

All faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Attendance at all scheduled course activities is expected. Additionally, students will be responsible for additional out-of-class activities as part of a partially blended classroom environment (described above). Further, the assignments outlined will be completed outside of class. Students will be required to meet with their term project groups outside of class and may find it beneficial to attend other events or have additional scheduled meetings, depending on the topic selected by their working group outside of the in-person course meetings.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Please note: Any requests for make-ups due to technical issues MUST be accompanied by the UF Computing help desk (<http://helpdesk.ufl.edu/>) correspondence. You MUST e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

Policy Related to Required Class Attendance

Please note all faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details:

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Additional information can be found here:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Policies are tentative and subject to change with advance notice and collaborative discussion with students, as applicable.

Expectations Regarding Course Behavior

All members of the class community are expected to demonstrate professional behavior in all conduct, synchronous, asynchronous, and written. The expectations regarding course behavior are a collaborative agreement between the all of the students and the instructor (and TA, as applicable). This applies to discussion etiquette, in-person collaborations, and group work, interactions with guest speakers and community members, and beyond.

Cell phones and laptop use

Cell phone and laptop use are encouraged as it relates to the classroom work.

Privacy

Our class sessions may be audio visually recorded for students in the class to refer back, for enrolled students who are unable to attend live, or for other record-keeping purposes. 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 and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Students are strongly encouraged to have their video cameras on and engage actively using their microphones and through the chat. This is particularly important when we have guest speakers, as it may be perceived as rude or discourteous by the guest speaker that they give a talk to interact with the class and no one would interact using the video or chat.

Communication Guidelines

The communication guidelines are a collaborative agreement between the all of the students and the instructor (and TA, as applicable). Email messages are expected to be sent through the Canvas system, not the instructor's or TA's UF email addresses. Students should expect a response within 1-2 business days, excluding weekends.

My goal as an instructor is to provide feedback on small activities (quizzes) the day after they close, small assignments (reflections) within 2-3 days, and larger activities (scaffolded project activities and homeworks) within one week.

Announcements: Class announcements will be sent via the announcements tool in eLearning. Depending on your Canvas notification settings, you may or may not be notified via email; you are responsible for all information in these announcements whether or not you see them in your email.

Further, please see the university's Netiquette Guidelines:

<https://teach.ufl.edu/wp-content/uploads/2020/04/NetiquetteGuideforOnlineCourses.docx>

Additional Resources

UF Library: <https://uflib.ufl.edu/>, physical location map: <https://uflib.ufl.edu/using-the-libraries/library-location-map/>

UF Writing Studio: <https://writing.ufl.edu/writing-studio/>, how to schedule an appointment: <https://writing.ufl.edu/writing-studio/for-students/schedule-an-appointment/>

UF Disability Resource Center Accommodated Testing: <https://disability.ufl.edu/students/accommodated-testing-request/> (reminders and online testing information included here)

Academic Integrity

Students are expected to act in accordance with the University of Florida policy on academic integrity. 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 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 additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>
<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

Professionalism and COVID

As students pursuing a path in the health professions or public health, it is crucial to demonstrate professional behaviors that reflect integrity and commitment to the health of patients, fellow health professionals, and to populations we serve. To accomplish this, a strong responsibility for the well-being of others must be evident in our decisions, along with accountability for our actions. Professionalism in the health disciplines requires adherence to high standards of conduct that begin long before graduation. This is particularly true during times of health emergencies such as the COVID pandemic, given our professional habits can have a direct impact upon the health of persons entrusted to us.

If you are not vaccinated, get vaccinated. Vaccines are readily available at no cost and have been demonstrated to be safe and effective against the COVID-19 virus. Visit this link for details on where to get your shot, including options that do not require an appointment: <https://coronavirus.ufhealth.org/vaccinations/vaccine-availability/>. Students who receive the first dose of the vaccine somewhere off-campus and/or outside of Gainesville can still receive their second dose on campus.

In response to COVID-19, the following professional practices are in place to maintain your learning environment, to enhance the safety of our in-classroom interactions, and to protect the health and safety of ourselves, our patients, our neighbors, and our loved ones.

- You are required to wear approved face coverings at all times while in Health Science Center classrooms and within Health Science Center buildings even if you are vaccinated.
- If you are sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 (or email covid@shcc.ufl.edu) to be evaluated for testing and to receive further instructions about returning to campus. UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the UF Health Screen, Test & Protect website for more information.
- Continue to follow healthy habits, including best practices like frequent hand washing.
- Avoid crowded places (including gatherings/parties with more than 10 people)

Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class. Hand sanitizing stations will be located in every classroom.

Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. If you are withheld from campus by the Department of Health through Screen, Test & Protect you are not permitted to use any on campus facilities. Students attempting to attend campus activities when withheld from campus will be referred to the Dean of Students Office.

Continue to regularly visit coronavirus.UFHealth.org and coronavirus.ufl.edu for up-to-date information about COVID-19 and vaccination.

COVID-19 Symptoms

See <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html> for information about COVID-19 symptoms, which may include fever, cough, shortness of breath or difficulty breathing, fatigue, chills, muscle or body aches, headache, sore throat, congestion or runny nose, nausea or vomiting, diarrhea, and loss of taste or smell.

Recording Within the Course:

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Policy Related to Guests Attending Class:

Only registered students are permitted to attend class. However, we recognize that students who are caretakers may face occasional unexpected challenges creating attendance barriers. Therefore, by exception, a department chair or his or her designee (e.g., instructors) may grant a student permission to bring a guest(s) for a total of two class sessions per semester. This is two sessions total across all courses. No further extensions will be granted. Please note that guests are **not** permitted to attend either cadaver or wet labs. Students are responsible for course material regardless of attendance. For additional information, please review the Classroom Guests of Students policy in its entirety. Link to full policy:

<http://facstaff.php.ufl.edu/services/resourceguide/getstarted.htm>

Online Faculty Course Evaluation Process

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/>.

SUPPORT SERVICES

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, it is strongly recommended you register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class or as soon as you believe you might be eligible for accommodations. The Dean of Students Office will provide documentation of accommodations to you, which you must then give to me as the instructor of the course to receive accommodations. Please do this as soon as possible after you receive the letter. Students with disabilities should follow this procedure as early as possible in the semester. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The **Counseling and Wellness Center** 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.
- **U Matter We Care** website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.

- The **Student Health Care Center** at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: <https://shcc.ufl.edu/>
- Crisis intervention is always available 24/7 from: Alachua County Crisis Center: (352) 264-6789 <http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>
- **University Police Department:** [Visit UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).
- **UF Health Shands Emergency Room / Trauma Center:** For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; [Visit the UF Health Emergency Room and Trauma Center website.](#)

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.

Inclusive Learning Environment

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: www.multicultural.ufl.edu

Appendix A: Reading List

Reading assignments and selected supplemental materials are listed by week and module. All readings are tentative and subject to change. Please see each Canvas module for the most up-to-date listing.

Week	Date(s)	Topic(s) and Objectives	Readings and Resources
1	September 1, 3	<p>Syllabus Discussion and Development of Course Ground Rules</p> <p>Drivers: What are the drivers of climate change?</p> <ul style="list-style-type: none"> -Factors affecting climate change -Population growth -Rate of change for the climate -Modeling and projections -What ice cores reveal -Policy changes, legislative, behavioral, and social drivers 	<p>The Royal Society and the US National Academy of Sciences. Climate change evidence & causes. https://royalsociety.org/-/media/Royal_Society_Content/policy/projects/climate-evidence-causes/climate-change-evidence-causes.pdf</p> <p>Cook, D. 2020. How the term ‘anthropocene’ jumped from geoscience to hashtags – before most of us knew what it meant. The Conversation. https://theconversation.com/how-the-term-anthropocene-jumped-from-geoscience-to-hashtags-before-most-of-us-knew-what-it-meant-130130</p> <p>Peach, S. 2020. ‘How is climate change affecting winter in my region?’ Yale Climate Connections. https://www.yaleclimateconnections.org/2020/02/how-is-climate-change-affecting-winter-in-my-region/</p> <p>Yoho, R. 2019. Hope in discussing environmental issues. Minding Nature. 12(3), 107-111. Link.</p>
2	September 8, 10	<p>Drivers: Energy generation and current infrastructure</p> <ul style="list-style-type: none"> -Industrial revolution to present -Fossil fuels, nuclear energy, and sustainable energy generation -US power grid and energy distribution -Wastewater infrastructure 	<p>Ifran, U. 2015. Climate change is coming for U.S. energy infrastructure. Scientific American. https://www.scientificamerican.com/article/climate-change-is-coming-for-u-s-energy-infrastructure/</p> <p>U.S. Department of Energy. 2015. Climate change and the U.S. Energy Sector: Regional vulnerabilities and resilience solutions. Link. Read pages xii through 1-4.</p> <p>U.S. Department of Energy. 2015. Southeast. Climate change and the U.S. energy sector: regional vulnerabilities and resilience solutions. Summary in brief. https://www.energy.gov/sites/prod/files/2015/10/f27/Southeast.pdf</p> <p>Cronin, J., Anandarajah, G., & Dessens, O. (2018). Climate change impacts on the energy system: a review of trends and gaps. <i>Climatic change</i>, 151(2), 79-93. https://link.springer.com/content/pdf/10.1007/s10584-018-2265-4.pdf</p> <p>York, R. (2012). Do alternative energy sources displace fossil fuels?. <i>Nature Climate Change</i>, 2(6), 441-443. https://www.nature.com/articles/nclimate1451.pdf</p>

3	September 15, 17	Effects: Climate Change and Human Health -Communicable and noncommunicable diseases -Energy generation, emissions, and air quality -Environmental and social justice/injustices -Mental health	<p>U.S. EPA. ND. Climate impacts on human health. https://archive.epa.gov/epa/climate-impacts/climate-impacts-human-health.html</p> <p>Vezzulli, L., Grande, C., Reid, P. C., Hélaouët, P., Edwards, M., Höfle, M. G., ... & Pruzzo, C. (2016). Climate influence on Vibrio and associated human diseases during the past half-century in the coastal North Atlantic. <i>Proceedings of the National Academy of Sciences</i>, 113(34), E5062-E5071. https://www.pnas.org/content/pnas/113/34/E5062.full.pdf</p> <p>Yale Climate Connections. 2020. To protect residents from wildfire smoke, some cities set up clean air shelters. https://www.yaleclimateconnections.org/2020/02/clean-air-shelters-to-protect-residents-from-wildfire-smoke/ (90 second audio)</p> <p>Harrington, S. 2019. How climate change threatens public health. Yale Climate Connections. https://www.yaleclimateconnections.org/2019/08/how-climate-change-threatens-public-health/</p>
4	September 22, 24	Effects: Food security -Food and nutrition -Access to nutritious foods -Land use and agricultural changes -Alternative approaches to food production, food use and meatless movements, plant genetic modifications -Pollinators and food access -The human cost of agriculture (Case study: farmworkers)	<p>Brown, M. E., & Funk, C. C. (2008). Food security under climate change. <i>Science</i>, 319(5863), 580-581. https://science.sciencemag.org/content/sci/319/5863/580.full.pdf</p> <p>Schmidhuber, J., & Tubiello, F. N. (2007). Global food security under climate change. <i>Proceedings of the National Academy of Sciences</i>, 104(50), 19703-19708. https://www.pnas.org/content/pnas/104/50/19703.full.pdf</p> <p>U.S. EPA. 2017. Climate impacts on agriculture and food supply. https://archive.epa.gov/epa/climate-impacts/climate-impacts-agriculture-and-food-supply.html</p> <p>Johnston, P (interviewee) and O Patel (interviewer). 2020. Pasha 50: The threat of climate change to South Africa's agriculture. The Conversation. https://theconversation.com/pasha-50-the-threat-of-climate-change-to-south-africas-agriculture-130137 (5 minute audio)</p>

5	September 29, October 1	<p>Effects: Biodiversity</p> <ul style="list-style-type: none"> -Biodiversity resources, ecosystem services -Land use, change, and development -US land use, deforestation and land use change internationally -International biodiversity and land use agreements (Case Studies: Amazon Rainforest; Indonesia) 	<p>Harvey, C. 2018. Climate change is becoming a top threat to biodiversity. <i>Scientific American</i>. https://www.scientificamerican.com/article/climate-change-is-becoming-a-top-threat-to-biodiversity/</p> <p>Chen, I. C., Hill, J. K., Ohlemüller, R., Roy, D. B., & Thomas, C. D. (2011). Rapid range shifts of species associated with high levels of climate warming. <i>Science</i>, 333(6045), 1024-1026. https://science.sciencemag.org/content/sci/333/6045/1024.full.pdf</p> <p>Dantas, T. 2018. How climate change affects biodiversity loss. <i>Medium</i>. https://medium.com/@thalesetd/how-climate-change-affects-biodiversity-loss-d6a93fb1a760</p> <p>Legagneux, P., Casajus, N., Cazelles, K., Chevallier, C., Chevrinain, M., Guéry, L., ... & Ropars, P. (2018). Our house is burning: discrepancy in climate change vs. biodiversity coverage in the media as compared to scientific literature. <i>Frontiers in Ecology and Evolution</i>, 5, 175. https://www.frontiersin.org/articles/10.3389/fevo.2017.00175/full</p>
6	October 6, 8	<p>Effects:</p> <p>Environmental Justice and Natural Disasters</p> <ul style="list-style-type: none"> -Adaptation, mitigation, and resilience -Exposure to climate change impacts -Socioeconomic status and individual/community resilience -Indigenous populations 	<p>Oliver-Smith, A. (2012). Debating environmental migration: society, nature and population displacement in climate change. <i>Journal of International Development</i>. 24, 1058-1070. https://onlinelibrary.wiley.com/doi/pdfdirect/10.1002/jid.2887</p> <p>Yale Climate Connections. 2020. Hottest places in a city are often low-income neighborhoods. https://www.yaleclimateconnections.org/2020/02/hottest-places-in-a-city-are-often-low-income-neighborhoods/ (90 second audio)</p> <p>Ahmed, S. 2020. Climate change impacts in Bangladesh show how geography, wealth and culture affect vulnerability. <i>The Conversation</i>. https://theconversation.com/climate-change-impacts-in-bangladesh-show-how-geography-wealth-and-culture-affect-vulnerability-128207</p>
7	October 13, 15	<p>Effects: Economics, GDP, and the US and International Stock Markets</p> <ul style="list-style-type: none"> -Estimations of current economic losses -Ecosystem services -Impacts on Gross Domestic Product, world GDP losses -Money and more money – businesses, stock market, and “green” trends 	<p>Hoffman, A and E Hughes-Cromwick. 2018. Nobel award recognizes how economic forces can fight climate change. <i>The Conversation</i>. https://theconversation.com/nobel-award-recognizes-how-economic-forces-can-fight-climate-change-104520</p> <p>Sinclair, P. 2020. Video: BlackRock CEO warns of increasing climate risks to investors. <i>Yale Climate Connections</i>. https://www.yaleclimateconnections.org/2020/02/video-blackrock-ceo-warns-of-increasing-climate-risks-to-investors/ (includes article and 6 minute video)</p> <p>Alexander, S. 2020. I’ve seriously tried to believe capitalism and the planet can coexist, but I’ve lost faith. <i>The Conversation</i>. https://theconversation.com/ive-seriously-tried-to-believe-capitalism-and-the-planet-can-coexist-but-ive-lost-faith-131288</p>

8	October 20, 22	Effects and Approaches: Community-based issues and solutions -Impacts of climate change on communities -Community engagement strategies	<p>Baldauf, M., Garlappi, L., & Yannelis, C. (2020). Does climate change affect real estate prices? Only if you believe in it. <i>The Review of Financial Studies</i>, 33(3), 1256-1295. https://academic.oup.com/rfs/article/33/3/1256/5735306</p> <p>Palm, R and TW Bolsen. 2020. 'Sea level rise won't affect my house' – even flood maps don't sway Florida coastal residents. <i>The Conversation</i>. https://theconversation.com/sea-level-rise-wont-affect-my-house-even-flood-maps-dont-sway-florida-coastal-residents-130433</p> <p>Hobbie, S. E., & Grimm, N. B. (2020). Nature-based approaches to managing climate change impacts in cities. <i>Philosophical Transactions of the Royal Society B</i>, 375(1794), 20190124. https://royalsocietypublishing.org/doi/pdf/10.1098/rstb.2019.0124</p> <p>Rodríguez, I and M Inturias. 2020. Bolivia: contribution of indigenous people to fighting climate change is hanging by a thread. <i>The Conversation</i>. https://theconversation.com/bolivia-contribution-of-indigenous-people-to-fighting-climate-change-is-hanging-by-a-thread-129399</p> <p>Linzey, T., & Brannen Jr, D. E. (2017). A Phoenix from the Ashes: Resurrecting a Constitutional Right of Local, Community Self-Government in the Name of Environmental Sustainability. <i>Ariz. J. Env'tl. L. & Pol'y</i>, 8, 1. Link</p>
9	October 27, 29	Effects and Approaches: Rights of Nature -Does nature have rights? -Restoration of natural carbon sinks	<p>Stone, C. D. (2010). <i>Should trees have standing?: law, morality, and the environment</i>. Oxford University Press. Chapter 1. Should trees have standing? Toward legal rights for natural objects. (Chapters available through UF library - https://ebookcentral.proquest.com/lib/ufl/detail.action?docID=1591559#)</p> <p>Mount, M. 2017. Can a river have legal rights? I visited the jungles of Colombia to find out. <i>The Conversation</i>. https://theconversation.com/can-a-river-have-legal-rights-i-visited-the-jungles-of-colombia-to-find-out-84878</p> <p>Westerman, A. 2019. Should rivers have same legal rights as humans? A growing number of voices say yes. NPR. https://www.npr.org/2019/08/03/740604142/should-rivers-have-same-legal-rights-as-humans-a-growing-number-of-voices-say-ye</p>
10	November 3, 5	Approaches: Climate Change Law and Policy -Corporate subsidies, household, business carbon footprint reductions -Carbon capture and sequestration -The insurance industry as regulators -Corporate governance and securities regulation	<p>Stone, C. D. (2010). <i>Should trees have standing?: law, morality, and the environment</i>. Oxford University Press. Chapter 2. Does the climate have standing? (Chapters available through UF library - https://ebookcentral.proquest.com/lib/ufl/detail.action?docID=1591559#)</p> <p>Sims Gallagher, K. 2018. State cap-and-trade systems offer evidence that carbon pricing can work. <i>The Conversation</i>. https://theconversation.com/state-cap-and-trade-systems-offer-evidence-that-carbon-pricing-can-work-101428</p> <p>Bradlow, D. 2019. Central banks are waking up to climate change dangers. It's about time. <i>The Conversation</i>. https://theconversation.com/central-banks-are-waking-up-to-climate-change-dangers-its-about-time-122204</p> <p>Wood, M and MC Blumm. 2020. The dramatic dismissal of a landmark youth climate lawsuit might not close the book on that case. <i>The Conversation</i>. https://theconversation.com/the-dramatic-dismissal-of-a-landmark-youth-climate-lawsuit-might-not-close-the-book-on-that-case-130162</p>

11	November 10, 12	<p>Approaches: Why directions matter - top-down and bottom-up changes</p> <ul style="list-style-type: none"> -National and International policies, treaties -Administrative and executive decisions -Global consensus, mandatory pledges to reduce GHGs -International law for enforcing country pledges -Grassroots and community-based movements 	<p>Institute of Physics. 2017. The most effective individual steps to tackle climate change aren't being discussed. https://phys.org/news/2017-07-effective-individual-tackle-climate-discussed.html</p> <p>Wood, T. 2020. Carbon pricing: it's a proven way to reduce emissions but everyone's too scared to mention it. The Conversation. https://theconversation.com/carbon-pricing-its-a-proven-way-to-reduce-emissions-but-everyones-too-scared-to-mention-it-132342</p> <p>Chan, G; R Stavins; Z Ji. 2018. International climate change policy. Annual Review of Resource Economics. 10:335-60. https://www.annualreviews.org/doi/pdf/10.1146/annurev-resource-100517-023321</p>
12	November 17, 19	<p>Approaches: Dignity, human rights, and national security</p> <ul style="list-style-type: none"> -Dignity law -International human rights -Climate refugees and human health -Is climate change a national security issue? 	<p>Cubie, D. (2014). Promoting dignity for all: Human rights approaches in the post-2015 climate change, disaster risk reduction and sustainable development frameworks. <i>Hum. Rts. & Int'l Legal Discourse</i>, 8, 36.</p> <p>The Universal Declaration of Human Rights. United Nations General Assembly, Paris, 10 December 1948. General Assembly resolution 217A. https://www.un.org/en/universal-declaration-human-rights/</p> <p>United Nations. ND. History of the Document. Universal Declaration of Human Rights. https://www.un.org/en/sections/universal-declaration/history-document/index.html</p> <p>Liberman, B. 2019. A brief introduction to climate change and national security. Yale Climate Connections. https://www.yaleclimateconnections.org/2019/07/a-brief-introduction-to-climate-change-and-national-security/</p>

13	November 24 (No class November 26)	<p>Approaches: Talking climate change</p> <ul style="list-style-type: none"> -Why climate change is political -Individual and collective action -How to (productively) talk about climate change and other contentious topics -Strategies for finding common ground with conversation partners, collaborators, and stakeholders 	<p>Berwyn, B. 2018. A year of climate change evidence: notes from a science reporter's journal. Inside Climate News. https://insideclimatenews.org/news/24122018/climate-change-evidence-reports-2018-year-review-ipcc-arctic-emissions-gap-national-assessment</p> <p>Sommer, L. K., & Klöckner, C. A. (2019). Does activist art have the capacity to raise awareness in audiences?—A study on climate change art at the ArtCOP21 event in Paris. <i>Psychology of Aesthetics, Creativity, and the Arts</i>. https://psycnet.apa.org/fulltext/2019-36639-001.pdf</p> <p>Lawson, D. F., Stevenson, K. T., Peterson, M. N., Carrier, S. J., Strnad, R. L., & Seekamp, E. (2019). Children can foster climate change concern among their parents. <i>Nature Climate Change</i>, 9(6), 458-462. https://faculty.cnr.ncsu.edu/nilspeterson/wp-content/uploads/sites/17/2019/09/Lawson-et-al.-2019-IGL-NCC.pdf</p> <p>Muller, D. 2020. Media 'impartiality' on climate change is ethically misguided and downright dangerous. <i>The Conversation</i>. https://theconversation.com/media-impartiality-on-climate-change-is-ethically-misguided-and-downright-dangerous-130778</p> <p>Climate Outreach. The #TalkingClimate Handbook. How to have conversations about climate change in your daily life. https://climateoutreach.org/resources/how-to-have-a-climate-change-conversation-talking-climate/</p> <p>(looking ahead to developing the poster)</p> <p>Erren, TC; PE Bourne. 2007. Ten simple rules for a good poster presentation. <i>PLoS Computational Biology</i>. 3(5)e102. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1876493/pdf/pcbi.0030102.pdf</p>
14	December 1, 3	<p>Approaches: Putting it all together and where we go from here</p> <ul style="list-style-type: none"> -Alternative energy - nuclear fuels (Case study: Yucca Mountain) -Renewable energy – wind, water, solar -Environmental and health impacts of alternative and renewable energy sources 	<p>Capon, A. 2020. 222 scientists say cascading crises are the biggest threat to the well-being of future generations. <i>The Conversation</i>. https://theconversation.com/222-scientists-say-cascading-crises-are-the-biggest-threat-to-the-well-being-of-future-generations-131551</p> <p>Power, A. To prepare climate strikers for the future, we need to rewrite the history books. <i>The Conversation</i>. https://theconversation.com/to-prepare-climate-strikers-for-the-future-we-need-to-rewrite-the-history-books-131857</p> <p>Levy, N. 2020. Climate change: how do I cope with our planet's inevitable decline? <i>The Conversation</i>. https://theconversation.com/climate-change-how-do-i-cope-with-our-planets-inevitable-decline-128593</p>
15	December 8	<p>Term Project Presentations – Poster Session</p>	<p>University of Nebraska-Lincoln Office of Graduate Studies. ND. Presenting a research poster. Graduate Connections. https://www.unl.edu/gradstudies/connections/presenting-research-poster</p>

Appendix B: Rubrics

All rubrics are tentative and subject to change.

The final individual creative projects will be assessed using the following rubric:

Criteria	Exceptional (100%)	Accomplished (95%)	Emerging (85%)	Fair (70%)	No Marks (0%)
Content	Meets and exceeds assignment expectations: -Exceptional accurate and concise discussion of topic/issue -Demonstrates exceptional understanding of topic/issues and application of course concepts/themes	Meets basic assignment expectations: -Accurate and concise discussion of topic/issue -Demonstrates understanding of topic/issues and application of course concepts/themes	Meets many/most of assignment expectations: -Mostly accurate and concise discussion of topic/issue -Demonstrates sufficient understanding of topic/issues and application of course concepts/themes	Meets few to some of the assignment expectations: -Partially accurate and/or somewhat concise discussion of topic/issue -Demonstrates partial or limited understanding of topic/issues and application of course concepts/themes	Assignment requirements not met, not addressed, and/or no work submitted
Critical Thinking	Meets and exceeds assignment expectations: -Demonstrates excellent critical thinking skills and depth of analysis in discussion of topic/issue -Applies course content in writing and analysis	Meets basic assignment expectations: -Demonstrates critical thinking skills and depth of analysis in discussion of topic/issue -Applies course content in writing and analysis	Meets many/most of assignment expectations: -Demonstrates some critical thinking skills and depth of analysis in discussion of topic/issue -Applies some course content in writing and analysis	Meets few to some of the assignment expectations: -Demonstrates limited critical thinking skills and depth of analysis in discussion of topic/issue -Limited application of course content in writing and analysis	Assignment requirements not met, not addressed, and/or no work submitted
Communication	Meets and exceeds assignment expectations: -Demonstrates clear written communication throughout work, including citations of work and sources as applicable	Meets basic assignment expectations: -Demonstrates sufficiently clear written communication throughout work, including citations of work and sources as applicable	Meets many/most of assignment expectations: -Demonstrates mostly clear written communication throughout work, including citations of work and sources as applicable	Meets few to some of the assignment expectations: -Demonstrates some clear written communication, including citations of work and sources as applicable	Assignment requirements not met, not addressed, and/or no work submitted

The final submission report for the term project will be assessed using the following rubric:

Criteria	Exceptional (100%)	Accomplished (95%)	Emerging (85%)	Fair (70%)	No Marks (0%)
Report Content	<p>Meets and exceeds assignment expectations:</p> <ul style="list-style-type: none"> -Exemplary accomplishments related to term project -Demonstrates excellent depth of understanding of concepts and scope of work -Excellent collaborative efforts -Excellent understanding of issues, influences, and cultural sensitivity 	<p>Meets basic assignment expectations:</p> <ul style="list-style-type: none"> - Accomplishments meet term project expectations -Meets expectations for depth of understanding of concepts and scope of work -Meets expectations for collaborative efforts -Meets expectations for understanding issues, influences, and cultural sensitivity 	<p>Meets many/most of assignment expectations:</p> <ul style="list-style-type: none"> - Accomplishments partially or mostly meet term project expectations -Meets many/most expectations for depth of understanding of concepts and scope of work -Meets many/most expectations for collaborative efforts -Meets many/most expectations for understanding issues, influences, and cultural sensitivity 	<p>Meets few to some of the assignment expectations:</p> <ul style="list-style-type: none"> - Accomplishments work towards or meet few term project expectations -Meets few expectations for depth of understanding of concepts and scope of work -Meets few expectations for collaborative efforts -Meets few expectations for understanding issues, influences, and cultural sensitivity 	<p>Assignment requirements not met, not addressed, and/or no work submitted</p>
Project Analysis	<p>Meets and exceeds assignment expectations:</p> <ul style="list-style-type: none"> -Exemplary depth of analysis -Applies course concepts and topics to analysis -Exceptional use of and grounding of work in published literature 	<p>Meets basic assignment expectations:</p> <ul style="list-style-type: none"> -Meets basic expectations for depth of analysis -Applies course concepts and topics to analysis -Meets basic expectations for use of and grounding of work in published literature 	<p>Meets many/most of assignment expectations:</p> <ul style="list-style-type: none"> -Meets many/most expectations for depth of analysis -Applies some course concepts and topics to analysis -Limited use of and grounding of work in published literature 	<p>Meets few to some of the assignment expectations:</p> <ul style="list-style-type: none"> -Meets few expectations on depth of analysis -Applies limited course concepts and topics to analysis -Needs additional use of and grounding of work in published literature 	<p>Assignment requirements not met, not addressed, and/or no work submitted</p>
Communication and Style	<p>Meets and exceeds</p>	<p>Meets basic assignment expectations:</p>	<p>Meets many/most of</p>	<p>Meets few to some of the</p>	<p>Assignment requirements not met, not</p>

	assignment expectations: -Exceptional application of report style to discuss activities -Clear and concise discussion -Complete use of citation style throughout -Very limited to no errors	-Applies report style to discuss activities -Sufficiently clear and concise discussion -Application of citation style throughout -Limited to no errors	assignment expectations: -Applies report style partially or completely to discuss activities -Mostly clear and concise discussion -Mostly complete application of citation style -Some errors	assignment expectations: -Limited application of report style to discuss activities -Somewhat clear and concise discussion -Limited application of citation style -Errors present	addressed, and/or no work submitted
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The final submission poster presentation for the term project will be assessed using the following rubric:

Criteria	Exceptional (100%)	Accomplished (95%)	Emerging (85%)	Fair (70%)	No Marks (0%)
Poster Content	Meets and exceeds assignment expectations: -Exceptional summary and representation of accomplishments -Proper attribution of work, reference use, visuals, as applicable -Accurate and without errors	Meets basic assignment expectations: -Summary and representation of accomplishments meet expectations -Proper attribution of work, reference use, visuals, as applicable -Accurate and without or with few errors	Meets many/most of assignment expectations: -Meets many/most expectations for summarizing and representing accomplishments -Mostly proper attribution of work, reference use, visuals, as applicable -Generally accurate and with few errors	Meets few to some of the assignment expectations: -Works towards meeting summary and representation of accomplishment expectations -Some proper attribution of work, reference use, visuals, as applicable -Some accuracy issues and/or errors	Assignment requirements not met, not addressed, and/or no work submitted
Poster Visual Presentation	Meets and exceeds assignment expectations: -Exceptional use of text, graphics, and visuals to represent work -Exceptional professional display	Meets basic assignment expectations: -Meets expectations for display of text, graphics, visuals to represent work -Display meets professional	Meets many/most of assignment expectations: -Meets many/most expectations for display of text, graphics, visuals to represent work	Meets few to some of the assignment expectations: -Works towards meeting expectations for display of text, graphics, visuals to represent work	Assignment requirements not met, not addressed, and/or no work submitted

		display expectations	-Display mostly meets professional display expectations	-Display works towards meeting professional display expectations	
Poster Session Discussion (NOTE: Individual attendance required for poster session; graded at 0 without excused absence, following University guidelines)	Meets and exceeds assignment expectations: -Excellent, succinct, and professional discussion -Professional interactions with poster session attendees	Meets basic assignment expectations: -Succinct and professional discussion -Professional interactions with poster session attendees	Meets many/most of assignment expectations: -Mostly succinct and professional discussion -Mostly professional interactions with poster session attendees	Meets few to some of the assignment expectations: -Discussion works towards succinct and professional conversation -Mostly professional interactions with poster session attendees	Assignment requirements not met, not addressed, and/or no work submitted