4325 - Status: PENDING

Last Updated: Vankeerbergen, Bernadette Chantal 02/06/2025

Term Information

Summer 2025 **Effective Term Previous Value** Spring 2021

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

course title change, course description update, submission for GE Theme

What is the rationale for the proposed change(s)?

To better reflect course content, course description to accurately reflect course, and to be approved as a GE Theme

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

Is approval of the requrest contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area Pub Hlth: Envirmtl Hlth Scis College of Public Health - D2505 Fiscal Unit/Academic Org

College/Academic Group Public Health Level/Career Undergraduate

Course Number/Catalog 4325

Course Title Climate Change, Sustainability and Human Health

Previous Value Climate Change and Human Health

Transcript Abbreviation Clim Chng Sus Hlth **Previous Value** Clim Chng Hum Hlth

Students taking this course will critically evaluate how international, national, regional, state, and local **Course Description**

sustainability goals will work synergistically with climate change policy that is designed to mitigate the public health impacts from the effects of climate change and improve climate change adaptation or

reduce community vulnerability and increase community resilience to climate change.

Previous Value Recognize current controversies about climate change, summarize the evidence about climate change

on human health, and identify major human diseases associated with climate change.

Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week, 12 Week, 8 Week, 7 Week, 6 Week, 4 Week

Flexibly Scheduled Course Does any section of this course have a distance Yes education component?

Is any section of the course offered

100% at a distance

Grading Basis Letter Grade

Repeatable Nο **Course Components** Lecture **Grade Roster Component** Lecture Credit Available by Exam No

COURSE CHANGE REQUEST

4325 - Status: PENDING

Last Updated: Vankeerbergen,Bernadette Chantal 02/06/2025

Admission Condition Course No
Off Campus Never

Campus of Offering Columbus, Lima, Mansfield, Marion, Newark, Wooster

Previous Value Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites None

Previous Value Exclusions

Electronically Enforced No

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code 51.2202

Subsidy Level Baccalaureate Course

Intended Rank Freshman, Sophomore, Junior, Senior

Requirement/Elective Designation

Required for this unit's degrees, majors, and/or minors Sustainability

The course is an elective (for this or other units) or is a service course for other units

Previous Value

Required for this unit's degrees, majors, and/or minors

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- Recognize the current controversial issues about climate change, including global warming
- Summarize the evidence about climate change on human health
- Identify major human diseases associated with climate change and possible mechanisms
- Discuss and debate major climate changes and human health effects
- List possible actions and further research about climate change with human health impact

Content Topic List

- Introduction to Climate Change and Global Warming; Historical Overview of Climate Change, Science and Its Association with Health Issues
- Health Risks of Carbon Capture and Storage; Public Health Benefits From Air Pollution Mitigation
- Health Impact of Climate Projections- Global; Health Impact of Climate Projections- North America
- Health Impact of Climate Projections- Other Regions; Climate Change, Politics, and Policy-making on Health Impact
- Health Effects: Infectious Diseases; Health Effects: Non-infectious Disease
- Health Effects: Impacts of Air Pollution; Health Effects: Impacts of Temperature Changes
- Health Effects: Impacts of Extreme Weather Events; Health Effects: Changes in Food and Nutrition
- Health Effects: Cumulative Effects and Multiple Stresses; Health Effects: Impacts on Vulnerable Populations
- Significant Cases of Climate Change and Human Adaptation 1; Significant Cases of Climate Change and Human Adaptation 2
- Recent Developments and Next Steps in Climate Change and Human Health
- Changing Planet: Past, Present, Future
- An Inconvenient Truth Science, politics and more

Sought Concurrence

Attachments

- PUBHEHS 4325_Climate Change, Sustainability, and Human Health_Syllabus.pdf
- (Syllabus. Owner: Droesch, Kynthia Ellen)
- PUBHEHS 4325 Sustainability Theme Schedule of Topics_LMs_Assessments.pdf

(GEC Course Assessment Plan. Owner: Droesch, Kynthia Ellen)

PUBHEHS 4325 GE Theme course submission worksheet_Sustainability.pdf

(Other Supporting Documentation. Owner: Droesch, Kynthia Ellen)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Droesch,Kynthia Ellen	02/03/2025 10:13 AM	Submitted for Approval
Approved	Hefner, Jennifer	02/04/2025 01:33 PM	Unit Approval
Approved	Ferketich, Amy Kathleen	02/05/2025 12:21 PM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Hanlin,Deborah Kay Hilty,Michael Neff,Jennifer Vankeerbergen,Bernadet te Chantal Steele,Rachel Lea	02/05/2025 12:21 PM	ASCCAO Approval

PUBHEHS 4325 Climate Change, Sustainability, and Human Health

Course Overview

Course Information

• Credit hours: 3 credit hours

• Mode of delivery: 100% distance learning

Instructors

• Name: Paul Rosile, MPH, PhD, R.E.H.S.

 Virtual Student Drop-In Hours: Virtual Student Drop-In Hours: https://go.osu.edu/pubhehs3310

See: What exactly are Student Drop-In Hours in Carmen?

Teaching Assistant

Name:

For further details on contacting the instructor and TA, see the "Communication with the instructor and TA" section below.

How this online course works

Prerequisites: None

Mode of delivery

This course is a 100% online distance learning (DL) asynchronous course from the Division of Environmental Health Sciences in the College of Public Health. The course is hosted on OSU's Carmen learning course management system (https://carmen.osu.edu/). The content for the course can be found in the Modules tab.

The course is organized in two main themes:

- 1. Overview of the science of Climate Change/Global Warming (Modules 1)
- 2. The Impacts of Climate Change/Global Warming and Human Health (Modules 2 8)

A detailed schedule can be found in the **Schedule of Topics and Assignments** on the Course Syllabus page in Carmen.

Each module will contain a variety of topics, shared via learning materials, such as videos, lectures, readings, articles, and PDFs) as well as assignments due at the end of that module They may also include supplemental readings and other materials for review and self-study.

Modules have requirements. You must complete all the requirements for a module to gain access to the next modules. For example, Module 2 cannot be started until Module 1 is completed. Modules are considered "complete" once all conditions for module completion have been met. Details about this can be found in your Canvas course in Course Organization and Navigation.

Attendance and participation requirements

Because this is an online course, your attendance is based on your online activity and participation. The following is a summary of students' expected participation:

- Participating in online activities for attendance: AT LEAST ONCE PER WEEK
- You are expected to log in to the course in Carmen every week to review Learning Materials and to complete the Self-Checks, Assignments, and the Discussion and Debate Board. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with the instructor as soon as possible.

Please see more details in the section "Course Activities and Assignments."

Course description

In 1987, the United Nations Brundtland Commission defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." Today, there are almost 140 developing countries in the world seeking ways of meeting their development needs, but with the increasing threat of climate change, concrete efforts must be made to ensure development today does not negatively affect future generations. The US National Environmental Policy Act of 1969 committed the United States to **sustainability**, declaring it a national policy "to create and maintain conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations." In May 2023, the UN Department of Economic and Social Affairs (DESA) and the United Nations Framework Convention on Climate Change (UNFCCC) secretariat co-convened an international group of 14 experts from diverse backgrounds. Their goal was to provide analytical research and practical recommendations, building the evidence base for how actions addressing both the climate emergency and sustainable development challenges can work synergistically as a win-win solution, maximizing impact. Students taking this course will critically evaluate how international, national, regional, state, and local **sustainability** goals will work synergistically with climate change policy that is designed to mitigate the public health impacts from the effects of climate change and improve climate change adaptation or reduce community vulnerability and increase community resilience to climate change while accessing the most current climate change scientific reports from the US and Internationally, and becoming aware of the history of international policy-making conferences. Students will be able to discuss the definition of climate change and weather, the difference between the causes of climate change (e.g., greenhouse gas), the effects of climate change (e.g. drought and other extreme weather events), and the short and long-term impacts of these effects on ecosystem and human health, such as excessive heat-related illnesses, vector- and waterborne diseases, increased

exposure to environmental toxicants, and exacerbation of cardiovascular and respiratory diseases due to declining air quality. The concepts of prevention, mitigation, adaptation, vulnerability, and resilience will be presented in the Learning Materials as they relate to the impacts of climate change on human health. The course will also serve as a platform for the students to participate in discussions and debates on the impacts of climate change on human health.

Course Learning Outcomes

By the end of this course, students should successfully be able to:

- Broadly discuss and critically evaluate issues related to current CC/GW science literature and reports, and the near-term and long-term causes and effects of climate change on the earth's ecosystem,
- 2. Discuss and critically evaluate how international, national, regional, state, and local **sustainability** goals will combat climate change and its public health impacts
- 3. Discuss and critically evaluate the near-term and long-term causes and effects of CC/GW and their impact on human health,
- 4. Discuss and critically evaluate the concepts of Prevention, Mitigation, and Adaptation Strategies and how these affect the impacts of climate change on human health, and,
- 5. Discuss and critically evaluate the concepts of vulnerability and resilience and how these affect the impacts of climate change on human health.

Instructional Time

For a typical Ohio State class in any modality, university policy calls for an average of 1 hour "direct instruction" plus 2 hours "out-of-class" time per week for each 1 credit hour for a "C" grade. This equates to 9 hours of in-class and out-of-class activities per week or 18 hours for a 2-week module. Instruction time for an online class asynchronous class such as this class, the amount of time students spend learning is equivalent to an in-person class of the same number of credit hours. In other words, you should plan on spending 9 hours per week or 18 hours per module learning in this course.

Some modules in the course may require more or less than 18 hours of instructional time. You may need to spend more time depending on the learning level and grade that you desire. The Overview of each module contains an expectation for instructional time for that module.

BSPH Foundational (Core) Competencies All students completing Climate Change, Sustainability and Human Heath will be prepared to:

- compare and contrast examples of major domestic and international public health issues;
- 2. discuss approaches and strategies to identify, respond to, and intervene with an attempt to resolve common public health issues;
- 3. identify political, cultural, behavioral and socioeconomic factors related to global public health issues;
- 4. the ability to communicate public health information, in both oral and written forms, through a variety of media and to diverse audiences; and

5. the ability to locate, use, evaluate and synthesize public health information

Specialization Competencies for BSPH Majors Environmental Public Health Specialization Competencies

- Summarize major sources, chemical, biological, and physical agents, conditions, the social determinants of health, and other exposure factors that contribute to environmentally-related human diseases including those at the intersection of humans and animals.
- 2. Explain the relationship between population growth, ecosystem health, **sustainability** and resilience, climate change, and environmental public health.
- 3. Identify regulations, policies, standards, and guidelines applicable to the quality of air, water, soil, and food; and explain how the prevention or control of environmentally related human exposures and diseases, including changes to the lived environment, are applied to improve environmental public health.
- 4. Apply the principles of environmental ethics and justice to environmental public health issues.

CEPH Domains

- 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
- 2. the underlying science of human health and disease, including opportunities for promoting and protecting health across the life course
- 3. the socioeconomic, behavioral, biological, environmental and other factors that impact human health and contribute to health disparities

Aligned CEPH Cross-Cutting Concepts

- 1. advocacy for the protection and promotion of the public's health at all levels of society
- 2. critical thinking and creativity
- 3. independent work and a personal work ethic
- 4. research methods

A complete list of College of Public Health Competencies can be found in the CPH Undergraduate Student Handbook at https://cph.osu.edu/students/undergraduate/handbook.

GE Theme Sustainability

Goal 1: Successful students will analyze an important topic or idea at a more advanced and in-depth level than the foundations.

1.1 Engage in critical and logical thinking

Activities to achieve goal:

This course will build the skills needed to engage in critical and logical thinking in this class. Students will critically evaluate initial responses/posts from their peers in a Discussion and Debate Board. The initial responses/posts will be summaries of popular press or peer-reviewed journal articles answering specific prompts. The additional responses to their peers' initial posts will be required to refute, support, or validate the claims, issues, or

actions in their peers' news or journal articles using scientific justification from the Learning Materials or their own credible references.

1.2 Engage in an advanced, in-depth, scholarly exploration of the topic or idea of sustainability

Activities to achieve goal:

Students will write a research paper to promote further study of the impact from the effects of climate change and global warming on human health. The research paper is a study of one of the effects of climate change (such as extreme weather events, air pollution, or floods) in any region of the world that may have significant public health impacts. For this research paper, students will develop a thesis statement that is expected to answer this research question: 1. Which one of the health impacts from the effects of climate change is the most critical to mitigate and adapt to both now and until 2050, and why? The research paper is expected to prove or disprove their thesis statement.

Goal 2: Successful students will integrate approaches to the theme by making connections to out-of-classroom experiences with academic knowledge or across disciplines and/or to work they have done in previous classes and that they anticipate doing in future.

2.1 Identify, describe, and synthesize approaches or experiences **Activities to achieve goal:**

Students describe what video significantly impacted their understanding of sustainability, climate change, and global warming compared to the other videos. They explain why/how it significantly impacted your understanding of sustainability, climate change, and global warming, and what they learned that you didn't know before they watched the video.

2.2 Demonstrate a developing sense of self as a learner through reflection, self-assessment, and creative work, building on prior experiences to respond to new and challenging contexts.

Activities to achieve goal:

Students complete an Essay about how the course affected their understanding of climate change: In no more than 200 words, describe the impact of this course on your understanding and confidence in the science of climate change.

Students will complete a Creative Project: Using one of the local, state, national, or international (UNSDG) sustainable development goals, students will need to creatively represent how this goal improves public health. They can use a TED talk, infographic, homemade video, or other creative work.

GOAL 3: Students analyze and explain how social and natural systems function, interact, and evolve over time; how human wellbeing depends on these interactions; how actions have impacts on subsequent generations and societies globally; and how human values, behaviors, and institutions impact multi-faceted, potential solutions across time

3.1 Describe elements of the fundamental dependence of humans on Earth and environmental systems and on the resilience of these systems.

Activities to achieve goal:

Write a short factual essay with credible justification on a local, state, national, or international sustainability goal that will mitigate ONE of the public health impacts from

the effects of climate change discussed in this module and improve climate change adaptation or reduce community vulnerability and increase community resilience. Include the causes and effects of climate change that are associated with your public health impact.

3.2 Describe, analyze and critique the roles and impacts of human activity and technology on both human society and the natural world, in the past, currently, and in the future.

Activities to achieve goal:

Write a short essay on the future human health impact from the effects of climate change that you believe will be the most accurately predicted in 2050 and why. This opinion essay does need to have credible justification.

Write a short essay on the current human health impact from the effects of climate change that you believe is the most important to mitigate and why. This opinion essay does need to have credible justification.

3.3 Devise informed and meaningful responses to problems and arguments in the area of sustainability based on the interpretation of appropriate evidence and an explicit statement of values.

Activities to achieve goal:

Discussion/Debate Board

Initial Response: Answer prompts to summarize a popular press article about implementing sustainability practices related to mitigating the impacts of climate change on human health within the USA.

Additional Response: Answer prompts to refute, support, or validate the claims, issues, or implementation/actions in your peers' news articles using scientific justification from the Learning Materials or your own credible references.

Module Schedule, Assignments, and Grading

Roadmap - Module Schedule and Tasks

Each Module will contain a variety of topics, shared via learning materials, such as videos, lectures, readings, articles, and PDFs as well as assignments. They may also include optional readings and other materials for review and self-study. A roadmap is provided in the Overview of each module that lists the due dates of the assignments.

Modules for this course open on (day of week) at (time) and close on (day of week) at (time). There are 8 Modules in the course. All Modules are 2 weeks long except Module 1 is 1 week and Module 8 is 2 weeks and 1 day. A detailed schedule can be found in the 4325 Schedule of Topics and Assignments found on the Syllabus page in Carmen.

Assignments in this Course

1. Self-Checks (due on the last day of the first week in the module) = 5% of grade

For each topic taught in this course, you will be required to review the Learning Materials (LMs). To assess your level of understanding of the lecture topics and other LMs, you will then be required to complete periodic Self-Checks. Self-Checks may contain true/false, multiple choice, short answer, or other question forms, and will generally assess your competency in meeting Course Learning Outcomes #1, #2, #3, #4, and #5. You have 2 attempts at each Self-Check, and there is no time limit. 1 drop will be given for Self-Checks.

2. Participation: Graded Discussion/Debate Boards (due at the end of every module) = 20% of grade

A graded mandatory Discussion/Debate Board (DDB) is an assignment due at the end of each module. The DDBs will generally assess your competency in meeting Course Learning Outcomes #1, #2, and #3. For each of the impacts of climate change on human health in the course modules, students will be asked to present a summary of a popular press news article that makes claims (takes a position or provides evidence) about a human health impact from the effects of climate, a prevention/mitigation, adaptation strategy, or an example of the concepts of vulnerability and resilience within a country outside the US, within a region or the US as a whole, or within a US state or local jurisdiction such as Columbus Ohio. You will be answering specific/unique prompts for your initial response and your additional response to your peers' initial response. To meet or exceed the Learning Outcomes and to receive maximum credit, you will post an initial response to the prompts about your news article and one additional response to your peers' initial response. Your additional response will be required to refute, support, or validate the claims, issues, or actions in your peers' news articles using scientific justification from the Learning Materials or your own credible references. Your initial and additional responses need to be your own work. Please read the instructions and the rubric with each DDB to understand how they are graded. 1 drop will be given for Discussion/Debate Boards. Your answers will be scrutinized using plagiarism and Al-checking software.

3. Homework (HW) (due at the end of every module) = 20% of grade

This class will utilize homework assignments to foster critical thinking skills. There will be one to three HW assignments per a two-week module. Assignment instructions and submission requirements can be found in each assignment in your Canvas course. You may use the course LMs or other credible references to complete the assignment, but your answers must be your own work. The HW will generally assess your competency in meeting Course Learning Objectives #1, #2, and #3. Students will be asked to prepare a short essay with scientific justification on a local, state, national, or international **sustainability** practice that will mitigate one of the public health impacts from the effects of climate change discussed in this module and improve climate change adaptation or reduce community vulnerability and increase community resilience. Your answers will be scrutinized using plagiarism and Al-checking software.

4. Short Essay (due at the end of Module 8) = 5% of grade

You will be answering a short essay question about how the course affected your understanding of climate change.

5. Research Paper (Module 2 - Module 8) = 25% of grade

The goal of the research paper assignment is to promote further study of the impact from the effects of climate change and global warming on human health. The research paper is a study of one of the effects of climate change (such as extreme weather events, air pollution, or

floods) in any region of the world that may have significant public health impacts. For this research paper, you will develop a thesis statement that is expected to answer this research question: 1. Which one of the health impacts from the effects of climate change is the most critical to mitigate and adapt to both now and until 2050, and why? The research paper is expected to prove or disprove your thesis statement and have the following key components: title, introduction, body, and a conclusion with a minimum of six and a maximum of 10 pages excluding the title page and bibliography, 1" margins, double spaced, and 12-point font in Word. A rubric for grading purposes will also be provided. Detailed instructions about the research paper Milestones can be found in your Carmen (Canvas) course Modules and Assignments. Your paper will be scrutinized using plagiarism and Alchecking software. You will include in-text citations using numbers (1,2,3, etc.), and a bibliography containing links to full-text articles, not just abstracts.

The assignment is due at the end of Module 8, but it will open in Module 2 so that you can begin to work on it before Module 8 if you choose to do so. It will be broken up into five Milestones: Milestone #1, choosing your specific topic; Milestone #2, writing your "Introduction"; Milestone #3, writing your "Body"; Milestone #4, writing your "Conclusion"; and Milestone #5, Formatting your Final Research Paper.

6. Creative Project = 25% of grade

Using one of the local, state, national, or international (UNSDG) sustainable development goals, you will need to creatively represent how this goal improves public health. You can use a **TED talk, infographic,** homemade video, or other creative work. READ THE PROJECT RUBRIC CAREFULLY to understand how you will be graded. More details are provided on Carmen.

How Your Grade is Calculated

The weighting scheme for the course will be composed of the following items. See additional grading details at the end of this document.

Category	Total Percent of Grade
Self-Checks	5%
Homework Assignments	20%
Participation	20%
Short Essay	5%
Research Paper	25%
Creative Project	25%
Total	100 %

Course Communication

Canvas

 We will be using Canvas for all aspects of course management. Please check the course homepage on Canvas daily for course announcements, clarifications, and other class materials every time you log into the classroom to stay on top of the latest developments in the course. You are required to subscribe to "Announcements," which will notify you via email of a new posting. See https://www.youtube.com/watch?v=Yj flcz0lmk

Communication with the Instructors and TA

- The instructors and TA will only respond to messages sent to the Carmen Inbox, the Discussion Board, or grade book comments. Messages directly emailed to the instructors or TA will not be answered.
- Questions, comments, or needing clarification about course content, policies, or assignments need to be posted in the Course Content, Policies, or Assignments Discussion Board. This board will be accessible to you throughout the entire semester. Use this discussion board (DB) if you have questions, comments, or need clarification on course content, policies, or assignments. The TA or Dr. Rosile will respond within 1 day either on the DB or through Announcements to ensure that everyone has access to the same information. If you post on the DB after 5 pm on Friday, your response may not be until the following Monday.
- All messages regarding your grades or other academic problems you are having with the course, missing assignment deadlines, or problems you are having due to an illness, emergency, or disability accommodation. Please message Dr. Rosile and copy the TA on all messages regarding your grades or other academic problems you are having with the course, missing assignment deadlines, or problems you are having due to an illness, emergency, or disability accommodation. Messages may not be answered if the TA is not copied. We can also schedule a time to meet via Zoom and discuss any issues you may have. The TA or Dr. Rosile will respond within 1 day. If you post a message to Carmen after 5:00 pm on Friday, your response may not be until the following Monday.

Technology and Tech Skills Needed to be Successful in this Course:

Minimum and recommended computer configurations

- To meet the requirements of commonly used software and to use the Internet effectively, your computer should meet the MINIMUM hardware requirements recommended by OSU's IT service desk
 - Device (computer, laptop, tablet) which meets <u>Ohio State's minimum</u> requirements
 - Stable high-speed internet access (DSL, cable, home or public Wi-Fi, eduroam)
 - Current versions of a web browsers such as Mozilla Firefox or Google Chrome
- Other: a mobile device (smartphone or tablet) to use for BuckeyePass authentication If you do not have access to the technology you need to succeed in this class, review options for technology and internet access at go.osu.edu/student-tech-access.

Additional Required Hardware and Software

- Calculator one that you understand how to use!!
- Webcam: built-in or external webcam, fully installed
- Microphone: built-in laptop or tablet mic or external microphone

Required Technical Skills

In this course, you will be expected to:

- Use an Internet browser Google Chrome or Firefox
- View videos on Mediasite, YouTube, and other locations
- Use Carmen (Canvas)
- Download, save, and open files
- View PDFs
- Use copy, cut and paste, find functions
- Send and receive messages with attachments within Carmen
- Use a word processing program (Microsoft Word preferred. Files are in.docx)
- Run and switch between multiple programs
- Create and share multi-media objects such as video or audio files
- Use apps included in your OSU Digital Flagship iPad:
 - o App list https://digitalflagship.osu.edu/students/technology/app-list
 - Tutorials https://digitalflagship.osu.edu/students/technology/app-tutorials
 - o Resources https://digitalflagship.osu.edu/students/resources

Main Tools Used in this Course

Carmen Canvas, Carmen Zoom, and Microsoft Office 365 are the three main tools that will help you access your course material and stay connected with your instructor and classmates. Learn more about all the tools at your disposal - Tools | Keep Learning (osu.edu)

Class Policies

Suggested Workflow, Missing Assignment Deadlines, Excused Absences, Making Up Your Work, Late Policy, Attendance, and Participation

Suggested Workflow

It is strongly encouraged that you plan to complete the material in advance of the deadline. Students who are most successful in the class space out the material to ensure that there is sufficient time to absorb it. A "Suggested Workflow" document can be found in the "Getting Started" module. Planning your workflow also helps guard against the impact of unforeseen circumstances. There will be very few exceptions to the late policy. Managing your schedule and time is an important skill that will serve you well both in this course and in your future career. Late policy exceptions will only be granted under exceptional circumstances and extended emergencies with properly documented evidence. Delaying starting the material until a few hours before the deadline and then having insufficient time to complete it will not result in an extension. Some modules also have group work that needs to be completed by a certain deadline for your group to move forward. It is recommended that you turn in materials on time to ensure that you stay on track with the course and avoid late penalties. Keep in mind that each module represents many hours of effort, which are clearly outlined on the overview page of each module, AND that for you to move through the modules, you must complete the previous module to move on to the next.

Missing Assignment Deadlines, Excused Absences, Making Up Your Work

If you miss a class or a deadline for Homework, Self-Checks, Discussion/Debate Boards, or any other assignments, excused absences, or make-ups may only be permitted for legitimate reasons. Legitimate reasons for an excused absence or make-ups include but are not limited to, serious illness and injury, disability-related concerns, military service, death in the immediate family, religious observance, academic field trips, participation in an approved concert, or athletic event, and direct participation in university disciplinary hearings. If so, you must contact the instructor before or no later than three days after the class or deadline. You must provide evidence that you were unable to attend class or meet a deadline. "Evidence" would include a flexibility accommodation from the Student Learning and Disability Services, a note from a health care professional, or other accommodations provided by the university and acceptable to the instructor, proof of military service, death in the immediate family, religious observance, academic field trips, participation in an approved concert, or athletic event, and direct participation in university disciplinary hearings, or other reasons acceptable to the instructor, stating that you were "unable to participate in course-related requirements on the ___." If such evidence is provided, then you may and times: following dates: receive an excused absence and be allowed to submit your missed work within a timeframe acceptable to the instructor. No make-up opportunities or excused absences will be granted for, including but not limited to, personal reasons such as your alarm was not set or you overslept, travel time, traffic, personal hardship, leisure, or to ease test week schedules. Exceptions may be made at the instructor's discretion.

Late Policy

Failure to submit assignments by the due date and time may result in an automatic reduction of your score **by 10% per day from the original grade**. As always, unforeseen circumstances may cause the class deadlines to be changed. Any changes will be communicated on the "Announcements" page.

All excused or unexcused missed assignments are due by the last day of the course before finals week unless other arrangements are made with the instructor.

Provisionally

Please note that this syllabus is tentative, and that the instructor reserves the right to make changes at any time, as necessary.

Academic Policies

Office of Student Life - Disability Services

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are ill and need to miss class, including if you are staying home and away from others while experiencing symptoms of a viral infection or fever, please let me know immediately. In cases where illness interacts with an underlying medical condition, please consult with Student Life Disability Services to request reasonable accommodations. You can connect with them at slds@osu.edu; 614-292-3307; or slds.osu.edu.

Mental Health Services

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

Respect for diversity

I intend to create an environment for all students to learn. I am committed to affirming the identities, realities, and voices of all students especially those from historically marginalized or underrepresented backgrounds. In this course, we will use person-centered language and preferred gender pronouns. We will respect all diversity including and not limited to gender, sexuality, ability, body weight, age, socioeconomic status, ethnicity, race, culture, religion, and experiences. If you need an accommodation due to religious observances, let me know as soon as you can. I will do my best to provide an environment that is conducive to learning. I encourage you to speak with me if there is any aspect of the course that is counter-productive to your learning.

Copyright for Instructional Materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

Statement on Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator at titleix@osu.edu.

CCAMPIS Program

The Office of Diversity and Inclusion provides holistic support for qualifying student parents enrolled at Ohio State. To learn more, contact the "Child Care Access Means Parents in School" (CCAMPIS) Program at 614-247-7092, lewis.40@osu.edu, or visit http://odi.osu.edu/ccampis.

Religious accommodations

Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the

course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement and the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins, instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to report discrimination or harassment based on religion, individuals should contact the Office of Institutional Equity. (Policy: Religious Holidays, Holy Days and Observances)

Territory Acknowledgement

I acknowledge that we are occupying the traditional homelands of the Miami people. Descendants of the Ohio Miami are members of the federally recognized Miami Tribe of Oklahoma (http://www.miamination.com/), and the unrecognized Miami Nation of Indiana. This statement is one small part of disrupting and dismantling colonial structures.

Academic integrity

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University, the College of Public Health, and the Committee on Academic Misconduct (COAM) expect that all students have read and understood the University's Code of Student Conduct and the School's Student Handbook and that all students will complete all academic and scholarly assignments with fairness and honesty. The Code of Student Conduct and other information on academic integrity and academic misconduct can be found on the COAM web page (http://oaa.osu.edu/coam/home.html). Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct, the Student Handbook, and in the syllabi for their courses may constitute "Academic Misconduct."

The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Please note that the use of material from the Internet without appropriate acknowledgment and complete citation is plagiarism just as it would be if the source were printed material. Further examples are found in the Student Handbook. Ignorance of the Code of Student Conduct and the Student Handbook is never considered an "excuse" for academic misconduct.

If I suspect a student of academic misconduct in a course, I am obligated by University Rules to report these suspicions to the University's Committee on Academic Misconduct. If COAM determines that the student has violated the University's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in the course and suspension or dismissal from the University. If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Al policy

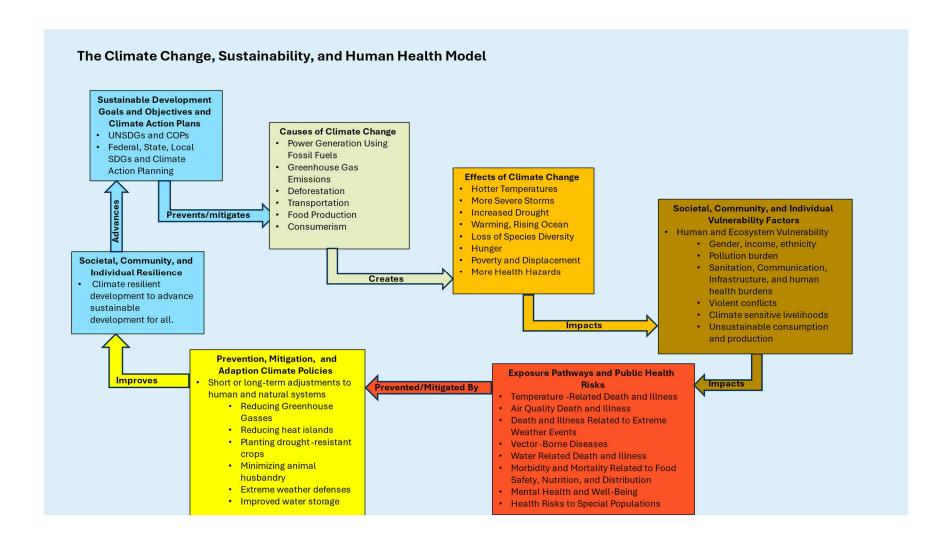
Written assignments: Your written assignments, including Homework, Discussion/Debate Boards, and Research Paper, should be your original work. Cite any sources (including class Learning Materials) you use for your written assignments according to the specifications noted.

Given that the learning goals of this class are to develop your ability to use writing to articulate your scientific findings, the use of generative artificial intelligence (GenAI) tools such as Copilot or ChatGPT, **is not permitted in this course**. Any use of GenAI tools for work in this class may therefore be considered a violation of Ohio State's Academic Integrity policy and Code of Student Conduct because the work is not your own. The use of unauthorized GenAI tools will result in referral to the Committee on Academic Misconduct. If I suspect that you have used GenAI on an assignment for this course, I will ask you to communicate with me to explain your process for completing the assignment in question.

If you feel you need to use GenAl for translation, please contact me first. If you have any other questions regarding this course policy, please contact me.

Final Grade Percentages

Grade	Percentage	Meaning
A	100-93	Outstanding performance; consistently shown exceptional depth of understanding and/or capacity for creative application of course concepts
A-	92.9-90	Very strong performance with a demonstrated depth of understanding and/or ability to apply course concepts
B+	89.9-87	Performance at an expected level; work is complete and shows solid understanding and application of course concepts
В	86.9-83	Adequate performance: work is complete but shows some limitations in grasp or ability to apply course concepts
B-	82.9-80	Marginally acceptable; work is conducted only to meet minimum course requirements
C+	79.9-77	Indicates only average understanding or application of course concepts
С	76.9-73	
C-	72.9-70	
D+	69.9-67	Below average or failure to meet stated course requirements
D	66.9-60	
E	<60	



Module #	Themes/Concepts	Learning Materials (May change at the desecration of the instructor. Check the module in Carmen for Required and Optional Learning Materials)	Student Activity Used for Assessment	Course Learning Outcomes Assessed
#1	THEME I Overview of the Science of Climate Change/Global Warming	Dr. Rosile's lecture topic: Overview of Global Warming and Climate Change Learning Materials (LMs) to Read or View REQUIRED Learning Materials 1.	Self-Checks will assess the competency in understanding of the science of global warming/climate change introduced in the lectures and required video LMs. Homework #1: 1. In your own words, describe what video significantly impacted your understanding of Sustainability, Climate Change, and Global Warming compared to the other videos. 2. Justify your answer to Prompt #1 by explaining why/how it significantly impacted your understanding of Climate Change and Global Warming. 3. What did you learn that you didn't know before you watched the video? Homework #2: 1. Choose one of OSU's Sustainability Goals for Resource Stewardship and write a short essay, using the Climate Change, Sustainability, and Human Health Model as a guide, on how you believe this goal can improve human health. This opinion essay does need to have credible justification. This assignment will help formulate your Creative Project. Discussion/Debate Board: 1. How would you try to educate a climate change denier that climate change and global warming are real? Submit your answer with supporting references (scientific articles, government websites, and other credible references). See "Sources for Credible References" below to learn about what is a credible reference.	#1

#2	THEME II The Impacts of Climate Change/Global Warming and Human Health	Dr. Rosile's lecture topic: Overview: Health Impacts from the Effects of Global Warming and Climate Change Dr. Rosile's Lecture topic: Sustainability and Health Dr. Rosile's lecture topic: Prevention, Mitigation, and Adaptation Strategies Learning Materials to Read or View REQUIRED Learning Materials 1. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016 a. About this Report b. Guide to the Report c. Executive Summary d. Chapter 1. Introduction: Climate Change and Human Health 2. UN SDGs webpage 3. Video: UN SDGs 4. Video: We The People for The Global Goals 5. Video: The 5 Ps of the SDGs: People, Planet, Prosperity, Peace, and Partnership 6. USEPA Learn about Sustainability 7. Synergy Solutions for Climate and SDG Action: Bridging the Ambition Gap for the Future We Want 8. Synergy Solutions for a World in Crisis: Tackling Climate and SDG Action Together, Publication Year: 2023 a. https://sdgs.un.org/sites/default/files/2023-09/UN%20Climate%20SDG%20Synergies%20Report-091223B 1.pdf 9. Harnessing Climate and SDGs Synergies 10. Transforming our world: the 2030 Agenda for Sustainable Development 11. NASA webpage Mitigation and Adaptation.	Self-Checks will assess the competency in understanding the concept of sustainability, the health impacts from the effects of climate change, and the concepts of mitigation, adaption, vulnerability, and resilience found in the lectures and the LMs. Homework #1: 1. What is the definition of climate change vs. weather? 2. Write a concise summary describing 4 main drivers (i.e., causes) of climate change. 3. Write a concise summary describing 4 ecological and environmental effects of climate change resulting from the drivers in Q2. 4. Write a concise summary describing 4 how the effects in Q3 impact human health. 5. How has your knowledge about "climate change" changed since the beginning of the course? Homework #2: 1. Use LM #1 and write a short essay on the current human health impact from the effects of climate change that you believe is the most important to mitigate and why. This opinion essay does need to have credible justification. This assignment will help with formulating your research question for your research paper. Homework #3: 1. Using the Climate Change, Sustainability, and Human Health model, and the LMs in this module, choose the one UNSDG that you believe has the most synergy with mitigating ANY of the current and future health impacts from the effects of climate change and write a short essay justifying your choice with credible justificano. This assignment will help formulate your Creative Project. Discussion/Debate Board: No DDB in Module #2. Use this time to work on your Research Questions.	#1, #2, #3, #4, #5
#3	THEME II The Impacts of Climate Change/Global Warming and Human Health	Dr. Rosile's lecture topic: Significant Publications and Resources on The Impacts of Climate Change/Global Warming, Sustainability, and Human Health Learning Materials to Read or View REQUIRED Learning Materials These LMs are NOT to be read word-for-word. You should scan these documents ONLY to understand their structure (table of contents) and purpose. You will be referring to chapters and content of these documents throughout the course for your Self-Checks, HW, Assignments, and your Research Paper. 1. CDC's Climate and Health Program 2. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016 a. About this Report b. Guide to the Report	Self-Checks will assess the competency in understanding the Value of the Significant Publications and Resources on The Impacts of Climate Change/Global Warming, Sustainability, and Human Health found in the lectures and the LMs. Homework #1: Use the LMs in this HW or your own credible sources to REWRITE the "What To Know" section presenting specific additional information from your credible sources using no more than 400 words for BOTH #1.1.1 and #1.1.2 below. 1. To receive full credit your additional information needs to be added to each of the claims made in the CDC's What To Know statements 1. For the food security example, you would add data and additional scientific information to the following claims 1. Climate change is expected to threaten: 1. food production (how? by what quantity? what time frame?)	#2, #3

- c. Executive Summary
- d. Chapter 1. Introduction: Climate Change and Human Health
- 3rd US Climate Change Assessment, 2014 (Third National Climate Change Assessment)
 - a. Review for content Chapter 9 Human Health
- Highlights of the 3rd US Climate Change Assessment, 2014 (Third National Climate Change Assessment, NCA3)
 - a. Finding 5 Human Health
- 5. 4th US Climate Change Assessment, 2018
 - a. Fourth National Climate Assessment | Volume I: CLIMATE SCIENCE SPECIAL REPORT
 - Fourth National Climate Assessment | Volume II:
 Impacts, Risks, and Adaptation in the United States
 - c. Fourth National Climate Assessment (NCA4) | Volume II: Impacts, Risks, and Adaptation in the United States
 - i. Chapters 13 and 14
- 6. <u>NCA5</u>
 - a. Chapters 4, 11, 14, and 15
- The IPCC finalized the first part of the Sixth Assessment Report, Climate Change 2021: The Physical Science Basis, the Working Group I contribution to the Sixth Assessment ReportLinks to an external site.
 - WGI Summary for Policy Makers Links to an external site.
- 8. PDF Climate Change 2022: Impacts, Adaptation and Vulnerability Links to an external site.
 - a. https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC AR6 WGII FullReport.Links to an external site.Links to an external site.pdfLinks to an external site.
 - b. WGII Summary for Policy Makers.Links to an external site.
- Climate Change 2022: Mitigation of Climate Change, the Working Group III contribution. Links to an external site.
 - a. WGIII Summary for Policy Makers.

Optional Learning Materials

These materials may be referred to throughout the course in Lectures and in your Carmen modules. You may need to reference these materials in your HWs and Assignments. They represent publications and resources on the topics of Climate Change and **Sustainability** from the International to the local (Columbus, Ohio) level from NGOs, public, and private/commercial organizations.

- 10. The Rio Summit
- 11. The Kyoto Protocol
- 12. The Copenhagen Accord COP 15
- 13. The Paris Accord COP 21
- 14. UN COP 26
- 15. UN COP 27
- 16. UN COP 29
- 17. UN COP 28

- certain aspects of food quality, (what aspects?) (why these aspects?)
- 3. food prices, (how? by what quantity? what time frame?)
- and food distribution systems on a global scale. (how? by what quantity? what time frame?)
- 2. Adaptation activities can:
 - reduce the health impacts of some of the anticipated food security challenges. (what types of adaptation activities? by how much? what time frame?)

Homework #2:

 Choose one of Columbus Ohio's Sustainability Goals and write a short essay, using the Climate Change, Sustainability, and Human Health Model as a guide, on how you believe this goal can improve human health. This opinion essay does need to have credible justification. This assignment will help formulate your Creative Project.

Discussion/Debate Board

- Initial Response: Answer prompts to summarize a popular press article about implementing sustainability practices related to mitigating the impacts of climate change on human health within the USA.
- Additional Response: Answer prompts to refute, support, or validate the claims, issues, or implementation/actions in your peers' news articles using scientific justification from the Learning Materials or your own credible references.

Research Paper Milestone #1: Submit the two thesis statements that you chose for your research paper.

		 NASA Responding to Climate Change: Mitigation and Adaption NIH Climate Change and Health Initiative Strategic Framework USA President's Executive Order: Tackling Climate Change USEPA Learn about Sustainability USEPA 2024-2027 Climate Adaptation Plan ASPPH Climate Change and Health NACCHO Climate Change OPHA Climate Resilience in Ohio Central Ohio Climate Action Plan Ohio Environmental Council Climate Change FCPH Indicators for Local Climate and Health Surveillance FCPH Climate and Health Dashboards Sustainable Columbus Columbus Climate Action Plan Columbus Climate Adaptation Plan Smart Columbus Sustainability Ohio State University Sustainability OSU Sustainability Institute 		
#4	THEME II The Impacts of Climate Change/Global Warming and Human Health	Dr. Rosile's lecture topic: Guide to the Report Dr. Rosile's lecture topic: Chapter 1. Part 1. The association between observed Climate Change, projected Climate Change, and how Climate Change Affects Human Health Dr. Rosile's lecture topic: Chapter 1. Par 2. The association between observed Climate Change, projected Climate Change, and how Climate Change Affects Human Health Learning Materials to Read or View REQUIRED Learning Materials 1. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016	Self-Checks will assess the competency in understanding the Value of the Significant Publications and Resources on The Impacts of Climate Change/Global Warming, Sustainability, and Human Health found in the lectures and the LMs. Homework #1 1. Use LM #1 and write a short essay on the future human health impact from the effects of climate change that you believe will be the most accurately predicted in 2050 and why. This opinion essay does need to have credible justification. This assignment will help formulate your research question for your research paper. 2. Homework #2: no HW #2 in this module. Use this time to work on your research paper Milestone #2. Discussion/Debate Board 1. Initial Response: Answer prompts to summarize a popular press article about a future prediction from 2050 or beyond, of a human health impact from the effects of climate change in the US 2. Additional Response: Answer prompts to refute, support, or validate the claims, issues, or implementation/actions in your peers' news articles using scientific justification from the Learning Materials or your own credible references. Research Paper Milestone #2: Introduction due	#3
#5	THEME II The Impacts of Climate Change/Global Warming and Human Health	Dr. Rosile's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 2. Temperature Related Death and Illness Dr. Rosile's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 3 Air Quality Impacts Learning Materials to Read or View	Self-Checks will assess the competency in understanding Temperature Related Illness and Death and Air Quality Impacts found in the lectures and the LMs. Homework #1 1. Use the LMs in Modules 1-5 and write a short factual essay with credible justification on a local, state, national, or international sustainability goal that will mitigate ONE of the	2, #3
			, 5	

		1. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016 a. The lectures use this document for source material and include my comments and the HW and SCs will refer to this document. I would suggest reviewing (not reading word-for-word) to obtain an understanding of Chapters 2 and 3.	public health impacts from the effects of climate change discussed in this module and improve climate change adaptation or reduce community vulnerability and increase community resilience. Include the causes and effects of climate change that are associated with your public health impact. This assignment will help with writing the "Body" of your research paper due at the end of this module. Homework #2: no HW #2 in this module. Use this time to work on your research paper Milestone #2. Discussion/Debate Board 1. Initial Response: Answer prompts to summarize a popular press article about a future prediction in the US from 2050 or beyond, of a human health impact from the effects of climate change 2. Additional Response: Answer prompts to refute, support, or validate the claims, issues, or implementation/actions in your peers' news articles using scientific justification from the Learning Materials or your own credible references.	
#6	THEME II The Impacts of Climate Change/Global Warming and Human Health	Dr. Rosile's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 4 Impacts of Extreme Events on Human Health Dr. Rosile's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 5 Vector Borne Disease Learning Materials to Read or View REQUIRED Learning Materials 1. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016 a. The lectures use this document for source material and include my comments and the HW and SCs will refer to this document. I would suggest reviewing (not reading word- for-word) to obtain an understanding of Chapters 4 and 5.	Self-Checks will assess the competency in understanding the Impacts of Extreme Events and Vector-Borne Diseases found in the lectures and the LMs. Homework #1 1. Use the LMs in Modules 1-5 and write a short factual essay with credible justification on a local, state, national, or international sustainability goal that will mitigate ONE of the public health impacts from the effects of climate change discussed in this module and improve climate change adaptation or reduce community vulnerability and increase community resilience. Include the causes and effects of climate change that are associated with your public health impact. This assignment will help with writing the "Body" of your research paper due at the end of this module. Homework #2: no HW #2 in this module. Use this time to work on your research paper Milestone #3. Discussion/Debate Board 1. Initial Response: Answer prompts to summarize a popular press article about the human health impacts of Vector Borne Disease from the effects of climate change outside the USA. 2. Additional Response: Answer prompts to refute, support, or validate the claims, issues, or implementation/actions in your peers' news articles using scientific justification from the Learning Materials or your own credible references. Research Paper Milestone #3: "Body" due	#2, #3

#7	THEME II The Impacts of Climate Change/Global /arming and Human Health	Dr. Rosie's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 6, Climate Impacts of Water-Related Illness Dr. Rosie's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 7, Food Safety, Nutrition, and Distribution Learning Materials to Read or View REQUIRED Learning Materials 1. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016 a. The lectures use this document for source material and include my comments and the HW and SCs will refer to this document. I would suggest reviewing (not reading word- for-word) to obtain an understanding of Chapters 6, and 7.	Self-Checks will assess the competency in understanding the Impacts of water-related illness and food safety, nutrition, and distribution found in the lectures and the LMs. Homework 1. Use the LMs in Modules 1-5 and write a short factual essay with credible justification on a local, state, national, or international sustainability goal that will mitigate ONE of the public health impacts from the effects of climate change discussed in this module and improve climate change adaptation or reduce community vulnerability and increase community resilience. Include the causes and effects of climate change that are associated with your public health impact. Homework #2: no HW #2 in this module. Use this time to work on your research paper Milestone #4. Discussion/Debate Board 1. Initial Response: Answer prompts to summarize a popular press article about the human health impacts of food safety, nutrition, and distribution problems from the effects of climate change outside the USA. 2. Additional Response: Answer prompts to refute, support, or validate the claims, issues, or implementation/actions in your peers' news articles using scientific justification from the Learning Materials or your own credible references.	#2, #3
#8 W.	THEME II The Impacts of Climate Change/Global /arming and Human Health	Dr. Rosie's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 8, Mental Health and Well-Being. Dr. Rosie's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 9, Populations of Concern Learning Materials to Read or View REQUIRED Learning Materials 1. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016 (Links to an external site.) 1. The lectures use this document for source material and include my comments and the HW and SCs will refer to this document. I would suggest reviewing (not reading word-for-word) to obtain an understanding of Chapters 8 and 9.	Research Paper Milestone #4: Research Paper "Conclusion" due Self-Checks will assess the competency in understanding the Impacts of mental health and well-being and populations of concern in the lectures and the LMs. Homework 1. Use the LMs in Modules 1-5 and write a short factual essay with credible justification on a local, state, national, or international sustainability goal that will mitigate ONE of the public health impacts from the effects of climate change discussed in this module and improve climate change adaptation or reduce community vulnerability and increase community resilience. Include the causes and effects of climate change that are associated with your public health impact. Discussion/ Debate Board: No DDB in Module #8. Use this time to work on your Milestone #5. Short Essay Research Paper Milestone #5: Final formatted Research Paper due NO FINAL EXAMS	#2, #3

Module #	Themes/Concepts	Learning Materials (May change at the desecration of the instructor. Check the module in Carmen for Required and Optional Learning Materials)	Student Activity Used for Assessment	Course Learning Outcomes Assessed
#1	THEME I Overview of the Science of Climate Change/Global Warming	Dr. Rosile's lecture topic: Overview of Global Warming and Climate Change Learning Materials (LMs) to Read or View REQUIRED Learning Materials 1.	Self-Checks will assess the competency in understanding of the science of global warming/climate change introduced in the lectures and required video LMs. Homework #1: 1. In your own words, describe what video significantly impacted your understanding of Sustainability, Climate Change, and Global Warming compared to the other videos. 2. Justify your answer to Prompt #1 by explaining why/how it significantly impacted your understanding of Climate Change and Global Warming. 3. What did you learn that you didn't know before you watched the video? Homework #2: 1. Choose one of OSU's Sustainability Goals for Resource Stewardship and write a short essay, using the Climate Change, Sustainability, and Human Health Model as a guide, on how you believe this goal can improve human health. This opinion essay does need to have credible justification. This assignment will help formulate your Creative Project. Discussion/Debate Board: 1. How would you try to educate a climate change denier that climate change and global warming are real? Submit your answer with supporting references (scientific articles, government websites, and other credible references). See "Sources for Credible References" below to learn about what is a credible reference.	#1

#2	THEME II The Impacts of Climate Change/Global Warming and Human Health	Dr. Rosile's lecture topic: Overview: Health Impacts from the Effects of Global Warming and Climate Change Dr. Rosile's Lecture topic: Sustainability and Health Dr. Rosile's lecture topic: Prevention, Mitigation, and Adaptation Strategies Learning Materials to Read or View REQUIRED Learning Materials 1. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016 a. About this Report b. Guide to the Report c. Executive Summary d. Chapter 1. Introduction: Climate Change and Human Health 2. UN SDGs webpage 3. Video: UN SDGs 4. Video: We The People for The Global Goals 5. Video: The 5 Ps of the SDGs: People, Planet, Prosperity, Peace, and Partnership 6. USEPA Learn about Sustainability 7. Synergy Solutions for Climate and SDG Action: Bridging the Ambition Gap for the Future We Want 8. Synergy Solutions for a World in Crisis: Tackling Climate and SDG Action Together, Publication Year: 2023 a. https://sdgs.un.org/sites/default/files/2023-09/UN%20Climate%20SDG%20Synergies%20Report-091223B 1.pdf 9. Harnessing Climate and SDGs Synergies 10. Transforming our world: the 2030 Agenda for Sustainable Development 11. NASA webpage Mitigation and Adaptation.	Self-Checks will assess the competency in understanding the concept of sustainability, the health impacts from the effects of climate change, and the concepts of mitigation, adaption, vulnerability, and resilience found in the lectures and the LMs. Homework #1: 1. What is the definition of climate change vs. weather? 2. Write a concise summary describing 4 main drivers (i.e., causes) of climate change. 3. Write a concise summary describing 4 ecological and environmental effects of climate change resulting from the drivers in Q2. 4. Write a concise summary describing 4 how the effects in Q3 impact human health. 5. How has your knowledge about "climate change" changed since the beginning of the course? Homework #2: 1. Use LM #1 and write a short essay on the current human health impact from the effects of climate change that you believe is the most important to mitigate and why. This opinion essay does need to have credible justification. This assignment will help with formulating your research question for your research paper. Homework #3: 1. Using the Climate Change, Sustainability, and Human Health model, and the LMs in this module, choose the one UNSDG that you believe has the most synergy with mitigating ANY of the current and future health impacts from the effects of climate change and write a short essay justifying your choice with credible justificano. This assignment will help formulate your Creative Project. Discussion/Debate Board: No DDB in Module #2. Use this time to work on your Research Questions.	#1, #2, #3, #4, #5
#3	THEME II The Impacts of Climate Change/Global Warming and Human Health	Dr. Rosile's lecture topic: Significant Publications and Resources on The Impacts of Climate Change/Global Warming, Sustainability, and Human Health Learning Materials to Read or View REQUIRED Learning Materials These LMs are NOT to be read word-for-word. You should scan these documents ONLY to understand their structure (table of contents) and purpose. You will be referring to chapters and content of these documents throughout the course for your Self-Checks, HW, Assignments, and your Research Paper. 1. CDC's Climate and Health Program 2. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016 a. About this Report b. Guide to the Report	Self-Checks will assess the competency in understanding the Value of the Significant Publications and Resources on The Impacts of Climate Change/Global Warming, Sustainability, and Human Health found in the lectures and the LMs. Homework #1: Use the LMs in this HW or your own credible sources to REWRITE the "What To Know" section presenting specific additional information from your credible sources using no more than 400 words for BOTH #1.1.1 and #1.1.2 below. 1. To receive full credit your additional information needs to be added to each of the claims made in the CDC's What To Know statements 1. For the food security example, you would add data and additional scientific information to the following claims 1. Climate change is expected to threaten: 1. food production (how? by what quantity? what time frame?)	#2, #3

- c. Executive Summary
- d. Chapter 1. Introduction: Climate Change and Human Health
- 3rd US Climate Change Assessment, 2014 (Third National Climate Change Assessment)
 - a. Review for content Chapter 9 Human Health
- Highlights of the 3rd US Climate Change Assessment, 2014 (Third National Climate Change Assessment, NCA3)
 - a. Finding 5 Human Health
- 5. 4th US Climate Change Assessment, 2018
 - a. Fourth National Climate Assessment | Volume I: CLIMATE SCIENCE SPECIAL REPORT
 - Fourth National Climate Assessment | Volume II:
 Impacts, Risks, and Adaptation in the United States
 - c. Fourth National Climate Assessment (NCA4) | Volume II: Impacts, Risks, and Adaptation in the United States
 - i. Chapters 13 and 14
- 6. <u>NCA5</u>
 - a. Chapters 4, 11, 14, and 15
- The IPCC finalized the first part of the Sixth Assessment Report, Climate Change 2021: The Physical Science Basis, the Working Group I contribution to the Sixth Assessment ReportLinks to an external site.
 - WGI Summary for Policy Makers Links to an external site.
- 8. PDF Climate Change 2022: Impacts, Adaptation and Vulnerability Links to an external site.
 - a. https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC AR6 WGII FullReport.Links to an external site.Links to an external site.pdfLinks to an external site.
 - b. WGII Summary for Policy Makers.Links to an external site.
- Climate Change 2022: Mitigation of Climate Change, the Working Group III contribution. Links to an external site.
 - a. WGIII Summary for Policy Makers.

Optional Learning Materials

These materials may be referred to throughout the course in Lectures and in your Carmen modules. You may need to reference these materials in your HWs and Assignments. They represent publications and resources on the topics of Climate Change and **Sustainability** from the International to the local (Columbus, Ohio) level from NGOs, public, and private/commercial organizations.

- 10. The Rio Summit
- 11. The Kyoto Protocol
- 12. The Copenhagen Accord COP 15
- 13. The Paris Accord COP 21
- 14. UN COP 26
- 15. UN COP 27
- 16. UN COP 29
- 17. UN COP 28

- certain aspects of food quality, (what aspects?) (why these aspects?)
- 3. food prices, (how? by what quantity? what time frame?)
- and food distribution systems on a global scale. (how? by what quantity? what time frame?)
- 2. Adaptation activities can:
 - reduce the health impacts of some of the anticipated food security challenges. (what types of adaptation activities? by how much? what time frame?)

Homework #2:

 Choose one of Columbus Ohio's Sustainability Goals and write a short essay, using the Climate Change, Sustainability, and Human Health Model as a guide, on how you believe this goal can improve human health. This opinion essay does need to have credible justification. This assignment will help formulate your Creative Project.

Discussion/Debate Board

- Initial Response: Answer prompts to summarize a popular press article about implementing sustainability practices related to mitigating the impacts of climate change on human health within the USA.
- Additional Response: Answer prompts to refute, support, or validate the claims, issues, or implementation/actions in your peers' news articles using scientific justification from the Learning Materials or your own credible references.

Research Paper Milestone #1: Submit the two thesis statements that you chose for your research paper.

		 NASA Responding to Climate Change: Mitigation and Adaption NIH Climate Change and Health Initiative Strategic Framework USA President's Executive Order: Tackling Climate Change USEPA Learn about Sustainability USEPA 2024-2027 Climate Adaptation Plan ASPPH Climate Change and Health NACCHO Climate Change OPHA Climate Resilience in Ohio Central Ohio Climate Action Plan Ohio Environmental Council Climate Change FCPH Indicators for Local Climate and Health Surveillance FCPH Climate and Health Dashboards Sustainable Columbus Columbus Climate Action Plan Columbus Climate Adaptation Plan Smart Columbus Sustainability Ohio State University Sustainability OSU Sustainability Institute 		
#4	THEME II The Impacts of Climate Change/Global Warming and Human Health	Dr. Rosile's lecture topic: Guide to the Report Dr. Rosile's lecture topic: Chapter 1. Part 1. The association between observed Climate Change, projected Climate Change, and how Climate Change Affects Human Health Dr. Rosile's lecture topic: Chapter 1. Par 2. The association between observed Climate Change, projected Climate Change, and how Climate Change Affects Human Health Learning Materials to Read or View REQUIRED Learning Materials 1. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016	Self-Checks will assess the competency in understanding the Value of the Significant Publications and Resources on The Impacts of Climate Change/Global Warming, Sustainability, and Human Health found in the lectures and the LMs. Homework #1 1. Use LM #1 and write a short essay on the future human health impact from the effects of climate change that you believe will be the most accurately predicted in 2050 and why. This opinion essay does need to have credible justification. This assignment will help formulate your research question for your research paper. 2. Homework #2: no HW #2 in this module. Use this time to work on your research paper Milestone #2. Discussion/Debate Board 1. Initial Response: Answer prompts to summarize a popular press article about a future prediction from 2050 or beyond, of a human health impact from the effects of climate change in the US 2. Additional Response: Answer prompts to refute, support, or validate the claims, issues, or implementation/actions in your peers' news articles using scientific justification from the Learning Materials or your own credible references. Research Paper Milestone #2: Introduction due	#3
#5	THEME II The Impacts of Climate Change/Global Warming and Human Health	Dr. Rosile's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 2. Temperature Related Death and Illness Dr. Rosile's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 3 Air Quality Impacts Learning Materials to Read or View	Self-Checks will assess the competency in understanding Temperature Related Illness and Death and Air Quality Impacts found in the lectures and the LMs. Homework #1 1. Use the LMs in Modules 1-5 and write a short factual essay with credible justification on a local, state, national, or international sustainability goal that will mitigate ONE of the	2, #3
			, 5	

		1. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016 a. The lectures use this document for source material and include my comments and the HW and SCs will refer to this document. I would suggest reviewing (not reading word-for-word) to obtain an understanding of Chapters 2 and 3.	public health impacts from the effects of climate change discussed in this module and improve climate change adaptation or reduce community vulnerability and increase community resilience. Include the causes and effects of climate change that are associated with your public health impact. This assignment will help with writing the "Body" of your research paper due at the end of this module. Homework #2: no HW #2 in this module. Use this time to work on your research paper Milestone #2. Discussion/Debate Board 1. Initial Response: Answer prompts to summarize a popular press article about a future prediction in the US from 2050 or beyond, of a human health impact from the effects of climate change 2. Additional Response: Answer prompts to refute, support, or validate the claims, issues, or implementation/actions in your peers' news articles using scientific justification from the Learning Materials or your own credible references.	
#6	THEME II The Impacts of Climate Change/Global Warming and Human Health	Dr. Rosile's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 4 Impacts of Extreme Events on Human Health Dr. Rosile's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 5 Vector Borne Disease Learning Materials to Read or View REQUIRED Learning Materials 1. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016 a. The lectures use this document for source material and include my comments and the HW and SCs will refer to this document. I would suggest reviewing (not reading word- for-word) to obtain an understanding of Chapters 4 and 5.	Self-Checks will assess the competency in understanding the Impacts of Extreme Events and Vector-Borne Diseases found in the lectures and the LMs. Homework #1 1. Use the LMs in Modules 1-5 and write a short factual essay with credible justification on a local, state, national, or international sustainability goal that will mitigate ONE of the public health impacts from the effects of climate change discussed in this module and improve climate change adaptation or reduce community vulnerability and increase community resilience. Include the causes and effects of climate change that are associated with your public health impact. This assignment will help with writing the "Body" of your research paper due at the end of this module. Homework #2: no HW #2 in this module. Use this time to work on your research paper Milestone #3. Discussion/Debate Board 1. Initial Response: Answer prompts to summarize a popular press article about the human health impacts of Vector Borne Disease from the effects of climate change outside the USA. 2. Additional Response: Answer prompts to refute, support, or validate the claims, issues, or implementation/actions in your peers' news articles using scientific justification from the Learning Materials or your own credible references. Research Paper Milestone #3: "Body" due	#2, #3

#7	THEME II The Impacts of Climate Change/Global /arming and Human Health	Dr. Rosie's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 6, Climate Impacts of Water-Related Illness Dr. Rosie's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 7, Food Safety, Nutrition, and Distribution Learning Materials to Read or View REQUIRED Learning Materials 1. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016 a. The lectures use this document for source material and include my comments and the HW and SCs will refer to this document. I would suggest reviewing (not reading word- for-word) to obtain an understanding of Chapters 6, and 7.	Self-Checks will assess the competency in understanding the Impacts of water-related illness and food safety, nutrition, and distribution found in the lectures and the LMs. Homework 1. Use the LMs in Modules 1-5 and write a short factual essay with credible justification on a local, state, national, or international sustainability goal that will mitigate ONE of the public health impacts from the effects of climate change discussed in this module and improve climate change adaptation or reduce community vulnerability and increase community resilience. Include the causes and effects of climate change that are associated with your public health impact. Homework #2: no HW #2 in this module. Use this time to work on your research paper Milestone #4. Discussion/Debate Board 1. Initial Response: Answer prompts to summarize a popular press article about the human health impacts of food safety, nutrition, and distribution problems from the effects of climate change outside the USA. 2. Additional Response: Answer prompts to refute, support, or validate the claims, issues, or implementation/actions in your peers' news articles using scientific justification from the Learning Materials or your own credible references.	#2, #3
#8 W.	THEME II The Impacts of Climate Change/Global /arming and Human Health	Dr. Rosie's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 8, Mental Health and Well-Being. Dr. Rosie's lecture topic: THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, Chapter 9, Populations of Concern Learning Materials to Read or View REQUIRED Learning Materials 1. THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, A Scientific Assessment, U.S. Global Change Research Program, 2016 (Links to an external site.) 1. The lectures use this document for source material and include my comments and the HW and SCs will refer to this document. I would suggest reviewing (not reading word-for-word) to obtain an understanding of Chapters 8 and 9.	Research Paper Milestone #4: Research Paper "Conclusion" due Self-Checks will assess the competency in understanding the Impacts of mental health and well-being and populations of concern in the lectures and the LMs. Homework 1. Use the LMs in Modules 1-5 and write a short factual essay with credible justification on a local, state, national, or international sustainability goal that will mitigate ONE of the public health impacts from the effects of climate change discussed in this module and improve climate change adaptation or reduce community vulnerability and increase community resilience. Include the causes and effects of climate change that are associated with your public health impact. Discussion/ Debate Board: No DDB in Module #8. Use this time to work on your Milestone #5. Short Essay Research Paper Milestone #5: Final formatted Research Paper due NO FINAL EXAMS	#2, #3