

CLIM101-002 Fall 2025

Global Warming: Weather, Climate and Society

(Mason Core Course)

(Introduction to Climate Change and Sustainability)

Course Information:

Title: CLIM101: Global Warming: Weather, Climate and Society

CRN: 73510

Time: 1:30 -2:45PM, Tuesdays and Thursdays (online), 08/25-12/17/2025

Classroom location: Innovation Hall 204 (in-person Tuesdays)

Instructors: [Prof. John J. Qu](#)

Telephone: (703) 993-3958

E-mail: jqu@gmu.edu

Office: Room 2310, Exploratory Hall

Office Hour: 3:00—4:00PM Tuesdays and Thursdays or make appointment.



(Image courtesy of WMO)

Course Description:

This is a unique session of CLIM101, which falls under the Mason Core Course category, titled "Global Warming: Weather, Climate, and Society." The instructor is grateful for the consent provided by Prof. Shukla and Prof. Kinter, allowing us to present this distinctive session titled "Introduction to Climate Change and Sustainability," utilizing our recently published textbook. A multidisciplinary, Earth systems approach to sustainability of natural resources. Examines the basic scientific principles of climate change to develop long-term strategies on the sustainability of water, energy, and food/agricultural resources, and the impacts upon human health. Examines the application of sustainability to social, economic, and political science, to understand Earth as

an interconnected, integrated biological and physical system. This course is part of the Mason Core curriculum and fulfills requirements for Mason Category (<https://masoncore.gmu.edu/>).

Learn Objectives:

The impact of the changing climate on natural resources is among the greatest challenges that currently threaten Earth. This course focuses on the basic scientific principles of climate change that may be used to help develop long-term strategies to cope with the resulting broader environmental, societal, and economic impacts. Using a multidisciplinary approach, the course combines the principles of changing climate with specialized fields of the Water-Energy-Food-Health (WEFH) Nexus to examine how the Earth operates as an integrated system. It is an introduction-level courses in undergraduate programs. It will prepare students for future challenges regarding the climate and expose them to opportunities to meet these challenges. Furthermore, students will have the opportunity to participate in a well-organized discourse concerning the degree to which human actions contribute to the natural resources and sustainability of the Earth's climate change. This will also encompass an exploration of the potential consequences of climate actions, spanning from environmental conservation to the effects on job opportunities.

Prerequisites:

There are no formal prerequisites.

Final term paper

The description of the individual Final Project can be discussed in the classroom.

Grading:

Grades will be based upon your performance on the homework exercises, tests/g midterm, class attendance and final term paper and presentation. The weighted contribution of each of these items to your final grade is given below:

Homework 15%

Tests/quizzes 20%

Midterm 30%

Final term presentation and paper and 35%

Class attendance and discussions 10%

(A=90-100, B=80-89, C=70-79, D=60-69, F=<60)

Textbook:

Required Textbook: Qu, J. J. and R. P. Motha, (2022), Climate Change and a Sustainable Earth (textbook), Cambridge Scholars Publishing, ISBN13: 978-1-5275-8044-2 (<https://www.cambridgescholars.com/product/978-1-5275-8044-2/>)

Academic Standards

Academic Standards exist to promote authentic scholarship, support the institution's goal of maintaining high standards of academic excellence, and encourage continued ethical behavior of faculty and students to cultivate an educational community which values integrity and produces graduates who carry this commitment forward into professional practice.

As members of the George Mason University community, we are committed to fostering an environment of trust, respect, and scholarly excellence. Our academic standards are the foundation of this commitment, guiding our behavior and interactions within this academic community. The practices for implementing these standards adapt to modern practices, disciplinary contexts, and technological advancements. Our standards are embodied in our courses, policies, and scholarship, and are upheld in the following principles:

Honesty: Providing accurate information in all academic endeavors, including communications, assignments, and examinations.

Acknowledgement: Giving proper credit for all contributions to one's work. This involves the use of accurate citations and references for any ideas, words, or materials created by others in the style appropriate to the discipline. It also includes acknowledging shared authorship in group projects, co-authored pieces, and project reports.

Uniqueness of Work: Ensuring that all submitted work is the result of one's own effort and is original, including free from self-plagiarism. This principle extends to written assignments, code, presentations, exams, and all other forms of academic work.

Violations of these standards—including but not limited to plagiarism, fabrication, and cheating—are taken seriously and will be addressed in accordance with university policies. The process for reporting, investigating, and adjudicating violations is outlined in the university's procedures. Consequences of violations may include academic sanctions, disciplinary actions, and other measures necessary to uphold the integrity of our academic community.

The principles outlined in these academic standards reflect our collective commitment to upholding the highest standards of honesty, acknowledgement, and uniqueness of work. By adhering to these principles, we ensure the continued excellence and integrity of George Mason University's academic community.

Student responsibility: Students are responsible for understanding how these general expectations regarding academic standards apply to each course, assignment, or exam they participate in; students should ask their instructor for clarification on any aspect that is not clear to them.

Students with Disabilities

If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Resources at 703/993-2474. All academic accommodations must be arranged through that office.

Student use of electronic devices

The use of computers, either lab desktops or personal laptops, is required for the course. You will only be permitted to work on material related to the class, however. Engaging in activities not related to the course will result in a significant reduction in your participation grade. Please be respectful of your peers and instructor and avoid email, social media, and other distracting uses of computers.

Class Cancellation

If a class is cancelled due to inclement weather or other reasons, the syllabus will be updated as early as possible. Best efforts will be made to send each student an email with information on the cancellation of class. Make up classes will be scheduled during the next lecture. When an exam or quiz is cancelled, it will be given during the next lecture.

AI (Artificial Intelligence) Statement

Large language model generative artificial intelligence (generative AI) tools, such as ChatGPT and others, have recently emerged and become available for wide use. While generative AI tools can offer inspiration and new possibilities, they should not be seen as unacknowledged substitutes for the content created by students in their courses. More detailed information can be obtained from the following websites (<https://stearnscenter.gmu.edu/knowledge-center/ai-text-generators/> and <https://ctl.utexas.edu/chatgpt-and-generative-ai-tools-sample-syllabus-policy-statements>)

Detailed Course Schedule

Week one 08/26, 08/28	Introduction and Chapter 1
Week two 09/02, 09/04	Chapter 2 and Chapter 3
Week three 09/09, 09/11	Chapter 4 and Group study (1) and Quiz 1
Week four 09/16, 09/18	Chapter 5 and Guest lecture (NOAA/STAR)
Week five 09/23, 09/25	Chapter 6 and Chapter 7
Week six 09/30, 10/02	Chapter 8 and independent study for mid-term
Week seven 10/07, 10/09	Mid-term (in-person) and Group Study (2) Presentations
Week eight 10/14, 10/16	Chapter 9 and Chapter 10
Week nine 10/21, 10/23	Chapter 11 and Chapter 12
Week ten 10/28, 10/30	Chapter 13 and Group study (3) and Quiz 2
Week eleven 11/04, 11/06	Election Day (No Class, 11/04) and Chapter 14
Week twelve 11/11, 11/13	Chapter 15 and Chapter 16
Week thirteen 11/18, 11/20	Final lecture reviewing and Group study (4) and Quiz 3

Week fourteen 11/25,11/27	Group presentations (1-3) and Thanksgiving Break (No class on 11/27)
Week fifteen 12/02, 12/05	Group presentations (4-6) and prepare group final term paper
Week fifteen 12/09	Group final term papers (due date)