College of Professional Studies

THE GEORGE WASHINGTON UNIVERSITY

MPS in Sustainable Urban Planning

PSUS 6221

Climate Change Science in Urban Planning

3 Credits

Instructor Information

Instructor

Rachael G. Jonassen

In my career, I have served as an applied academic (Professor of Hydroclimatology) developing and applying climate downscaling techniques, and as Program Director for Carbon Cycle and Biogeosciences at the National Science Foundation where I received the Director's Award. I also served in leadership with the US Global Change Research Program. From 2008-2013 I was Senior Scientist for Climate Change at LMI and advised numerous government agencies on climate change actions. I have taught at GW since 2009 and currently direct the program in climate change in EEMI at GW and advise globally on climate change issues. My MS and PhD degrees in Geoscience are from Penn State and BA in Sociology-Anthropology is from Dickinson College.

Contact Information

Phone Number: 703-969-4714

Email Address: rachaelj@gwu.edu

Office Hours: Virtual meetings as mutually agreed, arrange via email or during class. Prof. Jonassen can be best reached via email and will generally respond to emails within 48 hours. If you have sent an email and it has not been answered within 48 hours, please call (703) 288-1656.

Course Details

CRN: 21970

Classroom: In person, 604 Arlington

Class Time: Thursdays 6pm-9pm

Course Description and Overview

This is a 15-week course in the Program in Urban Sustainability in George Washington University's College of Professional Studies. The title of the course is *Climate Change Science in Urban Planning*. The course requires classroom attendance. You are expected to read all lectures and read all assigned material and participate in the class sessions, which will be held Thursday at 6 pm Eastern Time. All material is posted online in Blackboard.

Each week we will cover one key policy related to the issue of anthropogenic climate change beginning with the foundational agreement of international policy, the UNFCCC. For each policy, we'll explore key science concepts that underly the policy as well as what science you need to understand to grasp why the policy is an important tool to address climate change and why the policy is shaped as it is.

You will explore the work of the Intergovernmental Panel on Climate Change and other major contributors and contributions to our knowledge underlying each policy. You will examine in detail key readings that are foundational for each policy. Throughout the course, we'll discuss real-life examples of

work on climate change policies drawn from my own experience around the world and from the efforts of others.

I am a firm believer in active learning so you will have many structured opportunities to direct your own learning and ensure that it relates to your own experiences and knowledge. I expect you to be actively involved in the learning process throughout the semester.

Prerequisites

Academic

Willingness to explore ideas of physics, chemistry, earth science, technology, engineering and mathematics, at college level.

Technological

As a student in a course that has online components, you need to ensure that you have the required technology and skills necessary to fully participate. The minimum technology requirements for all online students at GW are outlined at the following location: https://it.gwu.edu/services. I expect you to know how to use word processing, spreadsheets, web and library search tools including AI, and presentation tools. You must have skill at writing and expression in English at college level.

You should also be able to:

- Use a digital camera or scanner
- Use your computer to upload recordings and images to your computer
- Be open to learning and registering for new technologies, including AI
- Be flexible when technological glitches happen (which is a given)
- Seek technological help when necessary by contacting the Division of Information Technology

If you have any problems with the software in this course, please reference the Help link in the left navigation menu in our course on Blackboard.

Course Learning Objectives

As result of completing this course, students will be able to:

1. Assess whether scientific claims form the basis for action on challenges from climate change.
2. Judge policy reactions to the direct effects of radiative forcers upon social and earth systems.
3. Assemble and evaluate policy options for varied earth and societal system responses to anthropogenic forces.
4. Compare and contrast climate change policy choices across multiple constituencies using professional tools.
5. Role-play steps to identify and respond to policy challenges related to climate change.

Program Learning Outcomes

Students will demonstrate:

1. Strong written and oral communication skills
2. Broad-based knowledge of sustainability-oriented definitions, practices and technology
3. Forming evidence-based policy in the arena of sustainable urban development.
4. Holistic ability to connect planning theory to practice to produce answers to urban planning problems.

5. Understanding of professional ethics, as set forth by the American Institute of Certified Planners.

CPS Core Competencies

CPS Students will learn to:

1. Think strategically in researching and analyzing data and contexts to set goals, solve problems, and formulate and implement shared visions
2. Communicate complex information and ideas to, and solicit and incorporate feedback from, a variety of audiences
3. Foster collaboration in professional situations by knowing how to incorporate other's views, motivations, interests and strengths in the pursuit of solutions
4. Lead by creating innovative practices and inspiring others to join them in delivering better results
5. Practice professional ethics by advocating for and making choices that uphold the principles and values of their fields

Required Text and Learning Materials

We will use the Sixth Assessment Report of the IPCC for Working Group I (appeared 9 August 2021) WGII and for WGIII (appeared 28 February and 4 April 2022, respectively). Readings will be assigned from AR6 as available.

Required text: IPCC, 2021: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press. In Press. Available free online: https://www.ipcc.ch/report/ar6/wg1/#FullReport in multiple official UN languages*.

Assigned readings from professional journals will be available in BlackBoard or through Gelman Library.

Optional Supplemental Text and Learning Materials

Recommended text: The Warming Papers: The Scientific Foundation for the Climate Change Forecast (Paperback) Edited by David Archer and Raymond Pierrehumbert, 2011, ISBN: 978-1-4051-9616-1. This is available in Gelman Library or may be purchased as an ebook or paperback.

Methods of Instruction

This course uses the following methods of instruction:

- *Experiments*: I'll give you descriptions of simple experiments about climate change to perform
- *Computer Apps*: Several topics point to apps to explore specific questions.
- *Lectures:* I will frequently provide videos or *PowerPoint* slides with relevant material.
- *Discussion:* both in-class discussion and use of the *Discussion Board* are essential.
- *Student presentations:* you will present twice on your paper and once on the project.
- *Readings: a*s described above, there are weekly reading assignments from IPCC, etc. You will be asked to present a summary of certain readings during class time.
- *Writing assignments:* homework, paper assignments, memos, and exams require writing.

- *Journals:* on occasion you may need to use the *Journal* feature to share some thoughts.
- *Games:* yes, if it helps us to learn a topic better, we'll use a few games.
- *Collaborative work:* the course project and some classwork will be collaborative.
- *Artificial Intelligence:* you will be encouraged to use AI to learn more and to research topics.
- *Field visits:* a variety of places in the area that illustrate topics we discuss in class will be identified for your (optional) independent exploration.

Attendance policy

Barring unforeseen circumstances such as illness, you are expected to attend class in person each session prepared to participate in discussion of the assigned material of the week.

Evaluation and Grading

This course will include the following types of assessment:

You will have multiple opportunities to develop and demonstrate expertise in each of the learning outcomes listed above. Rubrics will guide your demonstration of mastery of the material. This information will be posted on the course BlackBoard web site. Assignments usually relate to more than one learning outcome. 大家辛苦了

- *Term Paper:* due in week eight with multiple related step-by-step assignments
- *Group Project:* due at end of semester with multiple related step-by-step assignments.
- *Final Exam:* due one week after classes end, it will be a written response to a singular issue.
- *Memos:* a few assignments may involve short memos
- *Readings*: you will discuss specific readings from the professional literature during class.
- *Class Exercises:* on occasion, you will be given challenges, alone or in a group.
- *Class Discussion:* active participation in all discussions is essential throughout the semester.

Assessments will contribute toward the student's grade based on the following chart:

Assignment Category	Weight
(Individual) Individually Selected Climate Change Topic	25%
(Team) Using Science to Address Climate Challenges	25%
(Individual) Addressing a Climate Change Problem	25%
Class Citizenship including attendance, participation (including in-class and on-line discussion groups), contribution to the learning environment, and general classroom demeanor. Readings, as well as on-line, in-class exercises, journals and homework writing count here.	25%
Total	*100%*

Grading Scale

Following is the grade scale for all graduate CPS classes:

Grade	Range	Grade Standard
A	94-100	Your work is outstanding and ready for submission in a professional environment. Your material, effort, research, and writing demonstrate superior work.
A-	90-93	Represents solid work with minor errors. Overall, excellent work.
B+	87-89	Very good. Represents well-written material, research, and presentation, but needs some minor work.
B	83-86	Good work, but needs reworking and more effort.
B-	80-82	You've completed the assignment, but you are not meeting all of the requirements.
C+	77-79	Needs improvement in content and in effort. Shows some motivation and concern.
C	73-76	Needs reworking, improved effort, and additional research. Shows minimal motivation and concern.
C-	70-72 (lowest grade to pass)	Poor performance. Major errors, too many misspellings, problems with accuracy, etc.
F	Below 70	Unacceptable performance, or inability to submit the assignment.

Late Work

All assignments are due on the dates indicated in this syllabus and in the course outline. Late materials are subject to reduction in grade. The later the paper, the lower the possible grade.

Papers submitted after the due date can get no higher than a 'B.'
Papers submitted one week or more late can get no higher than a 'C.'
Papers submitted two weeks or more late can get no higher than a 'D.'
Papers submitted three weeks or more late can get no higher than 59%.

If there is an emergency, which prevents you from submitting work on time, notify me as soon as possible so I am aware of your situation.

Tentative Course Schedule

The instructor reserves the right to alter course content and/or adjust the pace to accommodate class progress. Students are responsible for keeping up with all adjustments to the course calendar. Final dates and details will be found on the Blackboard course site.

Detailed Course Schedule – Spring 2025

1. January 16 (6-9pm) – UNFCCC: Dangerous Anthropogenic Interference with the climate system.

Key Questions:

1: What are the objectives, structure and requirements of the course?

2: What is the climate system?

3: What is dangerous anthropogenic interference?

Introduce the term paper expectations and schedule.

Required Text Reading (24p): The United Nations Framework Convention on Climate Change

Recommended Text Reading: Archer and Pierrehumbert, Chapter 18, *Tiny Bubbles*, p 402, and *Vostok Ice Core Provides 160,000-Year Record of Atmospheric CO_2*, pages 407-416.

2. January 23 (6-9pm) – Paris Agreement: to limit global warming to 2°C.

Key Questions:

1: How do we measure the global temperature?

2: How does global temperature change over time?

3: How does the earth respond to a global temperature change?

Discuss term paper topics.

Required Text Reading (25p): The Paris Agreement

Recommended Text Reading: Archer and Pierrehumbert, Chapter 1, *The Greenhouse Effect*, p 1-6, and *On the Temperatures of the Terrestrial Sphere and Interplanetary Space*, pages 7-20.

3. January 30 (6-9pm) – Putting a price on carbon emissions.

Key Questions:

1: What is an externality?

2: What is a Pigouvian tax?

3: What is a marginal abatement cost curve (MACC)?

Paper topic, plan, 3 refs. Due at the start of class.

Required Text Reading (8p+refs.): Public support for carbon pricing policies and revenue recycling options: a systematic review and meta-analysis of the survey literature.

Recommended Text Reading: Archer and Pierrehumbert, Chapter 3, *By the Light of the Silvery Moon*, pages 45-55, and *On the Influence of Carbonic Acid in the Air upon the Temperature of the Ground*, pages 56-77.

4. February 6 (6-9pm) – Net Zero: stopping the increase of radiative forcing.

Key Questions:

1: What is a carbon budget?

2: How does temperature change with cumulative emissions?

3: What is climate sensitivity?

Guest Lecture (6pm via Zoom): Dr. Aleya Kaushik – NOAA (spring 2025) "*Measurements and modeling at NOAA Global Monitoring Laboratory that contribute to the understanding of how the land carbon cycle is changing*."

Required Text Reading (30p+refs.): Net Zero: Science, Origins, and Implications

Recommended Text Reading: Archer and Pierrehumbert, Chapter 2, *Wagging the Dog*, pages 21-23, and *On the Absorption and Radiation of Heat by Gases and Vapours, and on the Physical Connexion of Radiation, Absorption, and Conduction*, pages 24-44.

5. February 13 (6-9pm) – CBAM: The Carbon Border Adjustment Mechanism.

Key Questions:

1: What is carbon intensity?

2: What is carbon leakage?

3: What is the social cost of carbon?

Initial talk on paper topic.

Required Text Reading (13p+refs.): Carbon border adjustment mechanism: a systematic literature review of the latest developments

Recommended Text Reading: Archer and Pierrehumbert, Chapter 4, *Radiative Transfer*, pages 78-80, and, *The Influence of the 15 Carbon-dioxide Band on the Atmospheric Infra-red Cooling Rate,* pages 81-91.

6. February 20 (6-9pm) – Renewable Energy Preference; Energy Efficiency Standards; Demand

Key Questions:

1: When is energy renewable?

2: How can we reduce energy intensity?

3: What is life cycle assessment?

Discuss term paper outline and annotations.

Required Text Reading (9p+refs.): The impact of energy efficiency and renewable energy consumption on carbon emissions in G7 countries

Recommended Text Reading: Archer and Pierrehumbert, Chapter 15, *One if by Land*, p 313, and *Changes in Land Biota and Their Importance for the Carbon Cycle*, pages 314-318.

7. February 27 (6-9pm) – The Montreal Protocol and Kigali Amendment

Key Questions:

1: Why is ozone important to climate change?

2: Why are hydrochlorofluorocarbons important to society?

3: **Group Project Introduction**

Discuss term paper format and content.

Required Text Reading (13 p.): The Kigali Amendment

Required Text Reading (6p+refs): Emissions of HFC-23 do not reflect commitments made under the Kigali Amendment.

Recommended Text Reading: Archer and Pierrehumbert, Chapter 12, *The Sky is Rising*, pages 257-260, and *The Artificial Production of Carbon Dioxide and its Influence on Temperature*, pages 261-273.

Guest Lecture: Dr. Claudia Tibaldi, AGU Distinguished Fellow

8. March 6 (6-9pm) – Presentations

Assessment #1 Due – Scientific Evaluation of a Major Climate Change Policy

Group Project Assignment.

Required Text Reading (10 p.+refs+app.): What drives greenhouse gas emissions? An international scoping review of academic studies in 2010–2019.

Recommended Text Reading: Archer and Pierrehumbert, Chapter 9, *Taking Earth's Temperature*, pages 206-207, and *Northern Hemisphere Temperature During the Past Millennium*, pages 220-225.

NO CLASS ON THURSDAY MARCH 13. UNIVERSITY SPRING BREAK.

9. March 20 (6-9pm) – International Emissions; Air and Marine

Key Questions:

1: What are international emissions?

2: What have ICAO and IMO done about emissions?

3: What science informs our approach to international emissions?

Q&A on term paper talks. Discuss team memos #1.

Required Text Reading (7p.+refs.): Different approaches to reducing aviation emissions: reviewing the structure-agency debate in climate policy

Required Text Reading (8p.+refs.): A review on carbon emissions of global shipping

Recommended Text Reading: Archer and Pierrehumbert, Chapter 13, *Denial and Acceptance*, pages 274-275, and *Carbon Dioxide Exchange Between Atmosphere and Ocean and the Question of an Increase in Atmospheric CO2 during the Past Decades*, pages 276-284.

10. March 27 (6-9pm) – AFOLU: Forest Conservation; Agricultural and Land Use

Key Questions:

1: What policy tools are appropriate for non-GHG radiative forcing?

2: Does what we do to the land affect long-term climates?

3: What's going to create the most change in the near term? [SLCF]

Q&A on term paper talks. Discuss team memos #2.

Required Text Reading (13p+refs): Overcoming global inequality is critical for land-based mitigation in line with the Paris Agreement

Recommended Text Reading: Archer and Pierrehumbert, in Chapter 16, *Effects of Fuel and Forest Conservation on Future Levels of Atmospheric Carbon Dioxide*, pages 354-384.

11. April 3 (6-9pm) – Climate Finance Initiatives

Key Questions:

1: How do I assess and reduce climate change hazards?

2: How do I evaluate the effectiveness of actions

3: What is loss and damage?

Paper presentation due. Discuss team memos #3.

Required Text Reading (11p.+refs.): Climate Finance

Recommended Text Reading: Archer and Pierrehumbert, Chapter 17, *On Ocean pH*, page 393, and *Anthropogenic Carbon and Ocean pH*, pages 394-395.

12. April 10 (6-9pm) – Climate Risk Disclosure Requirements; Extended Producer Liability

Key Questions:

1: How do I assess climate change risk? [CRA]

2: How do I determine the impact of my actions? [D&A]

3: What are transitional risk and circularity?

Discuss term paper talks and provide feedback and ideas on key points. Discuss team memos #4.

Required Text Reading [15p.+refs.]: Climate risk disclosures and global sustainability initiatives: A conceptual analysis and agenda for future research

Recommended Text Reading: Archer and Pierrehumbert, in Chapter 6, *Climate Sensitivity: Analysis of Feedback Mechanisms*, pages 154-190.

13. April 17 (6-9pm) – Adaptation Plans

Key Questions:

1: How do I deal with uncertainty within and across scenarios?

2: What are sources of exposure and vulnerability?

3: How do I reduce future risk?

Revised paper due. Discuss team memos #5.

Required Text Reading (11p.+refs.): What Makes Climate Change Adaptation Effective? A Systematic Review of the Literature

Recommended Text Reading: Archer and Pierrehumbert, Chapter 6, *The Birth of the General Circulation Model*, pages 136-137, and *The Effects of Doubling the CO2 Concentration on the Climate of a General Circulation Model*, pages 94-115.

14. April 24 (6-9pm) – Declaration of a Climate Emergency; Team Presentations

Assessment #2 Due – Using Science to Address Climate Challenges

Key Questions:

1: What are the cascading tipping points in the climate system?

2: What do I do if things get really bad? [GE: CDR & SRM]

3: What is intolerable risk?

Required Text Reading (14p.): The Public Law Paradoxes of Climate Emergency Declarations

Recommended Text Reading: Archer and Pierrehumbert, Chapter 11 *The Public Statement*.

15. May 8 – Final Exam due by midnight Eastern time

Final Exams Week (Saturday, May 3 – Friday, May 9)

Assessment #3 Due – Solving Your Climate Change Problem

[This is a Comprehensive Take Home Final Exam that will be assigned on April 24, 2025]

Expectations and Responsibilities

Blackboard Site

A Blackboard course site has been set up for this course. Each student is expected to check the site regularly throughout the semester to review weekly course content, view announcements, and submit assignments. Students can access the course site through GWU Blackboard.

This Blackboard course may have additional support individuals enrolled as Teaching Assistants, to include individuals such as the Program Director or Instructional Designer. The role of these individuals in the course site is to support faculty members and help ensure a positive and effective course experience for students.

Support for Blackboard is available at 202-994-4948 or the IT Blackboard web page.

Please note that your access to this course on Blackboard will continue for one month after the course ends. If you wish to keep any work or materials, you must download or save them before the course closes.

Technology Requirements

It is your responsibility to ensure that you have the required technology to fully participate in this course. The minimum technology requirements for learning online at GW are outlined on the Technical Requirements and Support web page.

If you have any problems with the technology in this course, you can seek technological support from GW in a variety of ways, outlined on the IT Support website.

GW is committed to providing an inclusive and welcoming environment that is accessible for everyone, including people with disabilities.

The following links provide more information about the accessibility of technologies that may be used in this course:

- Blackboard accessibility
- Microsoft Office accessibility
- Adobe accessibility
- Vimeo accessibility
- YouTube accessibility
- VoiceThread accessibility
- Zoom accessibility
- Webex accessibility

If you have any issues regarding the accessibility of the technology used in this course, please contact your instructor. You may also explore the Disability Support Services website.

Technology Expectations

Regarding technology skills, you should be able to:

- Create documents and presentation slides

- Use a webcam and microphone
- Use a digital camera or scanner
- Upload files, including recordings and images
- Be open to learning and registering for new technologies
- Be flexible when technological glitches happen (which is a given)
- Seek technological help when necessary by contacting the Division of Information Technology
- Be willing to learn and adopt best practices around AI tools

If you have any problems with the technology expectations in this course, please contact your instructor.

Netiquette

Please observe the following rules of etiquette for communicating online:

- Be professional and respectful: Remember that you're communicating with real human beings online. Assume best intentions and give others the benefit of the doubt. Please be gracious and constructive when your opinion differs from someone else's opinion.
- Consider context: Use school appropriate language in course related spaces online.
- Identify yourself: Ensure your name and contact information are accurate and identifiable in online spaces (e.g., Blackboard, Zoom/Webex).
- Respect privacy: Do not post personal information about someone else without permission.
- Proofread: Before posting, proofread for spelling and grammar mistakes to ensure you're communicating as clearly as possible.

Your instructor reserves the right to delete any post that is deemed inappropriate for the discussion forum, blog, or wiki without prior notification to the student. This includes any post containing language that is offensive, rude, profane, racist, or hateful. Posts that are seriously off-topic or serve no purpose other than to vent frustration will also be removed.

Getting Started

Everything you need to get started in the course is contained within the Blackboard course site. You can use the menu links on the left side panel to view different components. The content for each learning unit is divided into folders—one for each week. More unit folders will unlock as weeks in the course progress.

Participation Policy

All students are expected to learn and contribute by being a positive participant in discussions, activities, presentations, and assignments. If you have an unavoidable conflict or become ill, in a way that will affect your participation in any given week, please notify your instructor immediately.

Communication & Feedback

Important announcements will be posted periodically via Blackboard's announcement feature throughout the course. The instructor will strive to reply to student questions within 24 hours and provide feedback for assignments within a week after the due date.

Classroom protocol

All viewpoints, courteously expressed, are welcome. Robust discussion, including disagreement, makes for an interesting class. Reading or sending email, texting, using phones, or using laptops or tablets for purposes not related to the class are inappropriate classroom behaviors.

Generative AI Policy

Use of generative AI is fully open in this class and students should make every effort to learn how to make best use of this new and emerging tool. We will have regular discussions in the class about such tools, will introduce a number of those during the semester and track with interest ongoing developments. Students can choose for themselves the extent of their use and how they choose to cite such use or not in any course settings, including assignments. All students are encouraged to share their understanding of these tools and relevant experiences with them. This is an unknown world we are all exploring together. To the extent it can help us to help others in any professional setting, it is our professional obligation to learn how to do so responsibly.

Student Privacy

In accordance with the Family Educational Rights and Privacy Act (FERPA) of 1974, GW's student privacy policy prohibits the disclosure of information contained in a student's educational records to third parties without the express written consent of the student or former student.

Communication & Feedback

Important announcements will be posted periodically via Blackboard's announcement feature throughout the course. The instructor will strive to reply to student questions within 48 hours and provide feedback for assignments within a week after the due date.

Credit Hour Policy

For this **15-week, 3-credit course** there will be an average of **9-10 hours** of combined direct instruction and independent learning per week. For each credit hour there will be a minimum of 37.5 hours combined direct and independent learning. More information about GWU's credit hour policy can be found at the Office of the Provost's Policies web page (Under: Assignment of Credit Hour Policy).

University Policies & Services

Academic Integrity

Academic Integrity is an integral part of the educational process, and GW takes these matters very seriously. Violations of academic integrity occur when students fail to cite research sources properly, engage in unauthorized collaboration, falsify data, utilize generative artificial intelligence in an unauthorized manner and in other ways outlined in the Code of Academic Integrity. If you have any questions about whether academic practices or resources are permitted, you should ask me for clarification.

If you are reported for an academic integrity violation, you should contact Conflict Education and Student Accountability (CESA) to learn more about your rights and options in the process. Consequences can range from failure of assignment to expulsion from the University and may include a transcript notation. For more information, refer to the CESA website or contact CESA by email (cesa@gwu.edu) or phone at 202-994-6757.

Generative Artificial Intelligence (GAI) Policy

By submitting work for evaluation in this course, you represent it as your own intellectual product. You may not submit for evaluation any content (e.g., ideas, text, code, images) that was generated, in whole or in part, by GAI tools (including, but not limited to, ChatGPT and other large language models) unless the instructor has explicitly granted permission to do so.

Your instructor will explain to you the uses of GAI tools that are permitted or prohibited in this course, including on what specific assignments use of GAI tools is permitted. Submitting content for evaluation that was produced in whole or in part by GAI tools, except for the specific purpose(s) and assignment(s) discussed and authorized by the instructor, constitutes cheating in this course under the GW Code of Academic Integrity (available from the Office of Academic Integrity website).

Copyright Statement

Materials used in connection with this course may be subject to copyright protection under Title 17 of the United States Code.

Unless explicitly allowed by the instructor, course materials, class discussions, and examinations are created for and expected to be used by class participants only. The recording and rebroadcasting of such material, by any means, is forbidden.

Under certain Fair Use circumstances specified by law, copies may be made for private study, scholarship, or research. Electronic copies should not be shared with unauthorized users. If a user fails to comply with Fair Use restrictions, they may be liable for copyright infringement. For more information, including Fair Use guidelines, see the Libraries and Academic Innovations Copyright page.

Use of Electronic Course Materials and Class Recordings

Students are encouraged to use electronic course materials, including recorded class sessions, for private personal use in connection with their academic program of study. Electronic course materials and recorded class sessions should not be shared or used for non-course related purposes unless express permission has been granted by the instructor. Students who impermissibly share any electronic course materials are subject to discipline under the Student Code of Conduct. Please contact the instructor if you have questions regarding what constitutes permissible or impermissible use of electronic course materials and/or recorded class sessions. Please contact Disability Support Services if you need additional accommodations for accessing electronic course materials.

Student Privacy: Family Education Rights and Privacy (FERPA)

In accordance with the Family Educational Rights and Privacy Act (FERPA) of 1974, GW's student privacy policy prohibits the disclosure of information contained in a student's educational records to third parties without the express written consent of the student or former student.

Bias-Related Reporting

At The George Washington University, we believe that diversity and inclusion are crucial to an educational institution's pursuit of excellence in learning, research, and service. Acts of bias, hate, or discrimination are anathema to the university's commitment to educating citizen leaders equipped to thrive and to serve in our increasingly diverse and global society. We strongly encourage students to report possible bias incidents. For additional information, please visit Bias Incident Response.

Sexual Harassment & Discrimination: Title IX Statement

The George Washington University (GW) and its faculty are committed to creating a safe and open learning environment for all students. If you or someone you know has experienced sexual harassment, including sexual assault, dating or domestic violence, and stalking, please know that help and support are available through GW's Title IX Office. GW strongly encourages all members of the community to take action, seek support, and report incidents of sexual harassment to the Title IX Office. You may report an incident or contact the Title IX Office at 202-994-7434 or at titleix@gwu.edu.

Please be aware that **GW faculty and staff are mandatory reporters** and are required to disclose information about suspected or alleged sexual harassment or other potential violations of the Title IX Sexual Harassment and Related Conduct Policy to the Title IX Office. If the Title IX Office receives information about an incident, they will reach out to offer information about resources, rights, and procedural options as a member of the campus community. Community members are not required to respond to this outreach.

If you, or another student you know, need to speak to a confidential resource who does not have this reporting responsibility, please contact the Student Health Center at 202-994-5300 or shcadmin@gwu.edu or the Office of Advocacy and Support at 202-994-0443 or oas@gwu.edu.

University Policy on Observance of Religious Holidays

Students must notify faculty as early as possible, but no later than three weeks prior to the absence, of their intention to be absent from class on their day(s) of religious observance. If the holiday falls in the first three weeks of class, the student must inform the faculty within the first week of the semester that they are enrolled in the course.

To the greatest extent possible, faculty must continue to extend to these students the courtesy of absence without penalty on such occasions, including permission to make up examinations.

Instructors who intend to observe a religious holiday must communicate with the program director and students at the beginning of the semester if observance requires rescheduling a missed class or other changes to course-related activities.

For the full text of the policy and calendar of religious holidays, please see the Office of the Provost's Policies web page (Religious Holidays document).

Student Services & Resources

CPS Office for Student Engagement

The CPS Office for Student Engagement is dedicated to enhancing your academic and professional development at the College. Our team of student services and career services professionals is a resource for you as you navigate administrative offices across the University, contemplate ways to become involved in the GW community and strategize about your next career steps.

For questions about student services matters (including registration, graduation and other administrative matters), please contact the Student Success Coach assigned to your program.

For information about career services, please contact cpscareer@gwu.edu.

Disability Support Services (DSS)

Any student who may need an accommodation based on the potential impact of a disability should contact Disability Support Services (or call 202-994-8250) to establish eligibility and to coordinate reasonable accommodations.

Student Health Center (SHC)

The Student Health Center offers medical, counseling/psychological, and psychiatric services to GW students. The Student Health Center can be reached during business hours at 202-994-5300. Students experiencing a medical or mental health emergency on campus should contact GW Emergency Services at 202-994-6111, or off campus at 911.

Academic Commons

Academic Commons is the central location for academic support resources where GW students can find study skills tips, find help with research, and connect with other campus resources. Students may also schedule a peer tutoring session for a variety of courses. For questions about these resources, email academiccommons@gwu.edu.

The Writing Center

GW Writing Center cultivates confident writers in the University community by facilitating collaborative, critical, and inclusive conversations at all stages of the writing process. Working alongside peer mentors, writers develop strategies to write independently in academic and public settings. Writing Center appointments can be booked online.

GWU Libraries

GW Libraries offer research resources, services, and assistance to all students – including off campus students. The GW community can access 500+ online subscription databases and millions of items, electronic and print, in the library catalog.

Contact the Ask Us desk at 202-994-6048 or askus@gwu.edu with any questions or requests, including scheduling a research consultation appointment with a librarian. Librarians are there to guide students through any aspect of the research process, from selecting and narrowing a topic, to crafting a research strategy, to citation management.

GW Campus Emergency Information

GW Emergency Services: 202-994-6111

For situation-specific instructions, refer to GW's Emergency Procedures guide.

GW Alert

GW Alert is an emergency notification system that sends alerts to the GW community. GW requests students, faculty, and staff maintain current contact information by logging on to the GW Alert Portal. Alerts are sent via email, text, social media, and other means, including the Guardian app. The Guardian app is a safety app that allows you to communicate quickly with GW Emergency Services, 911, and other resources.

Protective Actions

GW prescribes four protective actions that can be issued by university officials depending on the type of emergency. All GW community members are expected to follow directions according to the specified protective action. The protective actions are Shelter, Evacuate, Secure, and Lockdown (details below).

Shelter

- Protection from a specific hazard
- The hazard could be a tornado, earthquake, hazardous material spill, or other environmental emergency.
- Specific safety guidance will be shared on a case-by-case basis.
- Action:
    - Follow safety guidance for the hazard.

Evacuate

- Need to move people from one location to another.
- Students and staff should be prepared to follow specific instructions given by first responders and University officials.
- Action:
    - Evacuate to a designated location.
    - Leave belongings behind.
    - Follow additional instructions from first responders.

Secure

- Threat or hazard outside of buildings or around campus.
- Increased security, secured building perimeter, increased situational awareness, and restricted access to entry doors.
- Action:
    - Go inside and stay inside.
    - Activities inside may continue.

Lockdown

- Threat or hazard with the potential to impact individuals inside buildings.
- Room-based protocol that requires locking interior doors, turning off lights, and staying out of sight of corridor window.
- Action:
    - Locks, lights, out of sight
    - Consider Run, Hide, Fight
- Classroom emergency lockdown buttons

  Some classrooms have been equipped with classroom emergency lockdown buttons. If the button is pushed, GWorld Card access to the room will be disabled, and GW Dispatch will be alerted. The door must be manually closed if it is not closed when the button is pushed. Anyone in the classroom will be able to exit, but no one will be able to get in.