

GEORGE MASON UNIVERSITY

History of the Climate Crisis

HIST 387-DL2

Fall Semester 2023

Location: Online

Time: Asynchronous

Professor Benjamin W. Goossen

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Office Hours: By appointment

Course Description

Human-caused warming of planet Earth is posing unprecedented challenges to global environments and societies. This class asks how the tools of history can help us navigate our present-day climate crisis. How have factors like colonialism, capitalism, and fossil fuel extraction contributed to the emergence of global warming? What resources have helped Earth scientists study the realities of climate change? How have scholars, activists, and concerned citizens worked to make political headway for climate justice in the face of business-as-usual opposition? We will consider a wide variety of historical sources and case studies to build understanding of the intersecting environmental and social emergencies of our time.

*****Syllabus subject to change, with notice*****

Course Objectives

In this course, we will seek to:

1. Identify core concepts and debates related to the history of climate science, policy and history
2. Develop familiarity with historical cases of climate change, prior to the onset of human-caused global warming, and consider their relevance for contemporary climate crisis

3. Examine the complex processes by which anthropogenic climate change became discovered and situate key aspects climate science within their historical context
4. Consider how different social and political groups have responded to knowledge of global warming, and evaluate present-day proposals for action and their possible outcomes

Prerequisites and Eligibility

Welcome! This course is an introduction to climate history. All students are welcome to enroll. No prior knowledge of climate history, science, or policy is assumed.

Some students may have preexisting interests in areas that we will cover in class, but others may be encountering major themes surrounding the topic of the climate crisis for the first time. Whatever prior levels of knowledge students bring to the course content, I am committed to working with you to deepen your understanding of the climate crisis and to developing your familiarity with the methodologies and tools of historical inquiry.

Mason Core

This class fulfills the Mason Core requirement in Global Understanding or the College of Humanities and Social Sciences requirement in non-Western culture.

Mason Core is Mason's general education program that builds the foundation for the Mason Graduate – an engaged citizen and well-rounded scholar who is prepared to act. The goal of the Global Understanding category is to help students see the world from multiple perspectives, reflect upon their positions in a global society, and be prepared for future engagement as global citizens.

Learning outcomes associated with Global Understanding courses include:

1. Identify and articulate one's own values and how those values influence their interactions and relationships with others, both locally and globally.
2. Demonstrate understanding of how the patterns and processes of globalization make visible the interconnections and differences among and within contemporary global societies.
3. Demonstrate the development of intercultural competencies.
4. Explore individual and collective responsibilities within a global society through analytical, practical, or creative responses to problems or issues, using resources appropriate to the field.

Inclusion and Accessibility

This course should be a welcoming and inclusive space for all students. We should work together to foster an environment that gives all students the tools they need to succeed. Students may be approaching the course material from many different perspectives, including as related to their personal backgrounds, abilities / disabilities, educational experiences, and/or additional factors. Please bring an open mind, a sense of grace, and a willingness to help. Feel encouraged to speak with me to provide feedback if there are ways I can work to make our course more inclusive and accessible for your needs.

Accommodations for students with disabilities are provided in conjunction with Disability Services, which you can reach online: <https://ds.gmu.edu/> or by phone: (703) 993-2474. If you require accommodations, please let me know as soon as possible so I can best support you.

Further Resources

Academic Advising for CHSS students: <https://academicaffairs.chss.gmu.edu/undergraduate-students>

Advising for History majors and minors:
<https://historyarthistory.gmu.edu/undergraduate/welcome>

Counseling and Psychological Services: 703-993-2380, <http://caps.gmu.edu>

Learning Services: <https://learningservices.gmu.edu/>

Student Support and Advocacy Center: 703-993-3686, <https://ssac.gmu.edu>

Writing Center: 703-993-1200, <http://writingcenter.gmu.edu>

Office Hours and Communication with Instructor

The best way to communicate with me is by email: bgoossen@gmu.edu. You are welcome to send me emails anytime; I check my inbox during weekday business hours. Every week, I will be available to meet over Zoom for office hours during which we can discuss course materials, your progress, or other relevant questions. Please schedule office hours appointments via email.

Structure of the Course

This is an entirely online class that meets asynchronously. You will need to complete readings and assignments by the stated deadlines, but otherwise you will be able to proceed at your own pace. You will need access to a computer and the internet to access readings and complete

course assignments. The main platform of the course is Blackboard. You will use Blackboard to watch videos, access readings, engage in discussions with your classmates, and complete assignments. You will be able to sign into our Blackboard site with your GMU credentials.

Our course will unfold over fifteen weeks. Our first week is an introductory week. During that first week, will get to know each other, begin to engage course content, and develop familiarity with the Blackboard site.

The rest of the course (Weeks 2-15) are divided into four sections or “Acts.” Each of these Acts will be three or four weeks long, and each Act will consider a core set of themes related to the history of the climate crisis. Act 1, “Framing the Problem,” introduces important ways of thinking about global warming from historical perspectives. Act 2, “Historical Precedents,” considers past periods of significant climate change, prior to the onset of human-caused global warming. Act 3, “The Discovery of Global Warming,” engages with the history of climate science and the process by which researchers learned that humans were warming Earth’s atmosphere. Act 4, “Responses,” considers the range of attitudes about global warming that have emerged during recent decades as well as debates about how we should move forward.

Weekly Schedule

During Weeks 2-15 (with the exception of Week 14, during which we will break for Thanksgiving), we will follow a regular pattern.

By **noon each Monday**, I will upload a “Main Lecture” to the Blackboard site. This lecture will introduce the topics and readings for the week, and it will also explain upcoming assignments that are due by the end of the week.

By **midnight each Wednesday**, you will upload a “Discussion Post” to Blackboard. Your post should be at least 300 words, and it should respond to our themes for the week. It can respond to my Main Lecture and/or to one or more of the assigned readings.

By **midnight each Thursday**, you will write two total “Response Posts” to Discussion Posts left by two of your classmates. Your Response Posts should be at least 100 words each. They should be substantially different from each other, and they should also be substantially different from your own Discussion Post.

By **midnight each Friday**, I will record a short “Wrap-Up Lecture” to Blackboard responding to your conversations from the weekly discussion board.

Some weeks, there will also be **other assignments** such as quizzes, essays, and tests. These will always be due by **midnight on Thursday**.

Accessing Materials

Most of the required texts for our course are available in PDF format via Blackboard. When you are logged into our Blackboard site, look at the main menu on the left-hand side. Click on the tab labeled “Course Readings.” Then, find the folder for the appropriate week (folders are labeled “Week 1 Readings,” “Week 2 Readings,” etc.). PDFs of the readings are in these folders.

In several cases, we are reading more than two chapters of a book. In such instances, the full books are available in electronic format via the GMU library system. (If you prefer, you can also order hard copies of these books from the library or from an online bookseller). These books are:

Paul N. Edwards, *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming* (Cambridge: MIT Press, 2010).

Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (London: Verso, 2016).

Michael E. Mann, *The New Climate War: The Fight to Take Back Our Planet* (New York: Public Affairs, 2021).

Naomi Oreskes and Eric Conway, *The Collapse of Western Civilization: A View from the Future* (New York: Columbia University Press, 2014).

Gillen D’Arcy Wood, *Tambora: The Eruption that Changed the World* (Princeton: Princeton University Press, 2014).

In one case, we will be watching a film, Al Gore’s 2006 documentary, *An Inconvenient Truth*. This documentary is available to rent and stream via online platforms such as YouTube, Amazon Prime, and Apple TV. You can also check out the documentary from the GMU library system.

If you have any trouble accessing course materials, email the instructor.

Course Requirements:

1) Introduction Post

Introduce yourself to the class! Write a post on Blackboard sharing basic information about yourself and your interest in this course. You can share about your academic interests, your hobbies, or anything else you’d like me and your classmates to know about you. Feel free to write about why you signed up for this course and what you hope to learn from it. What you share is up to you. Your post should be at least 300 words long.

If you would like, you can include in your Introduction Post some responses to the assigned materials for Week 1 (*An Inconvenient Truth*, “The Uninhabitable Earth,” and a portion of the

Sixth Assessment Report of the Intergovernmental Panel on Climate Change). Have you encountered any of these materials before? How did they make you feel? What really struck you as important in these materials? Was there anything missing from them that you would have liked to see included? In future weeks, you will write Discussion Posts responding to the weekly readings, so this might be a good chance to get a little practice for those other upcoming posts.

Finally, you are also invited to include a photograph with your Introduction Post. The photo might be of you – or it could be of something that is important to you: a pet, a place you like to visit, the cover of a favorite book, or anything else! Post something that will help your classmates get to know you!

2) Discussion Posts

Starting during Week 2, you will write a “Discussion Post” on Blackboard. Your weekly post should discuss one or more aspects of the week’s themes and materials. You can respond to my Main Lecture from Monday and/or you can respond to the required readings for the week. Your Discussion Post should engage the material rigorously: it should not merely be a summary of the material, but rather you should seek to analyze and draw connections. Your post should be at least 300 words long.

Discussion Posts are graded on a complete / incomplete basis. If you write a meaningful and compelling post, you will get full credit for the week. Posts that engage only cursorily with the course material, that are shorter than 300 words, or that merely summarize some aspect of the reading without going deeper will receive an “incomplete” for the week.

Over the course of the semester, you are required to complete 13 total Discussion Posts. This represents one Discussion Post per week from Week 2 through Week 15 (with the exception of Week 14, when we will break for Thanksgiving). Since this is an online asynchronous class, Discussion Posts are extremely important: they represent a core component of your interaction with fellow students and are comparable to weekly participation points that might be given in an in-person or synchronous online class.

3) Response Posts

Starting during Week 2, you will write “Response Posts” that engage with the Discussion Posts left by your fellow students. Once your classmates have written their Discussion Posts by midnight each Wednesday, you will be able to reply to their posts. You should write a total of two Response Posts each week. Each response should be at least 100 words long. You should respond to two different classmates. Each of your weekly Response Posts should be substantially different from each other, and they should also be substantially different

from your Discussion Post for that week. Thus, you should be able to cover at least three different significant topics related to each week's lecture and readings across your Discussion Post and two Response Posts.

Response Posts are graded on the same basis as Discussion Posts: on a complete / incomplete basis. If you write meaningful and compelling responses, you will get full credit for the week. *Please take special care to respond kindly and respectfully to your classmates.* It is crucial to take time to consider what your classmates have *added* to our collective wisdom rather than to start out by criticizing your colleagues. Responses can certainly be critical, and it is important that we foster serious discussion and even dissent in our class. However, respect is a must; disrespectful posts will receive an "incomplete" grade.

Over the course of the semester, you are required to complete 26 total Response Posts (two per week). This represents two Response Posts per week from Week 2 through Week 15 (with the exception of Week 14, when we will break for Thanksgiving). Like Discussion Posts, Response Posts are extremely important for our online asynchronous course: they represent a core component of your interaction with fellow students and are comparable to weekly participation points that might be given in an in-person or synchronous online class.

4) Content Quizzes

We will have four "Content Quizzes" over the course of the semester. Each of these short quizzes will occur at the end of one of the four Acts that structure the syllabus. The Content Quizzes will be available on Blackboard, and you will complete them online. Each quiz may include multiple choice, true/false, and fill-in-the-blank questions. The quizzes will test you on information from my weekly Main Lectures and from our shared weekly readings.

The purpose of the Content Quizzes is to provide accountability to you for watching the lectures and completing the readings. They are not designed to trip you up, and if you watch the lectures and complete the readings, you should do well on the quizzes. These quizzes are open-note and open-book. You are free to retake the quiz as many times as you would like, and I will use the highest score as your grade. Take as much time as you need to complete each quiz by the deadline. *However, extensions will not be granted past the deadline!*

Quiz 1 is due **September 28**, Quiz 2 is due **October 12**, Quiz 3 is due **November 2**, and Quiz 4 is due **November 30**.

5) Current Event Analysis

During Week 4, you will write a short essay analyzing a current event related to the climate crisis in light of our readings and discussions during the semester so far. You are responsible

for identifying a current event with bearing on the course material – it could be something you learn about from a newspaper, a podcast, television, or another source. Your Current Event Analysis paper should be 3-4 pages long, double spaced. Use font Times New Roman, font sized 12, with one-inch margins.

Include a full citation and a live hyperlink to the source about the current event you have chosen. Your paper should draw on what you have learned in class, and it should aim to explain how our discussions in class provide a deeper and more nuanced understanding of your current event than would be possible for someone without the knowledge that you have been gaining in this course. When you are referencing texts that we have read in class, you must cite the texts appropriately. You may use any citation system you are familiar with, as long as I can follow along (either footnotes or parenthetical citations are acceptable). When quoting from a text we have read in class, you must provide exact page numbers.

The Current Event Analysis is due via email by midnight on Thursday, **September 14**.

6) Midterm

During Week 10, you will write a take-home Midterm exam. The exam will include several questions about the topics that we have covered in class, and it will ask you to draw on what you have learned from the lectures, readings, and discussions. The exam will be open-note and open-book. I will distribute more information about the Midterm exam in advance.

The Midterm is due via email by midnight on Thursday, **October 26**.

7) Final Exam

During Exam Period, you will write a take-home Final Exam. The exam will include several questions about the topics that we have covered in class, and it will ask you to draw on what you have learned from the lectures, readings, and discussions. The exam will be open-note and open-book. I will distribute more information about the Final Exam in advance.

The Final Exam is due via email by midnight on Thursday, **December 7**.

8) Extra Credit

There will be one opportunity for extra credit in this class. You may choose one of the books that is on our syllabus and write a review. We are not reading any of the books on this syllabus cover-to-cover, so there will be more for you to discover in each and every one of these books if you choose to do this assignment. Some of the books are collections of essays

by a number of authors; others are monographs, where the whole book is authored by a single scholar. Select a book that is particularly exciting to you. Read it cover-to-cover. Then, write a review that is between 1,000 and 1,500 words.

Your review should be written as though it could be published in a magazine for general, but informed, audiences. You should assume that your readers are not experts (i.e. they have not been taking our class!) but that they want to learn more about the climate crisis and might be interested in reading the book you have reviewed. Make sure you communicate the crucial details: what is the aim of the book? Who is it for? What are its key arguments? How does the author / how do the authors make their case? What are the book's greatest strengths? Does it have any weaknesses, or do you have any suggestions for improvement?

An Extra Credit assignment that receives full credit will be worth 3% of your total grade. This means it could bump your overall grade as much as a full grade category, for instance: it could bump you from a B- to a B, or from a B+ to an A-. To be considered, this Extra Credit assignment must be turned in via email by midnight on Thursday, **November 30**.

Grading

The grade breakdown is as follows:

Introduction Post	2%
Discussion Posts	13%
Response Posts	13%
Content Quizzes	20%
Current Event Analysis	10%
Midterm	17%
Final Exam	25%

This course is graded on the [Undergraduate Regular scale](#). An "A" represents outstanding work. A "B" represents above average work. A "C" represents average work. A "D" represents below average work. And an "F" is a failing grade; it represents work that demonstrates a lack of caring or comprehension. Letter grades correspond to these percentages:

A+ 97-100	B+ 87-89	C+ 77-79	D 60-69
A 94-96	B 84-86	C 74-76	F <60
A- 90-93	B- 80-83	C- 70-73	

You are responsible for tracking your own cumulative in-progress grade in this class during the course of the semester based on your grades for individual assignments. Your overall grade is not reflected in the Blackboard grade center since I will be keeping grades in a separate register.

Late Assignments

No extensions will ordinarily be given for Discussion Posts, Response Posts, or Quizzes. In the event of an extraordinary circumstance, please email the instructor as soon as possible.

If you require an extension for other assignments, please be in touch with me at least 48 hours in advance of the deadline.

Academic Integrity

All students are expected to abide by the George Mason [Honor Code](#). Although you are encouraged to discuss the assignments with colleagues, all products should be your own work. You should appropriately cite information acquired from print or digital publications, or from conversations. Parenthetical citations or footnotes are both acceptable.

The most common violation of academic integrity is plagiarism. Plagiarism refers to taking someone else's work and passing it off as your own. Do not directly copy and paste material directly from the internet or other sources into your Discussion Posts, Response Posts, or your Assignments. It is fine to quote from materials such as our course readings, but any quotations must be clearly marked (i.e. with quotation marks), and direct citations must be given. I should never have to wonder where your ideas are coming from. Either they must clearly be your own thoughts, or if you are quoting or paraphrasing someone else, you should indicate where you found that material and provide a citation so I can trace your steps back to the original source.

A recent development in conversations about academic integrity involves generative Artificial Intelligence (AI) sites like ChatGPT. *You should be careful any time you use AI*, because it can very easily lead to plagiarism. Never directly copy and paste from sites like ChatGPT into your Discussion Posts, Response Posts, or Assignments. First, you should know that generative AI can often be wrong about basic facts—so if you use information from these sites, it may be factually incorrect and thus hurt your grade in class. Second, it's important to remember that information from these sites represents an aggregate of knowledge from the AI's underlying training data. That means that even paraphrasing from ChatGPT can be a form of plagiarism, since you are not able to directly cite the underlying work on which AI information is based.

To avoid plagiarism, follow these tips:

- 1) As a rule of thumb, always write your own text.
- 2) If you use any text written by someone else, always mark it in quotation marks.
- 3) Always cite sources that you consult, even if you do not quote from them directly.

COURSE SCHEDULE

Week 1: Introduction

(August 20-26)

Welcome to the class!

Al Gore, *An Inconvenient Truth* (2006). (*Rent and stream online, e.g. from YouTube, Amazon Prime, or Apple TV. Also available to check out via GMU libraries.*)

"Summary for Policymakers," *IPCC Sixth Assessment Report* (2021),
<https://www.ipcc.ch/report/ar6/wg2/chapter/summary-for-policymakers/>

David Wallace-Wells, "The Uninhabitable Earth," July 10, 2017, *New York Magazine*,
<https://nymag.com/intelligencer/2017/07/climate-change-earth-too-hot-for-humans.html>

Assignment: Introduction Post – due Thursday at midnight (Blackboard)

****No Discussion Posts or Response Posts this week****

ACT 1: FRAMING THE PROBLEM

Week 2: The Anthropocene

(August 27-September 2)

Dipesh Chakrabarty, "The Climate of History: Four Theses," *Critical Inquiry* 35, no. 2 (2009): 197-222.

Julia Adeney Thomas, "Humanities and Social Sciences: Human Stories and the Anthropocene Earth System," in *Altered Earth: Getting the Anthropocene Right*, ed. Julia Adeney Thomas (Cambridge: Cambridge University Press, 2022), 51-82.

Julia Adeney Thomas, "Why the 'Anthropocene' Is Not 'Climate Change, and Why It Matters,'" January 10, 2019, *AsiaGlobal Online*, <https://www.asiaglobalonline.hku.hk/anthropocene-climate-change>

Jan Zalasiewicz, "Science: Old and New Patterns of the Anthropocene," in *Altered Earth: Getting the Anthropocene Right*, ed. Julia Adeney Thomas (Cambridge: Cambridge University Press, 2022), 21-50.

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Week 3: Deep History

(September 3-9)

September 4 (Monday) – Labor Day, GMU holiday

Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900* (Cambridge: Cambridge University Press, 2004 [1986]), 1-40.

Dagomar Degroot et al., “The History of Climate and Society: A Review of the Influence of Climate Change on the Human Past,” *Environmental Research Letters* 17, no. 103001 (2022), <https://iopscience.iop.org/article/10.1088/1748-9326/ac8faa>

Anthony McMichael, *Climate Change and the Health of Nations: Famines, Fevers, and the Fate of Populations* (Oxford: Oxford University Press, 2017), 80-125.

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Week 4: The Industrial Revolution

(September 10-16)

Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (London: Verso, 2016), 1-76, 194-222 (chapters 1-4 and 9). (*Available as e-book at GMU libraries*)

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Current Event Analysis – due Thursday at midnight (via email)

Week 5: Carbon Regimes

(September 17-23)

Elizabeth Chatterjee, "The Asian Anthropocene: Electricity and Fossil Developmentalism," *Journal of Asian Studies* 79, no. 1 (2020): 3-24.

Amitav Ghosh, *The Nutmeg's Curse* (Chicago: University of Chicago Press, 2021), 105-131.

Jason W. Moore, "The Rise of Cheap Nature," in *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism*, ed. Jason W. Moore (Oakland, PA: PM Press, 2016), 78-115.

Victor Seow, *Carbon Technocracy: Energy Regimes in Modern East Asia* (Chicago: University of Chicago Press, 2021), 1-26.

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Content Quiz 1 – due Thursday at midnight (Blackboard)

ACT 2: HISTORICAL PRECEDENTS

Week 6: The Little Ice Age

(September 24-30)

Dagomar Degroot, *The Frigid Golden Age: Climate Change, the Little Ice Age, and the Dutch Republic, 1560-1720* (Cambridge: Cambridge University Press, 2018), 1-21, 154-195.

Sky Michael Johnston, "Accounting for a Fruitful Little Ice Age: Overlapping Scales of Climate and Culture in Württemberg, 1560–1590," *Environmental History* 27, no. 4 (2022): 722–746.

Geoffrey Parker, "Crisis and Catastrophe: The Global Crisis of the Seventeenth Century Reconsidered," *American Historical Review* 113, no. 4 (2008): 1053-1079.

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Week 7: Tambora

(October 1-7)

Gillen D'Arcy Wood, *Tambora: The Eruption that Changed the World* (Princeton: Princeton University Press, 2014), 1-44, 97-120, 199-234. (*Available as e-book at GMU libraries*)

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Week 8: Weather Control Schemes

(October 8-14)

October 9 (Monday) – Fall Break, GMU holiday

Stephen Brain, "The Great Stalin Plan for the Transformation of Nature," *Environmental History* 15, no. 4 (2010): 670–700.

Diana K. Davis, *The Arid Lands: History, Power, Knowledge* (Cambridge, MA: MIT Press, 2015), 117-154.

Philipp Nicolas Lehmann, "Infinite Power to Change the World: Hydroelectricity and Engineered Climate Change in the Atlantropa Project," *American Historical Review* 121, no. 1 (2016): 70–100.

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Content Quiz 2 – due Thursday at midnight (Blackboard)

ACT 3: THE DISCOVERY OF GLOBAL WARMING

Week 9: Climatology

(October 15-21)

Deborah R. Coen, *Climate in Motion: Science, Empire, and the Problem of Scale* (Chicago: University of Chicago Press, 2018), 1-24, 144-170. (*Available as e-book at GMU libraries*)

Gregory T. Cushman, "Humboldtian Science, Creole Meteorology, and the Discovery of Human-Caused Climate Change in South America," *Osiris* 26 no. 1 (2011): 19-44.

Spencer R. Weart, *The Discovery of Global Warming: Revised and Expanded Edition* (Cambridge: Harvard University Press, 2008), 1-18.

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Week 10: The Greenhouse Effect

(October 22-28)

Paul N. Edwards, *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming* (Cambridge: MIT Press, 2010), 1-26, 139-228. *(Available as e-book at GMU libraries)*

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Midterm – due Thursday at midnight (via email)

Week 11: Melting Worlds

(October 29-November 4)

Mark Carey, *In the Shadow of Melting Glaciers: Climate Change and Andean Society* (Oxford: Oxford University Press, 2010), 19-44.

Sarah Dry, *Waters of the World: The Story of the Scientists Who Unraveled the Mysteries of Our Oceans, Atmosphere, and Ice Sheets and Made the Planet Whole* (Chicago: University of Chicago Press, 2019), 231-269.

Adrian Howkins, “Melting Empires? Climate Change and Politics in Antarctica since the International Geophysical Year,” *Osiris* 26 no. 1 (2011): 180-197.

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Content Quiz 3 – due Thursday at midnight (Blackboard)

ACT 4: RESPONSES

Week 12: Climate Denial

(November 5-11)

November 7 (Tuesday) – Election Day, vote if you are eligible!

Matthias Dörries, “The Politics of Atmospheric Sciences: ‘Nuclear Winter’ and Global Climate Change,” *Osiris* 26 no. 1 (2011): 198–223.

Michael E. Mann, *The New Climate War: The Fight to Take Back Our Planet* (New York: Public Affairs, 2021), 1-45. (*Available as e-book at GMU libraries*)

Naomi Oreskes and Erik M. Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (New York: Bloomsbury Press, 2010), 169-215.

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Week 13: Geoengineering

(November 12-18)

Elizabeth Kolbert, *Under a White Sky: The Nature of the Future* (New York: Crown, 2021), 143-186.

Naomi Oreskes and Eric Conway, *The Collapse of Western Civilization: A View from the Future* (New York: Columbia University Press, 2014), ix-x, 1-62. (*Available as e-book at GMU libraries*)

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Week 14: Thanksgiving Break

(November 19-25)

No class this week

Week 15: Contested Futures

(November 26-December 2)

Neel Ahuja, *Planetary Specters: Race, Migration, and Climate Change in the Twenty-First Century* (Chapel Hill: University of North Carolina Press, 2021), 37-69.

Mike Hulme, "Reducing the Future to Climate: A Story of Climate Determinism and Reductionism," *Osiris* 26 (2011): 245–266.

Andreas Malm, *How to Blow Up a Pipeline: Learning to Fight in a World on Fire* (London: Verso, 2021), 5-64.

Science and Security Board, "2023 Doomsday Clock Statement," January 24, 2023, *Bulletin of the Atomic Scientists*.

Assignments: Discussion Post – due Wednesday at midnight (Blackboard)

Response Posts – due Thursday at midnight (Blackboard)

Content Quiz 4 – due Thursday at midnight (Blackboard)

Optional Extra Credit – due Thursday at midnight (via email)

Reading Period: December 4-5

Exam Period: December 6-13

Final Exam – due Thursday, December 7 at midnight (via email)