

Winter 2022
Geography and Environmental Studies
Climate Change: Social Science Perspectives
GEOG 2500/ENST 2500
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Meeting day, time, and room

Wednesday, 08:35-11:25, University Centre 231.

Office hours

Thursdays, 4-5 pm, online, by appointment.

Tutorials

A1 – M 09:35-10:25 SP 303
A2 – M 11:35-12:25 ONLINE
A3 – T 15:35-16:25 ONLINE
A4 – M 12:35-13:25 TB 202

COURSE DESCRIPTION

The course provides a general exploration of the possible socio-economic causes of climate change and the current global ecological crisis. The first sessions will present the basics of the knowledge about climate change and the anthropogenic impacts on the Earth systems, while the subsequent sessions will trace the socio-economic causes and their historical origins, summarize the theoretical features of the modern economic system, and discuss the possible alternative pathways forward. The lectures will provide a panoramic overview of these topics, to be complemented by the mandatory readings. The course aims to provide the basic tools to discuss the climate crisis from a social science perspective, but also as citizens in our community, since it is arguably the most important issue of our century.

Learning Outcomes

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

- Explain the basics of climate change and the global ecological crisis.
- Identify the main historical and socio-economic causes of the crisis.
- Analyze the main theoretical features of our contemporary economic system.
- Reflect critically on the different technological, economic and political pathways to overcome the crisis.
- Participate as an informed citizen in community discussions about these topics.

Texts

All readings in the course calendar will be available on the course website at Brightspace. Please note that assigned texts may be adjusted slightly over the course of the term depending on how our class conversations develop. No minor changes to readings will be made within less than a week of the class session in question.

COURSE CALENDAR

	Topic and required readings	Exams and assignments
<p>Week 1 January 12</p>	<p>Introduction</p> <p>Naomi Klein (2015) <i>This Changes Everything: Capitalism vs. the Climate</i>, Vintage Canada. Introduction, pp. 1-25.</p> <p>McNeill, John Robert and Peter Engelke (2014) <i>The Great Acceleration: An Environmental History of the Anthropocene since 1945</i>. Cambridge: The Belknap Press of Harvard University Press. pp. 63-82.</p>	
<p>Week 2 January 19</p>	<p>Climate change</p> <p>Guest lecture by Chris Burn, Chancellor's Professor.</p> <p>Intergovernmental Panel on Climate Change (2018) <i>Global warming of 1.5°C. Summary for Policymakers</i>, pp. 6-19. Available here.</p> <p>Burn, et al. (2021) "The Canadian Federation of Earth Sciences Scientific Statement on Climate Change – Its Impacts in Canada, and the Critical Role of Earth Scientists in Mitigation and Adaptation", <i>Geoscience Canada</i>, 48, 59-72, doi.org/10.12789/geocanj.2021.48.173.</p>	
<p>Week 3 January 26</p>	<p>Anthropocene</p> <p>Steffen, Grinevald, Crutzen and McNeill (2011) "The Anthropocene: conceptual and historical perspectives". <i>Phil. Trans. R. Soc. A</i>, 369, 842-867, doi: 10.1098/rsta.2010.0327.</p>	
<p>Week 4 February 2</p>	<p>Searching for the socio-economic causes I: population growth and the Industrial Revolution</p> <p>Eric Hobsbawm (1996 [1962]) <i>The Age of Revolution: 1789–1848</i>, New York: Vintage books. Chapter 2, pp.27-52.</p>	
<p>Week 5 February 9</p>	<p>Searching for the socio-economic causes II: agricultural change, colonialism, and long-distance trade</p> <p>Eric Hobsbawm (1999 [1968]) <i>Industry and Empire: From 1750 to the Present Day</i>, revised edition, London: Penguin books. Chapter 5, pp. 75-86.</p>	

	<p>Wolf (1997 [1982]) <i>Europe and the People Without History</i>, revised edition, Berkeley: University of California Press. Chapter 8, pp. 232-261.</p>	
<p>Week 6 February 16</p>	<p>The old world of peasants and nomads</p> <p>William Cronon (2003) <i>Changes in the Land: Indians, Colonists, and the Ecology of New England</i>, 20th anniversary edition, New York: Hill & Wang. Chapter 3, pp. 34-53.</p> <p>Harris (2000) <i>To make the earth bear fruit: essays on fertility, work and gender in highland Bolivia</i>. London: Institute of Latin American Studies. Chapter 2.</p>	
<p>Week 7</p>	<p>Fall break Classes are suspended.</p>	
<p>Week 8 March 2</p>		<p>Midterm exam</p>
<p>Week 9 March 9</p>	<p>Towards a Capitalist world</p> <p>Eric Hobsbawm (1996 [1962]) <i>The Age of Revolution: 1789–1848</i>, New York: Vintage books. Chapter 9, pp. 168-181.</p> <p>Eric Hobsbawm (1994) <i>The Age of Extremes: The Short Twentieth Century, 1914–1991</i>, London: Michael Joseph. Chapters 9, pp. 257-286, and 10, pp. 287-295.</p>	
<p>Week 10 March 16</p>	<p>The Capitalist economic system and its metabolism I</p> <p>Eric Hobsbawm (1994) <i>The Age of Extremes: The Short Twentieth Century, 1914–1991</i>, London: Michael Joseph. Chapters 14, pp. 403-424.</p>	
<p>Week 11 March 23</p>	<p>The Capitalist economic system and its metabolism II</p> <p>McNeill, John Robert and Peter Engelke (2014) <i>The Great Acceleration: An Environmental History of the Anthropocene since 1945</i>. Cambridge: The Belknap Press of Harvard University Press. pp. 7-40.</p>	
<p>Week 12 March 30</p>	<p>Overcoming the ecological crisis I: individual choices, green capitalism, and geo-engineering</p> <p>Green (2021) “Does carbon pricing reduce emissions? A review of ex-post analyses”, <i>Environ. Res. Lett.</i>, 16, 043004, doi: 10.1088/1748-9326/abdae9.</p>	

	<p>Schendler (2021) “The Complicity of Corporate Sustainability”. <i>Stanford Social Innovation Review</i>.</p> <p>Fancy (2021) “BlackRock hired me to make sustainable investing mainstream. Now I realize it’s a deadly distraction from the climate-change threat”, <i>The Globe and Mail</i>. https://www.theglobeandmail.com/business/commentary/article-sustainable-investing-is-a-deadly-distraction-from-actually-averting/</p> <p>Naomi Klein (2015) <i>This Changes Everything: Capitalism vs. the Climate</i>, Vintage Canada. Chapter 8, pp. 256-290.</p>	
<p>Week 13 April 6</p>	<p>Overcoming the ecological crisis II: corporate power and social movements</p> <p>InfluenceMap (2019) <i>Big Oil’s Real Agenda on Climate Change. How the oil majors have spent \$1Bn since Paris on narrative capture and lobbying on climate</i>.</p> <p>McGrath (2021) “COP26. Fossil fuel industry has largest delegation at climate summit”, <i>BBC News</i>. https://www.bbc.com/news/science-environment-59199484</p> <p>The Listening Post (2021) “Climate crisis: Can journalists make the world care?”, <i>Al Jazeera</i>. https://www.aljazeera.com/program/the-listening-post/2021/11/6/climate-crisis-can-journalists-make-the-world-care (watch the first part of the show)</p> <p>Franta and Supran (2017) “The fossil fuel industry's invisible colonization of academia”, <i>The Guardian</i> https://www.theguardian.com/environment/climate-consensus-97-per-cent/2017/mar/13/the-fossil-fuel-industrys-invisible-colonization-of-academia</p> <p>Monbiot (2021) “Capitalism is killing the planet – it’s time to stop buying into our own destruction”, <i>The Guardian</i> https://www.theguardian.com/environment/2021/oct/30/capitalism-is-killing-the-planet-its-time-to-stop-buying-into-our-own-destruction</p>	
<p>Week 14</p>		<p>Final exam</p>

Further reading:

For those of you interested in learning more, during the term or after, here is a brief introductory bibliography that can be useful. These are not mandatory readings.

Natural sciences

- Weart, Spencer R. (2003) *The Discovery of Global Warming*.
- Crutzen and Stoermer (2000) "The Anthropocene".
- Crutzen, Paul (2002) "Geology of mankind".
- Crutzen and Steffen (2003) "How long have we been in the Anthropocene Era?"
- Hansen, James (2009) *Storms of My Grandchildren: The Truth About the Coming Climate Catastrophe and Our Last Chance to Save Humanity*.
- Leakey, Richard E. and Roger Lewin (1996) *The Sixth Extinction: Biodiversity and Its Survival*.
- Lewis, Simon L. and Mark Maslin (2018) *The Human Planet: How We Created the Anthropocene*.
- Mann, Michael E. (2021) *The New Climate War*.
- Rockström, et. al. (2009a) "A safe operating space for humanity".
- Rockström, et. al. (2009b) "Planetary Boundaries. Exploring the Safe Operating Space for Humanity".
- Steffen, et. al. (2015) "Planetary boundaries. Guiding human development on a changing planet".
- Smil, Vaclav (2001) *Enriching the Earth: Fritz Haber, Carl Bosch and the Transformation of World Food Production*.
- Smil, Vaclav (2017) *Energy and Civilization: A History*.
- Schneider, Steven H. (1998) *Laboratory Earth: The Planetary Gamble We Can't Afford to Lose*.

History

- Braudel (1979a) *Civilization and Capitalism. 15th-18th Century, Volume I. The Structure of Everyday Life*.
- Braudel (1979b) *Civilization and Capitalism, 15th-18th Century, Volume II. The Wheels of Commerce*.
- Braudel (1979c) *Civilization and Capitalism, 15th-18th Century, Volume III. The Perspective of the World*.
- Chambers, Jonathan David and G. E. Mingay (1966) *The Agricultural Revolution, 1750-1880*.
- Cronon, William (1983) *Changes in the Land: Indians, Colonists and the Ecology of New England*.
- Cronon, William (1991) *Nature's Metropolis: Chicago and the Great West*.
- Hobsbawm, Eric (1962) *The Age of Revolution 1789-1848*.
- Hobsbawm, Eric (1975) *The Age of Capital. 1848-75*.
- Hobsbawm, Eric (1987) *Age of Empire 1875-1914*.
- Hobsbawm, Eric (1994) *The Age of Extremes. The Short Twentieth century*.
- Hobsbawm, Eric (1977) *Industry and empire*.
- Hudson, Pat (1992) *The Industrial Revolution*.
- Mantoux, Paul, (1905) *The industrial revolution in the eighteenth century*.
- McNeill, John Robert (2001) *Something New Under the Sun: An Environmental History of the Twentieth-Century World*.
- McNeill, John Robert and Peter Engelke (2014) *The Great Acceleration: An Environmental History of the Anthropocene Since 1945*.
- Williams, Michael (2002) *Deforesting the Earth: From Prehistory to Global Crisis*.
- Wolf, Eric R. (1982) *Europe and the People Without History*.

Economics

- Marx, Karl (1976 [1867]) *Capital. Vol. I*.
- Marx, Karl (1978 [1885]) *Capital. Vol. II*.
- Marx, Karl (1981 [1894]) *Capital. Vol. III*.
- Piketty, Thomas (2013) *Capital in the Twenty-First Century*.

EVALUATION

Students will be mainly evaluated on their knowledge and intellectual skills (although the lectures and tutorials will aim to provide cognitive strategies not necessarily evaluated).

1. Attendance and Participation (15%)

This course is scheduled as a series of lectures, and attendance and participation are required: the course and your learning depend on your coming to class well prepared and on a regular basis. Together, attendance (10%) and participation (5%) represent a significant percentage of your total mark. We will take attendance at each class. The participation mark aims to reward insightful engagement with the lecture and the assigned readings, both in the form of questions or comments.

2. Tutorials (20%)

Students are expected to participate in recurrent tutorial sessions led by their TAs. The purpose of the tutorials is to research and discuss climate change issues related directly to Canada; dissipate doubts and engage with the assigned readings; and reflect critically on a documentary (viewed at the student's convenience) in conjunction with your peers. Students are expected to draw connections to lectures and readings and show engagement with the materials and will be evaluated accordingly.

3. Midterm exam (30%)

The test will evaluate the students' gained knowledge from the first block of topics in the term. Multiple-choice and short-answer questions will cover both lecture and reading contents. The test will take place at the regular scheduled class day and time, according to the course calendar.

4. Final exam (35%)

The final test will include all lecture topics and assigned readings. Since it will represent the single largest fraction of the grade, three options that accommodate better to the student's preferences are provided. Students must sign up for one by reading week.

Option 1. Oral exam. Students will be asked a number of questions during a period of 15 to 30 minutes.

Option 2. Essay. This paper is meant to help you develop research and writing skills in addition to engaging with the knowledge on the course topic gained from readings, lectures, and tutorials. You will research and write a 1,500-2,500-word (excluding references) academic essay on a topic of your choosing related to course. More details will be provided during the term. The paper is due by the end of the university examination period.

Option 3. Written test. The final exam will be a combination of multiple-choice, short-answer, and short-essay questions. It will be administered during the examination period.

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

COURSE POLICIES

Course format

Lectures will be delivered in person, according to the schedule detailed above. Accommodation for students who would only be able to attend lectures and tutorials online, due to justified causes, must be requested to the department.

Other course materials

Some PowerPoint slides, used during lectures, will be posted on Brightspace.

Communication and E-mail

The fundamental information for this course is contained in this syllabus. I will communicate other relevant information about the course to you via Brightspace. If you have more in-depth questions about the lectures and course material, book an appointment for a meeting during my office hours. If you are not able to make my office hours due to a valid reason, we can arrange for an appointment at another time during the week in case of important matters. For any general consultation and advice, communicate with your TA to discuss them.

Late penalties

Late penalties will be enforced to ensure fairness in grading among students. Late assignments will be subject to a reduction of 10% of the overall assignment mark for each calendar day past the due date, unless accompanied by adequate written documentation for a legitimate reason.

Extenuating circumstances

Reasonable accommodations will be made for students with extenuating circumstances (i.e. out of your control). Missed classes and tutorials must be reasonably justified to your TA. In case of missed exams due to unforeseen circumstances, current university regulations will be followed.

Plagiarism

The University Academic Integrity Policy defines plagiarism as “presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one’s own.” This includes reproducing or paraphrasing portions of someone else’s published or unpublished material, regardless of the source, and presenting these as one’s own without proper citation or reference to the original source. Examples of sources from which the ideas, expressions of ideas or works of others may be drawn from include but are not limited to: books, articles, papers, literary compositions and phrases, performance compositions, chemical compounds, art works, laboratory reports, research results, calculations and the results of calculations, diagrams, constructions, computer reports, computer code/software, material on the internet and/or conversations.

Examples of plagiarism include, but are not limited to:

- any submission prepared in whole or in part, by someone else;
- using ideas or direct, verbatim quotations, paraphrased material, algorithms, formulae, scientific or mathematical concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another’s data or research findings without appropriate acknowledgement; and
- failing to acknowledge sources through the use of proper citations when using another’s work and/or failing to use quotations marks.

Plagiarism is a serious offence that cannot be resolved directly by the course's instructor. The Associate Dean of the Faculty conducts a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They can include a final grade of "F" for the course or even suspension or expulsion from the University.

Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For accommodation regarding a formally-scheduled final exam, you must complete the [Pregnancy Accommodation Form](#).

Religious obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details [click here](#).

Academic Accommodations for Students with Disabilities: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in- class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally- scheduled exam (if applicable).

Survivors of Sexual Violence: As a community, Carleton University is committed to maintaining a positive learning, working, and living environment where sexual violence will not be tolerated, and where survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: <https://carleton.ca/equity/sexual-assault-support-services>.

Accommodation for Student Activities: Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation will be provided to students who compete or perform at the national or international level. Write to me with any

requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>.