

# ENV362H1S L0101

## Energy and Environment: Transitions in History

Winter 2025

This course will take a historical perspective on energy technologies, focusing on periods when there was significant change in the available technologies and in the organization and exploitation of energy resources. The emphasis will be on the contexts that gave rise to these changes (cultural, economic, political, environmental), as well as on the consequences of these changes for interactions within and between human communities and their environments. The “Industrial Revolution” and the transformative effects of the adoption of fossil fuel technologies in the nineteenth and twentieth centuries will be given due prominence, but attention will also be paid to longer-term issues of food and fuel production and processing, and to changes in transport and storage. The chronological scope of the course will therefore include the emergence of agricultural communities and the development of territorial states and empires as well as more recent developments.

**Class time and location:**      Thursdays, 12 noon – 2pm      AB107

**Tutorials:**      T0101: Thursdays 2pm -3pm      AB114

                         T0201: Thursdays 3pm – 4pm      AB114

(note that tutorials start in the second week of term: the first tutorials will meet on Thursday 16<sup>th</sup> January).

**At the end of this course, students should be able to:**

- **Show understanding** of energy transitions in history.
- **explain** how changes in energy technologies led to changes in past human societies and their environments, and what factors affected the adoption and use of new energy technologies.
- **compare** the effects of energy transitions in different social contexts
- **reflect** on the possible implications for Canadians of the current energy transitions.

**Instructor:** Ben Akrigg (Classics)

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email: [ben.akrigg@utoronto.ca](mailto:ben.akrigg@utoronto.ca) I shall do my best, but cannot promise, to answer email enquiries within 24 hours. I shall not answer email enquiries over the weekend, however.

Office hours: **Monday 9am to 11am** (If this time is not possible for you, please email me to arrange an appointment at a different time.).

<b>Course Assessment:</b>	Mid-term test	25%
	Final Exam	40%
	Tutorial attendance & participation	15%
	Weekly assignments	20%

**Some further notes on course requirements:**

- **Readings.** Reading in preparation for each session will be provided on Quercus.
- **Tutorials.**
  - Attendance at tutorials is required. There will be three possible marks for participation in each tutorial: 10 (present and contributes effectively to discussion, and/or participates fully in other tutorial activities); 7 (present, but does not contribute effectively to discussion, or take full part in activities); and 0 (absent).
  - **Note that there will be no tutorials in the first week of term (10th January).**
- Most weeks there will be a **short written assignment** to be completed in advance and **handed in on paper at the start of the week's lecture class**. Details of each assignment will be provided in class a week in advance (so we will talk about the first assignment in the first lecture class), but typically you will be asked to write about 200 words/half a page in response to an aspect of the set reading. There will be three possible marks for these assignments. If your response shows evidence of careful reading of the set text(s) and organized thought about it, you will receive full credit (10). If you hand in something, but it is clearly half-hearted and put together in a rush, you will get half-credit (5). Obviously if you fail to hand anything in you will get no credit (0).
  - There will be ten of these assignments in total.
- There will be one mid-term **test**, which will be held on Thursday 13<sup>th</sup> February.
  - The test will cover the material from the preceding five weeks of the course, including assigned readings and class slides and handouts, and will require both

short answers and a small number of longer answers (similar in length and scope to the weekly written assignments).

- Students who miss the test will receive a mark of zero for the test.
  - However, if the test was missed for reasons entirely beyond your control you should, within one week of the test if at all possible, submit to the instructor a written request for special consideration explaining your reason for missing the test. If your reason for missing the test is acceptable, then you will be able to take a make-up test.
- The **final exam** will be a summative, timed, assessment to be completed during the Final Assessment Period (9<sup>th</sup>-30<sup>th</sup> April). It will be scheduled by the Faculty's Exams Office. The exam will require you to respond to a number of short-answer questions and to write about three short (1-2 page) essays.

## Class schedule:

(Note that the reading schedule here is still subject to change: make sure you check Quercus for the readings and assignment for each week).

**Week 1**      **9<sup>h</sup> January**  
Note: No tutorials this week.

### **Introduction: The Scope of the Course**

**Week 2**      **16<sup>th</sup> January**

### **Environmental History and Energy Humanities**

Vaclav Smil, 2017. *Energy and Civilization*, pages. 1-20.

Donald Worster 1988 "Appendix: Doing Environmental History," in *The Ends of the Earth: Perspectives on Modern Environmental History* (pages 289-307).

William Cronon 1992. "A Place for Stories: Nature, History, and Narrative" in *The Journal of American History* 78.4, pages 1347-1376).

**Week 3**      **23<sup>rd</sup> January**

### **Foraging, and Farming**

Ian Morris 2015. *Foragers, Farmers, and Fossil Fuels: How Human Values Evolve*. Chapters 1-2 (pages 1-40).

David Graeber, and David Wengrow. 2021. *The Dawn of Everything* chapter 4.

**Week 4**      **30<sup>th</sup> January**

### **States**

James Scott 2017, *Against the Grain* chapters 1 & 4

Eliot M. Abrams and Leah McCurdy. 2019. “Massive assumptions and moundbuilders: the history, method, and relevance of architectural energetics,” in *Architectural Energetics in Archaeology: Analytical Expansions and Global Explorations*, pages 1-25.

**Week 5      6<sup>th</sup> February**

**“Advanced Organic Societies”**

Örjan Wikander 2009 “Sources of Energy and Exploitation of Power” in J. P. Oleson ed. *The Oxford Handbook of Engineering and Technology in the Classical World*.  
Paul Erdkamp, 2021 “Climate change and productive landscape in the Mediterranean region in the Roman Period.” In Erdkamp et al. (eds), *Climate Change in Ancient Europe and the Near East*, pp. 411-442

**Week 6      13<sup>th</sup> February**

**MIDTERM**

Note: No tutorials this week, either.

**READING WEEK is February 17<sup>th</sup> to 21<sup>st</sup>**

**Week 7      27<sup>th</sup> February**

**Globalizations and Modernity**

J. A. Goldstone 1998 “The Problem of the ‘Early Modern’ World” in *Journal of the Economic and Social History of the Orient* 41.3 pages 249-284  
Robert Marks 2020 *The Origins of the Modern World* (4<sup>th</sup> edition). Introduction and chapter 2.  
Dipesh Chakrabarty 2009. “The Climate of History: Four Theses” in *Critical Inquiry* 35.2 pages 197-222

**Week 8      6<sup>th</sup> March**

**Agriculture and Industry**

(Note that Monday 10<sup>th</sup> March is the last day to cancel S courses without academic penalty)

Robert Marks 2020 (as above) chapter 3  
A. E. Wrigley 2010 *Energy and the English Industrial Revolution* chapter 1  
Robert Allen 2009 *The British Industrial Revolution in Global Perspective* chapter 1.

**Week 9      13<sup>th</sup> March**

**Coal and Democracy**

Robert Allen 2009 (as above) chapter 3  
Timothy Mitchell 2011 *Carbon Democracy* chapter 1

**Week 10      20<sup>th</sup> March**

**Histories of Women and Energy**

Jane Humphries 2013 “The lure of aggregates and the pitfalls of the patriarchal perspective: a critique of the high wage economy interpretation of the British industrial revolution” in *Economic History Review* 66.3 pages 693 to 714.

Ruth Sandwell 2021 “Changing the Plot: Including Women in Energy History (and Explaining Why They Were Missing)” in Ruth Sandwell and Abigail Harrison-Moore eds *In a New Light: Histories of Women and Energy* pages 25-54.

Sheena Wilson “Gendering Oil: Tracing Western Petrosexual Relations” in Barrett, Worden, and Stoekl eds. *Oil Culture* pages 279-298

**Week 11      27<sup>th</sup> March**

**Energy History and the Postcolonial**

Amitav Ghosh 2016 *The Great Derangement* part 2 “History”

Hannah Holleman 2018 *Dust Bowls of Empire: Imperialism, Environmental Politics, and the Injustice of “Green” Capitalism* pages 1-73

**Week 12      3<sup>rd</sup> April**

**Review and Reflection: The Current Energy Transition in Historical Perspective.**

Christopher Jones 2014 *Routes of Power: Energy and Modern America* chapters 1 and 2.

Bathsheba Demuth, 2019. *Floating Coast*, pages 1-53.

*(Final Assessment Period begins Wednesday 9th April, runs to Wednesday 30th April).*

**Finally, information on some important issues, in no particular order:**

**Academic Integrity**

All students, faculty and staff are expected to follow the University's guidelines and policies on academic integrity. For students, this means following the standards of academic honesty when writing assignments, collaborating with fellow students, and writing tests and exams. Ensure that the work you submit for grading represents your own honest efforts. Plagiarism—representing someone else's work as your own or submitting work that you have previously submitted for

marks in another class or program—is a serious offence that can result in sanctions. Do not hesitate to speak to me or your TA for advice on anything that you find unclear. To learn more about how to cite and use source material appropriately and for other writing support, please see the U of T writing support website at <http://www.writing.utoronto.ca>. Consult the Code of Behaviour on Academic Matters for a complete outline of the University's policy and expectations. For more information, please see <https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity> and <http://academicintegrity.utoronto.ca>

### **Religious Accommodations**

As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of cultural and religious traditions. I shall make every reasonable effort to avoid scheduling tests, examinations, or other compulsory activities on religious holy days not captured by statutory holidays. Further to University Policy, if you anticipate being absent from class or missing a major course activity (such as a test or in-class assignment) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can work together to make alternate arrangements.

### **Students with Disabilities or Accommodation Requirements**

Students with diverse learning styles and needs are welcome in this course. If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) by visiting <http://www.studentlife.utoronto.ca/as/new-registration> . Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs. AS will assess your situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your needs or condition with any instructor, and your instructors will not reveal that you are registered with AS.

### **Accommodation for Personal Reasons**

There may be times when you are unable to complete course work on time due to non-medical reasons. If you have concerns, speak to me or to an advisor in your College Registrar's office; they can help you to decide if you want to request an extension or accommodation. They may be able to provide you with a College Registrar's letter of support to give to your instructors, and importantly, connect you with other resources on campus for help with your situation.

### **Quercus Info**

This course uses the University's learning management system, Quercus, to post information about the course. This includes posting readings and other materials required to complete class activities and course assignments, as well as sharing important announcements and updates. The site is dynamic and new information and resources will be posted regularly as we move through the term, so please make it a habit to log in to the site on a regular, even daily, basis. To access the course website, go to the U of T Quercus log-in page at <https://q.utoronto.ca>. Once you have logged in to Quercus using your UTORid and password, you should see the link or "card" for ENV362H1S Energy & Environment: Transitions in History. You may need to scroll through other cards to find this. Click on the ENV362H1S link to open our course area, view the latest announcements and access your course resources. There are Quercus help guides for students that you can access by clicking on the "?" icon in the left side column. SPECIAL NOTE ABOUT GRADES POSTED ONLINE: Please also note that any grades posted are for your information only, so you can view and track your progress through the course. No grades are considered official, including any posted in Quercus at any point in the term, until they have been formally approved and posted on ACORN at the end of the course. Please contact me as soon as possible if you think there is an error in any grade posted on Quercus.

### **Lecture Capture by Instructor**

Where lecture recordings are provided, they are only for the exclusive use of enrolled students, for their personal learning. Lecture recordings are not to be shared in any way beyond enrolled students.

### **Mental Health and Well-being**

As a student, you may experience challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation, financial concerns, family worries and so forth. These factors may affect your academic performance and/or reduce your ability to participate fully in daily activities. Everyone feels stressed now and then – it is a normal part of university life. Some days are better than others, and there is no wrong time to reach out. There are resources for every situation and every level of stress.

There are many helpful resources available through your College Registrar or through Student Life (<http://studentlife.utoronto.ca> and <http://www.studentlife.utoronto.ca/feeling-distressed>). An important part of the University experience is learning how and when to ask for help. Please take the time to inform yourself of available resources.

### **Equity, Diversity and Inclusion**

The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of

mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.

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