

Carleton University
Department of Political Science
Carleton.ca/polisci

Fall 2026

PSCI 1500-A

Technology, Nature, Power

Time: Thursday 2:35pm – 4:25pm
Please confirm location on Carleton Central

Instructor: Ilirjan Shehu
Office Hours: Monday 3pm – 4pm, Office (TBA)
(also available via Zoom)
E-Mail: ilirjanshehu@cunet.carleton.ca (only use this email)

OBJECTIVES AND LEARNING OUTCOMES

What do we mean when we use the word ‘technology’? What is its role in modern society, and how does our use of technology shape our relationship with nature? How does all of this relate to social power? With the increasingly ubiquitous presence of this thing we like to call technology in human societies around the globe, particularly in light of recent major technological advancements and the ultimate dangers such advancements may present, an attempt to educate ourselves and understand the challenges we face has probably never been more important. For millennia, technological advancement itself was slow. Swords, for example, as weapons of war, only disappeared in the 20th century. Since the Industrial Revolution, technological change has been a continuous and defining feature of Western society, and increasingly of societies around the world. From the optimism of the Enlightenment, which saw technology as a tool of human progress, to the promise of artificial intelligence, the use of technology has brought enormous benefits to society. And yet, a rapidly changing climate, resource scarcity, and political-economic systems that seem to degrade by the day despite our technological advancement have made us more aware than ever of the complex linkages between nature, technology, and social power.

With these questions in mind, this first-year introductory course seeks to explore the relationship between technology, nature, and power by introducing students to a range of ideas, concepts, and authors. Through lectures, assigned readings, class discussions, and written assignments, students will learn to critically examine the ways in which technology shapes and is shaped by human societies and our relationship with the natural world. They will develop their analytical, critical-thinking, and comprehension skills by engaging with different perspectives and applying them to contemporary issues and historical examples. By the end of the course, students will have developed a deeper understanding of technology not simply as a collection of tools or machines, but as a social and political force that can transform societies, redistribute power, and reshape the relationship between human beings and nature.

Students who successfully complete this course will be able to:

- Define and critically examine the concept of technology, including different historical and theoretical understandings of what constitutes technology and its role in human societies.
- Explain the relationship between technology, nature, and society, with particular attention to how technological development has transformed humanity's relationship with the natural world.
- Identify and analyse the relationship between technology and social power, including how technologies can create, reinforce, redistribute, or challenge existing forms of political, economic, and social power.
- Apply key concepts and arguments from course readings to historical and contemporary cases, demonstrating the ability to connect theoretical ideas to real-world technological and social developments.
- Develop and communicate independent critical arguments, using evidence from course materials to evaluate competing perspectives on technological progress, its benefits and risks, and the challenges posed by technological change.

COURSE REQUIREMENTS AND ASSESSMENT

The course consists of a combination of weekly readings, participation in discussion and written assignments. Students are expected to attend class regularly and to actively contribute to class discussion.

Course Requirement and Assessment

Grade assessment for this course will be based on the following contributions:

<u>Percentage</u>	<u>Assignment</u>	<u>Due Date</u>
20%	Attendance and participation	Ongoing
20%	1 st written assignment	Due October 22nd
25%	2 nd written assignment	Due November 26th
10%	Final reflection	Due December 10th
25%	Final exam	TBA

Please keep in mind that your final grade is a composite of regular, timely and meaningful participation in discussion as well as on-time submission and quality of written work. Both will require forward thinking, preparation and research.

Attendance and Participation

Attendance and participation in discussion groups are an integral part of the course and an important part of your final grade. Think of it as your opportunity to engage critically with the course to broadcast and debate your thoughts on relevant course-related themes. Through discourse with your instructor, TA and fellow students you will be able to develop a better and more nuanced understanding of the assigned readings.

Participation is organized around a combination of general discussion, presentations and small group work. Assessment of your participation grade is evenly divided between attendance and quantity and quality of contributions to in-tutorial debate. Students are expected to provide thoughtful comments based on their reflections on reading assignments, current events and other relevant topics. Keep in mind each tutorial session is worth 2% of your final grade and note that at Carleton every 3-4% equals one letter grade. Attendance of the class lecture is not compulsory. However, grades cannot be made up after the fact. Exceptions to the rule are normally allowed for medical reasons only.

Conduct during tutorial discussion is expected to conform to normal rules of civil engagement. Each class will focus on relevant discussion questions that connect the week's readings to broader theoretical and practical themes. **Please note that you are expected to have completed the readings in advance of the discussion.**

How to do well in your discussion group:

- come prepared to discuss the readings
- contribute to discussion
- ask a good question
- respond constructively to another student's argument
- bring an interesting example from outside the course
- occasionally lead a small-group discussion (depending on how TA organizes tutorial)

There will be 12 discussion "credits" distributed by your TAs to each student throughout the semester. Only your best 10 will count towards your grade. (You can earn 0 credit if absent, 50% if present but no contribution, 75-100% (full credit) if meaningful contribution as outlined above).

Written Assignments

There is a written component that comprises two essay assignments of 1000 and 1500 words in length and a final reflection of 300-500 words differentially weighted at 20%, 25% and 10% of your final grade. They are designed to test your lecture absorption and familiarity with the readings as well as to allow you to develop your analytical, research and writing skills. Instructions for each assignment will be posted on Brightspace and will also be discussed in class and tutorial seminars. Completed assignments are to be uploaded to the appropriate assignment dropbox on Brightspace by 11.55 pm on the due date. Please note the following penalties: 1) there is an over-length penalty of 5%, starting at the first word past the maximum length – **there are NO exceptions to this penalty**; 2) there is a late penalty of 3% per day, including weekends, beginning from 12.00am on the first calendar day following the due date (ie, approximately 5 minutes after your essay is due). Extensions can only be granted by the instructor and are normally granted for medical reasons only. Please also note that assignments will not be accepted for marking more than 10 days after the due date without an extension. It is of course always advisable to store copies of your work in

a place that is separate from your laptop, such as a desktop computer, an external hard drive or a cloud account. **Please back up your work on a regular basis.**

Final Exam

The final component of your assessment is a three-hour exam worth 25% of your grade and scheduled during the regular examination period. It is designed to test your overall comprehension of the course material. For the final exam students are expected to be fully conversant with all the readings and able to demonstrate their relevance to the exam questions. The last class of the semester will be a detailed discussion of what may be expected on the exam.

Reading Materials

In preparation for each lecture and tutorial, students will be asked to read approximately 30 – 40 pages per week (there are a couple of exceptions to this). Please note that the readings are the basis for your contribution to in-class discussions and form an important element of your written assignments and final exam. It is very important for you to complete the readings. They help you to better understand the lecture as well as enhance your ability to meaningfully participate in tutorial discussion. Keeping on top of your readings will also make your final exam preparations easier.

There is **NO textbook required** for this course. All readings for this course will be made available online through the ARES system on Brightspace or the Carleton Library website free of charge.

Office Hours

Office hours are scheduled on Mondays between 3 - 4pm. If that doesn't work for you, I'm also available to meet by appointment online (via Zoom) at another agreed upon time if meeting during regular office hours is not possible.

AI Policy

The core principle of academic integrity is that work students submit for evaluation must be theirs alone. Completely delegating a task that you were assigned to perform to an algorithm is no different than delegating it to another person. Hence, it violates academic integrity. Furthermore, there is little, if any, benefit to students in terms of their education if they submit AI produced work and there is no point in instructors and TAs grading such work.

This said, if used appropriately, AI can be a very helpful assistant in your research, idea generation process, comprehension of topic or concepts and even in the composition of your work (and, of course, citation). Therefore, for this course, students may use AI tools for ideas, clarifying challenging concepts or getting started on projects. Some acceptable uses include:

- Generating essay topics with ChatGPT, using Microsoft Word's Smart Lookup or Copilot to find inspiration and related topics.
- Creating outlines (e.g. using AI to structure an essay or presentation flow, using Microsoft Word's Outline View with AI suggestions.)
- Providing helpful definitions or explanations of complex concepts (e.g. using AI find relevant information to help you explain a difficult theory). For this one, please keep in mind that you should evaluate how correct the definitions and explanations presented by AI are and structure text to suit the assignment and reflect your own ideas and writing style.

Make sure to review, edit and ensure accuracy and originality of final submissions. Finally, please keep in mind that more specific instructions on the use of AI might be included in the assignments themselves.

READING MATERIAL AND SCHEDULE

Sep. 10th Session 1: Course Details and Introductory Lecture: Nature, Technology and Power

Question: What is technology?

- Langdon Winner: Do artifacts have politics?

Sep. 17th Session 2: Technology and the Conquest of Nature – The Origins of Modernity Question: Can nature be controlled?

- Carolyn Merchant. 2016. *Autonomous Nature: Problems of Prediction and Control from Ancient Times to the Scientific Revolution*. New York: Routledge. Read Ch. 4. “Vexing Nature: Francis Bacon and the Origins of Experimentation,” pp. 81 – 97 (16 pages)

Sep. 24th Session 3: Technology and Society Question: Does technology shape society?

- Lewis Mumford. 1970. “The Polytechnic Tradition.” in *The Myth of the Machine: The Pentagon of Power*. NY: Harcourt Brace Jovanovich: 130-163 (33 pages)

Oct. 1st Session 4: Production Power and World Order Who controls production?

- Robert Cox. 1987. *Production, Power, and World order: social forces in the making of history*. New York: Columbia University Press. Part I, pp. 11 – 34 (23 pages)

Oct. 8th Session 5: Technology and Power Who controls information?

- Daniel J. Solove. 2001. “Privacy and Power: Computer Databases and Metaphors for Information Privacy.” 53 Stan. L. Rev: pp. 1393 – 1430 (37 pages); or until the end p. 1462 (69 pages) who wants to.

Oct. 15th Session 6: Technology and Empire Question: How does technology enable domination?

- Daniel Headrick. 2010. Ch. 8 “The Age of Air Control”. In idem, *Power Over Peoples*:

Technology, Environments, and Western Imperialism 1400 to Present. New Jersey: Princeton University Press, pp. 302 – 328 (26 pages)

Oct. 22nd Session 7: Technology and Economy
Question: Who controls technological infrastructure?

- Natasha Tusikov. 2017. *Chokepoints*. University of California Press. Ch. 4 Access Chokepoints, pp. 116 – 155 (39 pages)

Oct. 26th – 30th Fall Break

Nov. 5th Session 8: Technology and International Organization
Question: How do corporations and governments shape technology?

- Stan Luger. 2005. *Corporate Power, American Democracy and the Automobile Industry*. Cambridge University Press. Read Ch. 2 “The Structure of the Auto Industry” (pp. 34 – 53) and Ch. 7 “The Triumph of Corporate Power: Trade Policy” (pp. 135 – 153) (37 pages)

Nov 12th Session 9: Technology and Efficiency
Question: Who decides what is efficient?

- Tim Di Muzio. 2018. “Corporate Capitalism.” In idem, *The Tragedy of Human Development*. NY: Rowman & Littlefield, pp. 119 – 144 (25 pages)

Nov. 19th Session 10: Progress and Regress
Question: Does technology produce progress?

- Timothy Mitchell. 2002. *Rule of Experts: Egypt, Techno-politics, Modernity*. Berkeley: University of California. Read Ch. 1 “Can the Mosquito Speak,” pp. 19 – 53 (34 pages)

No. 26th Session 11: Technology, Power and Production
Question: Does technology liberate or control workers?

- David Noble. 2011. *Forces of Production: A Social History of Industrial Automation*. Transaction Publishers. London. Read Ch. 2 The Setting: The War at Home, pp. 21 – 41 and Ch. 4 The Automatic Factory. pp. 57 – 76 (39 pages)

Dec. 3rd Session 12: Technology and Labor
Question: Does technological progress threaten our future?

- Arun Sndararajan. 2016. *The End of Employment and the Rise of Crowd Based Capitalism*. MIT Press, Cambridge, Massachusetts and London, England. Ch. 1 The Sharing Economy, Market Economies and Gift Economies pp. 29 – 54 and Ch. 7 The Future of Work: Challenges and Controversies pp. 183 – 202 (44 pages)

Dec. 10th Session 13: Technology, Power, Nature and the Future

- Jaron Lanier. 2013. *Who Owns the Future*. New York: Simon and Schuster. Read Ch. 4 (Part II) “The Ad Hoc Construction of Mass Dignity” to Ch. 9 (part III) “From Above: Missing Data to Become Ridiculous”
- James Briddle. 2018. *New Dark Age – Technology and the End of the Future*. Read Ch. 2 Computation, pp. 16 – 45 (29 pages) **(Optional)**

Political Science Course Outline Appendix

REQUESTS FOR ACADEMIC ACCOMMODATION

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

Student Mental Health

As a university student, you may experience a range of mental health challenges that significantly impact your academic success and overall well-being. If you need help, please speak to someone. There are numerous resources available both on- and off-campus to support you. Here is a list that may be helpful:

Emergency Resources (on and off campus): <https://carleton.ca/health/emergencies-and-crisis/emergency-numbers/>

Carleton Resources:

Mental Health and Wellbeing: <https://carleton.ca/wellness/>

Health & Counselling Services: <https://carleton.ca/health/>

Paul Menton Centre: <https://carleton.ca/pmc/>

Academic Advising Centre (AAC): <https://carleton.ca/academicadvising/>

Centre for Student Academic Support (CSAS): <https://carleton.ca/csas/>

Equity & Inclusivity Communities: <https://carleton.ca/equity/>

Off Campus Resources:

Distress Centre of Ottawa and Region: (613) 238-3311 or TEXT: 343-306-5550, <https://www.dcottawa.on.ca/>

Mental Health Crisis Service: (613) 722-6914, 1-866-996-0991, <http://www.crisisline.ca/>

Empower Me: 1-844-741-6389, <https://students.carleton.ca/services/empower-me-counselling-services/>

ood2Talk: 1-866-925-5454, <https://good2talk.ca/>

The Walk-In Counselling Clinic: <https://walkincounselling.com>

Academic consideration for medical or other extenuating circumstances: Students must contact the instructor(s) of their absence or inability to complete the academic deliverable within the predetermined timeframe due to medical or other extenuating circumstances. For a range of medical or other extenuating circumstances, students may use the online self-declaration form and where appropriate, the use of medical documentation. This policy regards the accommodation of extenuating circumstances for both short-term and long-term periods and extends to all students enrolled at Carleton University.

Students should also consult the [Course Outline Information on Academic Accommodations](#) for more information. Detailed information about the procedure for requesting academic consideration can be found [here](#).

Pregnancy: Contact your Instructor 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, please contact Equity and Inclusive Communities (EIC) at equity@carleton.ca or by calling (613) 520-5622 to speak to an Equity Advisor.

Religious obligation: Contact your Instructor 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, please request your accommodations for this course through the [Ventus Student Portal](#) 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*). Requests made within two weeks will be reviewed on a case-by-case basis. For final exams, the deadlines to request accommodations are published in the [University Academic Calendars](#). 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 its 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.

PETITIONS TO DEFER

Students unable to write a final examination because of illness or other circumstances beyond their control may apply within **three working days** to the Registrar's Office for permission to write a deferred examination. The request must be fully supported by the appropriate documentation. Only deferral petitions submitted to the Registrar's Office will be considered. [See Undergraduate Calendar, Article 4.3](#)

INTELLECTUAL PROPERTY

Student or professor materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s). Permissibility of submitting substantially the same piece of work more than once for academic credit. If group or collaborative work is expected or allowed, provide a clear and specific description of how and to what extent you consider collaboration to be acceptable or appropriate, especially in the completion of written assignments.

WITHDRAWAL WITHOUT ACADEMIC PENALTY

Please reference the [Academic Calendar](#) for each term's official withdrawal dates

OFFICIAL FINAL EXAMINATION PERIOD

Please reference the [Academic Calendar](#) for each term's Official Exam Period (may include evenings & Saturdays or Sundays)

For more information on the important dates and deadlines of the academic year, consult the [Carleton Calendar](#).

GRADING SYSTEM

The grading system is described in the Undergraduate Calendar section [5.4](#).

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.

ACADEMIC INTEGRITY

Academic integrity is an essential element of a productive and successful career as a student. Students are required to familiarize themselves with the university's [Academic Integrity Policy](#).

PLAGIARISM

The University Senate defines plagiarism as "*presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own.*" This can include:

- any submission prepared in whole or in part, by someone else, including the unauthorized use of generative AI tools (e.g., ChatGPT);

- reproducing or paraphrasing portions of someone else's published or unpublished material, and presenting these as one's own without proper citation or reference to the original source;
- submitting a take-home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else;
- using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another's data or research findings;
- failing to acknowledge sources through the use of proper citations when using another's works and/or failing to use quotation marks;
- handing in "*substantially the same piece of work for academic credit more than once without prior written permission of the course instructor in which the submission occurs.*"

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.

RESOURCES (613-520-2600, phone ext.)

Department of Political Science (2777)	B640 Loeb
Registrar's Office (3500)	300 Tory
Centre for Student Academic Success (3822)	4 th floor Library
Academic Advising Centre (7850)	302 Tory
Paul Menton Centre (6608)	501 Nideyinàn
Career Services (6611)	401 Tory