

**University of Toronto, School of the Environment**  
**ENV 1001: Environmental Decision-Making: Interdisciplinary Perspectives**  
Fall 2021 – Prof Tanhum Yoreh,  
Wednesday 12-3pm

**Contact information:**

**Instructor:** Professor Tanhum Yoreh, <tanhum.yoreh@utoronto.ca>

**Office hours:** Wednesdays 3-4 pm or by appointment

**TA:** Raul Salas Reyes, <raul.salasreyes@utoronto.ca>

**Structure:** Weekly 3-hour classes. The course is aligned with the School of the Environment's Environment Seminar Series, so six of the twelve weeks of class will have an invited guest lecturer. These seminars will be open to the public. Any changes to the schedule will be announced by email and posted on Quercus (UofT's online course platform). Please note that this is a seminar course, rather than a lecture course; active classroom engagement is expected (and crucial to the value of the course!) Please also note that there is quite a bit of reading and other work outside our weekly classes—full engagement and preparation will make our class sessions better.

**Course location:** The first two weeks of the course will be online only on Zoom. The links may change from week to week, and will be posted on Quercus and communicated via email. After the first two weeks our meetings will be fully in-person. On weeks with guest speakers, some of the speakers have chosen to deliver their talks online. These talks will be broadcast on a big screen in the lecture hall. Students who cannot be in class during these lectures will be able to connect via Zoom for the talk and Q&A, but will not be able to participate in the subsequent classroom discussions. Readings will be available online through Quercus. Class location will be announced at our first meeting.

**Course overview**

***Description:*** ENV1001 is the core course for the graduate Collaborative Specialization in Environmental Studies at the School of the Environment. This course addresses the topic of “environmental decision-making,” which we understand broadly as the challenging process of how humans engage with the natural world, and the many iterative (and sometimes invisible) decisions we make about how to organize human societies and activities. While decision-making is itself a field of study, this course takes a more flexible interpretation of the term, involving choices about, and affecting, the environment.

Drawing on insights from across a range of disciplines—throughout the humanities, social sciences, and natural and applied sciences—and with attention to fields beyond academia, we consider multiple perspectives on the environment. Through bi-weekly guest lectures, student presentations, group projects, and individual written assignments, we explore worldviews and values (what assumptions we make about the world that shape the kinds of decisions we can make), conflicting interests and information (at multiple scales), and decision-making models and tools (a survey of the range of tools that are available), along with questions of uncertainty, adaptation, and iterative decision-making processes.

Students should emerge from the course with a broader perspective on environmental and social challenges, enhanced communication skills across disciplines, and additional experience working in diverse teams. In addition, students should also leave the course more confident about the options for interdisciplinary collaboration. Our central goal in the course and the Collaborative Specialization program is to enable conversations to take place within and beyond the classroom about the challenges of human-environment relationships, with new ideas on creative and just approaches to social and political decisions.

***Assignments (details available on Quercus)***

- Weekly participation: 15% (continuous)
  - attendance, active listening & engagement each week
  - weekly participation in online discussion board chats & activities
- One-time guest seminar speaker facilitation: 20% (varying deadlines)
  - Pre-seminar posting of reflection paper and discussion questions
  - In class mid-seminar coordination of break-out room discussions
  - In class, post-seminar facilitation of small group discussion
- Individual “3-minute thesis” presentation: 20% (due weeks 5 and 6)
- Individual written assignment: 20% (due week 8)
- Group-based project: 25% (due week 12)

In case of unexpected challenges (guest speaker cancellations, student illness, other emergencies, etc.), grading policies may be changed as follows:

- Deadlines may be moved (as a class or individually; extensions are possible)
- Guest speaker facilitation may be altered to involve shorter/longer student-facilitated discussions, including without a seminar speaker (with discussions to be based on assigned readings and possible supplementary video material)
- Individual students facing challenges may be exempted from group projects, with alternate assignment options and/or grades redistributed to other assignments.

**Class topics and readings: *order of classes may change; advance notice will be given***

**Week 1:** Sept 15: Introduction

**Week 2:** Sept 22: *Guest: Dr Michael Classens, School of the Environment, UofT*

**Week 3:** Sept 29: Environmental decision-making in times of crisis

**Week 4:** Oct 6: *Guest: Dr Daniel Hoornweg, Energy Systems & NucSci, Ont Inst of Technology*

**Week 5:** Oct 13: Decision-making tools, 3MT

**Week 6:** Oct 20: *Guest: Dr. Beth Savan, School of the Environment, UofT*

**Week 7:** Oct 27: Environmental values, 3MT

**Week 8:** Nov 3: *Guest: Dr. Michelle Murphy, Department of History, UofT*

**Fall Term Reading week:** Nov 10 - No class;

**Week 9:** Nov 17: Art and activism in enviro decision-making. Movie screening of *Anthropocene*

**Week 10:** Nov 24: *Guest: TBD*

**Week 11:** Dec 1: Systems thinking

**Week 12:** Dec 8: *Guest: Dr Marianne Touchie, Civil and Mineral Engineering, UofT*

## **Policies and Expectations**

***In general:*** In this course, you can expect that I will strive to be fair, respectful, prepared, responsive, and enthusiastic. In return, I anticipate you will be respectful of your classmates and of me, be prepared, and be flexible. We are all learning new skills, practices, and norms with the global pandemic, and doing so amidst a series of personal, community, and global challenges. I hope that together we can foster a safe and engaging classroom, and I will rely on all of you to help create that environment.

***Course site:*** We will have a course website (Quercus) for readings, course announcements, course materials, and discussions. We will use Zoom when online. Please check in frequently with the Quercus site. Please also be patient with our online tools, as we will encounter glitches and challenges. If/when communication on the site goes awry, please feel free to use email for assignments, questions, etc.

***Deadlines and late penalties:*** I anticipate all assignments will be submitted on time. However, some of you may find yourselves with valid conflicts and challenges, especially in light of your diverse programs and courses of study, and the exceptional challenges of this particular time (illness, caregiving duties, housing and financial insecurity, technological connectivity challenges, etc.). Please contact me as early as possible if you anticipate being unable to meet deadlines. Please also contact your group members if you run into challenges during the group project. As this is a seminar class, attendance is the bedrock of the course, enabling us to build a strong community and develop enriching conversations across weeks—still, we'll need to be flexible and understanding when conflicts and problems arise. If you know in advance you need to miss class, it helps me tremendously to be aware of these absences.

***Backups and rough drafts:*** You are strongly advised to keep rough drafts and backup copies of all assignments and essays you submit. Please take a minute at the start of the term to set yourself a backup strategy. Whether it's a backup external hard drive, a web-based cloud service like Dropbox or Google Drive, or some other option, it's important you have multiple copies of your work in the case of a hard drive failure or computer problem (this is important not only for this course, but also (especially!) for your research and thesis/dissertation projects).

***Names:*** If your name on the official course registration list does not, for any reason, match the name by which you would like to be addressed (and under which you would like to submit assignments and sign emails and be addressed in class) please let me know. I am not able to change official course lists, but I can certainly call you by your preferred name. Also, please let me know the pronouns you use (mine are he/him). I encourage you always to begin your interactions in academic settings with more senior scholars using formal forms of address—especially “Dr.” or “Professor” titles for profs/instructors. That said, as graduate student colleagues, I am happy to have formal or informal exchanges with you: you are welcome to call me Dr./Prof. Yoreh, Prof. Tanhum, or Tanhum, whichever makes you most comfortable. (If you use a title for me, though, please choose “Dr.” or “Prof.”, not “Mr.”)

***Exceptions and Assistance:*** The University has many resources to help students who need assistance for any number of reasons, both in and outside of the classroom, including library, academic, and health and counseling resources. Let's aim to work together as a class to help each

other find academic support in the midst of challenges. The University remains committed to providing allowances for religious observances, as do I. A few helpful resources:

- <https://www.sgs.utoronto.ca/gradlife/Pages/Grad-Wellness.aspx>
- <https://www.sgs.utoronto.ca/currentstudents/Pages/Writing-Centre.aspx>
- <http://uoft.me/religiousaccommodation>
- <http://familycare.utoronto.ca/resources/>

If you are struggling or you encounter unanticipated challenges or crises during the term (whether for academic and/or personal reasons), please seek the support you need as early as possible, as best you can. Some students find themselves facing challenges unexpectedly. If you find yourself in a difficult situation, even if you have not yet gone through all the official channels, it is best to let me know right away that you are seeking university assistance and may need accommodations (you do not need to disclose the details of your situation to me). If you will need accommodation from me for any reason, in the classroom or on coursework and assignments, please let me know as soon as you can.

**Academic integrity:** The seriousness of academic integrity really cannot be stressed enough. Academic integrity remains **essential** to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously, seeing these as serious academic offenses. As graduate students, your academic integrity will be the foundation of your scholarly and practitioner careers.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters, through the School of Graduate Studies. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information from your instructor or other institutional resources. As some norms differ across disciplines and universities, please take a moment to familiarize yourself with UofT policies.

- <https://www.sgs.utoronto.ca/facultyandstaff/Pages/Academic-Integrity.aspx>
- <http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>
- [www.artsci.utoronto.ca/osai/students](http://www.artsci.utoronto.ca/osai/students)

Potential offences include, but are not limited to:

- Using someone else's ideas or words without appropriate acknowledgement
- Using someone else's words without using quotation marks
- Submitting your own work in more than one course without instructor permission
- Making up sources or facts
- Obtaining or providing unauthorized assistance on any assignment.
- Looking at someone else's answers during an exam or test
- Falsifying institutional documents or grades
- Falsifying or altering any documentation required by the University

**Course details by week, in brief:****Week 1: Sept 15: introduction**

In this first week of class week, held on Zoom, we will introduce the goals for this course on environmental decision-making and set our expectations and practices for the semester. We find out a bit about each other and the perspectives from which we are each coming to the course, as well as various motivations for enrolling in the collaborative program in environmental studies.

Substantively, we discuss environmental studies, decision-making, and how a range of perspectives might inform different ways of approaching challenging environmental issues. Our readings discuss the broad topic of environmental decision-making (raising questions of scientific uncertainty and measurement, time horizons and contingencies, and values and equity), and different approaches to understanding the environment and land.

**Suggested readings: environmental decision-making and approaches**

- Lein, James. 1997. "The nature of environmental decision making," pp. 11-39 in *Environmental Decision Making: An Information Technology Approach*. Malden, Mass.: Blackwell Science.
- Simpson, Leanne Betasamosake. 2014. Land as pedagogy: Nishnaabeg intelligence and rebellious transformation. *Decolonization: Indigeneity, Education & Society*, 3(3): 1-25.
- Cunsolo, Ashlee, Harper, Sherilee L., Minor, Kelton, Hayes, Katie, Williams, Kimberly G., and Howard, Courtney. 2020. Ecological grief and anxiety: the start of a healthy response to climate change? *The Lancet*, 4: e261-e263.

**Week 2: Sept 22: Guest: Dr Michael Classens, School of the Environment, U of T. "(In)edible decisions: Reflections from a food studies perspective".**

In guest speaker weeks, we'll convene on Zoom for a public seminar. These sessions will involve a lecture, a ten-minute audience break-out room discussion session (in which student seminar facilitators will help to moderate short discussions), and an instructor-moderated question-and-answer session. Following the public seminar, we'll have a short break, and then our ENV1001 class will reconvene. This post-talk class will involve student-facilitated small-group discussions.

**Readings:**

- Gibson-Graham, J.K. and Roelvink, Gerda. 2009. "An economic ethics for the anthropocene." *Antipode* 41, no. S1: 320-346.

**Week 3: Sept 29: Environmental decision-making in times of crisis**

This week, we tackle the big questions of environmental change, and consider how contemporary events and crises (pandemics, climate change, racism, and other social and environmental challenges) influence decision-making processes. In our discussions, we will explicitly consider the ways in which constraints on movement shape environmental research and collaboration, especially in interdisciplinary endeavours.

**Readings: equity, colonialism, & interdisciplinary research**

- Purdy, Jedediah. 2015 (August 13). "Environmentalism's racist history," *The New Yorker*, <http://www.thenewyorker.com/news/news-desk/environmentalisms-racist-history>

- Record, S., P.F.B. Ferguson, E. Benveniste, R.A. Graves, V.W. Pfeiffer, M. Romolini, C.E. Yorke, and B. Beardmore. 2016. Graduate students navigating social-ecological research: insights from the Long-Term Ecological Research Network. *Ecology and Society* 21(1):7. <http://dx.doi.org/10.5751/ES-08111-210107>
- Polfus, Jean L., Manseau, Micheline, Simmons, Deborah, Neyelle, Michael, Bayha, Walter, Andrew, Frederick, Andrew, Leon, Klütsch, Cornelya F.C., Rice, Keren, & Wilson, Paul. 2016. Łeghágots'enetę (learning together): the importance of indigenous perspectives in the identification of biological variation. *Ecology & Society*, 21(2): 18-52.

**Week 4: Oct 6: Guest: Dr. Daniel Hoornweg, Associate Professor in International Relations, Faculty of Energy and Nuclear Science, Ontario Institute of Technology.**  
**“Sustainability – it all depends on our cities.”**

Readings: tbc

**Week 5: Oct 13: environmental decision-making tools (3MT)**

This week, we consider various tools that can be used to structure environmental decision-making processes, from modelling to environmental impact assessments to community consultations. In this overview of tools, we return to questions about the goals of decision-making, as well as the more technical processes of evaluating alternative courses of action. We also consider science-policy translation processes as part of the suite of environmental decision-making tools.

Readings: decision-making tools

- English, Mary R. *et al.* 1999. “Overview,” chapter 1 (pp. 1-31) in *Tools to Aid Environmental Decision Making*, Virginia H. Dales and Mary R. English (eds.), New York: Springer-Verlag.
- Pacala S., and Socolow R. 2004. “Stabilization wedges: Solving the climate problem for the next 50 years with current technologies.” *Science* 305 (5686): 968-972.
- Wong-Parodi, Gabrielle, Mach, Katharine J., Jagannathan, K., and Sjostrom, Kathryn Dana. 2020. Insights for developing effective decision support tools for environmental sustainability. *Current Opinion in Environmental Sustainability*, 42: 52-59.

Intergovernmental Panel on Climate Change (IPCC). 2018. “Summary for Policymakers,” in: *Global Warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. Masson-Delmotte, Valérie, et al. (eds.).

**Week 6: Oct 20: Guest: Dr. Beth Savan, School of the Environment, U of T.**

Readings: tbd

**Week 7: Oct 27: Environmental values (3MT)**

This week returns to the recurring theme of environmental values, considering multiple perspectives on the questions associated with value, as well as the persistent question of the

misalignment of peoples' actions with their claimed values. We ask some questions about decision-making that lie at the heart of the endeavour: who is making decisions? For whom? On what grounds? In this discussion, we consider how our own research groups and labs might incorporate questions of value in our work.

Readings: environmental values and the values-action gap

- Carney, Mark. 2021. Chapter 6 "The market society and the value of nothing." In *Value(s): Building a Better World for All*. Signal.
- Chan, Kai M.A., Balvanera, Patricia, Benessaiah, Karina, Chapman, Mollie, Diaz, Sandra, et al. 2016. Why protect nature? Rethinking values and the environment. *PNAS*, 113(6): 1462-1465.
- Dietz, Thomas, Amy Fitzgerald and Rachael Schwom. 2005. Environmental values. *Annual Review of Environment and Resources*, 335-372.
- Yoreh, Tanhum. November 4, 2020. "Broadening the Tent: Moral Language and Conservative Environmentalism." *Berkley Forum*. Berkley Center for Religion, Peace & World Affairs.

**Week 8: Nov 3: Guest: Dr. Michelle Murphy, Department of History, U of T. Individual written assignment due.**

Readings: tbd

*Fall Reading Week: Nov 10 – no class*

**Week 9: Nov 17: Art and activism in environmental decision-making.**

**Movie screening: *Anthropocene*. Meet at Robarts Library at the Media Commons: Theatre Room 3025**

Readings:

- Ghosh, Amitav. 2016. "Part 1: Stories." In *The Great Derangement: Climate Change and the Unthinkable*. University of Chicago Press.
- Robinson, Kim Stanley. 2020. "Chapter 1." In *The Ministry for the Future: A Novel*. Orbit Books.
- Tugend, Alina. March 12, 2019. "Can art help save the planet?" *The New York Times*. <https://www.nytimes.com/2019/03/12/arts/art-climate-change.html>

**Week 10: Nov 24: Guest: TBD**

**Week 11: Dec 1: Systems Thinking**

This week, we turn to questions of the interconnectedness of many of our decisions, and how to address decision-making at multiple levels. We use ideas of systems thinking to help place our

decisions into a broader context, considering how multiple worldviews might help us see environmental challenges in new ways.

Readings: systems thinking

- Meadows, Donella H. 2008. "Chapter 1: The basics," pp. 11-34 in *Thinking in Systems: A Primer*. White River Junction, VT: Chelsea Green Publishing.
- Liu, Jianguo et al. 2015. Systems integration for global sustainability. *Science*, 347(6225): 963.
- Kimmerer, Robin Wall. Corn tastes better on the honor system. *Emergence Magazine*, 3: <https://emergencemagazine.org/story/corn-tastes-better/>
- United Nations University, *Disaster Risks in an Interconnected World*. [https://s3.eu-central-1.amazonaws.com/interconnectedrisks/reports/UNU\\_Interconnected\\_Disaster\\_Risks\\_Report\\_210908.pdf](https://s3.eu-central-1.amazonaws.com/interconnectedrisks/reports/UNU_Interconnected_Disaster_Risks_Report_210908.pdf) (browse report)

**Week 12: Dec 8: Guest: Dr. Marianne Touchie, Civil and Mineral Engineering, U of T.**  
**Group assignment due.**

Readings: tbd