University of Toronto, School of the Environment  
ENV 1001: Environmental Decision-Making: Interdisciplinary Perspectives  
Fall 2020: Kate Neville, Wednesday 12-3pm (Eastern time zone), online

Contact information: Professor Kate J. Neville, email: kate.neville@utoronto.ca  
Office hours: online Mondays 4-6pm Eastern and by appointment  
TA: tbd

Course location – online: The course will make use of a series of online tools. Our core course site will be the online learning platform Quercus; we’ll also make use of Blackboard Collaborate, Zoom, MS Teams, Sharepoint documents, Slack, and other tools as needed. Readings are available online through Quercus on the Library Course Reserves page.

Course overview

Description: ENV1001 is the core course for the graduate Collaborative Specialization in Environmental Studies at the School of the Environment. In this course, we address 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.

With a focus on the 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 themes of worldviews and values (what assumptions we make about the world that shapes 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.

In a time of online learning provoked by public health concerns, we will turn analytic attention to the benefits and challenges associated with a range of virtual technologies for interdisciplinary collaboration, research, and decision-making. As travel becomes constrained not only by pandemic conditions but also as a response to climate change and environmental degradation, we anticipate the need for these tools will increase in the future. In the class, then, we will consider how online platforms may be useful in enabling ongoing research efforts at a distance, and how different strategies and tools may be designed for better communication and action.

Students should emerge from the course with a broader set of perspectives on environmental and social challenges, enhanced communication skills across disciplines, and additional experience working in diverse teams. In addition, based on our new online course structure, students should also leave the course more confident about the options for virtual collaboration across disciplines. 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.
Structure: Weekly 3-hour online 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 in our synchronous online class sessions and posted on Quercus (UofT’s online course platform). Please note that this is a seminar course, rather than a lecture course; active engagement in online sessions 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 two-hour weekly classes—full engagement and preparation will make our class sessions better.

Assignments (details available on Quercus)

- Weekly participation: 20% (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: 15% (due week 5)
  - to be recorded and posted online
- Individual written assignment: 20% (due week 7)
- 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 16: Introduction
Week 2: Sept 23: Guest: Ms. Tanya Rosen, conservationist and National Geographic Explorer
Week 3: Sept 30: Environmental decision-making in times of crisis
Week 4: Oct 7: Guest: Dr. Robert Soden, computer science/SoE, UofT
Week 5: Oct 14: Systems thinking
Week 6: Oct 21: Guest: Dr. Vianey Leos Barajas, statistics/SoE, UofT
Week 7: Oct 28: Decision-making tools
Week 8: Nov 4: Guest: Dr. Jennifer Clapp, political economy, University of Waterloo
  *Fall reading week: Nov 11: no class*
Week 9: Nov 18: Environmental values
Week 10: Nov 25: Guest: Ms. Cassie Flynn, climate advisor, UNDP
Week 11: Dec 2: Uncertainty and adaptation
Week 12: Dec 9: Guest: Dr. Alison Criscitiello, glaciology, University of Alberta
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 online learning arrangements, and doing so amidst a series of personal, community, and global challenges. I hope that together we can foster a safe and engaging online space, and I will rely on all of you to help create that environment.

Online course site: We will have a course website (Quercus) for readings, course announcements, course materials, and discussions. We will also use tools including Blackboard Collaborate, Zoom, Slack, MS Teams, and more. Please check in frequently with the Quercus site. Please also be patient with this site, and all 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 that all assignments will be submitted on time. However, some students may find themselves 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 that 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). In a time where, working from home, you may not have access to a printer or multiple computer stations (as at the UofT library), this may be even more important.

Names: If the 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 she/her). 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. Neville, Prof. Kate, or Kate, whichever makes you most comfortable. (If you use a title for me, though, please choose “Dr.” or “Prof.”, not “Ms.”)
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. That said, I know these may be difficult to access from a distance and may be overburdened during this unusual year. 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/gradlife/Pages/Grad-Wellness.aspx)
- [https://www.sgs.utoronto.ca/currentstudents/Pages/Writing-Centre.aspx](https://www.sgs.utoronto.ca/currentstudents/Pages/Writing-Centre.aspx)
- [http://uoft.me/religiousaccommodation](http://uoft.me/religiousaccommodation)
- [http://familycare.utoronto.ca/resources/](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, and is perhaps even more important in these virtual times and spaces. 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](https://www.sgs.utoronto.ca/facultyandstaff/Pages/Academic-Integrity.aspx)
- [http://www.governingcouncil.utoronto.ca/policies/behaveac.htm](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 16: introduction**
In this first week of class week, held on Blackboard Collaborate, we introduce the goals for this course on environmental decision-making and set out our expectations and practices for the online 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.

Readings: environmental decision-making and approaches

**Week 2: Sept 23: Guest: Ms. Tanya Rosen, National Geographic Explorer, IISD writer, and cat conservationist working across Central Asia**
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.

Speaker details tbd.

Readings: tbc

**Week 3: Sept 30: 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


Week 4: Oct 7: Guest: Dr. Robert Soden, Assistant Professor in Computer Science and the School of the Environment, University of Toronto
Details tbd.

Readings: tbc


Week 5: Oct 14: systems thinking and multiple levels of decision-making (3MT due)
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

- Kimmerer, Robin Wall. Corn tastes better on the honor system. Emergence Magazine, 3: https://emergencemagazine.org/story/corn-tastes-better/

Week 6: Oct 21: Guest: Dr. Vianey Leos, Assistant Professor in Statistics and the School of the Environment, University of Toronto
Details tbd

Readings: tbc
Week 7: Oct 28: environmental decision-making tools (Individual writing assignment due)

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


Week 8: Nov 4: Guest: Dr. Jennifer Clapp, Professor and Canada Research Chair in Global Food Security and Sustainability, University of Waterloo

Details tbd.

Readings: tbc


Fall Reading Week: Nov 11 – no class

Week 9: Nov 18: environmental values

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


Reading: environmental values in research practice – skim: no need to know specific plastic contaminant/ecology research protocols, but please pay attention to pp. 26-34 on equity protocols


Week 10: Nov 25: Guest: Ms. Cassie Flynn, Strategic Advisor on Climate Change, UNDP Details tbd.

Readings: tbc

Activity: Visit the UNDP’s “Mission 1.5” climate site, an online game and survey on global climate action: https://mission1point5.org/

About: “*Using mobile gaming technology, Mission 1.5 educates people about climate solutions and asks them to vote on the actions that they want to see happen. Your vote, and those from your country, will be compiled and presented to your government to encourage bolder climate action. Votes will also be counted in a global tally.*”

Week 11: Dec 2: uncertainty and adaptation
Recognizing the conditions of uncertainty under which much decision-making takes place, we look this week at decision-making strategies in cases of uncertainty, the need for adaptive approaches, and the challenges of communicating uncertainty to public audiences. We also consider how political changes create uncertainty and opportunities for change.

Readings: decision-making under uncertainty


Week 12: Dec 9: Guest: Dr. Alison Criscitiello – Director, Canadian Ice Core Lab, University of Alberta (Group project due)
Talk title: Stories From the Ice: Perspectives From New Canadian Arctic Ice Cores

Abstract: Our climate is critical to human health, food security, water supply, transportation, energy, and ecosystems. Ice cores represent a unique historical record that deepen our understanding of past climate events, providing tools to better interpret what is happening today and predict future climate conditions. In this seminar, Dr. Criscitiello will share her ice core research and recent discoveries from the far reaches of the Canadian North, and what they tell us about contaminants in our climate and environment. She will discuss sea ice proxy development in ice cores as well as environmental contaminant histories recorded in ice, highlighting the importance of considering ice core records in environmental decision-making.

Speaker bio: Dr. Alison Criscitiello is an ice core scientist and high-altitude mountaineer. Criscitiello’s research explores the history of sea ice in polar regions using ice core chemistry. She is the Executive Director of the Canadian Ice Core Lab (CICL) at the University of Alberta and an Adjunct Assistant Professor at the University of Calgary. She holds a BA in Earth and Environmental Science (Wesleyan University), an MA in Geophysics (Columbia University), and the first PhD in Glaciology ever conferred by MIT. As an alpine climber, she is capable of drilling ice cores in some of the highest, most inhospitable places on our planet. She has been the recipient of three American Alpine Club climbing awards, the Mugs Stump Alpine Award, and the Alpine Club of Canada's John Lauchlan Award. She has been named a National Geographic Explorer and a Fellow of the Explorers Club. Alison is also founder and co-director of Girls on Ice Canada, a tuition-free, science-immersion summer wilderness expedition that inspires young women to explore their curiosity in science and the outdoors.

Readings: tbc