

University of Toronto, School of the Environment

ENV 1001: Environmental Decision-Making: Interdisciplinary Perspectives
Fall 2022 – Prof. Simon Appolloni, PhD
Wednesday 12-3 pm; room AB 114

Overview

Contact information

Instructor: Prof Simon Appolloni, simon.appolloni@utoronto.ca

Office hours: Wednesdays 3-4 pm or by appointment; School of the Environment
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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 time and location

The seminar sessions will be in-person: Wednesday 12-3 pm; room AB 114. On weeks with guest speakers, these will be delivered online via Zoom, so we will meet in person every other week.

Course 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** (hence the picture at the top of this syllabus of the famous ‘5 blind philosophers each understanding an elephant from an entirely different perspective). Our investigation will be carried out through bi-weekly guest lectures, student presentations, group projects, and individual written assignments.

In this Fall term version of ENV1001, we will have a focus on **exploring ways of knowing in arriving at decisions on the environment and society**. We will also 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 processes, along with questions of uncertainty, adaptation, and the iterative nature of some decision-making.

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**. The 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**.

Course readings

1. All required readings will be made available through our library system via **Quercus**.
2. While not required (apart from two readings, available on Quercus) a suggested text to supplement readings is Simon Appolloni, *Convergent Knowing: Christianity and Science in Conversation with a Suffering Creation*. Montreal and Kingston: McGill-Queens University Press, 2018. Available through UofT Bookstore; also available in digital format: [Convergent Knowing | 9780773554436, 9780773555624 | University of Toronto \(vitalsource.com\)](https://www.vitalsource.com/9780773554436)

The book maps out a framework for making environmental decisions fostered by shifts in our understanding of science, ethics and ways of knowing.

Class outline & readings

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

Week 1: Sept 14: Environmental decision-making – An introduction. We will open with discussions about the course, our goals, and interests. Our primary interest in this class (apart from getting to know one another ☺) is to understand what it is we are exploring in this course and how that exploration might ensue. To that end, we begin with an examination of a systems thinking approach with a focus on the Gaia theory, followed by a discussion on how we might navigate the complex, multi-valenced conversations that require – for the purpose of this class – insights from science, economics, ethics and value-theory.
Readings:

- Lovelock, James. "The Living Earth," *Nature*, 12/2003, Volume 426, Issue 6968, pp. 769 – 770.
- McGuire, Chad J. *Environmental Decision-Making in Context: A Toolbox*. 1st edition. Chapter Two: "Science of Environmental Decision-Making," Boca Raton, FL: Routledge, 2017, pp. 7-62.

Week 2: Sept 21: Barriers to pro-environmental decisions/actions with guest Dr. Robert Gifford

Dr. Gifford is professor of Psychology and Environmental Studies at the University of Victoria. He was President of the Environmental Psychology division of the International Association of Applied Psychology, and Coordinator of CPA's environmental section. He is the founding director of UVic's minor in the Human Dimensions of Climate Change and an author of APA's 2008 task force report on climate change.

Readings:

- Gifford, Robert. "The Dragons of Inaction: Psychological Barriers That Limit Climate Change Mitigation and Adaptation," *The American Psychologist*, 66(4), 2011. 290–302. <https://doi.org/10.1037/a0023566>

Week 3: Sept 28: Environmental decision-making – Examining dynamics of conflict and power

Arriving at decisions about the environment is difficult enough, given the integration of multiple disciplines, the limits of the local ecosystems and the scarcity of resources. Add to this the joys, hopes, fears and anxieties of humans and communities across the planet, and the situation becomes decidedly more complex. We pay attention in this class to the processes involved at arriving at decisions, notably unequal power relationships which can lead to conflict that thwarts lasting peace and sustainability.

Readings:

- Autesserre, Séverine. "Island of Peace," chapter 1 in *The Frontlines of Peace: An Insider's Guide to Changing the World*. New York: Oxford University Press, pp. 23-44
- Ishardanti, Ria, Herdis Herdiansyah, and Francisia Saveria Sika Ery Seda. "Causes, Dynamics, and Environmental Conflict Resolution Models in Coal-Fired Steam Power Plant Development Locations." IOP Conference Series. Earth and Environmental Science 819, no. 1 (2021): 12031–. <https://doi.org/10.1088/1755-1315/819/1/012031>.
- Scharper, Stephen. "Option for the Poor and the Option for the Earth: Toward a Sustainable Solidarity," in *For Earth's Sake: Toward a Compassionate Ecology*. Toronto: Novalis: 2013, 154-171.

Week 4: Oct 5: Incorporating voices from the Global south with guest Dr. Isaac 'Assume' Osuoka

Dr. Osuoka is Executive Director of Social Action, an organization that works to promote resource democracy, social justice, and human rights in the sectors of energy, mining, the environment and climate change, trade and public budgets in Nigeria and other countries in the Gulf of Guinea region of Africa.

Readings:

- Osuoka, Isaac “Asume.” “Cooptation and Contention: Public Participation in the Nigeria Extractive Industries Transparency Initiative and the Demand for Accountable Government.” *The Extractive Industries and Society* 7, no. 3 (2020): 796–803. <https://doi.org/10.1016/j.exis.2019.03.013>.
- Osuoka, Isaac “Asume” and Anna Zalik. “No Change There! Wealth and Oil.” In *Handbook on Wealth and the Super-Rich*, 442–62. Edward Elgar Publishing, 2016. <https://doi.org/10.4337/9781783474042.00031>.

Week 5: Oct 12: Environmental decision-making – The messy and vital incorporation of ethics

Deciding the right course of action on most environmental decisions spans both temporal periods (past-present-future) and geographical distances, diverse populations, with different epistemologies, and multiple species in multiple bioregions. This class investigates ethical approaches that are far from easy, straightforward or even conventional.

Readings:

- Appolloni, Simon. “Toward a Serious and Sustained Reflection on the Liberation of All Creation,” in *Convergent Knowing*, pp. 135-174.
- Garvey, James. “Responsibility,” in *The Ethics of Climate Change: Right and Wrong in a Warming World*. New York: Continuum, 2008, pp. 57-87.

Week 6: Oct 19: Examining ecofeminism with guest Dr. Heather Eaton

Dr. Eaton is professor at Saint Paul University, Ottawa, whose work has focused on feminism, peace studies, gender, ecology, religion, animal studies, and nonviolence

Readings:

- Eaton, Heather. "Pathways to ecofeminism." *Catholic New Times*, vol. 30, no. 2, 29 Jan. 2006, pp. 10+. Gale OneFile: CPI.Q, link.gale.com/apps/doc/A141621061/CPI?u=utoronto_main&sid=bookmark-CPI&xid=eefef89b. Accessed 9 Aug. 2022.

Week 7: Oct 26: Environmental decision-making – Considering values & principles in organizing society

Both our authors in the readings for this class argue that something has gone amiss in how we are present to and on the planet, to other humans and other planetary beings, in ways that are mutually enhancing, responsible and relational. We consider here values and principles that we might consider when organizing our societal institutions.

Readings:

- Carney, Mark. “Introduction,” & Chapter 6 “The market society and the value of nothing,” *Value(s): Building a Better World for All*. Hardcover edition. Toronto: Signal, McClelland & Stewart, 2021, pp. 1-12 & pp. 123-148.

Week 8: Nov 2: Building a foundation for ecological economics with guest Dr. Peter Victor

Dr. Victor is an ecological economist, professor emeritus and senior scholar at York University. He was one of the founders of the emerging discipline of ecological economics and was the first President of the Canadian Society for Ecological Economics.

Readings:

- Victor, Peter. Chapter 3: “Philosophy, Ethics and Religion,” in *Herman Daly’s Economic for a Full World: His Life and Ideas*. New York: Routledge, 2022, pp. 47-64.

Fall Term Reading week: Nov 9 - No class

Week 9: Nov 16: Environmental decision-making – Exploring ‘reality’ presented to us

The pessimistic or sometimes contradictory and often one-sided narratives we hear, and even tell ourselves, can be disheartening and, in some cases, detrimental to our mental health. It can also thwart us from making important decisions. We will look closely at these stories we tell and hear and examine healthier and less problematic ways to engage reality.

Readings:

- De Meyer, Kris, Emily Coren, Mark McCaffrey, and Cheryl Slean. “Transforming the Stories We Tell About Climate Change: From ‘Issue’ to ‘Action.’” *Environmental Research Letters* 16, no. 1 (2020): 15002–. <https://doi.org/10.1088/1748-9326/abcd5a>.
- Sarewitz, Daniel. “Science and Environmental Policy: An Excess of Objectivity,” Chapter 7 in *Earth Matters: The Earth Sciences, Philosophy, and the Claims of Community*, edited by Robert Frodeman. Upper Saddle River, New Jersey: Prentice Hall, 2000, pp. 79-98.
- Wray, Britt. “Balancing Hope and Fear,” chapter 7 in *Generation Dread: Finding Purpose in an Age of Climate Crisis*. Toronto: Alfred Knopf Canada, 2022, pp. 150-167 & 267-269.

Week 10: Nov 23: Art and activism in environmental decision-making with guest Mr. Ravi Jain artistic director of Why Not Theatre.

Jain is a multi-award-winning artist known for making politically bold and accessible theatrical experiences in both small indie productions and large theatres, some that environmentally themed. His Toronto-based company works to foster civic engagement, city building through the arts.

Readings/viewing:

- “What You Won’t Do for Love” video, directed by Ravi Jain and Kevin Matthew Wong, June 2022. Adapted for screen from theatre production at Why Not Theatre. Available through Vimeo: <https://vimeo.com/ondemand/doforlovefilm>
- Galafassi, Diego, Sacha Kagan, Manjana Milkoreit, María Heras, Chantal Bilodeau, Sadhbh Juarez Bourke, Andrew Merrie, Leonie Guerrero, Guðrún Pétursdóttir, and Joan David Tàbara. “‘Raising the Temperature’: The Arts on a Warming Planet.” *Current Opinion in Environmental Sustainability* 31 (2018): 71–79. <https://doi.org/10.1016/j.cosust.2017.12.010> .

- Rathwell, Kaitlyn J., and Derek Armitage. "Art and Artistic Processes Bridge Knowledge Systems About Social-Ecological Change: An Empirical Examination with Inuit Artists from Nunavut, Canada." *Ecology and Society* 21, no. 2 (2016): 21–. <https://doi.org/10.5751/ES-08369-210221>.
- Smith, William. "Climate Change Has Already Transformed Everything About Contemporary Art," *Art in America*, May 4, 2020, <https://www.artnews.com/art-in-america/features/climate-change-contemporary-art-1202685626/>
- Tugend, Alina. "Can Art Help Save the Planet?" *The New York Times*, 12 March 2010, <https://www.nytimes.com/2019/03/12/arts/art-climate-change.html>.

Suggested reading:

- Sommer, L. K., & Klöckner, C. A. (2021). Does activist art have the capacity to raise awareness in audiences?—A study on climate change art at the ArtCOP21 event in Paris. *Psychology of Aesthetics, Creativity, and the Arts*, 15(1), 60–75. <https://doi.org/10.1037/aca0000247>

Week 11: Nov 30: Environmental decision-making – When how we know matters

We explore in this and our next, and final, class whether our decision-making process is comprehensive of the concerns and needs of a vast number of subjects, both human and other-than-human. To this end, are our epistemic approaches broad and inclusive of the multiple ways of apprehending reality? And why might broad and inclusive ways of knowing be important? We explore these questions primarily through the lens of Indigenous knowledge systems and their interplay with mathimatico-rational scientific knowledge systems.

Readings:

- Kimmerer, Robin Wall. "Mishkos Kenomagwen: The Teachings of Grass," *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants*. Minneapolis Minnesota: Milkweed Editions, 2013, 156-166.
- Kimmerer, Robin Wall. "Windigo Footprints," *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants*. Minneapolis Minnesota: Milkweed Editions, 2013, 303-309.
- McGregor, Deborah. "Indigenous Knowledge Systems in Environmental Governance in Canada." *KULA* 5, no. 1 (2021): 1–10. <https://doi.org/10.18357/kula.148>.

Week 12: Dec 7: Returning to systems-thinking, building a bridge between Indigenous knowledge systems and science with guest Ms Melanie Goodchild

Goodchild, moose clan, is a member of Biigtigong Nishnaabeg First Nation in Northern Ontario and a PhD candidate in the Faculty of Environment, University of Waterloo. Goodchild is the Founder and Co-Director of the Turtle Island Institute, an Indigenous social innovation think & do tank (a teaching lodge), a project on the Tides Canada platform.

- Goodchild, Melanie. 2021. "Relational Systems Thinking: That's How Change Is Going to Come, From Our Earth Mother". *Journal of Awareness-Based Systems Change* 1 (1) 2021:75-103. <https://doi.org/10.47061/jabsc.v1i1.577>.

Assignments

1. **Class engagement: 20% (continuous)**
 - i. attendance, active listening & engagement each week
 - ii. weekly participation in online discussion board chats & activities
 - iii. leading one class discussion based on one-page reflection
2. **One-time guest seminar speaker facilitation: 20% (varying deadlines)**
 - i. Pre-seminar posting of reflection paper and discussion questions
 - ii. In class mid-seminar coordination of break-out room discussions
 - iii. In class, post-seminar facilitation of small group discussion
3. **Individual one-page reflections on weekly readings (only 4 in all; due each week): 20%**
4. **Individual assignment: 20% (due week 9)**
5. **Group-based project – Project Imaginarium: 20% (due week 11)**

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 engagement – 20% (continuous)

With the idea that we learn from one another (me included), and given this is a seminar, discussions are essential. Each student will lead one discussion in class based on their one-page reflection. They will be open collegial and respectful, in both small and large group formats. The key is engagement, and there are different ways to do that:

1. The first is general participation: you can actively participate in class discussions (even if in small group and/or online Quercus platforms), ask questions in and between classes, and generally be inquisitive. This last part is easy, since we come from different disciplines and backgrounds: so, there is much to inquire about how others think and work. To this end, you are expected to attend every class and guest speaker zoom talks. In short, I will look for:
 - attendance, active listening & engagement each week,
 - weekly participation in online discussion board chats & activities.
2. The second is to lead one (1) class discussion on readings based on your one-page reflection (see below).

Facilitation guest speaker zoom talk assignment – 20% (various due dates)

You will all be assigned to one of six groups (numbers in each group will depend on enrollment) aligned to a specific week/ guest speaker for facilitation responsibilities. There are three parts (which you will divide among your group):

1. Pre-seminar:
 - i. meeting with our TA, Courtney, and me at the end of the class (on zoom) the week *before* the talk to discuss roles and preparation for the week ahead,

- ii. posting a reflection paper and discussion questions: due by 12pm Eastern on *Tuesday* before your assigned Wednesday seminar. Post this on the Quercus discussion board on the thread of the relevant seminar speaker.
 - Please post a one-page (~400-500-word) reflection paper on the readings and theme of the week (stated seminar topic or theme) with two or three discussion questions. In this paper, you might choose to reflect on the questions that arise for you from the reading, how the theme fits with other readings from our course, and/or how your work in your home program relates to the topic of discussion. You're welcome to read more widely, based on the description of the seminar, and bring in knowledge you have from other classes, research, or work you've done or learned about. If you refer to external/additional readings, please provide enough detail about that source to enable your peers who have not read the supplementary material to understand your reflections. The discussion questions may be ones your group incorporates into the moderated discussion with the speaker in the seminar session; they may also be used to help guide your post-seminar small group discussions. Everyone should read these papers/questions before class!

2. During the seminar: coordination of break-out room discussions with public audience: in the seminar

- i. This is an activity designed to help us at the School of the Environment manage a new format for our seminars. After the 30–40 minute seminar talk, I will place all audience members into breakout rooms for 5-10 minutes. The aim of this time is to give people the chance to come up with questions, which anyone can submit in the chat sidebar. Breakout rooms are sometimes the point when audiences drop out, so we'll organize the rooms so that each member of the facilitation group is in one of them. These might run in different ways, but one option is to start by *briefly* introducing yourself and by suggesting a question you have from the session. You won't report back on these, but you will write them in the chat any questions that come up in your session. I'll be asking some of these questions during the moderated conversation. This breakout time is useful for people to write their questions in the chat but needs a little more structure than just a quiet Zoom-room. You don't need to get to know everyone in the group, and the way this will run depends a bit on how big the audiences are.

While this may seem like vague and changeable element of the assignment, the main learning goal is to familiarize yourself with online moderation for when you run your own seminars and online workshops/talks/conferences. The grading for this part is more a "did you try/did you help" rather than a performance-based assessment.

- 3. After the seminar, in our class: facilitation of small group discussion: right after the seminar
 - i. After the public seminar and Q&A, we'll have a short break and then reconvene just with our class for small group discussions. Your group will moderate the discussion with small groups (we might switch group composition midway through the session,

perhaps more than once, to mix up discussions and add different perspectives -- please be prepared for the format of these to change slightly over the term as we learn how to work together in the most generative ways!) In general, you'll have 5-6 peers in your small groups, and you'll be tasked with moderating the discussions, asking questions to catalyze discussion, drawing links between your peers' comments and questions, and generally leading the discussion. You'll also be asked to report back to the full class on key insights from these discussions -- questions that might be relevant to the class as a whole or comments that were surprising or illuminating, points of agreement or divergence, etc.

You'll be asked for a self-assessment of your moderation of these sessions, so will need to think critically and carefully about moderation styles, what generates good conversations, and how to engage with your peers across perspectives and fields.

****See Appendix 1 at end for tips on facilitating/moderating (adapted from one of Prof Kate Neville's research assistants at end of syllabus)****

Individual one-page reflections on weekly readings (only 4 in all; due weekly) – 20%

You will be expected to reflect 4 times on one (1) aspect of any of the readings required for our in-person classes.

- Think of the reflection more as **'wondering' about a point mentioned in the reading**. The reflection will be no more than one-page double-spaced (with 11-12 pt. font, and margins no smaller than .75 inches). You will begin by clearly describing the aspect in question from the reading (for example, a point raised by Sarewitz in his "Science and Environmental Policy: An Excess of Objectivity" [allot no more than a 1/3 of the page to that], and one fully developed critical inquiry into the author's point [the remaining portion of page] (for example, what question does the point raise for you? Does the author's point relate to another point raised in previous readings? What seems missing from the analysis?, etc. For a critical analysis to be 'fully developed' (as much as is possible on one page), try to consider the possible challenges or responses to your query; you need not answer your query, just wonder about it (further explanation and examples will be shared in class).
 - **NOTE:** critical inquiry is not the same as critiquing. You are not being asked to review the work (find what is wrong or right about the piece), but to reflect on an aspect the reading raises.
 - **NOTE:** this is NOT a summary of the article either.
- The reflections will be handed in as either a printed hard copy or paper uploaded on Quercus before the start of the class whose paper is tied to the reflection. Marks will be assigned, and papers returned by the following class. **Evaluation** will be based on **clarity in describing** aspect of paper in question, **evidence of critical thinking** on that aspect, **writing style & mechanics**.
- The **aim** of this exercise is to have you engage more deeply with readings, to facilitate my gauging your inquiry processes on readings, and suggesting further lines of investigation, and to help you develop skills in writing clearly and concisely (not as easy as it sounds, but crucial for higher academic studies!)
- You will base your class engagement – leading a discussion on your reflection.

Individual Assignment - Communicating a burning issue – 20% (due week 9)

This is a short, individual less-conventional assignment focused on course content and interdisciplinary communication. You will communicate a burning environmental issue or question you have related to environmental decision-making.

- A **'burning issue' is defined** as an important subject that people are arguing about or discussing, such as: climate inaction / Earth-human relationships / green [which includes peaceful/participatory/just] transition and governance / global South concerns / ethics / values / economics / hope / the role of art / knowledge systems [other than Western mathematico-rational]). Choose one and communicate it.
- While conventional writing options (see below) are acceptable, **and in keeping with our theme on multiple ways of knowing**, you are encouraged to convey your burning issue using non-conventional methods, such as artwork, poetry, music, drama, ritual; you may choose one of the following formats (an alternate format of your choice is possible with my permission):
 - i. A **blog** post for an interdisciplinary or policy-focused website (i.e., the Washington Post's Monkey Cage, the Center for Global Development's web series, the Wilson Center's New Security Beat, The Conversation, etc.),
 - ii. An **op-ed** for a newspaper or other media outlet,
 - iii. A **proposal/plan** for an online interdisciplinary conference or workshop on a topic of current concern,
 - iv. A **ritual** that mourns the loss of something related to the environment,
 - v. A **poster** (i.e.: one inviting people to participate in a town-hall meeting) focused on taking new avenues on the environment,
 - vi. An original **poem, piece of music** (will need to be performed), **work of art**, or (short) **play** that conveys your burning issue.
- For purely **written conventional assignments** (blog, op-ed, proposal), your text should be roughly 1500-2000 words. Shorter is fine, although usually more challenging!
 - Most *New Security Beat* articles are 1800 words, most *Science* policy forums are 1700-2000 words, and most Monkey Cage posts are ~1000-1200 words. Op-eds generally are 800-1000 words. If you need a few more words for your assignment, that's fine too, but try not to go much over 2000 words (that should give you a sense of the scope of your piece). Notwithstanding the above, if you are writing an op-ed, stick to the lower word count.
- If your work is a **non-conventional written ritual, a poem, artwork, drama, or musical piece**, the above text lengths do not apply. However, despite the old adage, 'a picture paints a thousand words,' without some explanation behind the work, assessing these works will be difficult. For this reason, a 300-500-word (perhaps more depending on the medium) description of your work, its rationale and intent will be required. Please see me to decide on what precisely will be needed.
- In all instances above, you are to:
 - i. Specify the outlet you are writing for (for conventional written submission), the audience, for all other works,
 - ii. Cite sources using the citation style that is appropriate to the outlet you choose. If no citations are generally used in the outlet you choose, e.g., in op-eds, poem, please include footnotes or endnotes, so I can track your sources,
 - iii. (continuing from the previous bullet) Draw on course readings as much as possible,
 - iv. Write in the style or make use of art appropriate to your chosen outlet/audience.

- The **aim** of this exercise is to help you convey an issue demonstrating some understanding of the diversity of ways people communicate messages and possible barriers experienced by others in receiving messages.

Group Assignment – Project Imaginarium – 20% (due week 11)

Imagine one aspect of the future that is just, regenerative and/or sustainable for Earth and its multitude of communities and entities. Try to be as detailed and specific as possible when specifying your Imaginarium: energy (for home, office, industry etc. ...); transportation (again, home, industry, public, etc.); industry (i.e.: throughput); architecture (residential, other); urban planning/land management (this is broad, so it too would need to be narrowed down); agriculture (such as regenerative); an issue in economics, governance, forestry, (and so on). You are to describe or represent in some medium what you imagine (how that aspect of the future looks, operates) and discuss it. Specifically:

1. While there is no limit to what can be imagined, when considering aspects like technology in regard to your project, ground your vision in that which is current or at least plausible in the near future (a George Jetson flying saucer is neat, but pie in the sky at the moment – although who knows what energy and materials it uses and whether those are sustainable 😊! Same goes for dilithium crystals for Trekkies out there 🙌).
2. Your group will present your Imaginarium Project to the class (week 11; maximum 20 minutes) covering four things:
 - i. When you foresee it coming into practice or built,
 - ii. Why it will be good for Earth and its multitude of communities and entities,
 - iii. What steps (likely an iterative process) will be needed from now until then to make it happen (and the challenges [working with communities mainly] presented along the way – and how you foresee getting around them),
 - iv. How your Imaginarium addresses one or more aspects raised in our readings and/or guest lectures.
3. Be sure to hand in to me a page citing sources used to help you imagine your project.
4. Grading for this assignment will be based on **content** (how well the assignment conforms to the above criteria and how well it follows the three UofT 3MT judging criteria, with each component weighted equally: **comprehension; engagement; and communication**.
 - **Comprehension**
 - Did the presentation: help the audience understand the research/project? Follow a logical sequence?
Did the speaker: clearly outline the nature and aims of research/project? Did speaker clearly indicate what was significant about this research?
 - **Engagement**
 - Did the presentation make the audience want to know more? Did the speakers: convey enthusiasm for their work? Capture and maintain their audience's attention? Avoid trivializing or "dumbing down" their research? Would the audience want to know more about the speaker's research?
 - **Communication**
 - Was the presentation communicated in language appropriate for non-specialists? Did the speaker: use sufficient eye contact and vocal

range? Maintain a steady pace and a confidence stance? Avoid scientific jargon? Explain terminology that needed to be used? Provide adequate background information to illustrate points?

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, norms and – as the global pandemic has shown us – 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. Appolloni, or Simon 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

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

Appendix #1 – How to Moderate Meetings

What does 'moderating' mean?

- If you have ever attended a panel discussion at a conference, a debate or a webinar, you have seen a moderator. The moderator is like a *hiking trail*: guiding people in an interesting direction, helping avoid them getting lost, and occasionally pointing out interesting things along the way. But you're not a tour guide -- you're steering the hike, but you're not providing the commentary.
- The moderator's main role is to keep the conversation lively, on topic and balanced.
- A moderator needs to "read the room". If occasionally someone wanders off the trail, it's okay to encourage them back to it. But if people start leaving the hiking trail en masse, it means the trail is no longer taking them in a direction they want to go.

How can I be a good moderator?

- Be present, engaged, and attentive. Sit/stand comfortably. It's not rocket science, and it also does not have to be perfect.
- Your goal is to facilitate the conversation: we want to reflect on seminar content, dive deeper in the specific topic, and hear people's original ideas, while also meeting peers!
 - If someone answers with a short, vague answer, you can say "Yes, thank you for sharing. We have a bit more time, would you be able to elaborate on that point?"
 - If someone goes off track, you can gently bring back the conversation "This is a very interesting point, but I think it's a little beyond our scope. Could we focus on the initial question, and maybe talk about your point at the end if we have time?"
- Balance is crucial: some folks speak more than others, even though everyone in the class has something interesting to say. Try to pay attention to whom has already spoken a few times and whom has never been able to speak. Notice if the conversation becomes dominated by a smaller group and do your best to restore balance.
 - It is okay for you to say: "Hey [peer name], I think you spoke a few times already. Let's go first to those who haven't spoken and get back to you afterwards!" - it's not rude, it's your "job"!
 - Use your judgment for when to intervene, and when to let things go. This can be hard to do, so do reflect afterwards on whether your judgment calls were effective.
- You don't need to know the answers. If a colleague asks a question, you can answer as a student, open it up to everyone to see if anyone has the answer, and say "It seems like none of us know the answer here, I'll write it down and bring it back to the whole group". Moderation works better if the moderator *doesn't* try to provide the answers.
 - Don't feel you need to fill all the silences. Sometimes people need space to think before they speak. But if the silence drags on, be prepared to offer another prompt to get things going again.

- You can establish a system that works for you: you might have those who want to speak raise their hand, or indicate that they'd like to intervene by putting a note in the chat, etc.... whatever works for you, and allows people to have a chance to speak without interrupting each other.
- You are not expected to be an 'expert' -- just an engaged peer who is making sure the conversation has a direction, is participatory, and is coherent.

Appendix #2 – Suggestions for further reading and viewing

Economics/commerce and environment

Hawken, Paul. *The Ecology of Commerce: A Declaration of Sustainability*. New York: Collins Business, 1993.

Jackson, Tim. *Prosperity without Growth: Economics for a Finite Planet*. London: Earthscan, 2009.

Korten, David. *When Corporations Rule the World*. West Hartford, Connecticut: Kumarian Press, 1995.

Schumacher, E.F. *Small is Beautiful: Economics as if People Mattered*. Vancouver: Hartley and Marks, 1999.

Victor, Peter. *Herman Daly's Economic for a Full World: His Life and Ideas*. New York: Routledge, 2022.

Ethics and environment

Appolloni, Simon. *Convergent Knowing: Christianity and Science in Conversation with a Suffering Creation*. McGill-Queen's University Press, forthcoming, November 2018.

Berry, Thomas. "Ethics and Ecology." Paper delivered to the Harvard Seminar on Environmental Values, Harvard University, 9 April 1996. Accessed June 2013.

<https://intuerifarm.wordpress.com/philosophy/ethics-and-ecology-by-thomas-berry/>

Berry, Thomas. *The Great Work: Our Way into the Future*. New York: Bell Tower Publishing Group, 1999.

Boff, Leonardo. *Cry of the Earth, Cry of the Poor*. Translated by Phillip Berryman. Maryknoll, NY: Orbis Books, 1997.

Cheney, Jim, and Anthony Weston. "Environmental Ethics as Environmental Etiquette: Toward an Ethics-Based Epistemology." *Environmental Ethics* 21 (Summer 1999):115–34.

Cuomo, Chris J. "Getting Closer: Thoughts on the Ethics of Knowledge Production." Accessed August 2013. <http://fore.research.yale.edu/disciplines/ethics/essays/>.

Garvey, James. *The Ethics of Climate Change: Right and Wrong in a Warming World*. London: Continuum, 2008.

Guha, Ramachandra. "The Environmentalism of the Poor." In *Varieties of Environmentalism: Essays North and South*, edited by Ramachandra Guha and J. Martinez-Alier, 3–21. London: Earthscan Publications, 1997.

Jenkins, Willis. *The Future of Ethics: Sustainability, Social Justice, and Religious Creativity*. Washington DC: Georgetown University Press, 2013.

Leopold, Aldo. *A Sand County Almanac: With Essays on Conservation from Round River*. New York: Ballantine Books, 1966.

Scharper, Stephen Bede. *For Earth's Sake: Toward a Compassionate Ecology*. Edited by Simon Appolloni. Toronto: Novalis Publishing Inc., 2013.

Schweitzer, Albert. *Albert Schweitzer: Essential Writings*. Selected with an Introduction by James Brabazon. Maryknoll, New York: Orbis Books, 2005.

Waldau, Paul and Kimberly Patton (editors). *A Communion of Subjects: Animals in Religions, Science and Ethics*. New York: Columbia University Press, 2006.

Psychology (includes topic of eco-anxiety) and environment

Davenport, Leslie. *Emotional Resiliency in the Era of Climate Change: A Clinician's Guide*. Philadelphia: Jessica Kingsley Publishers, 2017.

Frankl, Victor E. *Man's Search for Meaning*. Boston: Beacon Press, 2006 (original publication 1959).

Kelsey, Elin. *Hope Matters: Why Changing the Way We Think Is Critical to Solving the Environmental Crisis*. Vancouver: Greystone Books, 2020.

Louv, Richard. *Last child in the woods: saving our children from nature-deficit disorder* (Updated and Expanded.). Algonquin Books of Chapel Hill, 2008.

Macy, Joanna and Chris Johnstone. *Active Hope: How to Face the Mess We're in without Going Crazy*. Novato, California: New World Library, 2012.

National Forum and Research Report (2012). "The Psychological Effects of Global Warming on the United States: And why the U.S. mental health care system is not adequately prepared." Available at: <https://www.nwf.org/Educational-Resources/Reports/Archive>

Ray, Sarah Jaquette. *A Field Guide to Climate Anxiety: How to Keep Your Cool on a Warming Planet*. Oakland: University of California Press, 2020.

Roszak, Theodore; Gomes, Kanner, A. D., *Ecopsychology: restoring the earth, healing the mind*. Sierra Club Books, 1995.

Wray, Britt. *Generation Dread: Finding Purpose in an Age of Climate Crisis*. Toronto: Alfred A. Knopf Canada, 2022.

Religion and environment

Appolloni, Simon. "The Roman Catholic Tradition in Conversation with Thomas Berry's Fourfold Wisdom." *Religions* 6 no. 3 (2015): 794–818, doi:10.3390/rel6030794.

Appolloni, Simon. "Wondering about Wonder as a Possible Antidote to Our Violence against Earth." In *Advancing Nonviolence and Social Transformation: New Perspectives on Nonviolent Theories*. Edited by Heather Eaton and Lauren Michelle Levesque, 265-280. Sheffield, UK.

Appolloni, Simon and Heather Eaton. "Religions and Ecology in Canada," *Alternatives Journal*, 1 March, 2016.

Berry, Thomas. *The Sacred Universe: Earth Spirituality, and Religion in the Twenty-First Century*. Edited by Mary Evelyn Tucker. New York: Columbia University Press, 2009.

Berry, Thomas. *The Christian Future and the Fate of Earth*. Edited by Mary Evelyn Tucker and John Grim. Maryknoll, NY: Orbis Books, 2009.

Delora, Vine. *God is Red: A Native View of Religion*. Fulcrum Publishing, 1994.

Moe-Lobeda, Cynthia. *Resisting Structural Evil: Love as Ecological-Economic Vocation*. Fortress Press, Minneapolis, 2013.

Taylor, Sarah McFarland. *Green Sisters: A Spiritual Ecology*. Cambridge Mass.: Harvard University Press, 2007.

White Jr, Lynn. "The Historical Roots of Our Ecologic Crisis." In *Worldviews, Religion, and the Environment: A Global Anthology*, edited by Richard C. Foltz, 30–7. Belmont, Calif.: Thomson Wadsworth, 2003.

Sustainability and environment

Angus, Ian. *Facing the Anthropocene: Fossil Capitalism and the crisis of the Earth System*. New York: Monthly Review Press, 2016.

Boyd, David R. *The Optimistic Environmentalist: Progressing Toward a Greener Future*. Toronto: ECW Press. 2015.

Carson, Rachel. *Silent Spring*. New York: Mariner Book – Houghton Mifflin Company, 2002/1962.

Cole, R., Robinson, J., and Westerhoff, L. "Regenerative Sustainability: Rethinking Neighborhood Sustainability", in Moore, S. ed, *Pragmatic Sustainability: Theoretical and Practical Tools*. 2nd edition. London: Routledge. 2016.

Gold, Lorna. *Climate Generation: Awakening to Our Children's Future*. New York: New City Press, 2019.

Hathaway, Mark, and Leonardo Boff. *The Tao of Liberation: Exploring the Ecology of Transformation*. Maryknoll, NY: Orbis Books, 2009.

Hawken, Paul. *Blessed Unrest: How the Largest Social Movement in History is Restoring Grace, Justice, and Beauty to the World We Make Things*. London: Penguin Books, 2007.

Hawken, Paul, editor. *Drawdown: The Most Comprehensive Plan ever Proposed to Reverse Global Warming*. New York: Penguin Books, 2017.

Klein, Naomi. *The Changes Everything: Capitalism versus Climate Change*. Toronto: Alfred A. Knopf Canada, 2014.

Klein, Seth. *A Good War: Mobilizing Canada for the Climate Emergency*. Toronto: ECW Press, 2020.

Mann, Michael. *The New Climate War: The Fight to Take Back Our Planet*. New York: Public Affairs, 2021.

McDonough, William and Michael Braungart. *Cradle to Cradle: Remaking the Way We Make Things*. New York: North Point Press, 2002.

McKibben, Bill. *Enough: Staying Human in an Engineered Age*. New York, Houghton-Mifflin, 2003.

Shiva, Vandana. *Earth Democracy: Justice, Sustainability and Peace*. Cambridge, Mass.: South End Press, 2005.

Wallace-Wells, David. *The Uninhabitable Earth: Life after Warming*. New York: Tim Duggan Books, 2020.

Wright, Ronald. *A Short History of Progress*. Toronto: House of Anansi Press, 2004.

Science and environment

Ehrlich, Anne, and Paul Ehrlich. *Earth*. New York: Franklin Watts, 1987.

Frodeman, Robert. *Geo-Logic: Breaking Ground between Philosophy and the Earth Sciences*. New York: State University of New York Press, 2003.

Lovelock, James. *The Revenge of Gaia: Why the Earth is Fighting Back and How We Can Still Save Humanity*. London: Allen Lane, 2006.

Lovelock, James. *Gaia: A New Look at Life on Earth*. New York: Oxford University Press, 1982.

Mitchell, Alanna. *Sea Sick: The Global Ocean in Crisis*. Toronto: McClelland and Stewart, 2009.

Sale, Peter F. *Our Dying Planet: An Ecologists View of the Crisis We Face*. Berkeley: University of California Press, 2011.

Suzuki, David with Amanda McConnell. *The Sacred Balance: Rediscovering Our Place in Nature*. Vancouver: Greystone Books, 2002.

Swimme, Brian Thomas, and Mary Evelyn Tucker. *Journey of the Universe*. New Haven: Yale University Press, 2011.

Worldviews and environment

Devall, Bill, and George Sessions. *Deep Ecology: Living as if nature Mattered*. Layton, Utah: Gibbs Smith, 1985.

Merchant, Carolyn. *The Death of Nature: Women, Ecology and the Scientific Revolution*. New York: HarperCollins, 1976.

Midgley, Mary. *Gaia: The Next Big Idea*. London: Demos, 2001.

Orr, David W. *Earth in Mind: On Education, Environment, and the Human Prospect*. Washington, DC: Island Press, 2004.

Ruether, Rosemary Radford. "Ecofeminism and the Challenges of Globalization." In *Ecofeminism and Globalization: Exploring Culture, Context, and Religion*, edited by Heather Eaton and Lois Ann Lorentzen, vii–xi. Landham, Md.; Toronto: Rowman & Littlefield, 2003.

Ruether, Rosemary Radford. *New Woman/New Earth: Sexist Ideologies and Human Liberation*. New York: Seabury Press, 1975.

Wall Kimmerer, Robin. *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants*. Minneapolis, Minnesota: Milkweed Editions, 2013.

Film and Environment

The following is a short list of movies I have come across that impart adeptly one or more themes tied to the environment, all which provoke deeper reflection.

Don't Look Up, US 2022, dir. Adam McKay

Avatar, US 2009, dir. James Cameron

WALL-E, US 2008, dir. Andrew Stanton

Erin Brockovich, US 2000, dir. Stephen Soderbergh

The Milagro Bean Field War, US 1998, dir. Robert Redford

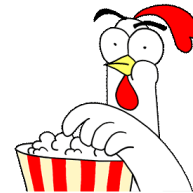
Mindwalk, US 1990, dir. Bernt Amadeus Capra

Babette's Feast, Denmark 1987, dir. Gabriel Axel

The Truman Show, US 1988, dir. Peter Weir

The China Syndrome, US 1979, dir. James Bridges

The Grapes of Wrath, 1940, dir. John Ford



Documentaries and Environment

Documentaries on the environment are too numerous to list here. Not all, despite their intentions, are completely factual, and some contain dated data. It is wise to approach all documentaries with a hermeneutic of suspicion (viewing the clip with some level of academic skepticism in order to reveal possible hidden meanings or undiscussed agendas). Below are samples of documentaries I have found worthwhile (I used the IMDB tag lines); let me know of others you found worth a look! The list is not, by far, comprehensive. Some might be of interest to you because of the tone concerning the environment they convey.

Anthropocene: The Human Epoch, directed by Jennifer Baichwal and Edward Burtinsky (2018); filmmakers document the impact humans have made on the planet in 20 countries.

Baraka, directed by Ron Fricke (1992); a collection of expertly photographed scenes of human life, religion and how we interact with life.

Before the Flood, directed by Fisher Stephens (2016); Leonardo DiCaprio looks at how climate change affects our environment and what society can do to prevent the demise of endangered species, ecosystems and native communities across the planet.

[The] Biggest Little Farm, directed by John Chester (2018); documentarian John Chester and his wife Molly work to develop a sustainable farm on 200 acres outside of Los Angeles.

[The] Corporation, directed by Mark Achbar and Jennifer Abbott (2003); looks at the concept of the corporation throughout recent history up to its present-day dominance.

Food Inc., directed by Robert Kenner (2008); an unflattering look inside America's corporate controlled food industry.

Kiss the Ground, directed by Joshua Tickell and Rebecca Harrell Tickell (2020); a revolutionary group of activists, scientists, farmers, and politicians band together in a global movement of "Regenerative Agriculture" that could balance our climate, replenish our vast water supplies, and feed the world.

[The] New Corporation: The Unfortunately Necessary Sequel, directed by Jennifer Abbott and Joel Bakan (2020); exposes how companies are desperately rebranding as socially responsible - and how that threatens democratic freedoms.

There's Something in the Water, directed by Elliott Page (2019); an example of environmental racism in Canada where Black and First Nations in Nova Scotia suffer disproportionate effect of environmental pollution.

This Changes Everything, directed by Avi Lewis (2015); narrated by Naomi Klein, this video looks at seven communities around the world with the proposition that we can seize the crisis of climate change to transform our failed economic system into something radically better.

[The] Race to Save the World, directed by Joe Gantz (2021); a documentary film following the lives of passionate and determined climate scientists, activists, and concerned citizens who are working to shift the world towards a clean energy future and to fight climate change before it's too late.

Sharkwater Extinction, directed by Rob Steward (2018); Filmmaker Rob Steward exposes the illegal fishing industry that threatens the survival of the world's sharks.

Water Warriors, directed by Michael Premo (2017); when an energy company begins searching for natural gas in New Brunswick, Canada, indigenous and white families unite to drive out the company in a campaign to protect their water and way of life.