

Environmental Sustainability (ENST 4810)
Course outline – Winter 2022

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Lecture/Lab/Tutorial: Fridays 8:30-11:30

The course

What is sustainability? Is it just being able to maintain yields of agriculture, fisheries, or natural resources? Or are we concerned about other non-target impacts of human activities?

With human society entering a sixth great mass extinction, out of control climate change, forest loss, and declining fisheries, amongst other issues, environmental sustainability in all its forms is increasing important to ensure resource use does not negatively impact critical earth systems processes, other resource users, and the ability of future generations to meet material needs.

This course will explore the development of environmental sustainability from ensuring adequate resource supply for human consumption to expanding concepts of sustainability to include impacts on biodiversity, climate, other resource users, and intergenerational sustainability.

Course Content

As a fourth-year seminar course students will be responsible for generating a portion of course readings and materials based on personal interest and career goals.

Marks Assignment

Final Exam (TBD)	25%
Assignments	
Participation (attendance, weekly readings, activity)	5%
Student-led class reading and discussion	5%
Written Assignment 1 (Due week 4)	5%
Quizzes (Weeks 4, 8, 12)	15%
Presentations (weeks before and after reading break)	20%
Term Paper (Due April 8)	25%

Textbook: Sustainability: A comprehensive foundation. Ed: Theis, T., Tomkin, J. 2018.

Additional Resources:

Weekly readings will be posted on mycourselink.

Late policy: All late assignments will be penalized 5% per day.

Marking Policy: Students who feel they have received a mark that is unfair relative to the perceived quality of the work they have done, be that on exams or assignments, are welcome to resubmit their work for re-evaluation providing they provide a rationale for doing so. However, there is no guarantee their mark will increase and the possibility exists that their mark may decrease upon re-marking.

Proposed Weekly Topics

Week	Topic	Learning Targets
1	What is sustainability?	Definitions of sustainability
2	A brief history of sustainability	Anthropocene; Bruntland commission; Rio earth summit
3	Growth Paradigm	Growth paradigm; Environmental kuznets curve;
4	Sustainability Indicators	Maximum sustainable yield; elements of sustainability
5	Energy Part 1	Energy definition; energy sources over time; CO2
6	Energy Part 2	World energy demand; sources of sustainable energy
7	Water	Hydrological cycle; water consumption; water pollution
8	Agriculture	Agricultural land use; land use per capita
9	Green Building	Energy consumption of buildings; LEED Certification
10	Sustainability Planning and Governance	Sustainable development; role of government
11	Sustainability, economics, global commons	Global commons; env. Economics; externalities
12	Environmental Justice	Modern env. Movement; Indigenous peoples and Env. Justics