



Environment, Resources, and Sustainable Development

An introduction to sustainable practices

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DESCRIPTION

This course is designed to introduce students to the policies and practices of environmental resource management and sustainable economic development. Discussions of human impacts on the environment will be applied to the examination of resources, such as water, energy, forestry, and fisheries, and urgent environmental issues such as climate change and urban development. Local field trips to local watersheds and key sites of urban development will be used to illustrate the policies and practices of environmental management and sustainable development in the Vancouver region.

The course is organized around a series of modules, for each of which there will be a local field trip to explore issues in sustainable development in the Vancouver region. Each field trip will be supported by in-class delivery of content and group discussions. Students will form groups and be expected to write a brief report at the end of each module. This report should place the field trip into the context of the course content for that module.

To support the field trips, in class we cover some of the concepts related to sustainability and the management of resource systems and human-environment interactions, including: sustainability; ecosystem services; resilience and tipping points; regulation and governance; etc. Students are expected to develop an understanding of these concepts, and be able to display this understanding in the assignments.

The course is designed to foster skills in understanding and processing issues of environment and sustainability that face us in our everyday professional and personal lives. We will develop these skills by analysing sustainability issues as they pertain to particular resources/sectors, also drawing on various forms of media (newsprint, podcast, video, etc.).

The *learning objectives* for the course are:

1. To acquire knowledge on key governance issues (management practices) in the sectors of fresh water governance, land and food production, urban development, and fisheries.
2. To develop skills in the critical analysis of environmental issues, including the ability to read between and across scientific and social perspectives.

READING

A selection of accessible, short readings will be used to support learning and understanding of real-world issues in sustainable practice (see course schedule below for details).

ASSESSMENT

1. Group field trip/module reports – 50%

We will embark on three field excursions in the Vancouver area. For each excursion, you will be required to write a trip report (in your groups assigned during the first class). The report should consist of more than simply repeating the field excursion; you are required to interact with the various presenters joining us on the excursions, to ask questions, and frame your report according to a key theme identified by your group. You will also be expected to structure your reports using some of the frameworks developed during the relevant modules of the course. You will be given some opportunities during class time to reflect on the field trips, to discuss your thoughts with me, and to begin drafting your report. See the course schedule (below) for due dates. Two of the reports will be submitted in groups; 1 report will be submitted individually. Each report should not exceed 1,000 words.

- Reports 1 & 2 (group submission) – 10% each (20% total)
- Report 3 (individual submission) – 30%

2. Final report on Vancouver Greenest City 2020 Plan – 30% (group submission)

In your pre-assigned groups, you will be responsible for conducting independent research in order to report on the progress being made towards *one* of the goals established in the City of Vancouver plan to become the Greenest City by 2020 (see <http://vancouver.ca/green-vancouver/greenest-city-2020-action-plan.aspx>). The goals to be addressed by each group will be established in the first class, and we will discuss various strategies and methodologies for completing the report. The report should not exceed 2,000 words and it is due at the end of the course.

3. Exam: presentations and peer assessment – 20% (groups)

In your groups, you will be required to present your Greenest City reports. Each group will also be assigned another group for which they must conduct a peer review (i.e. evaluate the report and the presentation).

Late assignments

Penalty: 5% (of existing grade) per day without prior permission and/or evidence of reasonable grounds (e.g. doctor's note).

Referencing

All work that you draw on must be cited appropriately. Select a referencing style, and stick to it – be consistent (e.g. APA or Harvard style (these are in-text “author, date” styles); Chicago style (this is a footnote style)).

Plagiarism

Plagiarism includes submitting the same paper for more than one course. Make sure you are familiar with and understand UBC's policies on plagiarism. See the on-line guide: <http://learningcommons.ubc.ca/guide-to-academic-integrity/>.

TEACHING AND LEARNING ACTIVITIES (TLAs)

- Lectures: the instructor will present concepts, theories, and case studies
- Field trips: visits to local sites of sustainability in action

- Group work: students will work together in-class on active learning/problem solving assignments, particularly in completing the field trip reports
- Research: students use relevant materials to write papers as set by the instructor.

Course schedule

Date	Topics	Reading & learning objectives
Module 1: Introduction - Approaching sustainability		
Wed July 22	1. Introduction What is sustainability? Introducing the Vancouver Greenest City 2020 Plan & the course assignments Formation of groups Introduction to field trip methods	Reading: <i>City of Vancouver (2012). Greenest City 2020 Action Plan.</i> Learning objectives:
Thurs July 23	2. Field excursion 1: Urban design and regenerative sustainability (CIRS & Wreck Beach)	<ul style="list-style-type: none"> • Explain environmentalism as a contemporary movement • Explain how building design can incorporate the concept of eco-health, with positive outcomes for humans and watershed management.
Fri July 24	3. Approaching resources, the environment, and sustainability A brief history of environmentalism Understanding resource issues in BC <i>TLA: The Alberta oil sands and environmental conflict</i> <i>TLA: Field trip 1 report write-up (groups)</i>	
Module 2: Vancouver and global environmental change		
Mon July 27	4. From globalized agro-industry to local food sovereignty Globalized agriculture & contributions to climate change Land grabbing and food sovereignty Urban agriculture – closing the loop for urban sustainability <i>TLA: Progress on group project on the Vancouver 2020 Greenest City Plan</i> <i>DUE: Submit field trip report 1</i>	City of Vancouver (2012) <i>Climate Change Adaptation Strategy</i> . Vancouver: City of Vancouver Learning objectives:
Tues July 28	5. Introducing environmental change in British Columbia: a threat to water security and fisheries? <i>Field excursion 3a: UBC Farm</i>	<ul style="list-style-type: none"> • Explain the links between different scales of food production and environmental impacts • To demonstrate critical thinking in relation to food consumption and globalized food production
Wed July 29	6. Adaptation to climate change in Vancouver Conceptualizing adaptive capacity Assessing vulnerability to climate change Adaptation in action: Vancouver's adaptation plan <i>TLA: Field trip 2 report write-up (groups)</i>	<ul style="list-style-type: none"> • Be able to illustrate the links between globalized food production and climate change • Explain climate change science • Be able to discuss adaptation to climate change and its assessment in relation to climate vulnerability
Thurs July 30	7. Field excursion 3b: Urban agriculture in Vancouver	
Fri July 31	8. No formal lecture: Group research for Greenest City report	
Module 3: Integrated socio-ecological systems		
Tues August 4	9. Ecosystem services and socio-ecological systems Introduction to ecosystem services Applying systems thinking to ecological	Reading: Millennium Ecosystem Assessment (2005) <i>Ecosystems and Human Well Being: Synthesis</i> . Island Press: Washington DC.

	problems <i>TLA: Progress on group project on the Vancouver 2020 Greenest City Plan</i> DUE: Submit field trip report 2	Learning objectives: <ul style="list-style-type: none"> • Apply systems thinking to the content of the field course. • Explain inter-dependence of resource sectors in terms of complex integrated ecological systems • Identify the opportunities and constraints of natural resources development in BC
Wed August 5 (ALL DAY)	10. Field excursion 3: Seymour-Capilano Water Treatment Centre and Lynn Canyon Ecology Centre	
Thurs August 6	11. Governing socio-ecological systems in BC: Forests <i>TLA: Field trip 3 report write-up (groups)</i>	
Module 4: Integrated resource governance for sustainable futures		
Mon August 10	12. Governing socio-ecological systems in BC: Fisheries <i>TLA: Progress on group project on the Vancouver 2020 Greenest City Plan</i>	Reading: Agrawal, A., & Lemos, M. C. (2007). A Greener Revolution in the Making? Environmental Governance in the 21st Century. <i>Environment</i> , 49(5), 36-45
Tues August 11	13. Final field observations for Greenest City group report	Learning objectives: <ul style="list-style-type: none"> • Synthesize environmental problems and issues of resources and sustainability
Wed August 12	DUE: Submit field trip report 3 (individual) DUE: Greenest City Report (groups)	
Thurs August 13	FINAL EXAM: Group presentations of Greenest City reports; peer review; submit reports	