

COASTAL SOCIAL-ECOLOGICAL SYSTEMS

ERS 375 (Fall 2016)

Tuesday and Thursday

1:00 pm – 2:20 pm

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Office Hours:
Wednesday 9:00 am – 11:00 am
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Overview

Approximately half the world's population lives within 60 kilometres of a coast. Yet, coastal spaces are some of the most threatened globally. There are many reasons for this situation, including unchecked development and urbanization, tourism pressure, the loss of important coastal habitat (like sea grass beds, coral reefs, dune systems, and coastal forests), the introduction of invasive species, and the effects of climate change (e.g., sea level rise, storm intensity).

Understanding the relationships among coastal systems and people reflects an important Canadian sustainability challenge, especially so because Canada has the longest stretch of coastline in the world. Much like water, energy, soils and wildlife, coasts are an important 'resource', and the livelihoods of millions of people in Canada and around the world are directly dependent on the ecosystem goods and services they provide. Science-based understandings of change will be integrated with policy and governance issues to study coastal regions as linked systems of people and nature, and to examine interdisciplinary sustainability challenges and opportunities.

Approach and objectives

The course will provide students with an opportunity to explore the relationships among people and the drivers of change that shape our coastal ecosystems. Course activities will involve a mix of lecture, discussion and assessment of coastal cases, both close to home (Ontario is a coastal province) and internationally. Case studies and assignments will emphasize current issues and drivers of change, as well as frameworks and approaches to understand and sustainably govern coastal systems. Guest speakers and multi-media (e.g., video) will be used to supplement course content.

At the end of this course, you should be able to:

- Understand the major challenges and drivers of coastal change (social and ecological) and the implications for management and governance;
- Consider and assess various applications (e.g., ecosystem-based management, marine protected areas, development of living shorelines, community conservation schemes) applied at local to national scales to deal with coastal change;
- Critically assess the assumptions underlying these applications, their limitations and the opportunities they provide for a transition to more social and ecologically sustainable coastal-marine contexts; and
- Apply an understanding of course material to coastal cases in Canada and internationally.

Required readings/texts

Berkes, F. 2015. Coasts for people: Interdisciplinary Approaches to Coastal and Marine Resource Management. Routledge, New York. 372 pp. (*Available through the UW bookstore*)

Lemmen, D.S., Warren, F.J., James, T.S. and Mercer Clarke, C.S.L. editors (2016): Canada's Marine Coasts in a Changing Climate. Government of Canada, Ottawa, ON, 274p. (*The full text will be posted and made freely available on the course LEARN site*)

Readings will be assigned on a weekly basis depending on the specific topic and issue being covered. Additional readings and resources may be posted on the LEARN site as appropriate, and in response to specific class interests. A useful popular media source on coastal issues is available here:

<https://www.hakaimagazine.com>

Course requirements and evaluation

This is a 0.5 credit weight course. Evaluation in this course is based on: (i) class engagement and participation; (ii) three critical reflection pieces on key issues covered in class; (iii) coastal case study 'needs assessment' – group and individual components. A summary of each expectation is provided below:

i) Class engagement (10%)

Assigning marks for class participation and engagement is intended to encourage you to approach the course in a professional and committed manner. The overall mark for engagement is based on your attendance and participation in discussions and course activities.

ii) Reflections (30%)

You will be responsible for completing three individual reflections based on key concepts covered in the class. The purpose of these assignments is to help you

highlight and critically reflect on what you think are the key ideas and concepts addressed in the class, and to apply these insights to the case study assessment project (see below). Additional guidelines on the reflections assignment will be provided. Each reflection is worth 10%.

iii) Coastal case study needs assessment (60%)

A key course outcome is the preparation of an integrated coastal assessment using a selected coastal region (i.e., a coastal region from the east or west coast of Canada, Canada's Arctic, the Canadian Great Lakes, or internationally in places like Vietnam, or Jamaica). Additional details (structure, content, length) about this report will be provided. In regards to your major report, keep in mind the following:

- A portion of the background research and analysis will be undertaken in small groups, typically built into class time and linked to the 'reflections' assignment (20% of the mark)
- The final products are: (i) an individual, in-class 'speed' presentation (10%) during the last week of class (you must be available for this class); and (ii) the major report itself that you produce individually (30%)
- Your final report is due on Monday, December 5th, 2016 (4:00pm).

Draft Course schedule

Specific themes and readings will be confirmed on a weekly basis in light of class interests and focus. General themes to be covered are as follows:

Week 1 (September 8th): Introduction and overview

Week 2 and 3: Coastal challenges and issues

Week 4 and 5: Coastal change through a social-ecological systems perspective

Week 5 and 7: Livelihoods and coastal development

Week 8 and 9: Coastal commons and resilience

Week 9 and 10: Management and governance approaches

Week 11 and 12: Coastal conservation

Week 13: Synthesis

**no class on October 11 (study day)*

Course policies

All assignments must be completed to receive a mark for the course.

Requests for extensions of any assignment must be done so in writing in advance of the assignment due date.

In the event of an illness, a supporting medical certificate completed by a physician must be provided.

Extensions may be granted for significant emergencies at the discretion of the Instructor.

Please consult the University's policy on plagiarism and academic misconduct. Please ensure you are aware of what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for your actions. If you are unsure whether an action constitutes an offense, or you need help in learning how to avoid offenses (e.g., plagiarism, cheating) or about "rules" for group work/collaboration, please see me. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline:
<http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>

Within ENV, those committing academic offences (e.g. cheating, plagiarism) will be placed on disciplinary probation and will be subject to penalties which may include a grade of 0 on affected course elements, 0 on the course, suspension, and expulsion. Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to Policy #70, Student Grievance:
<http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>