

## GEOG/ENST 3022 Environmental and Natural Resources January - April 2021

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Office Hours: Following Wednesday on-line, or by arrangement

Timetable: Monday and Wednesday on-line  
Wednesday on-line attendance is mandatory, 1:00pm – 2:30pm

### Description

We depend upon the natural world for the many resources that help maintain the standard of living we enjoy today. However, our seemingly insatiable appetite for these resources is driving us towards an environmental crisis.

Once the domain of economics, today's resource and environmental management strategies are increasingly interdisciplinary. Over the past half century, resource and environmental management has evolved from concepts of multiple use and integrated watershed management to integrated resource management, regional land-use planning and ecosystem-based management, and finally to integrated resource and environmental management. A theme that resonates through these various approaches is an environmental sensibility. However, have environmental concerns truly gained equal standing in decisions concerning resource extraction and use alongside economic and political concerns?

This course is designed to combine the theoretical with the pragmatic, seeking to integrate ideas about integrated resource and environmental management with the practical approaches and methodologies used professionally today. The course consists of weekly lectures introducing various ideas and approaches used in resource and environmental assessment, and weekly workshops in which you will apply the ideas and practices presented in lectures.

This course is a pre-requisite for GEOG/ENST 4003 Environmental Impact Assessment.

### Course Textbook

There is no textbook for this course.

Week of	Topics
January 11/13	<i>Part 1: The Normative Considerations of IREM</i> <i>Course Introduction</i> Lecture: Scope and Nature of Integrated Resource and Environmental Management (IREM). An Introduction to the Course. Selecting your project.
January 18/20	<i>Unit 1: Managing Resources and Human/Environment Interactions</i> Lecture: Describing the Planning Environment <i>Wednesday: Introducing the Projects. Assessing the Planning Environment.</i>
January 25/27	<i>Unit 2: Dealing with a Complex World</i> Lecture: Scoping and Scaling Issues and Impacts <i>Wednesday: Defining and organizing issues.</i>
February 1/3	<i>Unit 3: Foundations and Framings of Management Approaches</i> Lecture: Framing your Approach to the Policy/Program <i>Wednesday: How to Frame your Study. Modeling Options for your Assessment.</i>
February 8/10	<i>Unit 4: Incorporating Social and Environmental Justice in IREM</i> Lecture: Questions of Social and Environmental Justice in IREM <i>Wednesday: Incorporating Social and Environmental Justice into your Project.</i>
February 15-20	<b>Winter break. No class.</b>
February 22/24	<i>Putting this all Together I: Organizing the Normative Stage of an IREM</i> <i>Worksheets making up Part 1 due Monday by 1:00pm.</i> <i>Wednesday: Mid-term covering the Normative Stage of IREM.</i>
March 1/3	<i>Part 2: Strategic and Operational Considerations of IREM</i> <i>Unit 5: Whose 'Voice' Counts: Public Consultations in IREM</i> Lecture: Who to include in an IREM, When, How and Why <i>Wednesday: How to Approach Public Participation.</i>
March 8/10	<i>Unit 6: What knowledge(s) should you use in IREM?</i> Lecture: <i>What knowledge(s) should you use in resource and environmental management?</i> <i>Wednesday: Determining what Knowledge is Needed in an IREM.</i>
March 15/17	<i>Unit 7: Defining the Future</i> Lecture: How do you incorporate the future into IREM through visioning? <i>Wednesday: How to Approach the Issue of Future Visioning in IREM</i>
March 22/24	<i>Unit 8: Mapping out the Strategic Approach of an IREM</i> Lecture: <i>Organizing the Strategic Stage of an IREM</i> <i>Wednesday: Planning Implementation of an IREM Initiative.</i>
March 29/31	<i>Unit 9: Mapping out Monitoring and Evaluation of an IREM</i> Lecture: <i>Organizing Monitoring and Evaluation in IREM</i> <i>Wednesday: Planning Monitoring and, Evaluation of an IREM.</i>
April 5/7	<i>Putting this Together II: Reviewing the Strategic/Operational Considerations of an IREM</i> <i>Wednesday: Test on the Strategic/Operational Considerations of an IREM.</i>
April 12/14	<i>Worksheets making up Part 2 due Wednesday by 1:00pm.</i>

## Class Organization

The 'Monday' class will be asynchronous, and I will be introducing the week's materials in pre-recorded videos. You will be expected to have watched these videos before the Wednesday class. The Wednesday class will be a workshop based on the Monday's materials. In the workshop you will be break into groups according to the project you have selected to work on. You will then brainstorm and work on the specific section of the proposal pertaining to the week's topic. Attendance for the workshop classes is mandatory and one percent (one mark) will be deducted from your final grade for each class you miss.

The course itself is organized into two parts, reflecting the normative (preparatory) step and the strategic/operational steps of IREM. Each of these two parts have an associated set of assignments and a test. Yes, this means that there is work to be done weekly throughout the semester in this course. However, offsetting this is the fact that there is no final exam.

## The Case Study Proposal and Assignments

You will be required to choose between the three hypothetical proposals. These are presented in Appendix 1. The class will be evenly divided into these three proposal topics, so it is "first-come, first-served" in determining which case study you are ultimately assigned to. You will be working on your assignments in the weekly workshops. These assignments are meant to introduce you to both the theoretical and pragmatic side of resource and environmental management. You will be expected to produce a series of detailed assignments associated with the three steps in an IREM for the case study you are assigned to.

## Term Tests

Complimenting the assignments are two term tests. The first test, covering the normative steps in preparing an IREM will be held on February 24. The second test, covering the strategic and operational considerations of an IREM will take place on April 7.

These tests will be on-line. You will have 1.5 hours to complete the tests. These will consist of a series of three essay questions. You will be able to write the test any time on the specified day from 12:01am to 11:59pm. These tests will focus on the materials presented in the Monday lectures and NOT the workshops. These are designed to assess your understanding of the course materials. NOTE: Missing a test requires a doctor's certificate OR approval from the instructor prior to the test. Otherwise the student will be assessed a zero for that test.

## Deliverables: Dates and Grading

Course grading is based upon two sets of deliverables: the weekly assignments and the two tests. These are designed to support the other. All deliverables are mandatory. Failure to complete any of the tasks could result in the student failing the course. Dates and assignment of grades are summarized in the table below.

<i>Step</i>	<i>Task</i>	<i>Date of/Due date</i>	<i>Weighting</i>
Step 1. Normative	Mid-term Test	February 24	15%
	Assignment 1	February 22	30%
Step 2. Strategic/ Operational	End-of-term Test	April 7	15%
	Assignment 2	April 14	30%
Workshop Attendance			10%

### *Late Submissions of Assignments*

A late penalty of 2% per day will be charged to late submission. No assignments will be accepted after five days (including weekend days) and this means after the following Monday.

### *Grades*

In accordance with the Carleton University Calendar, the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	A = 85-89	A - = 80-84
B+ = 77-79	B = 73-76	B - = 70-72
C+ = 67-69	C = 63-66	C - = 60-62
D+ = 56-59	D = 53-56	D - = 50-52
F = Below 50	WDN = Withdrawn	ABS = Student absent from final exam
DEF = Deferred (See above)		
FND (Failed, no Deferral) = Student could not pass the course even with 100% on final exam.		
<u>Final grades are subject to the Dean's approval.</u>		

### *Deferred Assignments/Grades*

Only official deferrals petitioned through the Office of the Registrar will be honoured. Students who are unable to complete a final paper or write a final examination because of illness or other circumstances beyond their control or whose performance on an examination has been impaired by such circumstances may apply within five working days to the Registrarial Services Office for permission to extend a term paper deadline or to write a deferred examination. Permission can be granted only if the request is fully and specifically supported by a medical certificate or other relevant documents.

### *Drop/Withdrawal Date*

Please refer to the 2020-2021 Undergraduate Calendar for the final day that one is permitted to withdraw from a fall term course.

### *Written Assignments*

If you feel you need assistance in improving your writing skills, you are encouraged to get in touch early in the term with the Writing Tutorial Service (Room 229, Patterson Hall, <http://www.carleton.ca/wts/>).

### *Requests for Academic Accommodations*

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

#### *Pregnancy obligation*

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: [carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf](http://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)

#### *Religious obligation*

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, go to Equity Services: [carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf](http://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)

### *Academic Accommodations for Students with Disabilities*

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or [pmc@carleton.ca](mailto:pmc@carleton.ca) for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made.

### *Survivors of Sexual Violence*

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and its survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university visit: [carleton.ca/sexual-violence-support](http://carleton.ca/sexual-violence-support)

### *Accommodation for Student Activities*

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

### *Academic Standing and Conduct*

Students must familiarize themselves with the regulations concerning academic standing and conduct in the 2019-2020 Carleton University Undergraduate Calendar.

### *Retain Copies of Work Submitted*

Students are strongly advised to retain a hard copy (and electronic backup) of all assignments and term papers in the event of loss for whatever reason.

### *Student Life Services*

Student Life Services, located in Room 501 of the Unicentre, offers a wide range of programs and services to assist students in adjusting to academic life, in improving their learning skills, and in making academic and career decisions.

### *University Regulations Regarding Cheating and Plagiarism*

University regulations stipulate that any allegation of plagiarism, cheating or violations of examination conduct rules will be thoroughly reviewed. Each case must be reported to the Dean, who investigates each allegation. If there is no resolution following this investigation at the Dean's level, a tribunal will be appointed by the Senate to review the case and make a final decision.

Note on Plagiarism: Webster's Dictionary defines plagiarism as stealing. Plagiarism is the submission of someone else's writing/ideas/work as your own. All ideas presented which are not your own must be properly referenced. While forms of plagiarism may vary, each involves verbatim or near verbatim presentation of the writings or ideas of others' as one's own without adequately acknowledging the original source. Plagiarism includes (but is not limited to) copying from a book, article or another student, downloading material or ideas from the Internet, or otherwise submitting someone else's work or ideas as your own.

## Appendix 1. Choices for Your Proposal

You are to select one of the following hypothetical proposals and produce a proposed approach to undertaking a comprehensive resource and environmental evaluation of the proposal. You are not going to do the actual evaluation; you are simply going to outline what you would do and how you would go about doing this.

### *Proposal 1: Impacts of the Commercial Use of the 'Northwest Passage'*

As climate change continues to lead to the melting of the Arctic ice cap, the Canadian federal government has announced a call for proposals to examine the potential impacts of the opening of the 'Northwest Passage' to commercial shipping. This proposal is required to include an overview of potential issues associated with the opening of this passage through Canadian waters; an outline of how your firm would evaluate the potential environmental, social and cultural impacts of such activity; how your firm would organize effective and comprehensive monitoring and evaluation, public consultations (participation); and how you would implement your proposal (your timetable).

### *Proposal 2: A Water Export Strategy for Canada*

In light of growing water insecurity, the Canadian federal government has announced a call for proposals to examine the implication of operationalizing the Great Recycling and Northern Development (GRAND) Canal of North America as proposed by Newfoundland engineer Thomas Kierans first in 1959. The project would capture and make available for recycling the entire outflows of 11 rivers flowing into the Bay including the La Grande, Eastmain, Rupert, Broadback, Nottaway, Moose, and Albany Rivers. The GCNA would stabilize water levels in the Great Lakes and St. Lawrence River and improve water quality. However, most importantly, the GRAND Canal system would deliver new fresh water from the James Bay dyke-enclosure, via the Great Lakes, to many water deficit areas in Canada and the United States. The project was estimated in 1994 to cost C\$100 billion to build and a further C\$1 billion annually to operate, involving a string of hydroelectric dams to pump water uphill and into other water basins. However, the economic benefits resulting from the sale of water would more than provide Canada with tens of billions in revenues annually.

### *Proposal 3: An Agricultural Landbank for the Greater Golden Horseshoe Region*

As part of its *Future Urban Visions* series, The Canadian Association of Municipalities has announced a call for proposals to examine the appropriateness and challenges associated with creating an agricultural land bank to protect farmland in the Greater Golden Horseshoe Region that focuses on the Greater Toronto Area (GTA) but extends to Peterborough to the east, Waterloo to the west and, the Niagara Region to the southwest. This proposal is required to include an overview of potential issues associated with strategies for increasing local food security; an outline of how your firm would evaluate the potential environmental, social and cultural impacts of such activity; how your firm would organize effective and comprehensive monitoring and evaluation, public consultations (participation); and how you would implement your proposal (your timetable).