

GEOG/ENST 3022 Environmental and Natural Resources
September - December 2021

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Office Hours: Before or following Wednesday on-line, or by arrangement

Timetable: Wednesday and Fridays on-line
Wednesdays – Asynchronous videoed materials
Fridays – Live/Synchronous class; attendance strongly recommended

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 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, 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 and is strongly recommended for GEOG/ENST 4022 Regenerative Design & Development as well.

Course Textbook

There is no textbook for this course.

Week of	Topics
September 10	<p><i>Part 1: Normative Considerations of IREM</i></p> <p><i>Course Introduction</i></p> <p>Lecture: Scope and Nature of Integrated Resource and Environmental Management (IREM)</p> <p>An Introduction to the Course</p> <p><i>Wednesday: Introduction to the Projects and Worksheets</i></p>
September 15/17	<p><i>Unit 1: Managing Resources and Human/Environment Interactions</i></p> <p>Lecture: Describing the Planning Environment</p> <p><i>Wednesday: Worksheet 1. Introducing the Projects. Assessing the Planning Environment</i></p>
September 22/24	<p><i>Unit 2: Dealing with a Complex World</i></p> <p>Lecture: Scoping and Scaling Issues and Impacts</p> <p><i>Wednesday: Worksheet 2. Defining and Organizing Issues</i></p>
September 29/ October 1	<p><i>Unit 3: Foundations and Framings of Management Approaches</i></p> <p>Lecture: Framing your Approach to the Policy/Program</p> <p><i>Wednesday: Worksheet 3. How to Frame your Study. Modelling Options for your Assessment</i></p>
October 6/8	<p><i>Unit 4: Incorporating Social and Environmental Justice in IREM</i></p> <p>Lecture: Questions of Social and Environmental Justice in IREM</p> <p><i>Wednesday: Worksheet 4. Incorporating Social and Environmental Justice into your Project</i></p>
October 13/15	<p><i>Putting this all Together I: Normative Considerations of an IREM</i></p> <p><i>Friday: Mid-term test covering the Normative Stage of IREM</i></p>
October 20/22	<p><i>Part 2: Strategic and Operational Considerations of IREM</i></p> <p><i>Unit 5: Whose 'Voice' Counts and Public Consultations in IREM</i></p> <p>Lecture: Who to include in an IREM, When, How and Why</p> <p><i>Wednesday: Worksheet 5. How to Approach Public Participation</i></p> <p><i>Worksheets 1 through 4 are due Friday, October 22 by 1:00pm</i></p>
October 25-29	<p><i>Academic Break – No classes</i></p>
November 3/5	<p><i>Unit 6: What knowledge(s) should you use in IREM?</i></p> <p>Lecture: <i>What knowledge(s) should you use in resource and environmental management?</i></p> <p><i>Wednesday: Worksheet 6. Determining what Knowledge is Needed in an IREM</i></p>
November 10/12	<p><i>Unit 7: Visioning as a Tool in IREM</i></p> <p>Lecture: How do you incorporate the future into IREM through visioning?</p> <p><i>Wednesday: Worksheet 7. How to Approach the Issue of Visioning in IREM</i></p>
November 17/19	<p><i>Unit 8: Strategic Planning of an IREM</i></p> <p>Lecture: <i>Organizing the Strategic Stage of an IREM</i></p> <p><i>Wednesday: Worksheet 8. Planning Implementation of an IREM Initiative</i></p>
November 24/26	<p><i>Unit 9: Monitoring and Evaluation of an IREM</i></p> <p>Lecture: <i>Organizing Monitoring and Evaluation in IREM</i></p> <p><i>Wednesday: Worksheet 9. Planning Monitoring and, Evaluation of an IREM</i></p>
December 1/3	<p><i>Putting this Together II: Reviewing the Strategic/Operational Considerations of an IREM</i></p> <p><i>Friday: End-of-term test on the Strategic/Operational Considerations of an IREM</i></p>
December 10	<p><i>Worksheets 5 through 9 are due Friday, December 10 by 1:00pm</i></p>

Class Organisation

The 'Wednesday' class will be asynchronous, and I will be introducing the following week's materials in pre-recorded videos. You will be expected to have watched these videos before the 'Friday' class. The Friday class will be workshops based on the previous Wednesday's materials. These workshops will be organised into project meeting rooms where you will collaborate on that week's worksheet. In the real world, you will be expected to work in teams, and this is a valuable lesson in doing just that.

The course itself is organised into two parts, reflecting the normative dimension and the strategic/operational dimensions 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 Weekly Worksheets

You will be required to choose one of three hypothetical case studies. These are presented in Appendix 1. The class will be evenly divided into these three proposal studies, so it is "first-come, first-served" in determining which case study you are ultimately assigned to. You will be applying what you learn in the videoed lectures to the specific case study you have been assigned to through weekly worksheets. The objective here is to connect the theoretical and pragmatic sides of resource and environmental management.

Term Tests

Complimenting the worksheets are two term tests. The first test, covering the normative steps in preparing an IREM will be held on October 15. The second test, covering the strategic and operational considerations of an IREM will take place on December 3.

These tests will be on-line. You will have 1.5 hours to complete the tests. These will consist of a series of short-answer 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 worksheets and the two tests. These are designed to complement 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>Worksheets</i>	
Set 1: Worksheets One through Four (due: October 22)	30%
Set 2: Worksheets Five through Nine (due: December 10)	30%
<i>Course Exams</i>	
Mid-term test: Introduction and Units One through Four (October 15)	20%
End-of-term Test: Units Five through Nine (December 3)	20%
<i>Total</i>	<i>100%</i>

Late Submissions of Assignments

You are expected to meet your deadlines and I am going to impose severe penalties in order to encourage you to do so. Worksheet packages submitted:

1. Late (even one second past the due date) will incur an immediate 20% penalty in the grade. The submission time as recorded by the course BrightSpace will be accepted time of submission.
2. An additional five percent will be deducted for each day your assignment is late beginning with the second late day.
3. Assignments will not be accepted six days following the due day. You will receive a zero for that assignment.

I want you to take deadlines seriously. In this course, the assignments build on each other so it is imperative that you keep a steady pace through the semester.

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.

Final grades are subject to the Dean's approval.

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 2021-2022 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

Religious obligation/observation

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

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 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

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 2021-2022 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.

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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 in such an evaluation and how you would go about doing this.

Proposal 1: Assessment of the 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: Assessment of the Proposed GRAND Water Diversion

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 for the sale of water would more provide Canada with tens of billions in revenues annually.

Proposal 3: Assessment of the Wind Energy Program for Prince Edward Island

In 2008, the Prince Edward Island government released a Green Paper, *Securing our Future: A 10 Point Plan for Island Wind Energy*. This document outlined a strategy for shifting PEI away from fossil-fuel based energy to wind energy by the year 2020. The initial stated goal is to increase wind energy output to 500 megawatts by 2013 and to 1,000 megawatts by 2020. This Green Paper builds on the government's inaugural 2008 Speech from the Throne, in which the Government first called for the establishment of 500 megawatts of wind energy by 2013 as part of its environmental and economic strategic priorities. A further 350 megawatts of new production was planned to meet the 500-megawatt goal and yet another 500 megawatts to meet its target of 1,000 megawatts annual production by 2020. The Government of PEI requires an assessment of its wind energy program to date in order to design an update strategy for the continued realisation of self-sufficiency in Green energy by 2030.