

Department of Environment and Resource Studies
Faculty of Environment
University of Waterloo

ERS 215

Environmental and Sustainability Assessment I

Spring 2018

Mondays, 6:30 – 9:20 pm
Room: AL 113

Instructor:

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TAs:

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TA Office Hours: Online communication (starting with email)

Description:

This course is an introduction to the world of environmental assessment (EA). We will explore processes and techniques for incorporating environmental considerations in planning and evaluating proposals for future undertakings that may have significant social and ecological effects. The course provides an overview of the methodologies for the design and conduct of environmental impact studies. The main objective of this course is to introduce students to environmental assessment, with a focus on the origins, purposes, processes and gradual evolution of EA toward a sustainability-oriented framework, with particular reference to the Canadian federal environmental assessment regime.

Intended Learning Outcomes:

By the end of this course, students should be able to:

- Define the aims and objectives of environmental assessments, as well as key terms and concepts in EA
- Identify the role and relevance of EA as a potential venue that can contribute to sustainability;
- Describe the different steps and components of an EA process, particularly in Canada;
- Apply EA principles for best practices to case studies and critically analyze the strengths and weaknesses of environmental assessments; and
- Identify the important relationship between EAs and other environmental planning and management instruments (i.e., SEA, CEA, SA).

Approach:

Lectures will be used to provide an overview of key topics and also to highlight important themes. Key topics and themes will be elaborated on through in-class discussions and by regular attention to case studies. Assigned readings throughout the semester are critical for providing additional depth and breadth. Exams and assignments provide an opportunity for integrating key topics and themes, as well as for linking them with the broader scholarly literature on environmental assessment.

Website: <http://learn.uwaterloo.ca> (LEARN, ERS 215)

You will need to access the course website frequently, as some of the course material will be made available and managed through LEARN (Desire2Learn).

Required Textbook:

Noble, Bram (2014). **Introduction to Environmental Impact Assessment: a Guide to Principles and Practice**, 3rd Edition. Don Mills, ON: Oxford University Press.

Weekly readings are presented under the title "*Course Schedule*". Additional material will be presented in class and/or made available through the course website or library.

Information on using Waterloo LEARN

LEARN is a web-based course management system that enables instructors to manage course materials (posting of lecture notes, etc.), interact with their students (drop boxes for student submissions, on-line quizzes, discussion boards, course e-mail etc.), and provide feedback (grades, assignment comments etc.). The degree to which LEARN is utilized in a particular course is left to the discretion of the instructor and therefore, you may find a large variance in how LEARN is being used from one course to another.

Logging Into LEARN

Since LEARN is a web-based system, you will need a browser. Once you have started up your browser, type in the following URL: <http://learn.uwaterloo.ca>. Provide your Quest/WatIAM userid and password (case sensitive) to login. Once you have logged in, you should see a list of your LEARN courses under the Courses header bar. Clicking on the course name will take you to that course.

Multimedia Notes (DVDs, Videos, in-class internet-based videos, etc.).

Approximately 15% of course content is delivered through multi-media materials (DVDs, online audio or video clips), and ALL of this material is valid testing material. Therefore, each student should attend regularly and take comprehensive notes. If you miss a day when this material is shown, please arrange to obtain the notes from a classmate, and if possible, discuss these notes briefly with the note-taker. Most materials shown are the personal property of the instructor and some are available on the internet.

PowerPoint Viewer

The web addresses for Microsoft PowerPoint viewers (for those who do not have PowerPoint on their computers) is: <http://www.microsoft.com/download/en/details.aspx?id=13>

Course Schedule (topics might span more than one class):

	Date	Topic	Readings
Week 1	07- May	Course Outline and Introduction to EA and EIA In Canada	<p>Course Syllabus</p> <p>Chapter 1: Aims and Objectives of EIA</p> <p>Morgan, Richard K (2012). Environmental impact assessment: the state of the art, <i>Impact Assessment and Project Appraisal</i>, (30):1, 5-14.</p> <p>Hanna, Kevin S. (Ed.). 2009. Environmental Impact Assessment: Practice and Participation. (Chapter 2: Progress and Uncertainty: The Evolution of Federal Environmental Assessment in Canada). 2nd Edition. Don Mills, ON: Oxford University Press.</p>
Week 2	14- May	Recent Changes to EA in Canada – Guest Lecture* by Dr. Bob Gibson	<p>Chapter 2: Overview of EIA in Canada</p> <p>Gibson, Robert B. (2012). In full retreat: the Canadian government's new environmental assessment law undoes decades of progress, <i>Impact Assessment and Project Appraisal</i>, (30):3, 179-188.</p> <p>Bill C-69: The <i>Impact Assessment Act</i> (first 90 pages). The key sections are 22 and 63, and perhaps 92-95.</p> <p>Brief by Dr. Robert Gibson</p>
Week 3	22- May	Systems thinking and EA	<p>Kay, J. (2008). An Introduction to Systems Thinking. in Waltner-Toews, Kay and Lister (eds.) <i>The Ecosystem Approach: Complexity, Uncertainty, and Managing for Sustainability</i>. Columbia University Press. New York, pages 1-13 (check LEARN, week 3)</p> <p>Waltner-Toews, D., and J. Kay (2005). The evolution of an ecosystem approach: the diamond schematic and an adaptive methodology for ecosystem sustainability and health. <i>Ecology and Society</i> 10(1): 38. [online] URL: http://www.ecologyandsociety.org/vol10/iss1/art38/</p>
Week 4	28- May	The EA process I: • Screening • Scoping – Guest Lecture* by Elaine Ho	<p>Chapter 4: Screening Procedures</p> <p>Chapter 5: Scoping and Environmental Baseline Assessment</p> <p>IAIA and IEA. (1999). Principles of Environmental Impact Assessment Best Practice. Retrieved October 20, 2012, from http://www.iaia.org/publicdocuments/special-publications/Principles%20of%20IA_web.pdf</p>
Week 5	4- Jun	The EA process II: • Identifying and Predicting Impacts • Methods used • Impact Significance	<p>Chapter 3: Tools Supporting EIA Practice</p> <p>Chapter 6: Predicting Environmental Impacts</p> <p>Chapter 8: Determining Impact Significance</p>
Week 6	11- Jun	First exam (in-class)	<p>MONDAY</p> <p>Please arrive on time</p>

Week 7	18-Jun	Public Participation, Indigenous issues and the Crown's Duty to Consult – Guest Lecture* by Jessica and Caroline	Chapter 10: Public Participation in EIA Stevenson (1996). Indigenous Knowledge in EIA. Arctic, 49(3), 278-291. André, P., B. Enserink, D. Connor and P. Croal (2006). Public Participation International Best Practice Principles. Special Publication Series No. 4. Fargo, USA: International Association for Impact Assessment. Retrieved from http://www.iaia.org/publicdocuments/special-publications/SP4%20web.pdf
Week 8	25-Jun	Follow-up and Monitoring and A Policy-Maker's Perspective on EA – Guest Lecture* by Jeff Balsdon and Patricia Hyunh	Chapter 9: Follow-up and Monitoring Morrison-Saunders A., R. Marshall and J. Arts (2007). EIA Follow-Up International Best Practice Principles. Special Publication Series No. 6. Fargo, USA: International Association for Impact Assessment. Retrieved October 20, 2012, from http://www.iaia.org/publicdocuments/special-publications/SP6.pdf Noble, B., & Storey, K. (2005). Towards increasing the utility of follow-up in Canadian EIA. Environmental Impact Assessment Review, 25(2), 163-180.
Week 9	9-Jul	Cumulative Effects Assessment (CEA) (Potential Guest Lecture* to be confirmed)	Chapter 11: Cumulative Environmental Effects Assessment Dunkier, Peter. & Greig, Lorne (2006). The Impotence of Cumulative Effects Assessment in Canada: Ailments and Ideas for Redeployment. Environmental Management, 37(2), 153-161. Canter, Larry, & Ross, Bill. (2010). State of practice of cumulative effects assessment and management: the good, the bad and the ugly. Impact Assessment and Project Appraisal, 28(4), 261-268. Additional reading: Hegmann, G., Cocklin, C., Creasey, R., Dupuis, S., Kennedy, A., Kingsley, L., . . . Stalker, D. (1999). Cumulative Effects Assessment Practitioners Guide. Retrieved October 20, 2012, from http://www.ceaa.gc.ca/43952694-0363-4B1E-B2B3-47365FAF1ED7/Cumulative_Effects_Assessment_Practitioners_Guide.pdf
Week 10	16-Jul	Beyond the project level: Strategic Environmental Assessment (SEA) and Sustainability Assessment (SA)	Chapter 12: Strategic Environmental Assessment IAIA. (2002). Strategic Environmental Assessment Performance Criteria. Retrieved October 20, 2012, from http://www.iaia.org/publicdocuments/special-publications/sp1.pdf PCO and CEAA. (2010). Strategic Environmental Assessment: The Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals Retrieved October 20, 2012, from http://www.ceaa.gc.ca/Content/B/3/1/B3186435-E3D0-4671-8F23-2042A82D3F8F/Cabinet_Directive_on_Environmental_Assessment_of_Policy_Plan_and_Program_Proposals.pdf Gibson, Robert B. (2006). Sustainability assessment: basic components of a practical approach. Impact Assessment and Project Appraisal, 24(3), 170-182. Pope, Jenny. (2006). Editorial: What's so special about sustainability assessment? Journal of Environmental Assessment Policy and Management, 8(3), v-x.

Week 11	23-Jul	Multiple perspectives on EA in Canada and Exam Review	Main topic: Issues with EA and how to improve it Exam review
	25-Jul	Second Exam (in-class)	*MONDAY*

Note on Guest Lectures* = The guest lectures are subject to change in case of unforeseen circumstances. Due to the nature of guest lectures, lecture slides may not be available a week before the class but all efforts will be made to make the lecture slides available as soon as possible (either before or immediately after the guest lecture class).

Course and University Policies

Policy on student email: Most information students need is found in this course outline: please review it carefully before contacting the instructor or TAs. Discussion forums are available in LEARN and are the preferred means of answering procedural questions. Face-to-face contact time is available through instructor office hours, and during and after lectures. TA help is available through email communication.

Please remember these policies when sending email to the instructor or TAs:

- Always send emails from your University of Waterloo email account or from the email tool within UW LEARN.
- All emails should have the following subject line: "ERS 215: <<insert your subject here>>"
- The instructor should be copied on all course-related email communication with the TAs (TAs are under instructions not to respond to emails that do not cc the instructor).
- If your email includes an attachment, describe the contents of the attachment in the email.
- Be polite, respectful and professional.
- Proofread your email and use correct grammar and punctuation.
- Always use an appropriate greeting, and sign your full name.
- Allow the instructor or TA at least two business days to respond before sending the request again. Mark all urgent matters "URGENT" in the subject line.
- The instructor and TAs reserve the right to reply to you along with the entire class, if the question is deemed to be relevant to other students on the course. Alternatively, we may post the question and response in a discussion forum on LEARN. The questioner's identifying personal information will be removed from such emails and announcements.

Attendance:

Attendance in class is HIGHLY RECOMMENDED, but it is at your discretion. There is often extra content in the notes displayed in class vs. the notes posted on the course webpage (e.g., discussion points or questions asked of the class, graphics-heavy images such as maps or diagrams), and **all in-class discussions are valid "testable" materials**. In addition, all A/V materials (e.g., DVDs screened in class) are valid, "testable" materials, so complete notes should be taken for each lecture and each video screened.

Missed Tests:

All tests are mandatory, and thus, every effort should be made to attend each test. The only exceptions to this are those students who have a valid medical reason, personal or family emergency, etc.:

1. *Valid medical reason such as illness or accident (appropriate proof such as a Doctor's note is required);*
2. *Personal or family emergency, death in the family, etc. (with suitable proof where possible);*

If you know in advance that you will not be able to make a test, please contact the instructor as far in advance as possible to discuss alternatives.

If you miss a test:

1. Communicate to the instructor the reason why you missed the quiz.
2. IMPORTANT! As soon as possible, please obtain a valid medical, counselor's or other 'proof of absence' note explaining the reason for your absence, degree of incapacitation, dates covered by the note, etc.
3. Please make a copy of this note and give the copy to your instructor by hand or scanned and sent by email to dkirchho@uwaterloo.ca.

Note for students with disabilities: The AccessAbility Office located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AccessAbility Office at the beginning of each academic term.

Mental Health: The University of Waterloo, the Faculty of Environment and our Departments consider students' well-being to be extremely important. We recognize that throughout the term students may face health challenges - physical and / or emotional. Please note that help is available. Mental health is a serious issue for everyone and can affect your ability to do your best work. Counselling Services (www.uwaterloo.ca/counselling-services) is an inclusive, non-judgmental, and confidential space for anyone to seek support. They offer confidential counselling for a variety of areas including anxiety, stress management, depression, grief, substance use, sexuality, relationship issues, and much more.

Religious Observances:

Student needs to inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.

Evaluation:

Your final grade will be based on two assignments and two in-class exams. The professor determines the content and establishes the grading rules for all assignments, tests, and any quizzes. The teaching assistants will assist the instructor with grading course work.

The first exam is based on material covered in lectures and readings up to and including the class before the first exam. The second exam is mostly based on the second part of the course material (weeks 7 -12). Recurrent topics may be part of both exams (e.g., VECs, main EA steps, etc.). Both exams will include **multiple choice and short answer questions**. Students are expected to be present in class at the time tests are scheduled.

Course Component	Percentage
Assignment 1 (due June 1 st)	15%
First Exam (in class, June 11 th)	25%
Assignment 2 (due July 13 th)	35%
Second Exam (in class, July 25 th)	25%

Assignments (50% Of Final Grade)

You will complete two assignments. Assignment I is worth 15% of your final grade and Assignment II is worth 35% of your final grade. In Assignment I, you will write a briefing note to the Minister regarding improvements to the current CEAA (federal EA process). In Assignment II, you will write a research paper that critiques a completed EA.

- **IMPORTANT:** You should present your papers in an academic research paper format, based on adequate and appropriate reading and reflection, and it must acknowledge intellectual indebtedness through proper citations. Use the "Writing Effective Essays and Reports" booklet by Rob de Loë as guidance: http://www.environment.uwaterloo.ca/u/rdeloe/writing_booklet/twopage_format.pdf (also posted on LEARN under Assignments)

Required format for both assignments:

- Your assignment must have a plain title page with the title of your assignment, your name, course number (ERS 215), the date, your student number, and the term instructor's name.
- Include your name & student ID number on each page (inserting this into a 'header' is the easiest way to go!).
- Please number all pages
- Typed/word-processed, with 1" margins.
- Maps, diagrams and figures/tables are optional, but appreciated. If included, should be at the end of your assignment, starting on a separate page.
- There must be a minimum of **5 properly formatted references for assignment 2**. The **APA reference** format should be used for all references, including websites (for info on using the APA style, see [http://www.okanagan.bc.ca/Assets/Departments+\(Administration\)/Library/PDFs/apa.pdf](http://www.okanagan.bc.ca/Assets/Departments+(Administration)/Library/PDFs/apa.pdf))

Assignment Grading (Both Assignments):

- Evaluation of assignments takes into account organization, structure, style and presentation, research and quality of analysis/critique, as well as proper referencing style and in-text citation. Writing quality and content are both considered in grading.
- Students are expected to present well organized and properly written work. Penalties of up to **20%** may be applied in cases where writing quality, readability and/or clarity are considered inadequate.

Late penalty:

- All assignments are due on the date set by the professor. To be fair to students who hand in their assignment on time, late assignments will be penalized. Late assignments will be accepted up to **one week after the due date** with a **penalty of 10%** (i.e., 80% becomes 70%) except for unusual/documentated mitigating circumstances (see note below). Any assignments received **after this one-week grace period** will be subject to an **additional penalty of 5%** per business day.
- **August 10** is the last day late assignments can be submitted, and a grade of 'zero' will be recorded for assignments not received by this deadline.
- Any *requests for extension* without penalty or for more than one week must be made in writing before the assignment due date. The instructor reserves the right to waive this deduction if the following prevents the student from handing in an assignment on time:
 1. Valid medical reason such as illness or accident (appropriate proof such as a Doctor's note is required);
 2. Personal or family emergency (with suitable proof, when possible);

- Please ensure that you are diligent in **backing up computer files** of all assignments (different locations, hard drives, cloud, etc), as computer/disk failures, printer problems, etc., will not be considered a valid reason to waive the late assignment deduction.

Handing in your Assignments:

- You are responsible for making sure that your professor receives your work. Both assignments are to be submitted via LEARN dropbox using the course website.
- **Lost or misplaced assignments:** It is your responsibility to make more than one electronic copy of your work. Excuses are not accepted in the case of crashed computer and lost or misplaced work.

Tips/Hints:

- Begin well in advance of the deadline – last minute work is usually obvious to markers.
- As you write, use the concepts, language and ideas presented in lecture materials as a source of inspiration/discussion in your assignment.
- Create sub-headings for each of the main sub-sections (you can remove these or keep these later...they are intended as a guide to writing to ensure you address each sub-section!).
- Cite all materials/information you obtain from sources other than your own personal knowledge. The **APA reference** format should be used for all references, including electronic sources.
- Don't forget to include personal knowledge and 'brainstorming' in your analysis – it's a very powerful way to personalize your writing.
- Proofread and spell-check your work before submission, please.

Academic Integrity:

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. Students who are unsure what constitutes an academic offence are requested to visit the on-line tutorial at:

<http://www.lib.uwaterloo.ca/ait/>.

Discipline:

A student is expected to know what constitutes academic integrity, to avoid committing academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to Policy 71 - Student Discipline,

<http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>. For typical penalties, check Guidelines for Assessment of Penalties, <http://www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm>

Grievance:

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4, <http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>. When in doubt please contact your Undergraduate Advisor for details.

Appeals:

A decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 – (Student Discipline) may be appealed if there is a ground, A student who believes he/she has a ground for an appeal should defer to Policy 72 (Student Appeals)

<http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm>

Consequences of Academic Offences:

Students are strongly encouraged to review the material provided by the university's Academic Integrity office. See (<http://www.adm.uwaterloo.ca/infoacad/Students/index.html>).

University Policies: Plagiarism

Please familiarize yourself with the University of Waterloo's policy dealing with plagiarism. Be especially careful when using materials from the internet, and be aware that software available to instructors can be used to check student submissions for plagiarism. Plagiarism offences are normally treated quite seriously by the University and can result in significant penalties being assessed (e.g. failing grade on an assignment, repeating a course, suspension or expulsion).

Definition of Plagiarism:

"The act of presenting the ideas, words or other intellectual property of another as one's own." Source: University of Waterloo, Policy 71.

Turnitin: Plagiarism detection software (Turnitin) may be used to screen assignments in this course. This may be done to verify that use of all materials and sources in assignments is documented. Students will be given an option if they do not want to have their assignment screened by Turnitin. In the first week of the term, details will be provided about arrangements and alternatives for the use of Turnitin in this course.

To Avoid Plagiarism

The use of other people's work ***must be properly acknowledged and referenced*** in all written material such as assignments, take-home examinations, essays, research papers, laboratory reports, work-term reports, design projects, statistical data, computer programs and research results. The properly acknowledged use of sources is an accepted and important part of scholarship. However, use of such material without complete and unambiguous acknowledgement is an offence under UW Policy 71.

Quoting, paraphrasing, and summarizing (source:

<http://owl.english.purdue.edu/owl/resource/563/1/>)

These three ways of incorporating other writers' work into your own writing differ according to the closeness of your writing to the source writing.

- **Quotations** must be identical to the original, using a narrow segment of the source. They must match the source document word for word and must be attributed to the original author with page number.
- **Paraphrasing** involves putting a passage from source material into your own words. A paraphrase must also be attributed to the original source. Paraphrased material is usually shorter than the original passage, taking a somewhat broader segment of the source and condensing it slightly.
- **Summarizing** involves putting the main idea(s) into your own words, including only the main point(s). Once again, it is necessary to attribute summarized ideas to the original source. Summaries are significantly shorter than the original and take a broad overview of the source material.

