

School of Environment, Resources and Sustainability
Faculty of Environment
University of Waterloo

ERS 315 Fall 2017 Environmental and Sustainability Assessment II

Lecture: 12:30 - 2:20 pm, Wednesdays
EV3 1408

Instructor:

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TAs:

Sondra Eger - seger@uwaterloo.ca
Allison Elgie - aelgie@uwaterloo.ca
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Tutorials: TUT 101	Fri	2:30pm – 3:20pm	HH 124 (Sondra)
TUT 102	Fri	10:30am – 11:20am	HH 124 (Sondra)
TUT 103	Fri	8:30am - 9:20am	RCH 208 (Matt)
TUT 104	Thurs	8:30am - 9:20am	RCH 209 (Allison)
TUT 105	Thurs	10:30am - 11:20pm	HH 344 (Allison)

Readings: - Check LEARN weekly for links to papers

- The required text for ERS 215 provides many relevant materials and concepts that are built upon in ERS 315. Please refer to it as needed: Noble, B. (2015). Introduction to Environmental Impact Assessment: a Guide to Principles and Practice, 3rd Edition. Don Mills, ON: Oxford University Press.

Course prerequisites: ERS 215 and ENVS 200

Course Description:

This course builds on what was introduced in ERS 215 about the several categories of EAs used in Ontario and Canada, and the common elements of EAs used worldwide, through the use of case studies and a simulated EA. Tutorial work will be semi-directed and self-guided.

The assumption in ERS 315 is that students are already familiar with the principles and basic design requirements of impact assessment and that they have some understanding of the role of impact assessment in planning, management, and regulation particularly for Ontario or areas under the jurisdiction of the federal government. The concepts introduced to you in ERS 215 and 315 are applied to a broader range of pursuits in the next course in the assessment series, ERS 415. ERS 215, ERS 315 and ERS 415 are all required courses for the Environmental Assessment Diploma.

Course objectives:

For students:

1. To gain an understanding of the broad suite of types, tools and methods for EA in Canada
2. To develop student's critical thinking surrounding the current and future state of EA in Canada through the completion of a simulated EA scoping exercise.

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 required readings, in-class discussions and tutorials by paying regular attention to case study examples. 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 315)

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

EVALUATION:

Your final grade will be based on a **group assignment, three small individual assignments, participation in tutorials 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 in-class exam is based on material covered in lectures and readings up to and including the class before the exam. The second in-class exam is focused on the second part of the course material. Both exams will include multiple choice, short answer and essay questions. Students are expected to be present in class at the time tests are scheduled. The participation grade will be based on your participation in the tutorial sessions as well as your participation as a group member in your final project. The expectations around the assignments are detailed in a subsequent section.

Course Component	Due Date	Percentage
First in-class exam	October 18	20%
Second in-class exam	November 29	20%
Individual Assignments:		
1. Compare EA Panel Rept to Gov't Discussion Doc.	September 27	5%
2. EA in the News	Schedule set in tutorial	5%
3. Synthesis of a lecture	November 29	5%
Group Assignment	December 4	35%
Participation in Tutorials & Group Assignment	Throughout	10%

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.

Course Schedule (subject to change):

Date	Topic	Activities
Week 1 Sept. 13 th	Intro to course: (Simon, Allison, Sondra, Matt) Overview of Course Review of ERS 215	<i>Learning Objectives:</i> <ol style="list-style-type: none"> Understand the objectives and requirements of the course Ensure adequate foundational knowledge from ERS 215 and identify areas for review. <i>Tutorial:</i> <ol style="list-style-type: none"> Groups and topics will be assigned for group projects. Groups need to establish group task agreement and checklist based on Assignment outline. Review & discussion of 215 material Explanation and discussion of Individual Assignments #1-3. <i>Readings:</i> <ol style="list-style-type: none"> Expert Panel Review of Environmental Assessment Processes. 2017. Building Common Ground – A New Vision for Impact Assessment in Canada. The Final Report of the Expert Panel for the Review of Environmental Assessment Processes. https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews/environmental-assessment-processes/building-common-ground.html Government of Canada. 2017. Environmental and Regulatory Reviews: Discussion Paper. https://www.canada.ca/content/dam/themes/environment/conservation/environmental-reviews/share-your-views/proposed-approach/discussion-paper-june-2017-eng.pdf <i>Assignment #1:</i> Complete comparison essay assignment using Week 1 readings - due Wednesday, September 27th 11:59 pm. Upload to LEARN
Week 2 Sept. 20 th	The National EA review process (Dr. Bob Gibson) EA and systems thinking (Allison)	<i>Learning Objectives:</i> <ol style="list-style-type: none"> <i>Critique</i> current EA processes in Canada <i>Articulate</i> why there is growing consensus that we need to move to regional and strategic environmental assessment frameworks. <i>Understand</i> and be able to <i>define</i> with an example the concept of bounded rationality <i>Tutorial:</i> <ol style="list-style-type: none"> Discussion of assignment and West-Coast Environmental Law 12 Principles of Sustainability. 20 minutes of group work <i>Readings</i> <ol style="list-style-type: none"> Gregory, R. 2017. Beyond good intentions: will Feds' impact assessment expert panel make a difference? Vancouver Sun op/ed June 3, 2017. http://vancouversun.com/opinion/op-ed/beyond-good-intentions-will-the-feds-impact-assessment-expert-panel-make-a-difference Hjorth, P & Bagheri, A. (2006). Navigating towards sustainable development: A system dynamics approach. <i>Futures</i>, 38, 74-92. doi:10.1016/j.futures.2005.04.005
Week 3 Sept. 27 rd	Tools and Methods for monitoring biophysical impacts (Simon) Environmental Effects Monitoring for Canadian Pulp and Paper Mills Monitoring for Cumulative Effects Assessment	<i>Learning Objectives:</i> <ol style="list-style-type: none"> Describe how the federal EEM program for pulp and paper mills works Understand the rationale and the process of developing cumulative effects monitoring programs by the Canadian Water Network (CWN) at the regional/watershed level. Be able to provide specific examples from the nodes. <i>Tutorial:</i> <ol style="list-style-type: none"> Discussion and exercises based on required readings. <i>Readings:</i> <ol style="list-style-type: none"> Duinker, P. N., & L. Greig.(2006). The impotence of cumulative effects assessment in Canada: Ailments and ideas for redeployment. <i>Environmental Management</i>, 37(2), 153–161. http://doi.org/10.1007/s00267-004-0240-5 Canadian Water Network. (2016). Synthesis of learnings of the Canadian Watershed Research Consortium. Canadian Water Network, Waterloo ON. 20 p. http://www.cwn-rce.ca/assets/resources/pdf/2016-Watershed-Consortium-Report/CWN-CanadianWatershed-EN-2016-Web.pdf
Week 4 Oct. 4 th	Tools and Methods for monitoring Socio-economic impacts (Sondra) Regional, Strategic & Life Cycle Assessment (Simon)	<i>Learning Objectives</i> <ol style="list-style-type: none"> <i>Describe</i> the tools and methods used for assessing social impacts from human activities Explain why regional and strategic environmental assessments (REA and SEA) are necessary for assessing and addressing cumulative effects. Discuss, using examples, the relevance of LCA to EA <i>Tutorial:</i> <ol style="list-style-type: none"> Discussion of how CEA might be accomplished in the Bay of Fundy

		<p><i>Readings:</i></p> <ol style="list-style-type: none"> 1. Esteves A.M., Franks, D. & F. Vanclay. (2012). Social impact assessment: the state of the art, <i>Impact Assessment and Project Appraisal</i>, 30:1, 34-42 http://dx.doi.org/10.1080/14615517.2012.660356 2. Sinclair, A. J., Doelle, M., & Duinker, P. N. (2017). Looking up, down, and sideways: Reconciling cumulative effects assessment as a mindset. <i>Environmental Impact Assessment Review</i>, 62, 183–194. http://doi.org/10.1016/j.eiar.2016.04.007
Week 5	Oct. 13 th	<p>Review for Exam (Optional)</p> <p>Note: this is Fall Break so our regular Wednesday class will be held on Friday October 13 (same time & place)</p>
Week 6	Oct. 18 th	<p>In-class exam</p> <p>On material covered in Weeks 1-4 You will be assigned to either EV3-1408 or RCH 204 (check LEARN)</p>
Practice of Environmental Assessment		
<p>The second half of the course is a series of guest lectures from people with broad and different experiences with EA. Readings will be posted by week on LEARN and should be read before lecture. Tutorials will include discussions and/or exercises related to lectures.</p> <p>Learning Objectives for Weeks 7-11: Recognize the differences of presented perspectives of EA and be comfortable summarizing, comparing and contrasting motivations and responsibilities from each perspective using examples from guest lectures with support, as necessary, from required readings. Be prepared to discuss these topics in tutorials.</p>		
Week 7	Oct. 25 st	<p>A practitioner's perspective</p> <p>Jessica Kidd – Canadian Rivers Institute at UW, formerly doing EAs with Matrix Solutions Inc. Field experience of conducting EA with emphasis on selecting Valued Ecosystem Components and Indicators</p> <p>Kara Hearne – Knowledge Mobilization Manager, UW-Water Institute, formerly with Stantec communicating EA between technical experts and clients</p>
Week 8	Nov. 1 st	<p>An Industry perspective</p> <p>Dr. Kelly Munkittrick – Professor at Wilfred Laurier U.; former Director- Monitoring for Canada's Oil Sands Innovation Alliance (COSIA)) - an industry perspective on EA and supporting monitoring - Theory of Everything: where does monitoring fit into environmental management and the decisions that have to be made?</p>
Week 9	Nov. 8 th	<p>An Indigenous perspective</p> <p>Melanie Goodchild – Doctoral candidate at UW and Senior Indigenous Research Fellow and Ambassador, Suncor Fellow, The Waterloo Institute for Social Innovation & Resilience (WISIR)</p> <p>Amanda Joynt – Doctoral candidate at UW, former EA regulator with DFO and consultant to an NGO advocating for northern Indigenous communities.</p>
Week 10	Nov. 15 th	<p>A Regulatory perspective</p> <p>Darla Cameron – Section Leader at Canadian Environmental Assessment Agency -TO BE CONFIRMED-</p> <p>An ENGO perspective</p> <p>Sandra Cooke - Senior Water Quality Supervisor and Chair Water Managers - Grand River Conservation Authority</p>
Week 11	Nov. 22 nd	<p>A Visionary's Perspective</p> <p>Lorne Greig – Associate Environmental Scientist, ESSA Technologies Ltd. Environmental Assessment: Essential and Troubled</p> <p>Review for Exam (Teaching Team)</p> <p>Review of materials covered in Weeks 7-11 and opportunity for questions</p>
Week 12	Nov. 29 th	<p>In-class exam EV3-1408 RCH 204</p> <p>Content: Week 7 - Week 11</p>

INDIVIDUAL ASSIGNMENTS (15% of final grade)

Refer to Assignment Guidelines on Learn for more information

Individual Assignment #1: Review of the Government's proposed changes to EA (5%)

In August 2016 the Federal Minister of Environment and Climate Change McKenna announced the establishment of a four-person Expert Panel to review EA processes in order to restore public trust in EA, to introduce new, fair processes,

and to get resources to market. The final report of this panel was published in April 2017 and was quickly followed, in June 2017, by a Government of Canada Discussion Paper which outlines changes the Federal Government is considering for Canadian EA and regulatory processes. Legislation for these changes is being drafted now and may be tabled as early as January 2018.

1. Read the Executive Summary of the Panel Report and read the Government Discussion Paper (links on LEARN). Expert Panel Review of Environmental Assessment Processes. 2017. Building Common Ground – A New Vision for Impact Assessment in Canada. The Final Report of the Expert Panel for the Review of Environmental Assessment Processes. <https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews/environmental-assessment-processes/building-common-ground.html>
Government of Canada. 2017. Environmental and Regulatory Reviews: Discussion Paper. <https://www.canada.ca/content/dam/themes/environment/conservation/environmental-reviews/share-your-views/proposed-approach/discussion-paper-june-2017-eng.pdf>

2. Write a one page summary of how well you think the Government's proposed changes address the concerns and recommendations identified by the Panel Report. Is anything missing? Are the changes manageable?

Specifications: max. 300 words, Times New Roman 12 font, double-spaced, 1 inch margins. Spelling, grammar and syntax count.

To be uploaded to LEARN by Wednesday, September 27th 11:59 pm.

Individual Assignment #2: EA in the News (5%)

You don't really realize just how pervasive Environmental Assessment is until you start looking for EA stories in the news. It might be a major new construction announcement or a court challenge to a project or a protest. So, however you get your news, whether it is newspapers or news magazines like Macleans or CBC radio or online news sites, start looking for EA-related stories.

1. Choose a recent news article (within the last year) and write a brief synthesis of the story.
2. Present (don't read) your synthesis to your tutorial group and be prepared to answer one or two questions. Telling a story briefly and succinctly (like an "elevator pitch") is not easy so practice it before presenting.

Notes: -When you're not presenting, listen carefully and think of good questions (Participation).
- Schedule for presentations to be set in Week 1.
- Oral presentations are 2 minutes followed by 1 minute for questions.

Tip: To keep this interesting you cannot present a story that someone has already chosen. Therefore choose your story as soon as possible. Your TA will direct you to a GOOGLE Doc where you can sign up for a presentation time and let your colleagues know that this is your story.

Individual Assignment #3: Synthesis of a Guest Lecture (5%)

The second half of ERS 315 is a series of guest lectures in which we hear from people who have experienced EAs from different perspectives.

1. Choose one guest lecture presented during weeks 7 – 11 (Oct 25 - Nov 22)
2. Write a one page synthesis of the key points presented from the perspectives of the guest lecturer.

This exercise is inspired by the observation that we generally learn, and retain information, better by taking hand-written notes than by typing notes on a laptop during lectures (Mueller and Oppenheimer 2014). The reason, suggested by these authors, is that writing by hand forces us to process information and reframe it in our own words. This assignment, even though you will be typing it, will make you synthesize, in your own words, what the lecturer was trying to express and consider these ideas and incorporate them more deeply than if you just transcribed the words spoken or presented on slides. As well, this exercise gives you more practice at writing succinctly.

Specifications: max. 300 words, Times New Roman 12 font, double-spaced, 1 inch margins. Spelling, grammar and syntax count. To be uploaded to LEARN by Nov. 29.

Mueller, P.A. and D.M. Oppenheimer. 2014. The pen is mightier than the keyboard: advantages of longhand over laptop note taking. Psychological Science OnlineFirst, published on May 22, 2014 as doi:10.1177/095679761

GROUP ASSIGNMENT (35% of final grade – Due December 4th)

In this **group (4-5 people)** assignment, you will carry out a portion of work on a specific project related to EA. No primary data collection will be required for this assignment. In this simulation, each group will act as a **CONSULTING COMPANY** working on an EA.

This assignment is designed to give the student an opportunity to:

1. Become familiar with the basic and general concerns of EA scoping
2. Design/conduct part of an EA with respect to the scoping stage
3. Produce a written report

- **Length:** The maximum page length for the assignment is 20 pages (excluding title page, reference list page, tables and figures), double spaced.
- **Deadline: Electronic copy (MS Word file):** December 4th, 11:59 p.m. (LEARN dropbox).
- **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

Required format:

- Your assignment must have a plain title page with the title of your assignment, your names, course number (ERS 315), the date, your student number, and the term instructor's name.
- Typed/word-processed, please number all pages
- Times New Roman, 12 font, double-spaced, 1 inch 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 **10 properly formatted references (including 5 from peer-reviewed sources)**.
 - One reference will be the Project Description document. Statements in the assignment must be supported by the literature. Only articles cited in the text are to appear in the Literature Cited section.
 - Wikipedia **should not** be used as reference.
 - The **APA reference** format should be used for all references, including websites (for info on using the APA style, see <http://ereference.uwaterloo.ca/display.cfm?categoryID=15&catHeading=Citation%20/%20Style%20Guides#Allstyles:RefWorks>)

MAIN STEPS:

Step 1: The Project

You will be assigned to a group and a project which will be one of the five listed below. These projects are at the Project Description stage (no other documents submitted for review), since the idea is that you will be performing the scoping of your chosen project.

SCOPING PROJECT TOPICS

Projects 1-3 are different sections of the very large Energy East Project (EEP). For general background on EEP see:

<https://apps.neb-one.gc.ca/REGDOCS/Item/View/2995824> and specifically:

- Broad project context (search for through link above):

EEP Application - A76905-2 V1_Sec0_Energy_East_Application - A5A0G5

Executive Summary -A76905-3 V1_Sec1_Executive_Summary - A5A0G6

Project overview - A76905-4 V1_Sec2_Project_Overview - A5A0G7

Project Justification - A76905-5 V1_Sec3_Project_Justification - A5A0G8

- Relevant for specific assignment contexts (search for through link above):

Provincial Profiles - A76905-6 V1_Sec4_Provincial_Profiles - A5A0G9

1) EEP -Quebec: Focus on the construction and operation of pipe throughout Quebec section of the project. This includes any pipeline laterals and terminal interconnections as well as any related components and facilities (see #4- <http://www.ceaa-acee.gc.ca/050/details-eng.cfm?evaluation=80073> for examples)

2) EEP -NB: Focus on the construction and operation of pipe throughout NB, focusing on coastal and marine implications. This includes any pipeline laterals and terminal interconnections as well as any related components and facilities (see #4- <http://www.ceaa-acee.gc.ca/050/details-eng.cfm?evaluation=80073> for examples)

3) EEP Saskatchewan: Focus on the conversion and operation of existing natural gas pipelines to oil service in the Saskatchewan section of the project. This includes any pipeline laterals and terminal interconnections as well as any related components and facilities (see #4- <http://www.ceaa-acee.gc.ca/050/details-eng.cfm?evaluation=80073> for examples)

4) [Eastern Mainline Project - 80079](#) (Ontario)

[-http://www.ceaa-acee.gc.ca/050/details-eng.cfm?evaluation=80079](http://www.ceaa-acee.gc.ca/050/details-eng.cfm?evaluation=80079)
[-https://apps.neb-one.gc.ca/REGDOCS/Item/View/2996097](https://apps.neb-one.gc.ca/REGDOCS/Item/View/2996097)

5) [Lynn Lake Gold Project - 80140](#) – Manitoba

[-http://www.ceaa-acee.gc.ca/050/details-eng.cfm?evaluation=80140](http://www.ceaa-acee.gc.ca/050/details-eng.cfm?evaluation=80140)

Step 2: Screening (Provincial and Federal EA Legislation)

- Determination of whether the action is subject to an EA under the regulations or guidelines present and why, and if so what type of assessment is required

Step 3: Scoping and Alternatives

- Identify important issues to be considered
- Appropriate space and time boundaries of study
- Identify feasible alternatives

Step 4: Identifying Valued Ecosystem Components (VECs)

Step 5: Complete Impact Matrix to describe possible impacts

Step 6: Discuss impact significance of chosen project

REQUIREMENTS OF THE SCOPING REPORT:

1) Describe the Proposed Activity

Briefly describe project actions associated with the constructions and operation of the proposed undertaking (for example, site clearing, pit constructions, blasting, etc.)

- Proponent – provide information about the company/organization or governing body
 - Who are they?
 - What is their mandate or industry sector?
- Proposed location of activity
 - Provide the basic geographical and political boundaries of the activity, provide a map.
- Interested publics
 - Preliminary identification of likely affected and interested publics for consultation
- Additional information you find relevant

2) *Relevant legislation and associated governing bodies.*

- a) Does the activity fall under EA legislation?
If yes, what type (e.g., Provincial – class EAs, individual EAs; Federal –review panel EAs)?
- b) What governing bodies will be reviewing the EA (e.g., CEEA, NEB) and why (i.e., what permits and licenses are required)?

3) *Scope Project Alternatives*

- a) Begin to describe possible alternatives (alternatives to the proposed undertaking as well as alternative means to undertake the project)

4) *Identify VECs*

- a) Brainstorm and draft a preliminary list of potentially affected VECs (approx. 10 or so) related to the proposed project

5) *Shortlist VECs and complete Impact Matrix to discuss/describe impact significance of chosen project*

- a) Choose 5 VECs from your list of identified VECs, briefly explain why those 5 are most likely to be affected, and then use them to complete an impact matrix;
- b) Complete an impact matrix characterizing the potential impacts of the proposed project on the affected VECs (similar to figure 6.4, page 97 (Noble, 2010), but applied to your chosen topic); template posted on LEARN;

6) *Discuss impact significance of proposed project on VECs based on impact matrix produced.*7) *Sign Assignment Checklist*

- a) Make sure you read and sign the assignment checklist form (at the end of this document) and include it with your assignment

NOTE: It is critical to provide **evidence** throughout your paper. Thus, you will need to cite all ideas, facts/dates, identified trends, etc. that are not yours throughout your paper. Papers written without reference to appropriate evidence **will have marks deducted**. It may be helpful to think of writing your paper like a lawyer argues a court case: a systematic presentation of documented evidence that eventually convinces the 'jury' (i.e., the reader) to believe you.

Helpful Online Resources for the Group Assignment:

- Canadian Environmental Assessment Agency: <http://www.ceaa.gc.ca>
- International Association for Impact Assessment: <http://www.iaia.org>
- Journal of Environmental Assessment, Policy and Management: <http://www.worldscinet.com/jeapm/>
- Impact Assessment and Project Appraisal: <http://www.ingentaconnect.com/content/tandf/iapa>
- Environmental Impact Assessment Review:
http://www.elsevier.com/wps/find/journaldescription.cws_home/505718/description

Peer-reviewed articles from the above Academic Journals (JEAPM, IAPA and EIAR) can be accessed through UW's Library website: <http://sfx.scholarsportal.info/waterloo/az>

Writing Resources (More posted on Learn):

- Mueller, P.A. and D.M. Oppenheimer. 2014. The pen is mightier than the keyboard: advantages of longhand over laptop note taking. *Psychological Science OnlineFirst*, published on May 22, 2014 as doi:10.1177/0956797614524581

Assignment Grading:

- Evaluation of assignments takes into account organization, structure, style and presentation, research, quality of analysis and content. 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 readability and/or clarity are considered inadequate.

Lateness 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. The first day an assignment is late brings about a **15% penalty**. A cumulative **5% penalty** is assessed for each additional late business day. A student's assignment more than one week late will not be accepted and a grade of 'zero' will be recorded for that assignment.
- Any *requests for extension* without penalty must be made in writing in advance of 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, 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.
- **Lost or misplaced assignments:** It is your responsibility to keep a copy of your work. Excuses are not accepted in the case of 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.

Course and University Policies

Attendance:

Attendance in class is at your discretion. However, 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, graphics-heavy images such as maps or diagrams), required readings and **all in-class discussions (including tutorials) are valid "testable" materials**. Also, 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 DVD screened. For these reasons, attendance at each lecture is HIGHLY RECOMMENDED and attendance at tutorials are mandatory. Part of the participation mark is based on attendance at tutorials.

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 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 (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.

TurnItIn:

Except as below, plagiarism detection software (TurnItIn) will be used to screen group assignments in this course. This is being done to verify that materials and sources in assignments are appropriately documented. For further information on UW's TurnItIn guidelines, see <https://uwaterloo.ca/academic-integrity/node/3/guidelines-instructors>. TurnItIn submissions will be stored on a server in the United States, so if you choose not to use TurnItIn you must make an Alternate Declaration in an email to your tutorial TA to be received by September 20, 2017, 11:55pm. Alternative arrangements will be made in the case a student chooses to opt out.

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.

Avoiding Plagiarism (More resources provided on Learn:)

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.

Unclaimed Assignments

Unclaimed assignments will be retained until one month after term grades become official in Quest. After that time, they will be destroyed in compliance with UW's [confidential shredding procedures](#).

The following student signed Checklist was developed by the University of Waterloo Secretariat as a means of emphasizing the importance of attribution of referenced work and reducing plagiarism. **Please read, sign, and hand in with your assignment.**

Group Work

Please read the disclosure below following the completion of your group assignment. Once you have verified these points, hand in this signed disclosure with your group assignment.

1. All team members have referenced and footnoted all ideas, words or other intellectual property from other sources used in the completion of this assignment.
2. A proper bibliography has been included, which includes acknowledgement of all sources used to complete this assignment.
3. This is the first time that any member of the group has submitted this assignment or essay (either partially or entirely) for academic evaluation.
4. Each member of the group has read the full content of the submission and is assured that the content is free of violations of academic integrity. Group discussions regarding the importance of academic integrity have taken place.
5. Each student has identified his or her individual contribution to the work submitted such that if violations of academic integrity are suspected, then the student primarily responsible for the violations may be identified. Note that in this case the remainder of the team may also be subject to disciplinary action.

Group Work Disclosure

Date: _____

Name (print)	Signature	Section Contributed	Section Edited

Notes: