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

ERS 315
Environmental and Sustainability Assessment II

Instructor:
Simon Courtenay, PhD Office EV2-2034
simon.courtenay@uwaterloo.ca

TAs:
Jess Kidd: j2kidd@uwaterloo.ca
Nathanael Bergbusch: ntbergbu@uwaterloo.ca

Lectures: Narrated PowerPoint files will be posted on LEARN under Weekly Folders
Synchronous Meetings: Online meetings, using MS Teams, will be held Tuesdays 2:30 – 3:20
pm Eastern Time for those able to attend, and will be recorded for those unable to attend.
Tutorials: Held at the following times and places:
101: Wednesday 9:30 – 10:20 am (Online; Jess)
102: Wednesday 10:30–11:20 am (Online; Jess)
103: Thursday 8:30 – 9:20 am (in person-EV3 3412; Nat)
104: Thursday 9:30 – 10:20 am (in person-EV3 3412; Nat)
Please use a headset with a microphone for our synchronous meeting and online tutorials.

Course Description

This course builds on what was introduced in ERS 215 about the several categories of environmental assessments (EAs) used in the provinces and territories (particularly Ontario) and Canada, and the common elements of EAs used worldwide. ERS 315 will focus on the mechanisms by which information is collected, analyzed, and presented to predict the future state of environmental parameters and the significance of impacts of human developments on those parameters. 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 in ERS 215 and 315 are applied to a broader range of pursuits in ERS 415, the next course in the assessment series. ERS 215, ERS 315, and ERS 415 are all required courses for the Environmental Assessment Diploma.

Intended Learning Outcomes

The learning outcomes of this course are intended to equip students with the skills to understand the "how" of the EA process. By the end of the course, students will be familiar with various impact prediction methods (both biophysical and social) and ways to determine the significance of these environmental effects. Specifically, for projects subject to formal federal or provincial EA, by the end of this course you will be able to (and able to exemplify with actual case studies):

1. Screen and Scope a project
2. Identify and quantify Valued Ecosystem Components (VECs or often shortened to just VCs)
3. Predict the future condition of VECs with and without the project being proposed
4. Recommend and implement tools and frameworks for managing impacts
5. Quantify impact magnitude and significance before and after impact management
6. Effectively and respectfully engage various publics in all relevant stages of EA

Approach

Narrated PowerPoint lectures, assigned readings, and optional (i.e., for greater interest) readings will be posted on Wednesdays and can be viewed at your convenience. Please email any questions you have about the material to the course instructor. The following Tuesday we will have a synchronous meeting, through MS Teams, during which the instructor will respond to any questions received. You will also be able to ask questions, either verbally or using the chat function, during the synchronous meetings. Also, during these synchronous meetings, the instructor will present some material and there will be guest speakers. These synchronous meetings are intended to replace some of the interaction that we would normally have together in a face-to-face class. It is understood that not everyone may be able to attend all of these meetings, because of being in a different time zone, lack of access to good internet, or other commitments. Therefore, we will record these meetings and they can be viewed at your convenience.

Communication

Your UW email account will be used for communications outside of our synchronous meetings and tutorials, so check your UW email and LEARN accounts regularly. All course announcements will be posted to LEARN, including weekly to do lists to help you keep track of course content, tasks and your assignments. An effort will be made to deal with email requests within two business days of receipt.

Office Hours

Office hours are a time that the instructor will be available to talk with you about anything related to ERS 315. Simon will be in the office (ENV2-2034) the mornings of Tuesday and Wednesday and all day Thursday. For those of you working remotely, we can meet by MS Teams or telephone. To schedule a time, please email simon.courtenay@uwaterloo.ca from your UW email account and put ERS 315 in your email subject line. TAs do not have formal office hours but are able to meet over MS Teams if needed.

Website (LEARN, ERS 315) https://learn.uwaterloo.ca/d2l/home

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 Readings

Weekly reading will be posted on LEARN. It is your responsibility to check LEARN regularly for these readings. The required text for ERS 215 provides many relevant materials and concepts that are built upon in ERS 315. In ERS 315 we are reading Noble 2021 through a lens of HOW EAs are conducted rather than WHAT an EA is:

Noble, B. (2021). Introduction to Environmental Assessment: A Guide to Principles and Practice, Fourth Edition. Don Mills, ON: Oxford University Press.

Evaluation

Your final grade will be based on two tests, a group presentation, feedback to your tutorial-mates on their group presentations (i.e., questions, constructive comments), and a final individual assignment. There is no final exam during the exam period in December. The instructor determines the content and establishes the grading rules for all assignments, course components, and the tests. The teaching assistants will assist the instructor with grading course work. The tests will be based on material covered in lectures and tutorials, including guest lectures and readings. When determining a student's final grade in the course, the instructor will examine the record of each individual student's achievement; the final grade may be adjusted to consider extenuating and compassionate circumstances and the student's general pattern of achievement in the course.

Course Component and Due Dates	Percentage
Midterm Test (**Week 6: October 18 – 22**)	20%
Group Methods Presentation (**Due October 18 and discussed in tutorials Oct 27/28 & Nov 3/4**)	25%
Feedback on others' Methods Presentations (5 x 2%; **Due Oct 24**)	10%
Individual Assignment (**November 22**)	25%
Final Test (**Week 12: November 29 – December 3**)	20%

Description of Elements

Tests

There will be two tests during the course: one on the first half of the course during Week 6 (Oct 18-22) and the other emphasizing the second half of the course but including the entire course in Week 12 (Nov 29 – Dec 3). Materials from asynchronous online lectures, synchronous meeting times, tutorials, guest speakers, case studies, and assigned readings are all be eligible for inclusion. The format will be open-book, multiple choice questions (1h time-limited), and short answer (open full week). We will have review sessions before each test and go through sample questions together.

Environmental Assessment Methods Presentation (Group Project)

The objective of this assignment is to learn how to make good predictions about the environmental impacts of a project and gain hands-on experience with a real assessment. The format will be introduced during tutorial in Week 2. You will be assigned to a group with 3–4 other students. Together you will choose a completed EA and prepare a 10–15 minute recorded presentation that describes the project and two impact prediction methods that were used—one that dealt with a social impact (i.e., an impact on a social Valued Component[VC]) and another

which dealt with a biophysical impact (impact on a biophysical VC). You will critique the accuracy of these predictions, both before and after proposed impact management measures. Presentations must be uploaded to LEARN by midnight, Monday October 18. During that week you will review the presentations of the other groups in your tutorial and submit questions and comments by midnight Sunday October 24. During tutorials in week 7 (October 27 or 28) and week 8 (November 3 or 4) your group will be asked to respond to, and discuss, questions and comments that were submitted by other members of your tutorial group.

For this exercise, we will focus on federal EAs completed between 2012 and the present. Projects can be searched through the Canadian Impact Assessment Registry. When you click on the ''Search'' icon within the Registry home page you will be brought to the search filter page. Using the search filters, Assessment Status (completed) and Assessment Type (EAs under CEAA/IAAC), type in key words such as EIS (Environmental Impact Statement). This will allow you to find completed projects that have an EIS included. Within those documents, look for sections which may be labelled something like: potential environmental effects, mitigation measures, significance of residual environmental effects, impact assessment and mitigation measures, determination of significance. Each report or statement is set up a little differently so you will have to hunt around a bit. Part of the value of this exercise is to bring you face-to-face with how big and complicated an Environmental Assessment can be. EA documents can be very long and confusing. To ensure that you have a completed EA to work from, you must tell your TA what EA document and what VECs you have chosen. Your TA will confirm that you have suitable materials from which to work.

Expectations

Provide your TA with a link to the EA and which Valued Components (VCs) you plan to examine as soon as you've decided and not later than midnight Sunday September 26. Your group could choose to work on the same EA as another group (though it would be more interesting if you didn't) but you must choose different VCs.

- Context – 10%
    - Title Slide: *Group member names, project name, VCs and impacts selected.*
    - Introduce and provide background on project.
        - *What is the project? Where is the project? Who did the assessment?*
    - Discuss whether the project has a completed assessment.
- Methods – 50%
    - How were VCs chosen?
    - Choose 1 social and 1 biophysical VC.
    - Describe how potential impacts on your selected VCs were identified.
    - How were predictions of impact on your selected VCs developed? *E.g., modelling, survey, literature.*
- Critical Assessment – 25%
    - Consider the following questions:
        - Were the techniques used appropriate? Were assumptions valid and supported?
        - How do we know if they got it right? Consider mitigations, residual effects (effects – mitigation = residual), how were residual impacts managed (e.g., offsetting, follow-up monitoring)

- How much do we believe the predictions that were made (i.e., were the predictions accurate)?
- Was the prediction based on sufficient and reliable data?
- If people/stakeholders were consulted, was it done comprehensively or was just one sector of the population consulted?
- If experts were consulted, how was their expertise assessed?
- Were baseline data collected? If yes, describe the timeline in which the data were collected (e.g., baseline data were collected over two years, baseline data were collected 10 years ago)
- Were the impacts of other similar projects and assessments considered?
- Were potential cumulative effects from other nearby active or proposed projects discussed?

- Delivery and Organization – 15%
  - Presentation was clear and flow was logical.
  - Demonstrate knowledge of the project contexts and impact prediction methods during the presentation (evaluated by the TA) and with clear responses to student questions. Read, fill out, and submit *Group Work Checklist* (at the end of this document). This form identifies the contribution made by each group member and confirms that materials used have been properly cited and credited.

Questions and Comments on Presentations of Other Groups

During Week 6 (October 18-22), review the presentations of the other five groups in your tutorial section. For each group, prepare one question and one constructive comment and submit these to LEARN by midnight Sunday October 24.

Individual Assignment

For your individual assignment, you will explore a $4 billion controversial case study in central and southern Saskatchewan called the Lake Diefenbaker Irrigation Expansion Project. The Government of Saskatchewan has proposed to expand river canals at the outflows of Lake Diefenbaker's Gardiner and Qu'Appelle Dams to increase irrigated farmland by 500,000 acres. Historically, Saskatchewan's agricultural industry has been primarily dryland farming (wheat, canola, flax, mustard), but this will expand their irrigation farming base and potentially other water-dependent industry (e.g., potash mining). This expansion will occur in three phases over the next 10 years (Government of Saskatchewan 2020-07-02). Concern has been expressed by the Federation of Sovereign Indigenous Nations (FSIN) (Battlefords Now 2021-02-15), scientists (Moose Jaw Today 2021-04-06), and conservation groups (Global News 2020-07-30). The project has not been formally designated for an environmental impact assessment by either provincial or federal authorities (Petition e-3401 2021-05-14). However, as of June 16, 2021, the Impact Assessment Agency has recognized FSIN's request to designate the project (Government of Canada 2021-06-16). Impacts of the irrigation expansion may be felt in both the South Saskatchewan River and the Qu'Appelle River Watersheds. The South Saskatchewan River joins the North Saskatchewan River which flows into Codette and Tobin lakes and then drains into the Saskatchewan River Delta and the northern side of Lake Winnipeg in Manitoba. The Qu'Appelle River moves through a series of lakes

(e.g., Buffalo Pound, Pasqua, and Crooked Lakes) and then flows into the Assiniboine River which, in turn, flows into the Red River and the southern side of Lake Winnipeg. You will have the opportunity in your tutorials to explore this project further.

For this individual assignment, you will write an essay (6–8 pages long, double spaced, 1" margins, and Times New Roman size 12 font) with the following components (each component is worth 5%):

1. *Select five valued ecosystem components (VECs)* that are likely to be selected based on the available project information and concerns of rightsholders and stakeholders. Gather project information using literature and news articles Describe who the VEC is important to and discuss its importance. Make sure to reference appropriately and clearly justify these selections. You must include at least one social and one biophysical VEC in your selection since you will need one of each for component #3.

2. *Complete a simple interaction matrix* for your five selected VECs selected. The matrix lists the impacts of project activities (including construction and operation) on the five VECs and indicates the impact direction (whether impacts will be positive or negative), and severity (whether impacts will be nill [blank], negligible [1], minor [2; slight or short term)] moderate [3], major [4; irreversible or long term] or severe [5; permanent]). Use the literature, news articles, and similar EAs to help you determine and justify the likely direction and severity of each impact for each VEC. Below is an example of a simple interaction matrix.

Valued Ecosystem Component (VEC)	Project Activities							Total Impact Score
	Construction					Operations		
	Surveying	Land Clearing	Temporary infrastructure construction	Temporary work camps establishment	Construction of main road	Regular vehicle traffic	Ongoing road maintenance	
Local employment	+1	+2	+2	+2	+2	+4	+4	+17
Cost of living	0	0	0	0	0	+5	0	+5
Caribou populations	-2	-4	-2	-2	-5	-4	-3	-22
Air quality	-1	-2	-3	-1	-3	-3	-1	-14
Peatland carbon sequestration	0	-4	-2	-2	-5	-1	-1	-15

+ = positive impact
- = negative impact

no impact = 0
negligible impact = 1
minor impact (short term) = 2

moderate impact (medium term) = 3
major impact (long term) = 4
severe impact (permanent) = 5

3. *Discuss a method used for determining the magnitude of the impact* of a project activity. For this component, you will select one biophysical and one social VC from the five VECs you selected. For these two VCs, discuss one method for testing whether your predicted scores in the matrix was correct. You can select any project activity and the selected activity can differ between your social and biophysical VCs. For example, highlighted in the table above, if you had selected Local Employment as your social VC you might have chosen to determine the magnitude of impact of land clearing and if you had chosen Caribou as your biophysical VC you might have chosen to determine the magnitude of impact of road construction. Discuss what baseline data you would need to measure against. Discuss why the methods you chose are appropriate and how you would carry them out. All points should be referenced using the literature and similar EAs.

4. *Describe the significance* of the selected impacts on your two selected VCs using this equation:

   Impact Significance = Impact characteristic X Impact Importance
                   (e.g., magnitude)   *(e.g., value of receptor)*

   Steps: 1) estimate (in qualitative terms – low, medium, high) how big the impact will be (e.g., **impact magnitude, duration, severity, reversibility etc.** relative to a baseline); 2) estimate (low, medium, high) how much people will care about a change in your VC (i.e., **impact importance**); 3) multiply these together to get **impact significance**. The value or importance attached to the two VECs should be described and justified with literature, news articles, and similar EAs.

5. *Suggest a management measure* for each of your two selected VCs that will enhance your selected impact if your prediction is that the impact will be positive, or avoid, mitigate, remediate, or compensate for a negative impact. What will be the *residual impact* after your management measure?

Tips:
Quality
- Ensure your work is readable and clear
- Organization, structure, style and presentation, research, and quality of analysis/critique all contribute to the grade you receive for the assignment.
- Students are expected to present well-organized and well-written work. You may find this reference useful: "Writing Effective Essays and Reports"
- Diverse and proper references are important (e.g., peer-reviewed journal articles, newspaper articles, and official EA documents). Your work should be presented as an academic research paper that relies on diverse and proper referencing and in-text citations. There is no minimum number of references as this is a third-year class and all information you present should be appropriately supported.
- Assignments will be run through Turnitin—use your own words when paraphrasing.

Format
- Submit your assignment in .pdf format.
- Your assignment must have a plain title page with the title of your assignment, your

- name, course number (ERS 315), the submission date, your student number, the term (i.e., Fall), your TA's name, and the instructor's name.
- Maximum page length is 6-8 pages double spaced (excluding title page, impact matrix, and reference list), normal margins, Times New Roma, size 12 font and 1" margins.
- Use [APA reference](#) format for all references including electronic sources.
- Include page numbers.
- Include your name & student ID number on each page (inserting this into a 'header' is the easiest way to go).
- All figures and tables must have proper descriptive headings, and quotes should have page numbers (keep quotes to a minimum).

Hints:
- Seek out help from your TAs—they are there to help you.
- Begin the assignment well in advance of the deadline—last minute work is usually obvious to markers.
- As you write your assignment, use the concepts, language, and ideas presented in lecture materials as a source of inspiration/discussion.
- 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.
- 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 and/or exchange assignments with a classmate (i.e., peer review).

Handing in your Assignments
You are responsible for ensuring that the instructor receives your work. Both assignments are to be submitted to the appropriate LEARN dropbox using the course website. It is also your responsibility to ensure your assignment is submitted in the correct format. A corrupt file will not be an excuse for a late submission.

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.

Questions about your Assignments
Any questions regarding your mark or feedback on your assignment are to be directed to your TA. Any concerns after talking with your TA can then be sent to the instructor. Any requests for remarking of a test question and/or an assignment must be submitted in writing to the instructor within *two weeks* of the release of the mark for the test/and or assignment in question Your request for a remark must be specific and you must be able to clearly state what questions or component you feel were mis-marked and why**.**

Proposed Course Schedule (subject to change)

Week	Recorded Lecture posted previous Wednesday	Online Meeting Tues 2:30-3:20 pm	Tutorial Wednesday or Thursday	Readings **for next week** (optional further readings will be posted on LEARN)
1 S8-10		No meeting – classes start Wed of this week	Introductions, Course Outline, review of ERS 215	Course Outline Noble Chap 3 & 10
2 S13-17	Pre-project Planning & Public Engagement / Indigenous Consultation & Engagement	Vegetation Sampling Protocol (Bev Raimbault & Anne Grant; ENV Ecology Lab)	Questions on syllabus? Introduction to Group Presentation	Noble Chap 4 & 5
3 S20-24	Screening, Scoping VECs, Indicators Baseline	Ontario Benthos Biomonitoring Network (Bev Raimbault & Anne Grant)	Review of Valued Components, Selection, use of indicators, baseline study, Determining Impact Significance	Noble Chap 6 & 7 Group Project Proposal due midnight Sunday Sept 26
4 S27-O1	Predicting & Managing Env Impacts	Wildlife sampling (Phil DeWitt, OMNRF, Senior Ecologist, Wildlife Monitoring Lead)	Individual project introduction, expectations & rubric	Noble Chap 8, 9 & 10
5 O4-8	Impact magnitude vs significance pre, post management predicting signif	Aquatic Env. Effects Monitoring, Cumulative Effects Monitoring	Review for first in-class test Work on group methods presentation	
O9-17	READING WEEK – NO LECTURE OR TUTORIAL			
6 O18-22	Midterm test, no Meeting or Tutorial. Group Methods Project due Oct 18; View other groups' projects & submit feedback Oct. 24			
7 O25-29	Muskrat Falls, Lower Churchill Project – social & cultural impacts, Prof. Shelley Price, St. FX, Roberta Benefiel, Grand Riverkeeper Labrador, Inc.	Systems thinking & Social Impacts Assessment	Discussion on Group Methods Presentations	
8 N1-5	Indigenous engagement in EA – Prof. Kelsey Leonard, SERS	Riverside Dam, City Councillor Pam Wolf & Project Engineer Scott MacDonald	Discussion on Group Methods Presentations	
9 N8-12	Giant Gold Mine, Yellowknife NWT – MLA for Frame Lake Kevin O'Reilly	Human Health & Ecol. Risk Assess Claire McAuley, MSc, MEng Senior Scientist Intrinsik, Calgary	Case Study #1 Site C Dam, Peace River, BC	CBC Doc "The Mill. What Divides a Community Can Bring It Together in New Ways"

10 N15-19	Toward Sustainability: higher order assessment – regional & strategic	Economic tools in EA – Dana Harper, MSc, Nichols Applied Management, Edmonton	Case Study #2 Northern Pulp, Pictou, NS	Kwadacha by the River film Individual Project Due Nov. 22
11 N22-26	Review for final in-class test	Working EA practitioners panel	Review for final in-class test Course evaluation	
12 N29-D3	IN CLASS TEST – NO LECTURE OR TUTORIAL			

The following student signed Checklist was developed by the University of Waterloo's Secretariat as a means of emphasizing the importance of attribution of referenced work and reducing plagiarism.

For Group Assignment:

Please read the disclosure below following the completion of your group presentation. 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 presentation.
2. A proper bibliography has been included, which includes acknowledgement of all sources.
3. 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.

Date: _____

Name (print)	Signature	Contribution

Course and University Policies

Note for Students with Disabilities:

The University of Waterloo is committed to ensuring you can access, and meaningfully participate in, your education. AccessAbility Services is the University's centralized office for the management of academic accommodations for all students with disabilities. You can reach them at: 519-888-4567, ext. 45231 or 47922, or email: access@uwaterloo.ca.

Mental Health:

The University of Waterloo, the Faculty of Environment and our Departments/Schools 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. Campus Wellness includes Counselling Services and Health Services and 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:

Students need 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.

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. Guidance on Academic Integrity at UW is available here. 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 their 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, A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm

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 (e.g. www.Turnitin.com). Plagiarism offices 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). **Paraphrase using your own words and reference ideas appropriately.**

Turnitin:

Plagiarism detection software (Turnitin) may be used to screen assignments in this course. Turnitin is primarily a plagiarism detection tool, but can also be used to help students understand academic integrity in written assignments. Turnitin generates 'originality reports' on student submissions, which can provide instructors with information about plagiarized sources, but the reports can also be used to help students understand the proper use of quotation marks, how to cite sources properly, and how to paraphrase.

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. NOTE: any student not wishing to submit materials for Turnitin detection must contact the instructor by September 21 to arrange for an alternative assignment.

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.*

To Avoid Plagiarism

The use of other people's work *must* be properly acknowledged and referenced in all written material such as 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. Use of such material without complete and unambiguous acknowledgement, however, is an offence under 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.

Numeric grades on a scale from 0-100 are used in grading all assignments at the University of Waterloo. The following list will give you an idea of the basis upon which numeric grades are assigned:

>90% Work that shows a high level of initiative and is clearly above and beyond what is expected. Referencing, style, grammar/spelling, content and the development of ideas are all superior. (similar to A and A+ in the previous system)

80-89% Work that shows good initiative and is above what is expected. Referencing, style, grammar/spelling, content and the development of ideas are all good. (Similar to B+ and A- in the previous system)

70-79% Work that shows initiative and is about what is expected, but one or more problems are evident in referencing, style, grammar/spelling, content and/or the development of ideas. (Similar to B- and B in the previous system)

60-69% Work that does not demonstrate initiative, has a series of problems in referencing, style, grammar/spelling, content and/or the ideas, and overall, does not fully convince the reader that the topic has been well considered (Similar to C-, C and C+ in the previous system)

50-59% Work that is substandard/sloppy in places, has many problems in referencing, style, grammar/spelling, content and/or the development of ideas, and overall, raises more questions in a reader's mind than the work answers. (Similar to D-, D and D+ in the previous system)

40-49% Work that is of consistently poor quality, demonstrates gaps in comprehension of the assigned material, and/or indicates that not enough time was taken to properly address the assignment. (Similar to F and F+ in the previous system)

<40 Work that is clearly of poor quality, demonstrates a lack of comprehension of the assigned material, shows little attempts at a personal development of ideas or efforts to back up arguments with suitable evidence, and/or indicates that the work was completed 'at the last minute'