

ENVS 4902
Environmental Science Honours Thesis Syllabus

Honours Coordinator: Sue Gass (susan.gass@dal.ca)
Office: LSC 809
Office Hours: by appointment

Time and Location:

Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people.

In ENVS 4902 you will have no formal classes. Students are expected to meet at least bi-weekly with their supervisors and work at least 6 hours/week on their thesis outside of class. In addition, students are required to be in monthly contact with the Course Coordinator Sue Gass via email (susan.gass@dal.ca) or in person to give updates on progress. Bi-weekly informal meetings with the course coordinate will be optional. The time and location will be announced on Brightspace before the start of term.

Course Description:

Independent research project carried out under the supervision of an approved faculty member or affiliated research scientists. This course is required for Honours Environmental Science. You will have the opportunity to advance your knowledge and skills in a specific area of environmental science.

Prerequisites: ENVS 4901.03 with a grade of B+ or higher

Readings

There are no required readings for this semester, but you may find the following text helpful in developing your final thesis report:

- ✓ Surviving Your Dissertation – A Comprehensive Guide to Content and Process by Kjell Rudestam, and Rae Newton
- ✓ *Doing Science* by Ivan Valiela, 2nd Edition

Course Objectives/Learning Outcomes

- Demonstrate ability to gather data and generate evidence
- Express research results effectively and succinctly
- Use written strategies for the effective dissemination of research results
- Communicate your project knowledge with accuracy and credibility to a target audience
- Develop project planning, implementation and evaluation skills

Plagiarism and Cheating

Students are reminded that plagiarism and cheating will not be tolerated. To avoid plagiarism, the rule of thumb is when in doubt, cite the source of the idea. If you have any questions about a particular circumstance, please see your instructor. Students are expected to be aware of, and

adhere to the Dalhousie University Academic Regulations as detailed in the University Calendar. If students have clearly used plagiarism a grade of zero will be given and disciplinary procedures will be initiated.

Evaluation

Final Thesis	100%
Honours Qualifying Examination	*required for graduation - see below

The final thesis is due on March 27 and will be worth 100% of your final grade for this class. The thesis will be marked by (a) the Honours Coordinator, (b) the Honours Thesis Supervisor, and (c) an independent thesis reader (appointed by the Honours Coordinator).

Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale

A+ (90-100)	B+ (77-79)	C+ (65-69)	D	(50-54)
A (85-89)	B (73-76)	C (60-64)	F	(<50)
A- (80-84)	B- (70-72)	C- (55-59)		

Other course requirements

Honours Qualifying Exam

Faculty regulations for Honours degrees require an "honours qualifying examination" which is over and above the 20 classes required for the degree. We meet this Faculty regulation by giving a Pass/Fail grade for an oral presentation and defense of your thesis at the Department of Earth and Environmental Sciences Honours Thesis Project Fair which will take place Saturday April 4th all day. You are expected to be present for all of the presentations that day. Presentations will be marked by all faculty present the Thesis Project Fair. In addition, awards for best Earth and Environmental Science thesis, and best Earth and Environmental Science presentation will be given out at the culmination of the Thesis Project Fair day.

Key Dates

- **Tuesday March 10, 2020.** The first draft of the thesis is due by 5 pm. Students are to submit a copy of the first draft to their supervisors and the Course Coordinator via email. Supervisors are requested to provide feedback on the thesis draft to the students by March 20, 2020.
- **March 13-15, 2020.** Students are highly encouraged to present at the Science Atlantic Environment Conference. This year the conference is to be held at Cape Breton University, Sydney, NS. Students can apply to the Faculty of Science for funds upto \$200 to support student travel to this conference. Application forms can be found [https://www.dal.ca/content/dam/dalhousie/pdf/science/Sandra%20Walde%20Updates/URC%20Funding%20Request%20Form%20\(Fillable\).pdf](https://www.dal.ca/content/dam/dalhousie/pdf/science/Sandra%20Walde%20Updates/URC%20Funding%20Request%20Form%20(Fillable).pdf)
- **Friday March 27, 2020.** Final thesis is due by 5 pm. Students are to deliver the final Honours thesis for grading to 1) the Supervisor via email, and 2) the Course Coordinator via

Brightspace. The thesis is to be graded according to the attached criteria and grading scheme.

- **Saturday April 4, 2020.** Honours Qualifying Exam (HQE) 8:30am to 5:00 pm for Earth and Environmental Science students. Students are assigned a pass/fail grade for the HQE. At the HQE, the students give a maximum 15-minute presentation, with 13 minutes for questions from the supervisor, the independent reader and the general audience. If a supervisor or independent reader is unable to attend the HQE, she/he will submit questions to be asked by the Course Coordinator at the HQE. See attached schedule.
- **Friday April 3, 2020.** Supervisors and independent readers are asked to submit their completed Marking Form to the Course Coordinator. At the end of the marking form Supervisors are asked to include a list of any essential corrections deemed necessary. Please keep in mind that students will have one week to make these corrections. In addition, supervisors are asked to give feedback and essential corrections deemed necessary to their students.
- **Tuesday April 21, 2020.** Corrected thesis is due. Students are to send the corrected thesis to their Supervisor and the Course Coordinator. Supervisors are asked to write to Sue Gass to confirm that the thesis meets the required standard, and that the student has satisfactorily addressed the comments. Only upon receipt of this confirmation will the student's final grade be submitted. The student's grade for this course is based 100% on the Thesis Marking Form from the Supervisor and the Course Coordinator. In the case where there is variation in the recommended final letter grade for the thesis, the Course Coordinator will consult with the Supervisor to identify the most appropriate grade.

Honours Qualifying Exam Schedule for April 4, 2020

Location: TBA

University Policies and Statements

This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

Information: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

Information: https://www.dal.ca/campus_life/academic-support/accessibility.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

Code: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness

Statement: <http://www.dal.ca/cultureofrespect.html>

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit or e-mail the Indigenous Student Centre (1321 Edward St) (elders@dal.ca).

Information: https://www.dal.ca/campus_life/communities/indigenous.html

Important Dates in the Academic Year (including add/drop dates)

https://www.dal.ca/academics/important_dates.html

University Grading Practices

https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html

Missed or Late Academic Requirements due to Student Absence (policy)

https://www.dal.ca/dept/university_secretariat/policies/academic/missed-or-late-academic-requirements-due-to-student-absence.html

Student Resources and Support

Advising

General Advising https://www.dal.ca/campus_life/academic-support/advising.html

Science Program Advisors: <https://www.dal.ca/faculty/science/current-students/academic-advising.html>

Indigenous Student Centre: https://www.dal.ca/campus_life/communities/indigenous.html

Black Students Advising Centre: https://www.dal.ca/campus_life/communities/black-student-advising.html

International Centre: https://www.dal.ca/campus_life/international-centre/current-students.html

Academic supports

Library: <https://libraries.dal.ca/>

Writing Centre: https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html

Studying for Success: https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html

Copyright Office: <https://libraries.dal.ca/services/copyright-office.html>

Fair Dealing Guidelines <https://libraries.dal.ca/services/copyright-office/fair-dealing.html>

Other supports and services

Student Health & Wellness Centre: https://www.dal.ca/campus_life/health-and-wellness/services-support/student-health-and-wellness.html

Student Advocacy: <https://dsu.ca/dsas>

Ombudsperson: https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html

Safety

Biosafety: <https://www.dal.ca/dept/safety/programs-services/biosafety.html>

Chemical Safety: <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>

Radiation Safety: <https://www.dal.ca/dept/safety/programs-services/radiation-safety.html>

Scent-Free Program: <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>

Marking Form for ENVS 4902 Final Honours Thesis

Thank you very much for serving as Supervisor for one of our Environmental Science Honours students. The enclosed document includes a grade form, a list of required corrections, and a list of questions for the Honours Qualifying Examination. Please send this completed form to me via email on **Friday April 3, 2020** to (susan.gass@dal.ca). Thank you!

Please complete the list of questions for the Honours Qualifying Examination *only if you cannot be present at the Honours Qualifying Examination on April 4, 2020*. For this case, please send the exam questions to me by email before **April 2, 2020**.

Grade Form

Area 1: Introduction

Performance Expectations
The title clearly reflects the contents of the thesis; A clear problem statement is made and the importance of the topic is described; Sufficient background, including definition of terms, is provided for the reader to understand the research questions; Knowledge gaps driving the research questions are summarized; The research problem and research questions are precisely and succinctly stated; and Specific hypotheses are identified.
Assigned Points for Area 1:
/10
Comments:

Area 2: Literature Review

Description of Performance Expectations
The literature review is complete in its coverage, addressing the main issues and topics related to the research question(s); The state of knowledge on the topic related to the research question(s) is clearly outlined, and the knowledge gaps are defined and supported; The literature review is well-organized; Statements and conclusions in the literature review are supported with references, careful logic and clear analysis; and The literature review explains existing controversies on the topic related to the research question(s).
Assigned Points for Area 2:
/15
Comments:

Area 3: Method(s)

Description of Performance Expectations
The logic of the research design is explained; Scientific methods and assumptions are valid and appropriate given the topic and the resources available to the student; The description of experiments and calculations are sufficiently complete and precise to allow their reproduction by fellow scientists; Data analyses are appropriate to the research design; and Any relevant ethical issues are clearly explained.
Assigned Points for Area 3:
/10
Comments:

Area 4: Results and Discussion

Description of Performance Expectations
The results are logically organized and presented in a clear and concise manner; The number of figures and tables is appropriate, and there are no redundancies in information among the figures, tables, and text; Figures and tables are in good shape and are appropriately and effectively used to convey meaning; Data interpretation is thorough, correct and clearly stated; Limitations of the findings are clearly explained; and Findings are clearly placed into context with the relevant literature and current knowledge gaps.
Assigned Points for Area 4:
/20
Comments:

Area 5: Conclusions

Description of Performance Expectations
A succinctly written summary of the research process is provided; Sound conclusions are made; Contribution of this research to the field is clearly articulated; and Suitable recommendations for future research and public policy (where applicable) are articulated.
Assigned Points for Area 5:
/15
Comments:

Area 6: References

Description of Performance Expectations
<p>The number and quality of references is appropriate; The amount and quality of supplementary material is appropriate; References are accurately cited in accordance with approved citation/style guidelines; Proper credit is given to related work; and It is clear in the thesis which contributions are new and original by the student and which are derived from others.</p>
Assigned Points for Area 6:
/5
Comments:

Area 7: Organization, Specifications, and Writing Style

Description of Performance Expectations
<p>The language is clear, precise, and effective; Mathematical formulae, symbols, abbreviations, and units are correctly defined and used; The thesis is free from grammar, spelling, word processing, and other related errors; The thesis is well-structured and organized in accordance with directions.</p>
Assigned Points for Area 7:
/15
Comments:

Area 8: FOR SUPERVISOR AND INSTRUCTOR ONLY Stewardship of the Project Process

Description of Performance Expectations
<p>The student used of a range of available resources to assist in project completion; Feedback on written components was sought from support group and committee and incorporated; Drafts of written components were revised and improved; and Research planning tools were used effectively (e.g., Gantt chart).</p>
Assigned Points for Area 8:
/10
Comments:

Final Grade Calculation:

Area	Score
1	/10
2	/15
3	/10
4	/20
5	/15
6	/5
7	/15
8	/10
TOTAL:	/100

LIST OF REQUIRED CORRECTIONS.

Please note that the student has one week to complete these corrections.

Items that MUST BE ADDRESSED before the thesis can be considered complete

Questions for Honours' Qualifying Examination

Questions are only to be submitted here for the case where the Supervisor cannot be present at the examination. The thesis Supervisor is allotted 5 minutes for questions during the examination.

Questions for the Honours Qualifying Examination