

BIOL/ENVS 4001 Environmental Impact Assessment Syllabus

Department of Biology

BIOL-10355/ENVS-11303 Fall 2024

Dalhousie University acknowledges that we are in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq People and pays respect to the Indigenous knowledges held by the Mi'kmaq People, and to the wisdom of their Elders past and present. The Mi'kmaq People signed Peace and Friendship Treaties with the Crown, and section 35 of the Constitution Act, 1982 recognizes and affirms Aboriginal and Treaty rights. We are all Treaty people.

Dalhousie University also acknowledges the histories, contributions, and legacies of African Nova Scotians, who have been here for over 400 years.

Course Instructor(s)

Name	Email	Office Hours
Dr. Patricia Lane, Professor	patricia.lane@dal.ca	Online, as requested
Dr. Christopher Course Instructor/PTA	ch608098@dal.ca	Online, as requested

Markers: Tutorial 1	Arden Goodfellow	ar208209@dal.ca
Tutorial 2	Mishell Itkind	ms754728@dal.ca
Tutorial 3	Omair Khan	om403043@dal.ca
Tutorial 4	Cat Roche	ct508355@dal.ca
Tutorial 5	Julia White	jl731821@dal.ca

Course Description

This course serves as the capstone to the EIA certificate. It is a hands-on training course that guides students through a nine-step framework for preparing individual EIAs on a physical project as well as a Strategic Environmental Assessment on a policy. International, national, provincial examples illustrate the framework. Class format includes lecture, tutorial and reading each week.

Course Prerequisites

NOTES: All students taking BIOL 4001.03 or ENVS 4001.03 must have completed 90 credit hours and be in their fourth year of study, or have permission of instructor.

PREREQUISITES: ENVS 1100.03 and 1200.03 (or ENVS 1000X/Y.06) or BIOL 2060.03 (or BIOA 3001.03) or ERTH 2410.03 or GEOG 2100X/Y.06 or GEOG 2201.03 or GEOG 2202.03 or INTD 2001.03 or INTD 2002.03 or OCEA 2000X/Y.06 (or OCEA 2001.03 and OCEA 2002.03) or SUST 2000.06 or SUST 2001.06

CROSS-LISTING: ENVS 4001.03

RESTRICTIONS: E1, E2, and E3 This course is open to all students with the necessary prerequisites regardless of whether they are applying for the EIA certificate or not.

Student Resources

The Professor, Dr. Lane, and Instructor/PTA, Dr. Course, are available to you online during business hours. In addition, you will be online synchronously with the Dr. Course for a one hour tutorial each week. Each tutorial group is assigned one Marker by tutorial number, and you can communicate with your Marker for feedback on the marking of your three assignments. Our Brightspace also includes two Discussion Boards, where you can submit questions to the Professor on overall course content and to the Instructor on tutorial content. Our website also contains websites and documents with additional information to help you understand the course content.

Course Structure

Course Delivery

The course is blended synchronous online for 8 tutorials and asynchronous online for the rest of the course content. Tutorials will be recorded, attendance taken, and participation marked. Tutorial 1 will occur within the first week of class. Although no parts of the class require on campus attendance, those students connecting to online resources from outside Canada are responsible for ensuring awareness and compliance with any applicable laws in the country from which they are connecting. There will be one online test October 26th and students must be available to complete the test during the assigned hours-see Course Outline and put the date and time in your schedule at the beginning of term. This course is cross listed between BIOL 4001 and ENVS 4001. Despite the two course numbers, both courses are identical. Students from both course numbers are integrated in the tutorials. Dr. Course is the 'go-to' person for technology issues in the course.

Lectures

Lectures are online and asynchronous; you should be sure to listen to the lecture each week to be able to understand how to do your tutorials (**PRACTICE PROJECT**) and work on your independent project assignments.

Tutorials-are held on Wednesdays(W) and Thursdays(R) beginning September 4 & 5, 2024.

The tutorials feature a **PRACTICE PROJECT**: Ecotourism on Sable Island, which is part of the Halifax Municipality located in the Northwest Atlantic Ocean. This **PRACTICE PROJECT** will help you learn the steps in the EIA framework. You can freely discuss this **PRACTICE PROJECT** with your classmates, Instructor, and Professor. In addition, you will be assigned a different project to assess by tutorial group for Assignments 1 and 2. Your **ASSIGNMENT PROJECT** is to be worked on individually and not discussed with others. Also Assignment 3 is to be completed totally individually.

Course	CRN	Number	Day	Time
BIOL 4001	10356	T01	W	1635-1725
BIOL 4001	10357	T02	W	1535-1625
BIOL 4001	10358	T03	R	1435-1525
BIOL 4001	10359	T04	R	1535-1625
BIOL 4001	10360	T05	R	1635-1725
ENVS 4001	11304	T01	W	1635-1725
ENVS 4001	11305	T02	W	1535-1625
ENVS 4001	11306	T03	R	1435-1525
ENVS 4001	11307	T04	R	1535-1625
ENVS 4001	11308	T05	R	1635-1725

Course Materials

- ❖ Required textbook(s) Bram-Noble Introduction to Environmental Impact Assessment (4th Edition) 2021, can be purchased as an e-book on our class website after an initial trial period. Use only Edition 4 of our textbook.
- ❖ See course Brightspace page under Content tab for Panopto lectures. Slides are posted separately.
- ❖ You will need a computer camera/microphone to participate in online tutorials.
- ❖ e-journal articles from Dalhousie Library
- ❖ Any online platforms outside Brightspace-Microsoft Teams: Office 365 for meetings.
- ❖ Email-class messages, reminders, discussion board questions, and announcements will be sent to all students via Brightspace.
- ❖ A student should post only to the discussion board to ask a question about class content or procedures. Questions will not be answered via Dr. Lane's personal email and you will be directed back to the Discussion Board.
- ❖ A student should request a virtual meeting by contacting Dr. Lane at Patricia.Lane@Dal.Ca or to communicate any emergency or personal issue regarding the course.
- ❖ A student should email Dr. Course at ch608098@dal.ca directly to ask a question about tutorial or any associated issues such as missing work/ lateness in submitting a tutorial, test, or assignment.

- ❖ Each student will be assigned one Project to assess for Assignment 1 and 2, and one Marker at the beginning of term. Projects and markers cannot be substituted and are based upon the tutorial you are registered for as per the above registration table.
- ❖ A student should email the Marker directly to ask a question about the marking of an assignment. If you are not satisfied after first discussing your issue with the Marker, then discuss it with Dr. Course.

Assessment

Component	Weight (% of final grade)	Date Due
Assignment 1 (Physical Project Assessment-Part 1)	25	Oct 6, Sunday
Assignment 2 (Physical Project Assessment-Part 2)	25	Nov 3, Sunday
Test (multiple choice-online Brightspace)	20	Oct 27, Sunday
Assignment 3 (Strategic [Policy] Environmental Assessment)	14	Dec 5, Thursday
Tutorials (8 tutorials x 2Pts.) Weeks 1-7 and 10	16	Marked in tutorial at your scheduled day and time
Total	100	

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)	

Test

If you have a conflict for the scheduled online test on October 27, 2024, please let the Instructor, Dr. Course know at least 4 weeks in advance to make earlier accommodations. Later accommodations after Oct 27 will not be possible. The online test will be given from 1:30-3:30 pm on Sunday, Oct 27 and is to be completed individually. The test is multiple choice with four possible answers per question on Weeks 1-8 material including tutorials. There are 40 questions that will be randomly generated from a large bank of questions for each individual test. Thus, each student will have a different test. Each right answer earns 0.5 points for a total of 20 points. You will have 1 minute to answer the question and then a new question will appear. You will not be able to return to a previous question so give your best answer within the time limit. There is no penalty for guessing or wrong answers. The test will cover Weeks 1-8 and there is nothing from Weeks 10-12 on Strategic Environmental Assessment. No online proctoring software will be used. More instructions will be posted on our Brightspace website. **The course does not have a final examination.**

Course Policies (See also university policies and websites on last pages of this syllabus.)

Course Policies on Missed or Late Academic Requirements

Use the Student Declaration of Absence (SDA) form for missed academic requirements in this course if you are ill for more than 3 consecutive days (not 3 class days) or have extenuating circumstances as per university policy. A submission site for your declaration is given on the class website on Brightspace. Two SDA submissions are permitted per term. **The possibility of making up late work is at the discretion of the Professor but for each SDA you will have one week automatically from the original due date to submit the assignment without penalty. SDAs cannot be used to miss tests.** Any material submitted for evaluation after the designated deadline or the SDA one week will have marks deducted at the rate of 10% per day late including weekends. Extensions without the mark penalty will be given only with a valid SDA or other excuse as approved by Dr. Lane. If you file a SDA for a short-term absence from class, you need to follow-up with Dr. Lane if you will not submit within one week. **We do not have the possibility of offering alternative assignments or changes in weighting of points for requirements-please do not ask for special treatment that is not fair to everyone.** “Students experiencing recurring long-term absences are strongly encouraged to meet with a Faculty or Declared Major Advisor, or Faculty Program Coordinator and refer to the University’s Student Accommodation”.

Course Policies Related to Academic Integrity

ALL WORK IN THIS CLASS IS TO BE DONE INDIVIDUALLY except the online-tutorial discussions you may have with your tutorial members and Instructor/PTA on the Sable Island Project. Do not collaborate on the 3 assignments; they will be checked for originality using plagiarism software. **DO NOT SHOW ANYONE YOUR WORK** or you too can be charged with plagiarism. All instances of suspected plagiarism will be reported promptly to the Academic Integrity Officer of the Faculty of Science. **YOU ARE NOT ALLOWED TO USE GENERATIVE AI AND LARGE LANGUAGE MODELS (e.g., ChatGPT)** in preparing Assignments 1-3; they must be totally original. You can quote other authors using their name(s), year, and page number of a publication referenced in your bibliography, but overall quoted passages should not exceed 5-7% of your assignments. Points will be deducted if you exceed this limit.

Course Policies Related to Grading and Marking

You will not receive a letter grade lower than what is indicated for your final point value listed above, although the professor reserves the right to give you a higher grade. Because the scale is generous for A’s and B’s (30 points) as compared to C’s and D’s (20 points), individual marks will only be rounded up if the student has more than 0.50 above the maximum value for a particular letter grade. For example, if you received 79.51 points, you would receive an A- in the class and not a B+. If you received 79.49 points, you would receive a B+ and not an

A-. The final grade that you receive in a class is the total of the work that you did and the knowledge that you gained. A grade is something that you earn. If you require a final grade at a particular level for an honours degree, job, graduate or professional school, or other purpose, you should ensure that you put the time and effort in during the term to earn that grade. The Professor is willing to give you extra help and study assignments if you believe that you are not achieving a satisfactory level of proficiency in the class. Please do not come at the end of the term requesting a higher grade because you need it to fulfil a requirement, enter graduate school, you worked hard, or because you paid your tuition. These are not satisfactory reasons. It is unfair to the other students in the class who have done the work, and to the university, which needs to maintain fair and high standards of academic achievement. Although assignments will have a detailed point distribution for marking, the Marker has discretionary power to deduct additional points (up to 10%) for overall sloppy writing, poor grammar and spelling, messy format, inadequate referencing, and overall inferior quality of the assignment. All assignments are to be typed and spell & grammar-checked before submission.

Learning Objectives

At the end of this class, students will have an in-depth understanding of environmental assessment procedures and related legislation in Canada and be able to conduct an independent Environmental Impact Assessment of a physical project and a Strategic Environmental Assessment of a policy. Students will be able to:

1. Apply an EIA Framework for projects and physical works
2. Explain EIA legislation at the Federal and Provincial levels
3. Generate a detailed project description for your assigned project
4. Identify Valued Environmental Components (VECs) in a range of ecosystems
5. Design a meaningful stakeholder participation program
6. Formulate reasonable bounds for various impact categories
7. Apply several environmental impact and risk methodologies
8. Predict environmental impacts accurately
9. Design Environmental Management Plans including mitigation, enhancement, compensation, monitoring, and accountability
10. Assess residual impacts for decision makers and make recommendations
11. Evaluate an existing EIA, identify strengths and weaknesses, and offer improvements
12. Recommend project decision: acceptance, modification, or rejection
13. Conduct a Strategic Environmental Assessment (SEA) framework for a policy
14. Recommend appropriate management strategies to SEA decision-makers

Course Content

3 Assignments and 1 Test due at 11:55 Atlantic Standard Time on dates indicated-shown in red.

Week	Lecture & Tutorial Topics	Assignments
1 Sept 3-8	A. Introduction to EIA B. EIA Federal Law Tutorial 1: Introduction to Project Assessment	NOBLE: Chapters 1, 2 Reading 1 Attend Tutorial 1
2 Sept 9-15	A. Project Description B. Scoping and Public Participation Tutorial 2: Project Description	NOBLE: Chapter 3, 4 Reading 2 Attend Tutorial 2
3 Sept 16-22	A. Description of Physical Environment B. Watershed Dynamics Tutorial 3: Selecting Physical VECs	NOBLE: Chapter 5 Reading 3 Attend Tutorial 3
4 Sept 23-29	A. Description of Biological Environment B. Social Impact Assessment Tutorial 4: Selecting Biological & Social VECs	NOBLE: Chapter 10 Reading 4 Attend Tutorial 4
5 Sept 30 – Oct 6	A. Environmental Baseline & Bounding B. Assessing Impacts-Methods Tutorial 5: Bounding & Impact Identification	NOBLE: Chapter 6, 8 Reading 5 Attend Tutorial 5 ASSIGNMENT NO. 1 DUE Oct.6 (Sunday) ONLINE: AT 11:59 pm
6 Oct 7-13	Lecture A. Assessing Risks-Methods Lecture B. Cumulative Effects Assessment Tutorial 6: CE & Ranking Risks Exercise	NOBLE: Chapters 10, 11 Reading 6A and 6B Attend Tutorial 6
7 Oct 14-20	Lecture: Environmental Management Plan Tutorial 7: Environmental Management Plan	NOBLE: Chapter 7, 9 Reading 7 Attend Tutorial 7
8 Oct 21-27	Test Week Study for test	TEST DUE ONLINE Oct 27 (Sunday) (Multiple Choice)
9 Oct 28-Nov 3	Work on Assignment 2 No new lecture or tutorial work this week.	ASSIGNMENT NO. 2 DUE ONLINE AT 11:59 pm Nov. 3 (Sunday)
10 Nov 4-10	Lecture: Introduction to Strategic Environmental Assessment Assignment 3 posted: SEA OF A POLICY Tutorial 8 (Week 10): SEA of a Policy	NOBLE: Chapter 12 Reading 10 Attend Tutorial 8
11 Nov 11- Nov 15	STUDY BREAK	STUDY BREAK
12 Nov `18-Dec 2	Lecture: Being a Professional EI Assessor Send Dr. Lane questions on Assignment 3 on the discussion board Prepare and Submit Assignment 3	NOBLE: Chapters 13-14 Assignment NO. 3 Strategic Environmental Assessment of a Policy DUE ONLINE AT 11:59 pm Dec 5 (Thursday)

University Policies and Statements

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 at 1321 Edward St or elders@dal.ca. Additional information regarding the Indigenous Student Centre can be found at: https://www.dal.ca/campus_life/communities/indigenous.html

Internationalization

At Dalhousie, 'thinking and acting globally' enhances the quality and impact of education, supporting learning that is "interdisciplinary, cross-cultural, global in reach, and orientated toward solving problems that extend across national borders." Additional internationalization information can be found at: <https://www.dal.ca/about-dal/internationalization.html>

Academic Integrity

At Dalhousie University, we are guided in all our work by the values of academic integrity: honesty, trust, fairness, responsibility, and respect. As a student, you are required to demonstrate these values in all 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. Additional academic integrity information can be found at: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Student Accessibility Centre is Dalhousie's centre of expertise for matters related to student accessibility and accommodation. If there are aspects of the design, instruction, and/or experiences within this course (online or in-person) that result in barriers to your inclusion, please contact the Student Accessibility Centre (https://www.dal.ca/campus_life/academic-support/accessibility.html) for all courses offered by Dalhousie with the exception of Truro. For courses offered by the Faculty of Agriculture, please contact the Student Success Centre in Truro (<https://www.dal.ca/about-dal/agricultural-campus/student-success-centre.html>)

Conduct in the Classroom – Culture of Respect

Substantial and constructive dialogue on challenging issues is an important part of academic inquiry and exchange. It requires willingness to listen and tolerance of opposing points of view. Consideration of individual differences and alternative viewpoints is required of all class members, towards each other, towards instructors, and towards guest speakers. While expressions of differing perspectives are welcome and encouraged, the words and language used should remain within acceptable bounds of civility and respect.

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 (Strategic Priority 5.2). Additional diversity and inclusion information can be found at: <http://www.dal.ca/cultureofrespect.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. The full Code of Student Conduct can be found at: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

Fair Dealing Policy

The Dalhousie University Fair Dealing Policy provides guidance for the limited use of copyright protected material without the risk of infringement and without having to seek the permission of copyright owners. It is intended to provide a balance between the rights of creators and the rights of users at Dalhousie. Additional information regarding the Fair Dealing Policy can be found at: https://www.dal.ca/dept/university_secretariat/policies/academic/fair-dealing-policy-.html

Originality Checking Software

The course instructor may use Dalhousie's approved originality checking software and Google to check the originality of any work submitted for credit, in accordance with the Student Submission of Assignments and Use of Originality Checking Software Policy. Students are free, without penalty of grade, to choose an alternative method of attesting to the authenticity of their work and must inform the instructor no later than the last day to add/drop classes of their intent to choose an alternate method. Additional information regarding Originality Checking Software can be found at: <https://www.dal.ca/about/leadership-governance/academic-integrity/faculty-resources/ouriginal-plagiarism-detection.html>

Student Use of Course Materials

Course materials are designed for use as part of this course at Dalhousie University and are the property of the professor unless otherwise stated. Third party copyrighted materials (such as books, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law. Copying this course material for distribution (e.g. uploading to a commercial third-party website) may lead to a violation of Copyright law.