

BIOL/ENVS Environmental Impact Assessment Syllabus

Department of Biology

Course Code: BIOL 10327/ENVS 11157

Fall 2026

Dalhousie University operates in the unceded territories of the Mi'kmaw, Wolastoqey, and Peskotomuhkati Peoples. These sovereign nations hold inherent rights as the original peoples of these lands, and we each carry collective obligations under the Peace and Friendship Treaties. Section 35 of the Constitution Act, 1982, recognizes and affirms Aboriginal and Treaty rights in Canada.

We recognize that African Nova Scotians are a distinct people whose histories, legacies, and contributions have enriched the part of Mi'kma'ki known as Nova Scotia for over 400 years.

Course Instructor(s)

Name	Email	Office Hours
Patricia Lane	patricia.lane@dal.ca	Online, as requested.
Julia White (TA) Tutorial Leader	jl731821@dal.ca	Online as requested.
Hannah McMann (TA) Tutorial Leader	zy494207@dal.ca	Online as requested.
Christopher Course (TA)	ch608098@dal.ca	Online as requested.

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 for a physical project. Strategic Environmental Assessment for a policy is also discussed. International, national, and provincial examples illustrate the framework. The class format includes lectures, tutorials, and readings each week.

Course Prerequisites: 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 from the 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 who meet the necessary prerequisites, regardless of whether they are applying for the EIA certificate.

Student Resources

The Professor, Dr. Lane, and our TAs, Julia White and Hannah McMann, are available to you online during business hours. In addition, you will be online synchronously or in-person synchronously with Julia or Hannah for a one-hour tutorial each week, depending on which tutorial you enrolled in. Each tutorial group is assigned a TA by tutorial number, and you can communicate with your TA for feedback on the marking of your two assignments. Our Brightspace also includes two Discussion Boards, where you can submit questions to the Professor on overall course content and to the TAs on tutorial and assignment content. Our website also contains additional resources and documents to help you understand the course content. Dr. Chris Course is the 'go-to' person for technology issues in the course. Please contact him if you have a problem with Brightspace.

Course Structure: Timetable, Classrooms, and Projects

BIOL-11157	ENVS-10327	01	Lecture	DAY	Online-ASYNCHRONOUS SESSION
11158	10328	T01	Tutorial	W	Online-SYNCHRONOUS SESSION 2035-2125 HRS-TA is Julia White Project 1: Pumped Storage Hydro and Highland Wind Farm, Skye Mountain/Whycocomagh Bay, Inverness-Victoria Counties, Nova Scotia
11159	10329	T02	Tutorial	W	Studley LSC-COMMON AREA C234 1535-1625 HRS-TA is Julia Wright Project 2: Hyperscale AI Data Centre and Dedicated Power Campus, Nappan-Maccan, Cumberland Co. (Chignecto Isthmus), Nova Scotia
11160	10330	T03	Tutorial	R	Studley LSC-COMMON AREA C216 1435-1525 HRS-TA is Hannah McMann Project 3: Lithium-ion Battery Recycling and Black Mass Refinery, LaHave River, Lunenburg County, Nova Scotia
11161	10331	T04	Tutorial	R	Studley LSC-COMMON AREA C220 1535-1625-TA is Julia Wright Project 4: Wind-Powered Green Hydrogen and Ammonia Export Complex-Sheet Harbor and Eastern Shore, Nova Scotia

Course Delivery: The course is blended with 8 in-person tutorials and two in-person tests during the tutorials, and asynchronous online learning for the remainder of the course content. During tutorials, attendance will be taken, and participation marked. Tutorial 1 will occur as shown on the timetable above on Wednesday or Thursday during the second week of class. All class components are numbered by week. See the Course Schedule and put the test dates and times in your schedule at the beginning of the term.

Lectures are online and asynchronous.

Tutorials-Tutorial 1 is online synchronous, and Tutorials 2-4 are synchronous and in-person. Tutorials are held on Wednesdays (W) and Thursdays (R) beginning in Week 1, which is the week of September 13-19. 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 ASSIGNMENT PROJECT** to assess as the focus of Assignments 1 and 2. These projects are listed on the previous page by tutorial group. Your **ASSIGNMENTS** are to be worked on individually and not discussed with others. The Project descriptions and assignments are given under the tab 'Content' on Brightspace.

Course Materials and Procedures

- ❖ 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 the course Brightspace page under the Content tab for Panopto lectures. Slides are posted separately.
- ❖ You will need a computer to access our Brightspace website for class content, including lectures.
- ❖ You will need a computer camera/microphone to participate in online tutorials for T01 only.
- ❖ e-journal articles from Dalhousie Library
- ❖ Any online platforms outside Brightspace: Microsoft Teams (Office 365 for meetings).
- ❖ Email-class messages, reminders, discussion board questions/answers, and announcements will be sent or posted 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 email, and you will be directed back to the Discussion Board.
- ❖ A student can send an email to discuss any emergency, absence, or other personal issue regarding the course by contacting Dr. Lane at Patricia.Lane@Dal.Ca. Students can have an online meeting with Dr. Lane by requesting it through her personal email.

- ❖ A student should email Julia White or Hannah McMann directly to ask a question about tutorials. A student should email Chris Course at ch608098@dal.ca directly to ask a question about a technical or Brightspace issue.
- ❖ Each student will be assigned one Project to assess for Assignments 1 and 2, and one TA for marking at the beginning of term. Projects and TAs cannot be substituted and are based upon the tutorial you are registered for, as per the above timetable entry.
- ❖ A student should email the TA directly to ask a question about the marking of an assignment. If you are not satisfied after first discussing your issue with the TA, then discuss it with Dr. Lane. She will, in turn, discuss the issue with your TA before deciding.

Assessment

Component	Weight	Date Due
Assignment 1 (Physical Project Assessment-Part 1)	25 points	Oct 24-Saturday
Assignment 2 (Physical Project Assessment-Part 2)	25 points	Dec 9-Wednesday
Test 1 in Scheduled Tutorial Time	15 points	October 14 Wednesday October 15 Thursday
Test 2 in Scheduled Tutorial Time	14 points	November 25 Wednesday November 26 Thursday
Tutorials 7 @ 3 pts each	21 points	On scheduled tutorial days
Total	100 points	

Lectures: 1-3 lectures per week.

Tutorials: 1 hr. tutorial per week

Tests-there are two tests in tutorials.

Final exam-there is no final exam.

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)	

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 SDA is given on the class website on Brightspace under assignments. Two SDA submissions are permitted

per term per student. 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 of the SDA for submitting late assignments without penalty. SDAs cannot be used to miss the tests, and you will need to talk to the professor before the test date if test absence is a possibility. Any material submitted for evaluation after the designated deadline without an SDA will have 10% points deducted per day of lateness, or, if the SDA is beyond one week, marks will be deducted at 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 Student Declaration for a short-term absence from class, you need to follow up with Dr. Lane if you do not submit missed work within one week. We cannot offer alternative assignments or changes to the weighting of course requirements. Please do not ask for special treatment; it is not fair to everyone else. Faculty of Science Policy: "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 Policy" (See Syllabus Appendix).

Course Policies Related to Academic Integrity

ALL WORK IN THIS CLASS IS TO BE DONE INDIVIDUALLY, except the tutorial discussions you may have with your tutorial members and TA during tutorials. Do not collaborate on the three assignments; they must be your original work even if aided by AI (see below). **DO NOT SHOW ANYONE YOUR ASSIGNMENT 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.

Use of Generative AI (Copilot) Statement

You are allowed to use Generative AI for brainstorming ideas, learning about environmental components, impacts, and environmental management measures and procedures, but not for developing your assessment logic or writing your assignments. If we are going to address the growing risks of living successfully in the 21st Century, then an 'all hands-on deck' approach is needed. This is why AI is permitted in this class. The writing of assignments and the responsibility for your work, however, must be your own. Dalhousie policies specify the use of Microsoft 365 CoPilot, which is a free tool for all Dalhousie accounts. Your intellectual property is secure on this site. Also, follow all other university guidelines on AI usage. **You are responsible for all content of your two assignments in terms of accuracy, quality, and integrity.** Be aware that AI is often unreliable, especially in its literature quotations and bibliography. Do not submit any hallucinatory bibliography, or points will be deducted. You should also research the literature and 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 assignment. Points will be deducted if you exceed this limit. Use the APA (American Psychological Association) Version 7 format for bibliographies. Also, for each assignment, include a Disclosure Statement outlining what role AI played in your research and paper preparation in a statement on the cover page of your Assignment. Note: disclosure does

not make an otherwise prohibited use acceptable. In the text, reference any use of AI information. You are not required to attach the AI prompts or transcripts you used for your assignment.

University Policy on AI:

<https://dalu.sharepoint.com/sites/hr/SitePages/guidelines-ai-tools.aspx>

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 honors degree, a 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 provide you with extra help and study assignments if you believe 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 fulfill a requirement, to enter graduate school, because 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 high, fair standards of academic achievement. Although assignments will have a detailed point distribution for marking, the TAs have the discretion to deduct additional points (up to 10%) for sloppy writing, poor grammar and spelling, messy formatting, inadequate referencing, and overall inferior quality of the assignment. All assignments are to be typed and spell-checked and grammar-checked before submission.

Course Accessibility

Refer to the Student Accommodation Policy in the Appendix below for information on how Dalhousie instructors and staff work collaboratively with students to create and sustain an accessible educational environment. You are eligible for accommodations based on protected characteristics such as religion. If you have religious, cultural, or community-significant observances that conflict with course requirements, reach out to the professor to collaboratively find alternatives for completing the course requirements. To begin the process of requesting a formal academic accommodation, contact the Student Accessibility Center.

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. Learn about Strategic Environmental Assessment (SEA) for a policy.

COURSE CONTENT AND SCHEDULE

Week	Lecture & Tutorial Topics JB=2025 instructor	Assignments
0 Sept 8-12		NOBLE: Chapter 1
1 Sept 13-19	1A. Introduction to EIA 1B. Federal and Provincial EIA Law 1C. More EIA Changes Are Coming Tutorial 1: Introduction to Project Assessment	Chapter 2 Reading 1
2 Sept 20-26	2A. Project Description 2B. Scoping and Public Participation-JB Tutorial 2: Project Description SEPT 30-NATIONAL DAY FOR TRUTH AND RECONCILIATION-UNIVERSITY CLOSED	NOBLE: Chapters 3, 4 Reading 2
3 Sept 27-Oct 3	3A. Description of Physical Environment 3B. Watershed Dynamics-PL Tutorial 3: Selecting Physical VECs	NOBLE: Chapter 5 Reading 3
4 Oct 4-10	4A. Description of Biological Environment-PL 4B. Social Impact Assessment-JB Tutorial 4: Selecting Biological & Social VECs	Reading 4

5 Oct 11-17	No lectures or tutorial. No new material.	TEST 1 IN TUTORIAL W (OCT 14) OR R (15)
6 Oct 18-24	6A. Environmental Baseline & Bounding 6B. Assessing Impacts-Methods Tutorial 6: Bounding & Impact Identification OCT 12-THANKSGIVING, UNIVERSITY CLOSED	NOBLE: Chapters 6, 8 Reading 6 ASSIGNMENT NO. 1 DUE ONLINE: OCT 24 SATURDAY AT 11:59 PM
7 Oct 25-31	7. Assessing Risks-Methods and Cumulative Effects Assessment Tutorial 7: CEs & Ranking Risks Exercise	NOBLE: Chapter 11 Reading 6A and 6B
8 Nov 1-7	8A. Environmental Management Plan (EMP) 8B. Stakeholder Plan-Indigenous People-JB Tutorial 8 on Environmental Management Plan	NOBLE: Chapters 7, 9, and 10
9 Nov 8-14	STUDY BREAK (Nov 10-14) NOV 11-REMEMBRANCE DAY, UNIVERSITY CLOSED	STUDY BREAK
10 Nov 15-21	10A. Strategic Environmental Assessment 10B. Emerging Assessment Policy in Canada-JB No tutorial this week.	NOBLE: Chapter 12
11 Nov 22-28	11A. Being a Professional EI Assessor in the Private Sector 11B. EIA Opportunities in Government-JB No tutorial this week.	Chapter 13, 14 TEST 2 IN TUTORIAL (NOV 25 OR NOV 26)
12 Nov 29 -Dec 9	No lectures or tutorial. No new material.	ASSIGNMENT NO. 2 DUE ONLINE: DEC 9 (WEDNESDAY) AT 11:59 PM

Note: Students in TO1, which is online, will need to sign up for one of the other 3 tutorial periods to take their tests in person twice during the term.

Syllabus Appendix

(Formerly University Policies and Statements)

If you want to find university supports, statements, policies, and guidelines. The link below replaces the required list of statements and policies that were at the end of our syllabus guide in previous years. The resources and policies are now hosted on a website and will remain up to date as policies, statements, resources, and guidelines change or are amended. The added benefit is that your syllabus remains shorter and more manageable, while saving countless trees. [Syllabus Appendix: Student Supports & University Statements, Policies, and Guidelines](#)