



**Faculty of Science Course Syllabus**  
**Department of Biology**

**BIOL 4003 - Indigenous Perspectives in Conservation Biology**  
*Summer July 27 - August 10, 2020*

**Instructor(s):** Dr. Jonathan Ferrier, jferrier@dal.ca, Dalhousie University, Department of Biology, Life Sciences Centre, Native Science and Medicine Laboratory, PO BOX 15000, Room 6087, 1355 Oxford St., K'jipuktuk, Mi'kma'ki, B3H 4R2

**Lectures:** 9am to 5pm, Brightspace Class, Department of Biology, Life Sciences Centre

**Laboratories and field trips:** 9am to 5pm. Synchronous online learning unless prior to course.

**Tutorials:** NA

**Course Description**

Frameworks in (native) science are discussed in conservation hotspots. Indigenous ways of knowing and duties are observed with our treaties with Canada. Ceremony and protocol for working with all our relations with cases in native linguistics, ecological knowledge, ethnobotany, food sovereignty, and medicine are presented.

**Course Prerequisites**

There are no prerequisites required; however, students must be ready to engage new ways of learning and ways of knowing. Timeliness is essential.

**Learning Outcomes**

Students that have taken this course should be able to:

1. List the tenets and protocols of Native Science and Western Science
2. Reflect on treaties for conservation biology purposes
3. Recognize standard protocols, research, and work ethics for work with indigenous communities
4. Discuss Traditional Ecological Knowledge (TEK) and responsibilities of Indigenous Peoples in contrast to resource and management frameworks in Canada
5. Observe and discuss frameworks of food security, food sovereignty, and their threats
6. List factors affecting species richness
7. Evaluate development projects versus non-consumption practices
8. Use dichotomous keys and native linguistics for determining flora and fauna
9. Practice and develop personal experimental design approaches
10. Write a report with a testable hypothesis or objective according to peer reviewed publication/community standards
11. Present a report with a testable hypothesis or objective according to peer reviewed conference/community standards
12. Deliver a story (oral or written) regarding self knowledge and individual growth as a practitioner of conservation biology

**Course Materials**

Peer reviewed literature will be provided on the website as readings for the course.

**Course Assessment**

## Assignments

1. **Self-knowledge reflection essay.** Based on self-knowledge of your starting point(s) as a conservation biologist. Land-based learning in one's community/treaty territory, teachings, readings, and ongoing personal reflection should highlight your growth objective as a conservation biologist. This reflection's objective (or hypothesis with prediction) will be the Introduction's background of Assignment 3. Follows a standard Introduction, Methods, Expected Results & Discussion format. **Written and submitted in class (July 29 end of class)—25%**
2. **Conservation report on a selected topic.** Based on a conservation topic's setting/treaty territory. Students will conduct a literature review, with fieldwork observations or sampling (if possible), analyze results, with comparisons to the literature and community knowledge for a discussion section. Topic must be connected to your growth path in Assignment 1 and 3. Follows a standard Introduction, Methods, Results and Discussion format **(Topic due July 29. Report due August 14, 5pm)—50%.**
3. **Self-growth assessment reflection essay.** Based on a conservation topic important for the community and relevant to your self-knowledge path in Assignment 1. This report will highlight the major findings from researching your topic and how this work contributed to your growth objective reflected upon in Assessment 1. Follows a standard Introduction, Methods, Expected Results and Discussion format. **(August 10, 5pm)—25%**
- 1.
- 2.
- 3.
- 4.
- 5.

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

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

## Course Policies

- More than two absences, missed, or late assignments, exams, etc. must be excused by a medical or community leader, in a note, signed or via some means of communication with the professor. Extension time shall begin after the leave time outlined in the excuse note, and begin from the leave end, through the allocated class time. Otherwise, component value is nil.
- 'Student Declaration of Absence (SDA)' can be found here (two max):  
[https://www.dal.ca/campus\\_life/safety-respect/student-rights-and-responsibilities/academic-policies/student-absence.html](https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/academic-policies/student-absence.html)
- Plagiarism detection software may be used by the instructor in the course

- Lectures may not be recorded

**Other policies include:**

- Submissions shall be made during class; except for Assignment 3 (via email to [jferrier@dal.ca](mailto:jferrier@dal.ca) and Biology Department Office).
- Submissions shall be returned with time for feedback, review, and reflection prior to next task deadline
- Professionalism and respect for all, especially around elders, teachers is expected
- Emails will be responded to within 24 hours (48 during break)
- No audio or video recording permitted
- Information to be completed by student and submitted to instructor will be kept in a locked office, in a locked filing cabinet, will remain confidential, not copied, prior to being returned to the student
- Trigger warnings and content warnings will be issued prior to sensitive topics

**Course Content****Material to be covered online from the land and the Brightspace class:****1. Introduction to Indigenous perspectives in conservation biology****July 27, 2020**

Housekeeping, triggers, lab and field safety

Introduction to the professor's personal ethnobotany and ecological knowledge

Storytelling (Writing and Presenting) rubric. composition workshop. and Topic selection guidance

**2. Mi'kmaw protocols at the Treaty Truck House****July 28, 2020**

Native Science and Western Scientific paradigms

Fundamental fieldwork methods

**3. Site visits via GoPro in Mi'kma'ki Conservation Hotspots****July 29 - August 1, 2020**

Elders' stories and ceremonies

Implications of observed development

Conservation stories and ways forward

Rationale for topic design (Talking circle)



Biodiversity (Bioblitz)  
Human chemical ecology (sampling)  
Self knowledge reflection essay (July 29th)—25%

#### **August 2 - August 4, 2020**

Making field samples  
Plant vouchers  
Laboratory exercises including: sample characterization and geospatial information characterization

#### **4. Reflecting and discussing our growth as Conservation Biologists in Indigenous Territories**

#### **August 5 - August 6, 2020**

Ecology and mechanisms  
People, Industry, and Government roles  
People and species at risk  
Our role as conservation biologists

#### **5. Food, Medicine, Material Sovereignty Work Shop via GoPro footage**

#### **August 7 - August 9, 2020**

Brier Island Food, Medicine, Material Security Observations

#### **August 10, 2020**

Last day of class

Sample and data processing wrap-up  
Assignment review sessions  
Self-growth assessment reflection essay (August 10, End of day)—25%

#### **August 14, 2020**

Conservation report on a selected topic-(August 14th)—50%

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### **ACCOMMODATION POLICY FOR STUDENTS**

Students may request accommodation as a result of barriers related to disability, religious obligation, or any characteristic under the Nova Scotia Human Rights Act. Students with disabilities are encouraged to register as quickly as possible at the Student Accessibility Services if they wish to receive academic accommodations. To do so please phone 494-2836, e-mail [access@dal.ca](mailto:access@dal.ca), drop in at the Mark A. Hill Accessibility Centre, or visit their website [www.studentaccessibility.dal.ca](http://www.studentaccessibility.dal.ca).

### **ACADEMIC INTEGRITY**



Academic integrity, with its embodied values, is seen as a foundation of Dalhousie University. Our Academic Integrity website (<http://academicintegrity.dal.ca>) is an exceptional resource that provides students and faculty access to current university policies. It highlights issues of concern to discourage violations of acceptable conduct, and provides many links to help students succeed honestly.

It is the responsibility of ALL students to be familiar with behaviours and practices associated with academic integrity – ***IGNORANCE IS NO EXCUSE FOR PLAGIARISM, CHEATING OR ANY OTHER ACADEMIC OFFENCE.***

**At Dalhousie University, plagiarism is defined as “the submission or presentation of the work of another as if it were one’s own.”** (Dalhousie Undergraduate Academic Calendar)

Instructors are REQUIRED to forward any suspected cases of plagiarism to the Academic Integrity Officer for their Faculty. If you are accused of plagiarism you will be informed of the allegation by the Faculty of Science Academic Integrity Officer, and a date will be set for a meeting. You may contact Dalhousie Student Advocacy Services to assist you in preparing a defense. Until the case is resolved, your final letter grade will be an “INC”. If it is determined that you have committed an offence you will be penalized. Penalties are determined on a case by case basis. For more details see the Academic Integrity Website and Academic Regulations (<http://academicintegrity.dal.ca>).

***“Plagiarism is considered a serious academic offence that may lead to the assignment of a failing grade, suspension or expulsion from the University.”*** (Dalhousie Undergraduate Academic Calendar)

## **STUDENT CODE OF CONDUCT**

Dalhousie University has a student code of conduct, and it is expected that students will adhere to the code during their participation in lectures and other activities associated with this course.

In general:

“The University treats students as adults free to organize their own personal lives, behaviour and associations subject only to the law, and to University regulations that are necessary to protect

- the integrity and proper functioning of the academic and non – academic programs and activities of the University or its faculties, schools or departments;
- the peaceful and safe enjoyment of University facilities by other members of the University and the public;
- the freedom of members of the University to participate reasonably in the programs of the University and in activities on the University's premises;
- the property of the University or its members.”

The full text of the code can be found here:

[http://www.dal.ca/dept/university\\_secretariat/policies/student-life/code-of-student-conduct.html](http://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html)