

University of Northern British Columbia
ENSC 440 “Internship in Environmental Science”
(An overview for potential supervisors)
March 15, 2018 version

What is the Internship in Environmental Science?

Students within the UNBC Environmental Science BSc (Major) are required to obtain a minimum of three credits of experiential learning in order to meet the requirements of their degree. ENSC 440 (Internship in Environmental Science) is the most common way students obtain this experiential learning. ENSC 440 allows individual students to gain hands-on experience working in an environment-related field with industry, academia, government or non-governmental organizations. Students benefit substantially through exposure to actual and current environmental issues and challenges. The supervisor/sponsor agency benefits from the opportunity to have students investigate specific topics/projects that may be of interest to his/her organization, with the unique perspective of enthusiastic students.

Background of the UNBC Environmental Science Degree

The degree is an interdisciplinary one in which students take a core curriculum along with an area of specialization (students are required to take a minor in an area of their choice). The core curriculum is designed to provide students with knowledge in fundamental biological, chemical, physical and practical aspects integral to the field of environmental science. In addition, students receive exposure to many of the human dimensions that underlie environmental issues. See the following link for more information about the degree:

<https://www.unbc.ca/calendar/undergraduate/environmental-science>

How is the Internship Structured?

Students register for ENSC 440 just like any other course; they are eligible once attaining 60 credits (i.e. finished 2nd year). The Internship involves: (i) the Intern, (ii) the Supervisor and (iii) the UNBC Environmental Science Internship Coordinator. The Supervisor may be from industry, government, academia or a non-governmental organization. The Internship Coordinator is a faculty member within the Environmental Science program that helps maintain consistency among the students taking ENSC 440, and helps liaise between off-campus Supervisors and the Environmental Science Program. The Internship Coordinator communicates the requirements of the Internship to the Intern and the Supervisor, and assists the Supervisor with the assessment of the Internship as well as the submission of a course grade (ENSC 440 is pass / fail).

Internship Project Characteristics

- **Topics:** a wide variety of projects are possible including (but not limited to): environmental monitoring, conducting experimental work (lab or field), exploratory research, developing environmental sustainability or waste management strategies, analyzing/synthesizing environmental data sets, conducting literature reviews, developing potential solutions to environmental challenges, developing/validating models, testing new methodologies or equipment
- **Flexible:** Can be conducted anytime during the year; internships can volunteer or be paid

- Short term: projects are typically conducted over a 3-4 month period; students can conduct two back-to-back internships if they wish, but normally each internship is at least 3 months long
- Academic Requirement: Interns are required to spend a minimum of 75 hours on the academic aspect of their Internship. Academic content is that which requires students to gather information, synthesize or analyze information, and write up their findings in the form of a final report. For example, an Intern may be employed at a regional landfill over a 4 month period. Over that period, the Intern may spend ~ 15% of their time developing some exploratory options for the recycling of food waste. This could involve a literature review, interviews with landfill managers or others, synthesizing data/findings and making recommendations in a final report. A final report is a requirement of the Internship.

Role/Responsibilities of Supervisor

- Develops potential Internship project (with help from Potential Intern and Coordinator)
- Works with potential Intern and Internship Coordinator to come up with objectives, timeline and expected deliverables (e.g. final report) of the Internship
- Provides resources required by Intern to conduct and complete the Internship
- Supervises the Intern's activities
- Ensures the Intern is made aware of any workplace guidelines (safety regulations; protocols)
- Reviews final report and in collaboration with Coordinator assigns a grade (pass/fail) for the Internship (will appear on Intern's UNBC transcript)
- Works with UNBC to develop a confidentiality agreement (if needed)

Examples of Past Projects

- Development of an Environmental Spill Response Protocol for a BC Mine
- Review of a Creek Weir Project and Application of Techniques
- Bioremediation of Diluted Drilling Wastes from NE BC
- Analysis of Meteorological Data in the Ancient Forest
- Meteorological Study of the Mount Polley Mine Tailings Breach
- Potential of Organic Waste Diversion in Regional District of Fraser Fort George
- Feasibility of Climate-Based Seedling Transfer in Selected Areas of central BC
- Analysis of Northern BC Snow Trends
- Evaluation of PM 2.5 Air Monitoring Equipment
- Food Waste Audit for a PG Franchise Restaurant
- Evaluation of Metals within Sediments of Urban Creek Systems
- Changes in Surface Area of Two BC Glaciers
- Impacts of PAHs and Salinity on Amphibians in Reclaimed Tar Sand Wetlands

Questions?

Do you represent an agency who might be able to provide an Internship opportunity? If so, please contact the current Internship Coordinator at michael.rutherford@unbc.ca. More details are available in the student handbook at: <https://www.unbc.ca/environmental-science>