

# **Indigenous Environmental Science and Practice**



### **Adding Value to Your Team**

By braiding together Indigenous and non-Indigenous practices, students in the Bachelor of Indigenous Environmental Science and Practice program learn to see the world through multiple perspectives. Students develop a foundation in the theoretical and applied aspects of environmental science, technology, management and landuse and policy development practices that are grounded in Indigenous ways of knowing and being. Students in this program have a broad range of interests and skills that can be applied in many workplaces.

### **University of Guelph Advantage**

This degree program is like no other program in Canada and has been created with Indigenous and non-Indigenous learners in mind. The curriculum includes unique courses addressing Indigenous knowledge systems, land-based teachings, and Indigenous-settler relations in Canada, including the legal and political context that surrounds environmental decision making in the country. Working directly with Indigenous communities and organizations on projects is also a key element in course delivery and cross-cultural learning.

Students do not begin their first work term until they have completed 2 years of study and have mastered the core competencies needed to be successful in their work terms. Students are available for up to four work terms (4, 8, or 12 months) and employers can post, interview and hire throughout the semester.

## **Student Strengths**

- Ability to apply a critical and decolonial lens to the existing approach to environmental stewardship in Canada through the exploration of the historical and ongoing legacy of colonization, land dispossession, and intergenerational trauma.
- Awareness of Indigenous cultural frameworks of environmental stewardship including the role of traditional knowledge keepers, right relations, multi-generational environmental stewardship, and inclusion of non-human beings.
- Technical and analytical expertise and skills (environmental risk assessment, GIS, remote sensing) for environmental management across different knowledge systems.
- Capable of communicating ideas, arguments and analyses to Indigenous and non-Indigenous audiences
  accurately and effectively, recognizing personal values, strengths and limitations, and respecting diverse
  perspectives.
- Ability to respectfully engage with Indigenous and non-Indigenous communities to address environmental challenges utilizing both Indigenous and western scientific knowledge systems.

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## Indigenous Environmental Science and Practice Course Sequencing

YEAR	FALL (SEPT-DEC)	WINTER (JAN-APRIL)	SUMMER (MAY-AUG)
ONE	GENERAL CHEMISTRY I NATURAL HISTORY OF THE GREAT LAKES REGION INTRODUCTION TO INDIGENOUS ENVIRONMENTAL SCIENCE AND PRACTICE INDIGENOUS LANGUAGE AND CULTURE ELEMENTS OF CALCULUS I	INTRODUCTORY FINANCIAL ACCOUNTING     DISCOVERING BIODIVERSITY     INDIGENOUS KNOWLEDGE FOR ENVIRONMENTAL SCIENCE AND PRACTICE     2 ELECTIVES/RESTRICTED ELECTIVES	OFF
TWO	ECOLOGY     INTRODUCTION TO CO-OPERATIVE EDUCATION     LAND-BASED TEACHINGS FOR ENVIRONMENTAL SCIENCE AND PRACTICE     STATISTICS I     2 ELECTIVES/RESTICTED ELECTIVES	<ul> <li>ENVIRONMENT AND RESOURCES</li> <li>MAPPING AND GIS</li> <li>CONTEMPORARY INDIGENOUS PEOPLES IN CANADA OR INDIGENOUS PEOPLES OF THE AMERICAS</li> <li>2 ELECTIVES/RESTRICTED ELECTIVES</li> </ul>	WORK TERM ONE
THREE	THE ANTHROPOLOGY OF INDIGENOUS PEOPLES BEFORE CANADA INDIGENOUS POLITICS IN CANADA RIGHT RELATIONS: RECONCILIATION, DECOLONIALIZATION & THE ENVIRONMENT 2 ELECTIVES/RESTRICTED ELECTIVES	5 ELECTIVES/RESTRICTED     ELECTIVES	WORK TERM TWO
FOUR	WORK TERM THREE	WORK TERM FOUR	OFF
FIVE	INDIGENOUS-SETTLER RELATIONSHIPS IN ENVIRONMENTAL GOVERNANCE     INDIGENOUS ENVRIONMENTAL SCIENCE: METHODOLOGIES IN PRACTICE     3 ELECTIVES/RESTICTED ELECTIVES	INDIGENOUS ENVIRONMENTAL     SCIENCE PROJECT     INDIGENOUS ENVIRONMENTAL     SCIENCE REFLECTIVE CAPSTONE     3 ELECTIVES/RESTRICTED     ELECTIVES	

#### **Restricted Electives**

Group 1:

A minimum of 7.50 credits of restricted electives are required, of which at least 2.00 credits must be at the 4000-level. Students must select restricted elective courses from each of Groups 1, 2 and 3. Please refer to the Undergraduate Calendar for the complete list of courses in each Group.

List A. Environmental Economics and Policy

List B. Quantitative Methods and Geomatics

#### Group 2:

List C. Wildlife Stewardship and Conservation

List D. Environmental Microbiology

List E. Ecotoxicology and Environmental Chemistry

List F. Forest Ecosystems

List G. Soil and Water Stewardship

List H. Climate

### Group 3:

Leadership, Business Management and Ethics

BASED ON THE 2022/23 UNDERGRADUATE CALENDAR
PLEASE SEE THE CURRENT UNDERGRADUATE CALENDAR FOR MORE INFORMATION