

<b>Contact Time</b>	Weekly 3-hour blended lectures-practicums	
<b>Format</b>	Lectures, in-class activities, and assignments	
<b>Class Assessment</b>	Assignments	2 X 15% each
	Weekly reflections	10 X 5% each
	In-class presentation	1 X 10% each
	Attendance/participation	1 X 10% each
	No Final Exam	

**COURSE OVERVIEW**

This course will provide an advanced multidisciplinary study of northern science, emphasizing processes in Canada's Arctic and Subarctic regions. The primary goal of this course is to provide students with a selection of topics and case studies which facilitate understanding of key concepts in Northern and Arctic System Science. This course will equip students with the skills and theory necessary to analyze and address contemporary northern science research questions affecting ecosystems and communities. Students will also gain an in-depth understanding of practical realities in conducting analyses in northern environments using modern scientific techniques. Case studies of real-world applications will be used to explore major themes related to cold region climates, glaciology, hydrology, permafrost science, snow science, resource development and/or other cognate areas.

**LEARNING OUTCOMES**

- Students will learn fundamental principles of Northern Science;
- Students will develop a holistic understanding of the biophysical and social character of northern regions;
- Students will learn to identify major biophysical processes that operate in northern regions;
- Students will apply natural science concepts to practical and contemporary issues surrounding resource development, infrastructure, and climate change in northern regions;
- Students will evaluate contemporary academic debates in Northern Science;
- Students will develop independent research evaluation, synthesis and communication skills drawing on contemporary Northern Science;

**COURSE TOPICS**

- Fundamentals of Northern Science
- Scholarship in Northern Regions
- Northern and Arctic Landscapes
- The Cryosphere
- Climate Change in Canada's North

**COURSE READINGS**

There is no required textbook for this class. However, multiple readings in the form of blogs, book chapters, news articles, and/or peer reviewed journal articles will be assigned each week.