

GEOGRAPHY AND PLANNING

GPHY 304: Northern and Arctic Environments



Format	Two 1.5-hour lectures per week	
Class Assessment	Quizzes	4 x 8%
	Assignments	2 x 20%
	Reflection Assignments	4 x 7%

COURSE OVERVIEW

This course provides students with an interdisciplinary understanding of the geographical, environmental, and social characteristics of Northern regions, with a focus on the Canadian Arctic. Students will develop an understanding of the complex natural processes that define northern regions and the interactions between climate, landscape, ecosystems, and human activity. Through lectures, case studies, discussions, and self-directed research, students will examine how environmental change and human activity intersect to influence Northern ecosystems and communities. Integrating concepts from both the natural and social sciences, this course equips students with the analytical tools to assess and address contemporary environmental challenges in the North. A background in the natural sciences is recommended.

LEARNING OUTCOMES

- Develop an advanced understanding of key concepts in northern science relating to climate, geomorphology, hydrology, and environmental change;
- Identify the major processes and systems, both biophysical and social, that operate throughout Arctic and northern regions;
- Evaluate the impacts of environmental change and climate change on northern landscapes and peoples; and
- Learn to communicate a holistic understanding of the biophysical and social character of the Arctic and northern regions.

COURSE TOPICS

- Defining the North
- Arctic Communities
- Northern and Arctic Climates
- Snow and Ice
- Northern and Arctic Landscapes
- Permafrost
- Arctic Freshwater Systems
- Climate Change
- Implications of Climate Change on the Environment and Northerners

COURSE READINGS

Required: There is no one textbook required for this course. Reading materials will include a combination of book chapters, journal articles, policy documents, and other relevant materials. Students will also be asked to watch videos.