



Faculty of Social Sciences  
Department of Geography

Geography 491 A02  
ADVANCED TOPICS IN GEOGRAPHY  
DYNAMICS OF THE CRYOSPHERE  
FALL 2016

Instructor: Dr. Randy Scharien  
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Office Hours: Tuesday 14:30-16:30 or by appointment  
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### Course Description

Snow and ice dominate the Canadian landscape. There is virtually no area in Canada which escapes the influence of snow and ice. We skate on frozen ponds, ski down snow laden mountains, drive through snow blizzards and watch how ice jams in rivers cause rivers to swell and floods to occur. The duration and the thickness of snow and ice increase rapidly northwards, and glaciers are found in mountainous areas and in large parts of the Arctic region. Given that snow and ice impact heavily on the Canadian way of life, this course seeks to understand the dynamics of snow and ice in physical, climatological, and hydrological contexts. This course will examine snow properties, snowcover distribution, glacier hydrology, melt runoff, and ice in its many forms (lake ice, river ice, sea ice, and ground ice). The application of remote sensing and other remote observing systems to understanding the cryosphere will be examined. This course will also examine the implications of climate change on the cryosphere in Canada and beyond.

### Class Meetings

Tuesday, Wednesday, and Friday 13:30 to 14:20 in CLE A316

### Text and Readings

There is no required text for this course. Assigned readings will be posted on CourseSpaces (<http://CourseSpaces.uvic.ca>). If necessary, readings may be made available on the course reserve in the main library. If you come to

class prepared it will be easier to remain committed to, and engaged with, the course materials throughout the term. This means you should have read and considered the relevant readings before each class meeting.  
For project work and the critical review assignment

There will also be 1-2 guest speakers at different points throughout the term. They will provide unique and inte

Sample Topics

This is a non-





remind you nearer the time, but please be thinking about this important activity, especially the following three questions, during the course.

1. What strengths did your instructor demonstrate that helped you learn in this course?
2. Please provide specific suggestions as to how the instructor could have helped you learn more effectively.
3. Please provide specific suggestions as to how this course could be improved.

## Academic Integrity

Academic integrity requires commitment to the values of honesty, trust, fairness, respect and responsibility. It is expected that students, faculty members and staff at the University of Victoria, as members of an intellectual community, will adhere to these ethical values in all activities related to learning, teaching, research and service. Any action that contravenes this standard, including misrepresentation, falsification or deception, undermines the intention and worth of scholarly work and violates the fundamental academic rights of members of our community. Students are advised to consult the university's Policy on Academic Integrity in the University Calntet9 lsihe(si)unstu(ct)5(o)-2(( )-503(re)-6(ser)-5(e(s )-387(t)4(