

**DEST 403 Sustainability and Human Ecology in the
Circumpolar Arctic
Winter 2015**

Th 2:00-4:45 PM

SB 144

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Course Description

The Arctic has become a lens through which to understand the world. An unstable Arctic poses threats not only to the future of the Arctic but to the world itself. In this course we will explore a landscape that is rapidly changing, largely as a result of climate and socioeconomic change. This seminar provides an interdisciplinary overview of histories and approaches to human-environment interactions in the circumpolar Arctic, with a focus on the contexts of sustainability, resilience, equity and social justice. We will examine the changing Arctic environment in three parts: The first part explores the contentions in defining the Arctic region within a framework of climate change, challenges to the ecosystem, and to indigenous communities, economies individual and community lifestyles, health and well-being. The second part focuses on indigenous responses to climate change, on challenges with the increased natural resource development projects in pristine areas, the global distillation of persistent organic pollutants to the north, and the increased signs of human health consequences. The third part focuses on the geopolitics of Arctic governance, indigenous rights, and on the resilient and sustainable development policies being considered for the region. This course will also explore opportunities rooted in resilience and sustainability thinking, and on how an understanding of socio-ecological processes offers design solutions for sustainable futures within the changing Arctic.

The course is intended for students who are interested in Environmental Studies, Environmental Policy, Sustainable Development, and International Relations. There are no prerequisites for this class. Students are strongly urged to use this opportunity to think “outside the box”, to open their minds to the possibility that no single theoretical position has all the answers to balanced or sustainable development, and to consider new ways of conceptualizing and synthesizing the complex and dynamic inter-relationships between humans and their environments in the Circumpolar Arctic.

Class Outline:

Each class will be structured around four discussion modules: 1) review of current events in the Arctic, 2) review of the week’s readings and theories, 3) group presentations of a topic of group’s choice applying of the readings/theory in the presentation, 4) large group debate and discussion. Participation in all four modules is required.

Participation 20%

This is a reading- and discussion-intensive class. You are expected to attend all classes and to *be prepared to discuss the readings*. There will be time in each class for you to pose questions about the readings to the larger group. You are expected to submit 1-3 questions on the basis of the weekly readings on D2L the day before the class. At least five submissions over the course of the semester are required to get a good participation grade on reading engagement (10%). The quality and insightfulness of the questions will also be evaluated. I'm looking for thoughtful contributions that refer directly to the readings and the weekly presentations at hand. Some of these questions will be the basis for reading discussions. Weekly participation on D2L discussion board and class participation is the other component of participation being evaluated (10% of the grade).

The following is a guide to my assessment of participation:

Outstanding: Contributions reflect exceptional preparation. Ideas offered are *always* substantive thought provoking, creative, inspirational and provide insight as well as direction for the class and your group. Challenges and arguments are well substantiated and persuasively presented.

Good: Contributions reflect thorough preparation. Ideas offered are *often* substantive, thoughtful, insightful, and sometimes provide direction for the class and your group. Challenges are well substantiated and often persuasive.

Adequate: Contributions reflect satisfactory preparation. Ideas are *sometimes* substantive and sometimes insightful, but do not necessarily offer a new or innovative direction for discussion. Challenges are sometimes presented, fairly well substantiated, and are sometimes persuasive.

Non-participant: This person does not contribute positively to the discussion. Hence, there is not an adequate basis for evaluation.

Presentations 40%

The class will be broken into groups of five. *Each week two groups will prepare a presentation that is up to 20 minutes long. 1) A case study on a sustainability initiative in the Arctic and 2) A group sustainability practice.* The idea is to have maximum cross-pollination of ideas and discussions among peers.

Case Study (20%): When you are preparing your presentations, your group will meet outside of class to identify and critically select sources in contemporary science news and journals for your case study. (i.e., sustainability initiatives in specific Arctic communities to address climate change, global distillation, effects of resource extraction projects in the Arctic, etc). Your group will prepare a presentation. There are 3 aspects to each presentation: description of the issue, the interpretation based on the readings, and further discussion questions. The group will also submit a short written summary or abstract, 1-2 pages long, of the project your group presented, list of all the group members and what each of you did for the project. You are expected to bring a hard copy of the write up to class as well as post it on D2L.

Group sustainability practice (20%): When you are preparing this presentation, your group will meet outside of class to design and implement a sustainability practice in your own lives or the community as a group. The presentation will provide an overview of the initiatives the group is undertaking, how you are measuring the progress of your initiative over time, what are some of the outcomes you expect and the significant challenges that you experience or expect. This will be the basis of your final assignment (See below).

The following is a guide to my assessment of presentations:

Outstanding: Contributions reflect exceptional preparation. The presentations are well organized and are visually engaging. Ideas offered are *always* substantive thought provoking, creative, inspirational and provide insight as well as direction for the class and your group. Challenges and arguments are well substantiated and persuasively presented.

Good: Contributions reflect thorough preparation. The presentations are somewhat well organized and are visually engaging. Ideas offered are *often* substantive, thoughtful, insightful, and sometimes provide direction for the class and your group. Challenges are well substantiated and often persuasive.

Adequate: Contributions reflect satisfactory preparation. The presentations lack continuity. Ideas are *sometimes* substantive and sometimes insightful, but do not necessarily offer a new or innovative direction for discussion. Challenges are sometimes presented, fairly well substantiated, and are sometimes persuasive.

Final Assignment 40%

Your final assignment for this course builds on your second presentation. You will design and implement a sustainability practice in your own lives or the community. Finalize on your group practice and submit a short five page write up on your group practice or initiative, its goals, metrics to measure progress over time and the expected outcomes by Feb 29.

The final paper will be a write up on the initiatives your group has taken and the breakthroughs and challenges you have faced in implementing sustainability practices in your own life or the community. The final paper is 15-20pp long, double-spaced with reasonable margins and proper referencing.

The final paper is due on April 23rd.

The following is a guide to my assessment of written assignments:

Outstanding: Contributions reflect exceptional preparation. (1) Responds fully to the assignment, (2) expresses its purpose clearly and persuasively, (3) provides adequate supporting arguments, evidence, examples and details, (4) correctly acknowledges and documents sources, (5) well organized, (6) free of errors in grammar, punctuations, spelling and formatting, (7) shows originality and creativity in realizing points 1-6.

Good: Contributions reflect thorough preparation. Realizes 1-6 fully and completely but shows little originality and creativity.

Adequate: Contributions reflect satisfactory preparation. Realizes 1-6 adequately and demonstrates competence but contains few errors and flaws.

Not Adequate: Fails to realize some elements of points 1-6 and contains several significant errors. The paper requires fair amount of editing and revisions.

Communication

I will do my best to facilitate learning in the class. To this end, I will answer questions as they arise. Contact me via e-mail, and this is especially encouraged, or come to office hours. If you cannot make posted hours, make an appointment. Please speak with me immediately if you are having a problem in class. I can be more understanding of your needs if you bring them to my attention before they become a serious problem. All questions and requests should therefore be made in person, especially if they concern requests for extensions and/or other serious matters.

Required Texts:

- Robert Bone. *The Canadian North: Issues and Challenges*. Oxford University Press. 2012.
- Andres R. Edwards. *The Sustainability Revolution: Portrait of a paradigm shift*. New Society Publishers. 2005.
- Gary Holthaus. *Learning Native Wisdom: What traditional cultures teach us about subsistence, sustainability, and spirituality*. University Press of Kentucky. 2008
- John W. Bennett. *The Ecological Transition: Cultural anthology and human adaptation*. Transaction Publishers. Inc. 2005.
- Karim-ALY S. Kassam. *Biocultural Diversity and Indigenous Ways of Knowing: Human Ecology in the Arctic*. University of Calgary Press. 2009.

Recommended Texts:

- Marla Cone. *Silent Snow: The Slow poisoning of the Arctic*. Grove Press. NY: New York. 2005.
- Subhankar Banerjee (Ed.). *Arctic Voices*. NY: Seven Stories Press. 2012.

Recommended Weblinks:

Lassi Heininen (Ed). *Arctic Yearbook*. Northern Research Forum and the University of the Arctic Thematic Network (TN) on Geopolitics and Security. 2013.

<http://arcticyearbook.com/?view=featured>

Arctic Biodiversity Assessment 2013: <http://www.arcticbiodiversity.is/>

Arctic Health: <http://arctichealth.nlm.nih.gov/>

Arctic Portal: <http://arcticportal.org/>

Note: All required readings come from the required textbooks. Extra copies of the required textbooks will be in the Department of Anthropology reading room (ES-810). Additional supplementary readings can be found in the recommended texts. Selected chapters from the recommended readings will be posted on D2L. Students should contact the instructor if they run into difficulties obtaining any of these materials.

January 15: Introduction

Week 1: Jan 22: Introduction

Required:

Robert Bone

Chapter 1: Northern Perceptions. pp.1-32.

Holthaus

Chapter 1: Introduction. pp.1-14.

Andres Edwards

Introduction: Portrait of Sustainability Revolution pp.1-10.

David Korten. The pursuit of happiness: The new Development Paradigm.

<http://livingeconomiesforum.org/new-development-paradigm>

Recommended:

John Bennett

Chapter 1: Prologue: Images of Man and Nature. pp.1- 16.

Karim-ALY S. Kassam

Chapter 1: Introductions. pp.1-16.

Week 2: Jan 29: Historical Background

Required:

Robert Bone

Chapter 3: The Historical Background. pp.62-103.

Holthaus

Chapter 2: Back to Basics. pp.15-49.

Andres Edwards

Chapter 2: The Birth of Sustainability pp.11-26.

Recommended:

John Bennet

Chapter 2: Culture, Ecology, and Social Policy. pp.17- 34.

Karim-ALY S. Kassam

Chapter 2: Relations between Culture and Nature. pp.17- 63.

Week 3: Feb 5 : Arctic Geography

Robert Bone

Chapter 2: the Physical Base. pp.33-61.

Holthaus

Chapter 2-3: pp.50-83.

Andres Edwards

Chapter 3: Sustainability and Community pp.29-47.

John Bennet

Chapter 3: Culture Ecology and Cultural Ecology. pp.35- 83.

Karim-ALY S. Kassam

Chapter 3: Human Ecology Reconceptualized. pp.63-92.

Week 4: Feb 12: Arctic Societies, Culture and People

Robert Bone

Chapter 4: Population Size and its Geographical Expression. pp.104-134.

Holthaus

Chapter 3-4: pp.84-110.

Andres Edwards

Chapter 3: Sustainability and Commerce pp.49-74.

Grete K. Hovelsrud, Birger Poppel, Bob van Oort and James D. Reist. Arctic Societies, Cultures, and Peoples in a Changing Cynosphere. *AMBIO*. 2011. 40:100-110.

John Bennet

Chapter 4: System, Ecosystem, and Social System. pp.84- 122.

Karim-ALY S. Kassam

Chapter 4: Man and his Friends. pp.93-158.

Week 5: Feb 19: READING WEEK

Week 6: Feb 26: Arctic Economy, Culture, Society

Robert Bone

Chapter 7: Aboriginal Economy and Society. pp.225-262.

Holthaus

Chapter 4: pp.111-129.

Andres Edwards

Chapter 6: Sustainability and Biosphere pp.113-122.

Nicole Gombay. Placing Economies: Telling Stories About Food and Making a Living. In *Making a Living*: CA: Purich Publishing. 2010. P.9-28.

Kathy Lynn et al. The Impacts of Climate Change on Tribal Traditional Foods. *Climatic Change*. 2013. 120:545-556.

John Bennet

Chapter 7: Culture and Ecology: Culture as Master Variable. pp.209- 242.

Week 7: March 5: Natural Resources in the Arctic

Robert Bone

Chapter 5: Resource Development, Megaprojects, and Northern Benefits. pp.135-185.

Andres Edwards

Chapter 4: Sustainability and Natural Resources pp.75-96.

Karim-ALY S. Kassam

Chapter 5: The weather is going under. pp.159-190.

John Bennet

Chapter 5: The Ecological Transition. pp.123- 155.

Week 8: March 12: Arctic Environment

Robert Bone

Chapter 6: Environmental Impact of Resource Projects. pp.186-224.

Holthaus

Chapter 4-5: pp.130-173.

Andres Edwards

Chapter 5: Sustainability and Ecological Design pp.97-111.

John Bennet

Chapter 6: Culture and Ecology: Biological Concepts. pp.156- 208.

Karim-ALY S. Kassam

Chapter 6: Mapping Human Ecology. pp.191-220.

Week 9: March 19: Pollution & Health

Marla Cone. *Silent Snow: The Slow poisoning of the Arctic*. Grove Press. NY: New York. 2005. Chapter 1-3. pp.1-52.

Holthaus

Chapter 4-5: pp.174-1218.

Charles Thrift et al. The Influence of Science on Canada's Foreign Policy on POPs (1985-2001). *Environmental Science & Policy*. 2009. 12:981-993.

Gretchen Welfinger-Smith et al. Organo-chlorine and Metal Contaminants in Traditional Foods from St. Lawrence Island, Alaska. *Journal of Toxicology and Environmental Health*. 2011. 74:1195-1214.

Elizabeth Burleson. Arctic Justice: Addressing Persistent Organic Pollutants. *Law and Inequality*. 2012. 30: 57-89.

S.L. Harper et al. Changing Climate, Changing Health, Changing Stories' Profile: Using an EcoHealth Approach to Explore Impacts of Climate Change on Inuit Health. *EcoHealth*. 2010. 9:89-101.

Week 10: March 26: Arctic Ownership and Governance

Robert Bone

- Chapter 8: Geopolitics, Climate Warming, and the Arctic Ocean. pp.262-287.
- Hannes Gerhardt, Philip E. Steinberg, Jeremy Tasch et al. Contested Sovereignty in a Changing Arctic. *Annals of the Association of American Geographers*. 2010. 100(4): 992-1002.
- Charles J. Marecic. Nunavut Territory: Aboriginal Governing in the Canadian Regime of Governance. *American Indian Law Review*. 2000. 24(2): 275-295.
- Maria Shaa Tlaa Williams. A brief history of native solidarity. In Subhankar Banerjee. *Arctic Voices*. NY: Seven Stories Press. pp.453-467.
- Timo Koivurova. Limits and possibilities of the Arctic Council in a rapidly changing science of Arctic governance. Cambridge University Press. 2009. pp.1-11.
- Evan T. Bloom. Establishment of the Arctic Council. *The American Journal of International Law*. 1999. 93(3):712-722.
- Belén Sánchez Ramos. Strengthening the Capacity of the Arctic Council: Is the Permanent Secretariat a First Step? University of Vigo, Spain. *Arctic Yearbook* 2013.
- Oran R. Young. Arctic Tipping Points: Governance in Turbulent Times. *AMBIO*. 2012. 41: 75-84.
- Conference Audio: Jessica Shadian. Alternate cultures of diplomacy and the Inuit Circumpolar Council. Nov 9, 2013. <http://backdoorbroadcasting.net/2013/11/jessica-shadian-alternative-diplomacies-and-the-inuit-circumpolar-council/>

Week 11: Apr 2: Arctic Sustainability

- Robert Bone
Chapter 9: Looking to Future. pp.287-311.
- Holthaus
Chapter 6: pp.219-231.
- Andres Edwards
Chapter 7: Future Pathways pp.123-137.
- Susan A. Crate. Investigating local definitions of sustainability in the Arctic: Insights from Post-Soviet Sakha Villages. *Arctic*. 2006. 59(3): 294-310.
- Mark S. Reed et al. An adaptive learning process for developing and applying sustainability indicators with local communities. *Ecological Economics*. 2006. 59:406-418.
- James Ford et al. Reducing vulnerability to climate change in the Arctic: The case of Nunavut, Canada. *Arctic*. 2007. 60(2):150-166
- Jason Prono. et al. Community vulnerability to climate change in the context of other exposure-sensitivities in Kugluktuk, Nunavut. *Polar Research*. 2011. 30, 7363.

Week 12: Apr 9: Resilience and Adaptation

- James D. Ford. Dangerous climate change and the importance of adaptation for the Arctic's Inuit population. *Environmental research Letters*. 2009. 4. 024006.
- Brian Walker et al. Resilience, adaptability and transformability in social-ecological systems. *Ecology and Society*. 2004. 9(2):5

Evan D.G. Fraser et al. Bottom up and top down: Analysis of participatory processes for sustainability indicator identification as a pathway to community empowerment and sustainable environmental management. *Journal of Environmental Management*. 2006 78:114-127.

F. Stuart Chapin, Michael Hoel, Steven R. Carpenter et al. Building Resilience and Adaptation to Manage Arctic Change. *AMBIO*. 2006. 35(4): 198-202.

Week 13: April 16: No Class

Week 14: April 23: Final assignments Due

Emergency Evacuation Assembly Points

In the event of an emergency that requires evacuation, please refer to the following link to become familiar with the assembly points for the class:

<http://www.ucalgary.ca/emergencyplan/assemblypoints>

Freedom of Information and Protection of Privacy Act

The University of Calgary is committed to protecting the privacy of individuals who work and study at the University or who otherwise interact with the University in accordance with the standards set out in the Freedom of Information and Protection of Privacy Act. Please refer to the following link for detailed information:

<http://www.ucalgary.ca/legalservices/foip>

Writing Across the Curriculum

Writing skills are not exclusive to English courses and, in fact, should cross all disciplines. The University supports the belief that throughout their university careers, students should be taught how to write well so that when they graduate their writing abilities will be far above the minimal standards required at entrance. Consistent with this belief, students are expected to do a substantial amount of writing in their university courses and, where appropriate, instructors can and may use writing and the grading thereof as a factor in the evaluation of student work. The services provided by the Writing Centre in the Effective Writing Office can be utilized by all undergraduate and graduate students who feel they require further assistance.

Academic Accommodation Policy

The purpose of academic accommodation is to provide students with documented disabilities equal opportunity to master the essentials of a post-secondary education. Students with disabilities at the University of Calgary have met all admission requirements but may have done so with the use of accommodations. Similarly, they are expected to meet all academic and non-academic requirements. Adaptive technology and other academic accommodations do not relieve students of their responsibility to develop the essential skills and abilities expected of all students. Please refer to the following web link for detailed information: <http://www.ucalgary.ca/drc/node/71>

Cheating and plagiarism

Cheating can cause irreparable harm to your future success and is simply not worth the risk. Cheating, plagiarism, and other forms of academic misconduct will not be tolerated in this course and will automatically result in a failing grade for the submitted material—without exception. Students caught cheating may be subject to additional penalties imposed by the university, including probation, suspension, or permanent expulsion by the faculty dean. I urge you to read about the University's regulations on academic misconduct and disciplinary actions:

<http://www.ucalgary.ca/pubs/calendar/current/k.html>

USRI

At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference, please participate!

Website: <http://www.ucalgary.ca/usri/>

Grading System

The following grading system is used in the Faculty of Arts:

	Grading Scale
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A+	96-100
A	90-95.9
A -	85-89.9
B+	80-84.9
B	75-79.9
B-	70-74.9
C+	65-69.9
C	60-64.9
C-	55-59.9
D+	53-54.9
D	50-52.9
F	0-49

Where a grade on a particular assignment is expressed as a letter grade, it will normally be converted to a number using the midpoint of the scale. That is, A- would be converted to 87.5 for calculation purposes. F will be converted to zero.

Students with Disabilities

If you are a student with a disability who may require academic accommodation, it is your responsibility to register with the Disability Resource Centre (403-220-8237) and discuss your needs with your instructor no later than fourteen (14) days after the start of the course.

"SAFEWALK" Program – 403-220-5333

Campus Security will escort individuals day or night – call 403-220-5333 for assistance. Use any campus phone, emergency phone or the yellow phone located at most parking lot booths.

Ethics

Whenever you perform research with human participants (i.e. surveys, interviews, observation) as part of your university studies, you are responsible for following university research ethics guidelines. Your instructor must review and approve of your research plans and supervise your research. For more information about your research ethics responsibilities, see:

The Faculty of Communication and Culture Research Ethics site:

<http://www.comcul.ucalgary.ca/ethics>