COURSE OUTLINE: GEOG 4911 – Polar Bear Conservation Spring Term 2014
(note: this course is open to all undergraduate and graduate students, but does require capacity to read scientific literature)

Text: Stirling, I. 2011. Polar Bears: A Natural History of a Threatened Species. Fitzhenry and Whiteside. Markham, Ontario. 327 pages.

Instructor: Dr. Mitchell Taylor, Department of Geography
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Office Hours: Office location: RC 2006E Thunder Bay Campus. If you wish to see me in person, please call first to be sure I am there, or make an appointment.

Communication: Please use the email address above for all digital communications. I will not monitor the D2L communication option just because there is no need for two independent addresses. Please consult the reference materials before messaging me with a question. The Course Outline will be updated periodically, so please check it periodically. Questions are welcome, but please be patient. I will reply as soon as I can.

Introduction: I began working on polar bears as a PhD student at University of Minnesota in 1978. I did a post-doc on polar bears at UBC where I became a lecturer in the Faculty of Forestry. In 1986, I was hired as polar bear biologist in the Northwest Territories, and I continued in that capacity when the Territories split into NWT and Nunavut in 1999. I was Nunavut's polar bear biologist until 1984 when I became manager of the Nunavut Wildlife Research Section. My last field season on polar bears was autumn of 2007. I moved to Thunder Bay in winter of 2008.

The author of your textbook (Dr. Ian Stirling) was already well established as a senior polar bear research scientist when I attended my first polar bear meeting in 1978. My first field experience was watching polar bears as a student from a research cabin that Dr. Stirling had built on a sea cliff near Resolute Bay, NWT. Some of that work is published in our text. Although our book was written as a popular text, it provides an excellent introduction to polar bear biology and research as well as a good historical development of polar bear governance at Provincial/Territorial, Federal and International levels. This edition of the book adds an important dimension by considering climate change and polar bears. Dr. Stirling has retired from his position as a Canada's senior federal polar bear biologist, but remains active in both research and management of polar bears as an emeritus senior scientist with the Canadian Wildlife Service and as an adjunct professor at University of Alberta.

Polar bears have always been a symbol of the north. Historically the conservation concerns for polar bears were mainly about how many were being taken by hunters, and secondarily about bioaccumulation of contaminants and impacts from petroleum exploration and extraction. Recently polar bears have become a flagship species for environmental concerns about the impacts of climate warming. Concurrent with the accumulation of scientific knowledge and conservation concerns about polar bears, Inuit and other northern aboriginal people have experienced a surge in political development; and Environmentalism has grown from a grass-roots conservation movement to international social and political movement. Scientific information, conservation governance, climate, and Environmentalism as a social and political force have all changed simultaneously. These changes make it difficult to fully understand polar bear information that is presented out of context and is sometimes argumentative. Symbols can be useful to capture people's interest and to generate support for progressive change. Symbols can also be abused and used for propaganda for self interest (commercialism), or to generate support by association regardless of the underlying reality.

In this course we will employ both biological science and social science perspectives to examine polar bear research, population status, management, and issues for their circumpolar range, with an emphasis on Canada. Canada has or shares 2/3 of the world's polar bear populations, and thus has a special responsibility for managing this remarkable and inspiring species.

Material (readings) will be available from D2L, Dropbox, and messages and attachments that I will send. This course will compete for your time with work, other courses and personal activities. For most of us, what can be put off until later is usually not done until later. So to protect us all from fatal procrastination … I need to ensure that you are keeping up with the readings (meaning both reading and understanding the material). However, I also appreciate the need for some flexibility in how the work load is scheduled. Quizzes are due at midnight the Friday of the week they are assigned, except for the first quiz (May 1-2 quiz) which is due Sunday at midnight. The quizzes are open-book and cover the assigned readings. There will be a comprehensive final at the end of the course. There is also a required outline and paper on some aspect of polar bears that particularly interests you. There will not be a midterm exam.

You should plan to spend at least 4-5 hours per week on readings and other assignments to do well in this course. We will begin with the text, so anyone wishing to work before class starts is welcome to begin reading *Polar Bears*. I am informed that students will not have access to D2L until the first day of classes, so access to other assigned papers will not occur until then. As mentioned above, the text was written as a popular book, so it is relatively easy to read. The assigned papers are scientific literature and will require more time read. I suggest you identify a specific time for this course each week rather than fit it in as you can. I also suggest that you study the readings by making summary notes on the important points as your read them and from the discussions in lecture. The time frames for completion of assignments are firm, and will be modified only in accordance with Lakehead policy (documented illness and family emergencies). Please

contact me if you have any special circumstances or questions. Good luck with the course.

Required Paper: Papers must consider some aspect of the natural history, ecology, population biology, conservation biology, or governance of polar bears. Please email or speak with me to confirm topics before beginning to work on the papers. Topics must be selected right away given the length of the course. An outline must be submitted by May 12th to confirm an approach that will be successful. The most common error in choosing a topic is to identify something that too general and broad. Please reduce the scope of your paper to something that is manageable for the time frame (3 weeks) and page limit (5-6 pages maximum) identified.

Course Schedule: This class is a distributed learning format, and is entirely on-line. The readings may be found on D2L and Dropbox (directions for Dropbox TBA). Please make sure your name and student number are on each quiz, the outline and the paper.

TIME BLOCK	Assigned Reading	Quiz #	Outline
May 1-2	Introduction to Polar Bears	1	
	Polar Bears (Chapter 1-5)		
	Polar Bears (Chapter 6-10)		
May 5	Polar Bears (Chapter 11-14)	2	
	Distribution		
May6	Taylor and Lee 1995	3	
	Taylor et al. 2000		
May 7	Paetkau et al. 1999	4	
	Stirling et al. 2004		
	Ecology		
May8	Theimann et al. 2008	5	
May 9	Taylor et al. 1985	6	
	Ferguson et al. 2000, 2001 (both papers)		
	Population		
May 12	Taylor et al. 2002	7	Outline Due
	Obbard et al. 2007		
May 13	Regehr et al 2007	8	
	Status		
May 14	COSEWIC 2008 Status Report	9	
	Amstrup et al. 2007		
May 15-16	Derocher et al. 2013	10	
	Strling and Derocher 2012		
	Climate – Sea Ice - TEK		
May 19	Mollnar et al. 2011	11	
May 20-23	York et al. 2014 submitted	12	
Spring 2014 date	Course Paper Due May 25th midnight		
Final Exam	May 24th		

Additional readings may be added or substituted, and some readings may be deleted depending on availability of new literature and emerging course needs.

Marking Protocol:

Quiz Scores	25%
Outline	5%
Required Paper	30%
Final	40%
Total	100%

Deferred Examinations and Assignments:

You must take examinations during their scheduled periods, and submit assignments on or before the day that they are due. Missed quizzes, missed exams, and late assignments will be counted as zero credit unless prior approval is given in writing or appropriate documentation for University approved absence is provided. I am aware that some of you have to maintain a particular grade average to retain your scholarship, stay in the Honours program, and to graduate. Now is the time to decide what grade you need, budget the time to achieve that mark, and commit to doing the work necessary. Please don't come to me after the course is finished and ask what can be done to address a poor performance.

Special Circumstances or Disabilities:

Students with special circumstances or disabilities are encouraged to contact the Learning Assistance Center right away so that appropriate accommodations can be arranged. It is not necessary to get my permission or support. The Learning Assistance Center will notify me of any accommodations that are required, and this information will be kept confidential.

Academic Honesty:

The Guidelines for Academic Conduct from Lakehead University (Code of Student Behaviour and Disciplinary Procedures) may be found at: >http://vpacademic.lakeheadu.ca/?display=page&pageid=46<

Honesty and integrity are expected in class participation, examinations, assignments, and other academic work. Expectations include:

- Perform your own work unless specifically instructed otherwise;
- Use your own work to complete assignments and exams;
- Cite the source when quoting or paraphrasing someone else's work;
- Follow examination rules;
- Be truthful on all university forms;
- Discuss with your professor if you are using the same material for assignments in two different courses;
- Discuss with your professor if you have any questions about whether sources require citation;
- Use the same standard of honesty with fellow students, lab instructors, teaching assistants, sessional instructors and administrative staff as you do with faculty.