This page intentionally left blank

Instructions:

This is a sample syllabus template/workbook.

Content can be re-organized to meet the preferred styles of individual instructors.

Tables are used in the document to preserve formatting.

An automatic table of content is included. In order to update the table:

Choose the references tab in the ribbon above
Choose “update table”
Choose “update entire table”

Content order can be re-ordered to best suit your course needs

University of Manitoba
Faculty of CHRFEER
Department of Environment and Geography

TABLE OF CONTENTS

COURSE DETAILS

Course Title & Number:	GEOG 7440 Climate Change (and the Arctic Marine System)
Number of Credit Hours:	3
Class Times & Days of Week:	2:30-5:00 pm Wednesdays
Location for classes/labs/tutorials:	545 Wallace (Klaus Hochheim Memorial Theatre)
Pre-Requisites:	On permission from Instructor

Instructor Contact Information

Instructor(s) Name:	Tim Papakyriakou
Preferred Form of Address:	Tim
Office Location:	594 Wallace Bldg
Office Hours or Availability:	Available by appointment scheduled via email
Office Phone No.	474-8513
Email:	Tim.Papakyriakou@Umanitoba.ca
Contact:	I usually respond to email within 8-12 hours Monday to Friday. Email is my preferred mode for contact. Also, I will often be available after class to discuss course material in person.

Course Description:

This seminar course will exposing students to the broad range of cutting-edge research with a particular focus on the effects of climate change on polar marine systems. Each week a guest lecturer will present on their field of expertise, providing background knowledge on the topic while also presenting some of their recent work and recent developments in the field. Following the guest lecture, students will give presentations related to a field of research that interests them. A goal of the course is to share knowledge and spark discussion between students and guest lecturers, and to introduce undergraduate students to contemporary themes in polar marine research.

General Course Information

Goals of this course include: (i) to introduce students to contemporary climate change research as it pertains to polar seas; (ii) to share knowledge and spark discussion between students and guest lecturers on the subject; (iii) expose students to effective presentation styles; (iv) provide opportunity for students to present research to their peers; (v) expose students to effect proposal writing techniques.

Course Goals

The goal of the course is to share knowledge and spark discussion between students and guest lecturers. Furthermore the goal is to provide students with the opportunity to practice giving presentations and prepare them for conference or thesis related presentations.

Using Copyrighted Material

Please respect copyright and correctly cite materials in your reports and presentations. Reports and assignments can follow any of the major referencing styles (e.g. APA, AMA, MLA, etc). A useful guide for reference styles from the American Geophysical Union (AGU) can be found at http://publications.agu.org/author-resource-center/text-requirements/reference-format/.

For more information from the University of Manitoba , see the University's Copyright Office website at http://umanitoba.ca/copyright/ or contact um_copyright@umanitoba.ca.

Recording Class Lectures

Audio and video recording of the seminar and student presentations are not allowed in this course.

Textbook, Readings, Materials

There is no required textbook for this class. In support of research papers and seminars students will be guided on how to use online and library resources on campus to produce their own list of reference materials.

Course Technology

It is the general University of Manitoba policy that all technology resources are to be used in a responsible, efficient, ethical and legal manner. Laptops, tablets and cell phones can be used for taking notes during presentations, but students should not participate in personal direct electronic messaging/posting activities (e-mail, texting, video or voice chat, wikis, blogs social networking (e.g. Facebook, twitter, Instagram or snap chat), online of offline "gaming") during scheduled class time. Phones should be set to vibrate, and if the student is required to take an emergency call we ask that they leave the theatre quietly and take the call outside.

Students are encouraged to use their own laptops for presentations so that they become familiar with how to connect and run a presentation off of their own machine. If a student doesn't have a laptop one can be provided for the presentation.

Assignments should be submitted as either a pdf or word document via email to Dave (david.babb@umanitoba.ca) or Nathalie (Nathalie.theriault@umanitoba.ca) prior to the presentation or the due date. Please title your assignments "GEOG7440F_*lastname_"* with either "background", "proposal" or "outline" behind the last underscore.

Class Communication

The University requires all students to activate an official University email account. For full details of the Electronic Communication with Students please visit: http://umanitoba.ca/admin/governance/media/Electronic_Communication_with_Students_Policy_-_2014_06_05.pdf

All communications related to this course must comply with the electronic communication with student policy (http://umanitoba.ca/admin/governance/governing_documents/community/electronic_communication_with_students_policy.html) and take place via official University of Manitoba email accounts.

Expectations: We Expect You To

We expect everyone to be in the theatre on time, to give their full attention to the visiting presenter and to take part in the question/discussion period following the presentation. Your participation in this question period will be reflected in your participation mark for the course. We realize that not all of the speakers are directly related to everyone's field of study, or experience base, however questions can extend beyond the presented material, questions regarding their writing style, tips for field work or advice for grad school can be just as useful and promote group discussion. Following the question/discussion period there will be a 5-10 minute break before the student presentations begin.

This course aims to provide you with not only an opportunity to learn about the various facets of polar research, but also aims to help you refine your own writing and presentation style. Please treat the presentation like you would a committee, defence or conference

presentation. Pay attention to the appearance and flow of your presentation, your presentation style and your ability to answer questions following the presentation.

We expect assignments to be submitted on time and in exchange we will work to return them to you with valuable feedback in a timely fashion.

This course aims to provide you with not only an opportunity to learn about the research being done at CEOS and by our close collaborators, but also aims to help you refine your writing and presentation style. Please treat the presentation like you would a committee, defence or conference presentation. Pay attention to the appearance and flow of your presentation, your presentation style and your ability to answer questions following the presentation.

We expect assignments to be submitted on time and in exchange we will work to return them to you with valuable feedback in a timely fashion.

Students Accessibility Services

Student Accessibility Services
If you are a student with a disability, please contact SAS for academic accommodation supports and services such as note-taking, interpreting, assistive technology and exam accommodations. Students who have, or think they may have, a disability (e.g. mental illness, learning, medical, hearing, injury-related, visual) are invited to contact SAS to arrange a confidential consultation.
Student Accessibility Services http://umanitoba.ca/student/saa/accessibility/
520 University Centre
204 474 7423
Student_accessibility@umanitoba.ca

Expectations: You Can Expect Us To

We have arranged an exciting line up of visiting presenters who will cover a wide array of topics within the target domain of the course. Each week will follow roughly the same schedule with the visiting presenter beginning at 2:30pm and ending between 3:15 and 3:30pm. A 15-20 minute question/discussion period will follow the presentation. A short 5-10 minute break will then take place, allowing people to stretch their legs and grab some water before we begin the two student presentations. Each student presentation will run 15-20 minutes with 5-10 minutes of question/discussion to follow each presentation. Typically the course ends between 4:30 and 5:00 pm. The instructor will be available after class if you'd like to discuss the presentation, have questions about the assignments or generally have questions regarding your work.

We will help to facilitate discussion in class and link the varying presentations to the common theme of climate change in the Arctic and each of your individual fields of study.

We will ensure that assignments are marked and returned with constructive comments within a timely fashion. We will also be available for clarification of the comments and further suggestions for your work.

Class Schedule

Below is the class schedule for this semester. Please not that the schedule is subject to change at the discretion of the instructor and course coordinators. The voluntary withdrawal date of November 18, 2016 is also presented in the schedule. Student presentation slots will be filled in during the introduction on September 14th.

Date	Guest Lecturer	Student Presentations	
September 14	Syllabus & quick round table (5 minutes / student)	x	x
September 21	Claire Hornby (BAYSYS Coordinator) & Dr. Jennifer Lukovich (Research Associate – CEOS) Introduction to BAYSYS and the Hudson Bay Complex		
September 28	Karley Campbell (PhD. Candidate``` – CEOS) Sea ice algae and phytoplankton		
October 5	Dr. Jack Landy (PDF – CEOS) (to be confirmed) Sea Ice Thermodynamics and Melt Processes		
October 12	Dr. Dustin Isleifson (Assistant Professor – Engineering – University of Manitoba) Microwave Remote Sensing of Sea Ice: From Theory to Application		
October 19	Bob Gill (Senior Environmental Specialist - Manitoba Hydro) Carbon Cycling and Freshwater Inputs		
October 26	Miriam Unruh (Director Academic Learning Center – U of M) How to write a scientific paper (process, style, citation, organization, and editing)		
November 2	Dr. Sergei Kirillov (Research Associate - CEOS) Arctic Oceanography and Oceanography within the Hudson Bay Complex		
November 9	Dr. Ian Mauro (Associate Professor – Dept. Geography – University of Winnipeg) Traditional Knowledge and Film Making		
November 16	Dr. Monika Pucko (Research Scientist – CEOS) Oil in ice and CMO		
November 18	Voluntary withdrawal date	x	x
November 23	Dr. Matthew Macdonald (PDF – Civil Engineering (Water Resources) – University of Manitoba) & Dr. Tricia Stadnyk P.Eng (Assistant Professor – Civil Engineering (Water Resources) – University of Manitoba)		

	Hydrological Modelling - BAYSYS		
November 30	Joel Heath (Arctic Eider Society) Traditional Inuit Knowledge and Community Based Monitoring		

Course Evaluation Methods

The course is comprised of three assignments that are directly relevant to your field of research and should build off of each other. The first two assignments are comprised of a written report and oral presentation. The final assignment is a mock NSERC/SSHRC proposal that is to be submitted as a written report. Marks will reflect the completeness of the work and the clarity with which it is presented. Constructive feedback on the written report and presentation will also be provided, please consider this feedback when you are doing the second assignment and final NSERC/SSHRC proposal.

Participation in class question/discussion periods is key to the class and therefore 10% of your mark will be based on class participation.

Assessment Tool	Value of Final Grade
Background presentation and report - (between Sept 21 and Oct 19)*	20%
Journal article proposal and outline - (between Oct 26 and Nov 30)*	20%
NSERC/SSHRC proposal and outline – Due 2:30pm November 23, 2016	50%
Class Participation**	10%

* Two students will present each week following the visiting presenter. The student schedule will be decided upon during the first course with students volunteering for presentation slots that fit their schedule.

** Class participation marks will be based on a student's involvement in the question and discussion period following each presentation.

Grading

The grading scale for this course is given below.

A+	> 90%	C+	65% - 69%
A	80% - 89%	C	60% - 64%
B+	75% - 79%	D	50% - 59%
B	70% - 74%	F	< 50%

Assignment Descriptions

REPORT #1: Background – due date to be decided in class (between Sept 21 & Oct 19).

Students are required to write a literature review (of peer-reviewed articles) related to an approved field of study. It will consist of a written review of 10 pages (including figures, excluding references and title page, double spaced) and an oral PowerPoint presentation (15 minutes). The written review and oral presentation should contain the following

(i) Context of your research (why it's important)
(ii) Previous studies in your field and about your area of interest
(iii) Type of data / manipulation that was previously used
(iv) Potential gap in the literature

A round of questions and discussion will take place after each oral presentation. The presenters' ability to answer questions will be considered towards their grade. Questions and contribution towards the discussion from the audience will be considered towards each students participation mark.

REPORT #2: Paper outline – due date to be decided in class (between Oct 26 & Nov 30).

Each student is required to write an outline for a future paper based on your thesis work. It will consist of a rough draft of around 5 pages (bullet point form) and an oral presentation (20 minutes). The objective is to get you to begin thinking about your first paper and the start to outline the structure of it. The written review and oral presentation should contain the following

(i) A working title, author list, and target journal
(ii) An outline of the key points and objectives of the paper
(iii) Introduction with relevant references from appropriate articles
(iv) A list of datasets available to be used in the paper
(v) An outline of the methods to be used on the datasets
(vi) Two figures based on the hypothesized outcomes (rough figures that show the hypothesized relationships or time series of the data. Can be made in Illustrator)
(vii) Minimum of 10 references

A round of questions and discussion will also take place after each oral presentation. An example outline will be presented in class to provide an idea of what is expected for this outline.

NSERC/SSHRC Application assignment:

Each student is required to complete an NSERC or SSHRC style research proposal on a topic related to their own research. This should follow NSERC/SSHRC guidelines.

The purpose of this assignment is to challenge you to concisely present a research concept, and identify the key project management and research considerations for the project. The deadline for the proposal will be **November 23, 2016**.

Assignment Grading Times

Assignments will be graded and returned to the students within two weeks, though Dave and Nathalie will be away for the classes on September 28 and October 5 and 12 so these assignments may not be returned until the class on October 19. Evaluative feedback will be available before the voluntary withdrawal date of November 18, 2016.

Assignment Extension and Late Submission Policy

Assignments are to be emailed to Dave or Nathalie prior to the class during which the associated presentation is given. For a documented medical or compassionate reason an extension can be given, however if no extension has been granted we will apply a penalty of 10% per day for any late assignments. All three assignments must be submitted and presentations given in order to pass the course.