

# Introduction to Climate Change and Its Causes: Syllabus

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## ACKNOWLEDGEMENTS

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Dr. John Iacozza has been a faculty member with the Department of Environment and Geography, specializing in the Arctic system and geomatics, for the past 10 years. In addition to this course, he teaches a number of courses in physical geography and techniques, including Introduction to Physical Geography, Thematic Cartography, Remote Sensing and Introduction to Climate Change and Its Causes. He has also recently been elected also a Fellow of the Royal Canadian Geographical Society.

Dr. Iacozza obtained his undergraduate degree at McMaster's University and Masters degree at the University of Manitoba, both in physical geography. He recently completed his PhD in Physical Geography, focusing on snow-covered sea ice as related to polar bear habitat in the Canadian Arctic. His current research interests continue his PhD research, and include climate change impacts on snow-covered sea ice and habitat relationships in the Arctic regions. He has also participated in a number of field projects in the Canadian Arctic over the last 15 years.

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## WELCOME NOTE

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I want to personally welcome you to this course. I hope you see this course as an opportunity to explore the concept of climate change and how climate has changed not only in your region of the circumpolar world but also in other regions. In

In addition this course is aimed at students with and without a science background and should hopefully help you to understand the misconceptions regarding this subject. If you need any help with the course material or any other issues, please feel free to contact me and I will try my best to help.

## CONTACTING YOUR INSTRUCTOR

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For information on contacting your instructor as well as other important information from your instructor see the Instructor Letter in your course website.

## COURSE DESCRIPTION

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Confused about the global warming debate that saturates the media? This course will give you a chance to understand the science behind circumpolar climate change. The primary objective of this course is to provide students with the scientific literacy to understand the general issue of climate change with emphasis on the circumpolar region. This will be accomplished by investigating the physical and astronomical factors that drive circumpolar climate change. Focus will also be given to current and future climate change in the context of observations and modeling.

## COURSE GOALS

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Upon completion of this course, you should be able to:

- discuss the components of the Earth's climate system as related to climate change;
- explain the historical context and mechanisms responsible for past and abrupt climate change;
- describe current changes to atmospheric observations and the relationship to Earth's system;
- describe the physical and astronomical factors that drive circumpolar climate change; and
- evaluate predictions for future climate change.

## DISTANCE AND ONLINE EDUCATION (DE) STUDENT RESOURCES

In your course website there are links for the following:

- Contacting Distance and Online Education Staff
- Distance and Online Student Handbook
- Distance and Online Education Website

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## COURSE OVERVIEW

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The overall aim of this course is to help you understand a very controversial and misrepresented topic. Most people will have a slightly different definition of what climate change is and the factors controlling it. A number of topics will be covered including but not limited to past climate change episodes, current climate change and predictions of future climate change. In addition, this background you learn in this course will help you comprehend the biophysical and social/economic impacts, as well as the mitigation and adaptation strategies that are specific to the circumpolar region, topics discussed in other courses. You are not required to have a science background to do well in this course.

The course is designed to be multidisciplinary in nature, allowing students with and without a science background to acquire knowledge and an understanding about climate change. The assignments and online discussion portion of this course are

designed to allow interaction between you and other students in other parts of the circumpolar world who are also registered for this course. This variety in student location will allow for a diverse exchange of ideas surrounding the concept of climate change and how climate has changed in various regions.

## TOPICS

- Review of Earth system
- Context of present/future climate change
- Recent climate change observations
- Climate change forcing factors
- Future climate change

## LEARNING ACTIVITIES

During this course you will participate in the following learning activities:

- Viewing Powerpoint slideshows with audio
- Participating in online discussions with your classmates and instructor via discussion board postings
- Reading assigned journal articles and websites
- Watching assigned online videos
- Demonstrating your learning through a variety of assessments

## EVALUATION AND GRADING

### ASSIGNMENTS

**Note:** Detailed instructions about the assignments are found in your course website.

- **Online Discussions**

Students are also responsible to participate in on-line discussions through the course website. These discussions are designed to promote an exchange of ideas regarding each module as related to your particular location. Grading will be based on your partaking in the discussion, as well as the relevance of your comments to the discussion thread. If a student is unable to participate in the on-line discussion due to technological limitations, they will be provided with the topic and will be expected to produce a short paper providing their ideas on the topic.

- **Assignment Papers**

There are five assignments associated with this course (one per module). These assignments are designed to increase your understanding of the material presented in the various modules by either applying the knowledge to specific aspects of climate change or providing you an opportunity to further research a period of climate change. Each assignment should be submitted online through the course website. Detailed instructions on completing the assignment can be found within the course website.

Each assignment should be written in complete sentences. Point form is not allowed unless asked for in the question. A grade of 0 will be given to any questions not answered in complete sentences. Each assignment must be completed and submitted prior to 11:59pm Central Time on the date they are due.

- **Online Quizzes**

Quizzes will be done online through the the course website. The format of these quizzes will include multiple choice, true-false questions and/or short answer questions. These questions will be based on content found within the modules, assigned readings and online discussions. A quiz will be available at the end of each course module for a period of 48 hours. Once you begin the quiz, you will have 30 minutes to complete it and will only be allowed one attempt. If you fail to complete the quiz within that timeframe, a grade of 0 will be assigned to the unanswered questions.

### ASSIGNMENTS DUE DATES

Consult your course schedule for the assignment due dates.

**Please note:** Unless otherwise noted, each assignment is due on the Friday of the week they are assigned by 11:59 pm Winnipeg Central Time.

### COURSE POLICIES

**Missed Quizzes:** A student will be able to make-up a missed quiz for either medical or compassionate reasons.

Notification must be provided to the instructor within 24 hours of the quiz deadline.

**Late assignments:** Assignments must be submitted by the deadline. A penalty of 10% per 24 hours will be given to late assignments unless the student has obtained approval in advance of the deadline. The first assignment is designed to have the students introduce themselves to the instructor and the other students, as well as becoming familiar with the drop box and discussion forums through the course website. **This assignment is worth zero marks, however each student must complete this assignment in order to pass the course.**

**Academic Integrity:** Academic dishonesty (plagiarism, cheating) is a very serious matter in any academic institution and is dealt with severely at the University of the Arctic. Commonly, the penalty for ANY FORM OF CHEATING is a grade of F on the assignment and/or a final grade of F in the course. Please familiarize yourself with the University policy on academic dishonesty.

**Questions/Concerns:** If you have any questions regarding the course/assignment content, please feel free to post your questions using the communication tools in the course website. The discussion forum will be checked by the instructor every Monday and Thursday evenings (Central Time Zone) and will try to address your questions. If you have a personal issue (i.e., grade on an assignment, deadline extension, etc.), please email the instructor.

### DISTRIBUTION OF MARKS AND DUE DATES

Evaluation	Percentage
Assignment Papers	60%
Online Quizzes	25%
Online Discussions	15%
<b>Total</b>	<b>100%</b>

### GRADING SCALE

Letter grade	Percentage range	Description
A+	90 – 100	Exceptional
A	80 – 89.9	Excellent
B+	75 – 79.9	Very good
B	70 – 74.9	Good
C+	65 – 69.9	Satisfactory
C	60 – 64.9	Adequate
D	50 – 59.9	Marginal
F	less than 50	Failure

Note: All final grades are subject to departmental review.

### PLAGIARISM, CHEATING, AND EXAMINATION IMPERSONATION

Plagiarism is a serious academic offense and it will not be tolerated. It is intellectual theft and is punishable by a grade of zero on the assignment, a grade of zero in the course, or more severe academic penalties. Additional information regarding plagiarism is posted on the course site. Plagiarism includes copying phrases, sentences, paragraphs, pictures, illustrations, maps, etc., from any source, including books, web pages, magazines, articles, radio, television or cinema, etc., and presenting it in your own work without acknowledging the original author.

Acknowledgment of words requires that you indicate the quoted material with quotation marks or blocked paragraphs and a reference to the original source. Recognition of images requires a source note and reference in a caption or in the text. A related academic offense is handing in a paper or assignment you prepared for another course, or submitting a paper you bought or had someone else write. However, it is not an academic offense to have someone else read and edit your work. Indeed, having other people read drafts of papers is an accepted part of academic work.

You should acquaint yourself with the University's policy on plagiarism, cheating, and examination impersonation. Note: These policies are also located in your *Distance and Online Education Student Handbook* or you may refer to Student Affairs at <http://www.umanitoba.ca/student>.

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