

SYLLABUS: VISUALIZING CLIMATE CHANGE (CONS 210)¹

What does climate change look like? What does the future hold for us? Do the movies and the media get it right on climate change? How can we get engaged in solutions to climate change?

This course provides an introduction to climate change through the lens of existing local landscapes and possible scenarios for your own future. The course provides an overview of the science of climate change, its implications for ordinary people, its potential solutions, and better ways to communicate climate change. We will use visual media such as movies and 3D visualisation to explain current realities and explore alternative futures with climate change, and to make learning more fun and memorable. It aims to build awareness about what climate change means for communities and the environment, how people perceive it, and how you can engage others in moving towards climate solutions.

This course has no pre-requisites, although it is particularly designed for second year undergraduates. It is intended for students of all backgrounds (arts and sciences) who are interested in solutions for climate change and communicating these to others.

LEARNING OBJECTIVES FOR STUDENTS

1. Understand the scientific basics of climate change and implications for people, communities and landscapes
2. See your surroundings differently: how to recognize climate change in the context of real life and places
3. Understand the basics of climate change perceptions and communication: how people think about climate change and how they can be engaged
4. Critically evaluate and use visual media and other communication strategies to engage people on climate change
5. Confidently explain, engage and communicate effectively with others about climate change



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TEACHING ASSISTANTS: TBD

¹ This is a draft and not the final syllabus. It is meant to give students a general idea of course content, grading and assignments. The finalized syllabus will be available to registered students in September 2017.

COURSE CONTENT OVERVIEW

The course will draw on recent research projecting climate change scenarios in BC and beyond. Guest lecturers (scientists, practitioners, and activists) working on different aspects of climate change will present key topics. Students will examine issues such as **sea level rise, carbon sequestration, pipelines, community energy, and urban lifestyles**, and consider responses such as education, practical action, policy change, and career paths.

The course begins with the basics of climate change science, but quickly introduces social and psychological issues, and ends up focusing on communication and engagement approaches. The course is divided into 3 main sections:

Section I: Climate Change Foundations: The Science and its Interpretation (key concepts)

- Overview of global climate change causes, consequences and solutions – a view of systems with a holistic perspective
- Climate change basics: meteorological/biophysical processes, carbon cycle, climate trends and impacts, and interactions with landscape systems and society.
- Overview of global emission scenarios, the role of models and impact projections, holistic future scenarios and responses/solutions, including policy issues and social implications,
- Human perceptions about climate change and social/psychological barriers to awareness and action.

Section II: Climate Change Components: Causes, Impacts, Mitigation & Adaptation

CIMA Framework:

- **Climate Change Impacts:** Overview of the global and local consequences of climate change.
- **Climate Change Causes:** Exploration of the diverse ways in which humans contribute to climate change.
- **Climate Change Mitigation:** Overview of strategies (local and global, personal and political) to reduce carbon footprints and the use of fossil fuels.
- **Climate Change Adaptation:** Explore how we can reduce the harm and adapt to the impacts caused by climate change.

Section III: Engaging People with Climate Change: How to generate greater awareness and action

- Overview of climate change communication
- Principles and strategies to engage people
- Media interpretations and examples
- Exploring integrated solutions and future scenarios, learning about visualisation based on case studies (e.g. sea level rise/flooding, Future Delta Videogame, Community Energy)

COURSE STRUCTURE

There will be an emphasis on discussion and interaction in class, to enhance students' understanding of the concepts and issues related to climate change. In addition to the lectures imparted by the instructor, the course will include:

- **Guest lecturers:** Multiple guest lecturers will be invited to present in class and explain about a specific topic area (e.g. mitigation and carbon sequestration, psychological barriers to action). In order to provide a broad perspective to students, guest lecturers will come from a diversity of sectors, such as science and academia, government and NGOs.
- **Collaborative sessions and class discussions:** These sessions are designed to improve students' understanding about the multiple topics covered in class. They include class discussions, interactive group exercises, review of assignments and group projects, among other activities.
- **Required readings:** Short readings from the course textbook "*Visualizing Climate Change*" by Stephen Sheppard (2012) will be required before most lectures.
- **Short quizzes:** Some lectures may start with a **short quiz** (likely using i-clickers) aimed at testing key concepts learned in class and from the course textbook.
- **Mid-term exam:** Will include multiple-choice and some short open-ended questions (1-2 paragraph answers). There is **no final exam**.
- **Assignments:** These include individual & group assignments, including a group term project (see below 'Evaluation of students').
- **Tutorials:** One or more specific sessions outside of class time may be scheduled to assist groups with midterm review or projects, later in the term. Students are welcome to make use of the office hours of the Instructor and TAs if you have questions or need help at other times.
- **Course blog:** A blog site will be provided which can be used by students to share information such as photos, news-clips, visualizations, group work and posts that are relevant to the class. Further blog instructions will be provided. The blog is not intended as a way to communicate with TAs or Instructors, but will be taken into account as input to class participation grades.
- **Optional movie night(s)** with documentaries or cli-fi classics

COURSE ORGANIZATION

Schedule: Tuesdays and Thursdays (3.30-5.00), Room 1005, Forest Sciences Centre (FSC). Occasional events and tutorials may occur after class or at other times.

Course website: All class materials will be placed on the course website for CONS 210 (2017) Winter Term 1 accessible only to registered or visiting students.

iClickers: You are required to **purchase an i>clicker remote** and bring to class (all sessions unless otherwise notified). Your **in-class participation will be assessed using i-clickers**. An i>clicker remote allows you to respond to questions posed during class. In order to avoid losing marks, **you will need to register your i>clicker remote online within the first 2 weeks of class.**

EVALUATION OF STUDENTS (*subject to change*)

Marks will be assigned based on technical correctness, demonstration of clear understanding of concepts, integration of course material, appropriate effort and additional research, team dynamics, critical thinking and creativity. Presentations and products should be clear, engaging, credible, well written/constructed and of appropriate length.

STUDENT ACTIVITY	MARK	
Class participation includes: class attendance, use of blog, participation in class discussions and asking useful questions, participation in-class exercises, preparation for presentations, contribution to team-work, substantive & appropriate contributions to class, etc.	15%	
Short quizzes on required readings (only in Sections I and II)	5%	
Mid-term exam	25%	
Assignments	55%	
- Assignment 1 (Individual) – Your Carbon Footprint	5%	
- Assignment 2 (Pair) – Climate Change Impacts & Causes	15%	
- Assignment 3 (Group Term Project) - Climate Change Engagement Plan	35%	
- 3.1 Outline of project and bibliography		5%
- 3.2 Group Presentation (adjusted for group & individual effort)		10%
- 3.3 Final Group Project report (adjusted for group & individual effort)		15%
- 3.4 Individual contribution to group research / discussions and during project (peer evaluation)	5%	
TOTAL	100%	

Plagiarism: As a university student, you are expected to submit original work and give credit to other people’s ideas and writings. Plagiarism includes copying or cutting and pasting other people’s writing without citing the source and identifying it as a quotation. **Plagiarism carries a penalty of zero marks for the assignment concerned, and is considered a very serious issue by the University Administration, which can affect your career.** Please make sure you know UBC’s policies on plagiarism (see <http://help.library.ubc.ca/planning-your-research/academic-integrity-plagiarism/>) & read ‘Tips for Avoiding Plagiarism’ at same url.

It is possible that some of the graphics or other material from your assignments may get used in future courses or in an education-related presentation or published document, in which case full credit to the source/author(s) by name will be included: **please let me know if you wish to withhold permission for such uses for any reason, without any adverse consequences.**

REFERENCE MATERIALS: Required course textbook: Sheppard, S.R.J. 2012. *Visualizing Climate Change*, Abingdon, Earthscan/Routledge. Available from UBC Bookstore, Amazon, or Routledge/Taylor & Francis (including e-book) <http://visualizingclimatechange.ca> for approximately \$75 US.