

ARTSSCI 4CK3 / ALTERNATIVE ENERGIES INQUIRY
COURSE OUTLINE
2015-2016 (TERM 1)

INSTRUCTOR: Dr. John Maclachlan
General Science Building 230
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Office Hours – By Appointment or Drop-in

Course Description

Since the formation of the Earth's atmosphere there has been a dynamic relationship between the Earth's climate and the processes, both natural and more recently anthropogenic, taking place on the surface. What cannot be argued is with the dawn of the Agricultural Age humans have been altering the proportion of greenhouse gases in the atmosphere. With varying opinions within the literature as to the potential consequences of this (geologically speaking) sudden change this course will take time to discuss both the geologic and historical implications of climate change and use that base knowledge to explore the development and use of alternative energies.

Students will be given the opportunity explore questions within the greater topic of alternative energies that interest them. Each student will lead a class discussion in an approved topic of their choice and are responsible for creating the reading list for the class. Topics are up to the student with countless potential topics such as 'Are alternative energies really cleaner?'; 'NIMBY! – Everyone likes wind turbines until one pops up next door'; 'Do you care as much about the environment as you think you do?' and 'Geoengineering: Can we use Science to get out of this mess?'

The course capstone project will be based upon the question of 'Alternative Energies in Canada'. Students will have an opportunity to make a sales pitch on the alternative energy option of their choice to a group of McMaster staff and faculty from the McMaster Sustainability Office.

Course Objectives

By the end of this course students should be able to;

- Intelligently discuss both scientific and social issues of climate change
- Be able to explain climate variability on both historical and geological timescales
- Demonstrate an understanding of the complexity of implementing an Alternative Energies program in Ontario
- Understand the practical challenges in adapting changes to a society questioning the idea of climate change
- Critically evaluate the alternative energy policies and literature in both the scientific and popular media

Course Schedule

Three hours/week, one term

Tuesday	9:30 – 11:20	BSB 122
Thursday	9:30 – 10:20	BSB 122

Class Schedule*:

Week 1 (beginning September 7th) – Discussion on the Earth’s Changing climate in both historical and geological times.

Week 2 (beginning September 14th) – Discussion of alternative energies and their place in both Canada and the world. Readings will be posted on Avenue.

Week 3 (beginning September 21st) – Exploration on how has the dynamic climate influenced human evolution and when did humans begin to influence the climate.

Week 4 (beginning September 28th) – A discussion on the perception of alternative energies. This will be used as an introduction to the capstone project.

Week 5 (beginning October 5th) – Student led discussion on topics of their choice. This will be the first of five weeks of student led discussion. During this time the reading list will be constructed by the class. An example of this can be found here: <https://docs.google.com/document/d/1gaLRrD0CZaKGRF3nLuxq7-j0gYZkLCNioAIYZOgBcQY/edit?usp=sharing>

Week 6 (beginning October 12th) – FALL BREAK

Week 7 (beginning October 19th) – Student led discussion on topics of their choice.

Week 8 (beginning October 26th) – Student led discussion on topics of their choice.

Week 9 (beginning November 2nd) – A skill building week in effective use of Multimedia techniques for message dissemination. All classes to take place in the Lyons New Media Centre.

Week 10 (beginning November 9th) – Student led discussion on topics of their choice. **Week 11** (beginning November 16th) – Student led discussion on topics of their choice.

Week 12 (beginning November 23th) – A discussion on how alternative energies are planned for by municipalities. This week’s discussion will take place in one of the McMaster Geographic Information System (room announced closer to the date)

Week 13 (beginning November 30st) – Presentation and Discussion of the capstone projects

Week 14 (beginning December 7th) – Reflection and discussion of key course content

*Class schedule may change at the discretion of the instructor

Grade Breakdown		Due Date
<i>Class discussion leadership</i>	30%	Students scheduled individually. This will involve numerous aspects including a presentation and reflection of a student colleague’s presentation.
<i>Assignment</i>	35%	Due date TBD (later in the semester). This will be a short assignments throughout the semester.
<i>Participation</i>	20%	Includes participation and attendance
<i>Final Presentation/Paper</i>	25%	November 30 th

Textbook

There is no need to purchase a textbook for this course. Extensive class readings will be posted on Avenue during the first week of classes. The student compiled reading list will be made available on a Google Document

Late Assignment Policy

All assignments are subject to a late penalty of 20% per 24 hours. The weekend counts as one day.

Classroom Discussions

As with all Inquiry classes it works best if it is centered around topics that interest the class. During the second week of class we will create a pool of interesting topics that we will explore. Students will get to choose a topic of interest and will then lead the class in a discussion. The student will be responsible for creating and posting a list of readings to a course Google Document at least 48 hours prior to the discussion as well as a post discussion quiz question. Each student must summarize two class discussions and these will be assigned by the instructor. Summaries are due within 72 hours of the class discussion.

A2L Information (<http://avenue.mcmaster.ca>)

This course will use Avenue to share and distribute information. This will be true of both the instructor and the students.

Avenue is an online system which will be used in this class for communicating information relating to the course. To log into avenue, use your MUGSI login and password. See the avenue homepage address above for more instructions if you need them. ***You are required to log on to avenue at least twice a week for course updates.***

Academic Integrity Statement

McMaster Policy on Academic Integrity:

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences—e.g., the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty, please refer to the Academic Integrity Policy, located at: <http://www.mcmaster.ca/academicintegrity> The following illustrates only three forms of academic dishonesty: 1) Plagiarism—e.g., the submission of work that is not one’s own or for which other credit has been obtained. 2) Improper collaboration in group work. 3) Copying or using unauthorized aids in tests and examinations.

MSAF Statement

McMaster Student Absence Form (MSAF):

In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar “Requests for Relief for Missed Academic Term Work.” Please also see the MSAF statement on our website (<http://artsci.mcmaster.ca/forms-requests/>) and direct any questions or concerns to Shelley Anderson or Rebecca Bishop in the Arts & Science Program Office as appropriate.

Email Contact and Student Responsibility Statement

Please Note:

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of students to check **their McMaster email** and course websites weekly during the term and to note any changes. Announcements will be made in class and by using the course email distribution list.

Academic Accommodation of Students with Disabilities Statement

Academic Accommodation of Students with Disabilities:

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or email sas@mcmaster.ca. For further information, consult McMaster University's Policy for Academic Accommodation of Students with Disabilities.

Criteria for Sustainable Written Work Submissions

The written work submission guidelines for this course have been chosen to support the more sustainable use of paper, energy and toner. Four levels of criteria have been developed by the Office of Sustainability and encouraged for adoption by professors and faculties.

The submission guidelines for this course meet the Platinum standard. All written work must be submitted in the following format:

- Reduced line spacing
- Exclusion of title page
- Decreased margins
- Online submission and return

For more information about criteria for sustainable written work submissions, visit the Office of Sustainability website: www.mcmaster.ca/sustainability