

**Course Description**

This course will be quite a bit different from other classes you have taken at the University of Alberta. According to the University Calendar, capstone courses are intended to “synthesize knowledge and skills learned throughout the four years of the program,” and “are integrative and experiential.” In this course, you will have the experience of tackling a complex, real world environmental issue, and be called upon to offer your own unique contribution to addressing that issue, on the basis of your personal knowledge, experience, and most importantly, your critical thinking and creativity.

We will do so in the context of a team project, involving all of the stages of problem-solving you would be asked to undertake in environmental management beyond the university. These steps include characterizing the problem, identifying gaps in knowledge, creating and implementing a plan to fill those gaps, and communicating the results with interested stakeholders. We will focus our efforts on the following question: How can we expand the adoption of renewable energy sources to supply electricity in Alberta?

This course will be run as a Community Supported Learning course, which means we have non-university organizational partners who are interested in participating in, and the outcomes of, our class efforts. Our partners include the Alberta Renewable Electricity Cooperative, otherwise known as Spark, and Alberta Coal Phase-out Network, a non-profit advocacy organization.

**Objectives**

- To apply knowledge gained throughout the student’s undergraduate studies to a contemporary environmental issue.
- To build critical and synthetic knowledge-building skills.
- To gain experience in collaborative, team-based problem solving.
- To improve upon scientific research and communication skills.
- To deliver valuable knowledge designed to address the environmental issue in question to interested stakeholders.

**Code of Student Behaviour**
All students should familiarize themselves with the University of Alberta Code of Student Behaviour, found on page 75 of the 2004/2005 Calendar. Pay particular attention to the section on plagiarism, as this is a serious violation often unknowingly committed by students. According to the Code of Student Behaviour (Calendar section 26.1.4.2), “No student shall submit the words, ideas, images or data of another person as the student’s own in any academic writing, essay, thesis, research project or assignment in a course or program of study.”

- Plagiarism includes paraphrasing a partial or whole idea of another person, and does not have to be a quote! Even though some students have been taught that it is not plagiarism if every third word has been changed, this is not true! It is still considered plagiarism.
- To properly reference ideas or quotes, it is strongly recommended the student purchase a style guide such as APA, Chicago, ASA or MLA. These are available at the bookstore or are at the reference desk in Rutherford Library.

Audio and/or visual recording of lectures is permitted only with the prior written consent of the professor.

**University Student Services**

Section 25 in the Calendar outlines the many university student services that are available to assist you in your academic program.

Should any students have disabilities, they must be registered with Specialized Support and Disability Services at 492-3381 or (TTY) 492-7269 in order to have individualized consideration with respect to obtaining special exam or class arrangements. Without this registration, the instructor cannot make exceptions.

As this course has a strong writing component, it is recommended that all students utilize the Effective Writing Resources program from the Academic Support Centre (492-2682). Another option may be to hire an English tutor from the Department of English (492-2682).

**Student Responsibilities and Assignments**

Because this is a small class, in which success at meeting objectives depends upon the active participation of all enrollees, students are responsible for attending class regularly, participating actively in individual and group work, and engaging in group discussion. The class will consist of the following components:

1) Characterization of the issue: We will work as a team to collect sufficient background information to offer an understanding of the current status of electricity production and consumption in Alberta, and the current contribution of renewable energy resources.

2) Empirical Research: On the basis of our background research, we will decide on a set of research questions and develop a methodological framework to pursue them. We will then implement our research plan, involving gathering of original data from secondary sources, and from relevant segments of the population; and analysis of the results.

3) Write-up and dissemination: A key component of our work will be the creation of a document for presentation to our organizational partners, an oral presentation, and a project poster.
Each of these components will be associated with a team deliverable, an individual deliverable, or both, as described further below.

- Should assignment deadlines be missed, the student must seek proper medical documentation from University Health Services within two days from the illness as per 23.5.7 of the calendar.
- Should other extenuating circumstances occur, it is expected that the student offer some evidence (i.e.) funeral announcements, etc.

**Marks and Grading**

Evaluation will be completed and expressed in raw marks throughout the term. The University of Alberta uses the letter grade system (see Calendar for explanation) to distribute the final grade at the end of the course. The grade remains unofficial until approved by the Faculty Council or its designate. Assignment and final course grades are determined through a balance of individual-level achievement and relative performance. In general, the recommended grade distribution system offered by the University of Alberta Marking and Grading Guidelines is followed, although the instructor may deviate from this distribution in certain cases upon consideration of an individual student’s performance. The final grade will be determined according to the following distribution:

<table>
<thead>
<tr>
<th>Component 1:</th>
<th>Individual Written Summary of Background Information Gathering</th>
<th>20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component 2:</td>
<td>Individual Written Summary of Research Findings</td>
<td>20%</td>
</tr>
<tr>
<td>Component 3:</td>
<td>Individual Report Section</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Participation in Group Oral Presentation</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Report Review Feedback</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Class Attendance and Participation</td>
<td>5%</td>
</tr>
</tbody>
</table>

**Course Schedule**

Week 1, Jan. 5: Introductions and Overview of Class Project

**Component 1: Characterization of the Issue**

Week 2, Jan. 12: We will decide as a group the types of information needed in order to address our issue, and divide up information-gathering responsibilities. We will then work individually and in groups to collect library and internet-based information.

Week 3, Jan. 19: Class review, presentation and discussion of background information and identification of research questions.

Deliverables: Each student will be required to submit a written report summarizing the information they were involved in gathering, and reporting back to the class in a short oral presentation and discussion. All students will be required to review all of the written summaries and be prepared to discuss and agree upon key research questions.
**Component 2: Empirical Research**

Weeks 4-5, Jan. 26, Feb. 2: Once we have our key research questions, we will work as a group to develop a method of gathering and analyzing data to address those questions, and develop our research instruments. Ethics in research involving human subjects will be discussed as part of our research preparations.

Weeks 6-7, Feb. 9, 23: We will then divide up data-gathering responsibilities, with students working in small groups.

Weeks 8-9, Mar. 2, 9: After data collection is complete, each student will be responsible for analysis of a portion of that data, and participation in group discussion in which we discuss our analysis efforts collectively, and agree upon the key findings.

Deliverables: Collection and analysis of a portion of the data will be conducted individually by each student, who will then be responsible for sharing the results of their analysis in written form, as well as in a short oral presentation to the class.

**Component 3: Write-up and Dissemination**

Weeks 10-11, Mar. 16, 23: Students will work collectively on a written report, with each student initially bearing responsibility for one portion of the report, and providing a review of the remainder of the report. All students will then review and provide feedback on the resulting report, and participate in revisions of their sections.

Weeks 12-13, Mar. 30, Apr. 6: Students will then be divided into two communication groups, one of which will be responsible for developing a poster, and the other for developing an oral presentation with visual aids.

**Note:** Within two weeks after the end of the term, we will schedule a presentation for our partner organizations, and invite other students and faculty in the ENCS program.