

Contact Information	
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Development date	July 6, 2011
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SHSM sector	Energy
Course code and course title	CGW 4U
Name of CLA	Energy SHSM - Independent Study Unit
Brief description of CLA	Using an Independent Study Unit format that serves as the culminating activity in CGW 4U, this unit provides topics that speak directly to a connection between the Energy SHSM and geopolitical, social and economic issues. This unit requires students to complete credible academic research on a topic of their choice and present the findings of their research in a report as well as through a presentation seminar.
Key Search Terms (Do not use SHSM, CLA, Course Code or Sector)	Independent study unit, climate change, biofuels, oil/fuel, hydricity, resource sustainability
Duration	10 hours
Overall expectations	<p><b>Methods of Geographic Inquiry -</b></p> <ul style="list-style-type: none"> <li>• Select and apply geographic skills, methods, and technologies to gather, analyse, and synthesize ideas and information;</li> <li>• Use a variety of methods and technologies to communicate the results of geographic inquiry and analysis effectively;</li> <li>• Select and apply appropriate decision-making and problem solving strategies to develop solutions for geographic problems and issues;</li> <li>• Conduct an independent inquiry that effectively applies geographic knowledge, skills, methods, and technologies to a selected local, national, or global geographic issue.</li> </ul>

## Specific expectations

### **Understanding Concepts -**

- Use geographic terms correctly in written and oral communication;
- Demonstrate an understanding of the technologies used in the analysis and synthesis of geographic data;
- Demonstrate an understanding of the value and use of geographic representations and methods
- Describe biases that may inform different viewpoints and perspectives on geographic issues;
- Demonstrate an understanding of the need to consider social differences (e.g., race, gender, class) when analysing global problems and issues;

### **Developing and Practising Skills-**

- Demonstrate an ability to distinguish between fact and opinion in information sources;
- Analyse cause and effect and sequence relationships in geographic data;
- Evaluate and effectively use information from a variety of primary and secondary sources (including mainstream and alternative print, broadcasting, and electronic sources) when conducting geographic inquiries, and apply relevant data when making decisions and solving problems;
- Draw conclusions or make judgements or predictions on the basis of reasoned analysis;
- Use statistical analysis techniques (e.g., correlational analysis) to interpret and analyse data;
- Collect and analyse the data to identify patterns and relationships;
- Use written, oral, and visual communication skills to present the results of geographic inquiry and analysis effectively.

### **Learning Through Application -**

- Produce a plan of action and conduct an independent inquiry that synthesizes concepts, skills, and applications related to a geographic issue;
- Identify practical applications in the local community of conclusions reached in the independent inquiry.

### **What do we want students to learn?**

#### • Learning Goals:

- Conduct credible academic research to learn about various perspectives of an important global issue using the factors of geographic analysis
  - Create a research report using the proper APA formatting and style
  - Present the information via a formal argumentative research report
  - Present major arguments to the class audience using a creative component
- These learning goals are divided incrementally into stages that students will complete during an extended period through the semester.

<p>Catholic Graduate Expectations</p>	<p><b>CGE1d</b> -develops attitudes and values founded on Catholic <b>social teaching</b> and acts to promote social responsibility, human solidarity and the common good;  <b>CGE1h</b> -respects the <b>faith traditions</b>, world religions and the life-journeys of <b>all people of good will</b>;  <b>CGE2a</b> -listens actively and critically to understand and learn in light of gospel values;  <b>CGE2b</b> -reads, understands and uses written materials effectively;  <b>CGE2c</b> -presents information and ideas clearly and honestly and with sensitivity to others;  <b>CGE2e</b> -uses and integrates the Catholic faith tradition, in the critical analysis of the arts, media, technology and information systems to enhance the quality of life.  <b>CGE3b</b> -creates, adapts, evaluates new ideas in light of the common good;  <b>CGE3c</b> -thinks reflectively and creatively to evaluate situations and solve problems;  <b>CGE3f</b> -examines, evaluates and applies knowledge of interdependent systems (physical, political, ethical, socio-economic and ecological) for the development of a just and compassionate society.  <b>CGE4a</b> -demonstrates a confident and positive sense of self and respect for the dignity and welfare of others;  <b>CGE4f</b> -applies effective communication, decision-making, problem-solving, time and resource management skills;  <b>CGE5g</b> -achieves excellence, originality, and integrity in one's own work and supports these qualities in the work of others;  <b>CGE7e</b> -witnesses Catholic social teaching by promoting equality, democracy, and solidarity for a just, peaceful and compassionate society;  <b>CGE7f</b> -respects and affirms the diversity and interdependence of the world's peoples and cultures;  <b>CGE7g</b> -respects and understands the history, cultural heritage and pluralism of today's contemporary society;</p>
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<p>Essential Skills and work habits</p>	<p style="text-align: center;"><b>Essential Skills</b></p> <p><input type="checkbox"/> Reading Text</p> <p><input type="checkbox"/> Writing</p> <p><input type="checkbox"/> Document Use</p> <p><input type="checkbox"/> Computer Use</p> <p><input type="checkbox"/> Oral Communication</p> <p>Numeracy</p> <p><input type="checkbox"/> Data Analysis</p> <p>Thinking Skills</p> <p><input type="checkbox"/> Job Task Planning and Organizing</p> <p><input type="checkbox"/> Decision Making</p> <p><input type="checkbox"/> Problem Solving</p> <p><input type="checkbox"/> Finding Information</p> <p style="text-align: center;"><b>Work Habits</b></p> <p><input type="checkbox"/> Reliability</p> <p><input type="checkbox"/> Organization</p> <p><input type="checkbox"/> Working Independently</p> <p><input type="checkbox"/> Initiative</p> <p><input type="checkbox"/> Self-Advocacy</p>
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## Instructional/Assessment Strategies

Teacher's notes

The Independent Study Unit provided outlines a comprehensive process that can be used in its entirety for all students enrolled in the CGW4U Canadian and World Issues course. It is meant to be a research unit that students work on independently under the advice of the teacher as well as peer conferencing. Some of the stages are designed for students as a guide through assessment FOR and AS learning. Other summative stages are part of the assessment OF learning category.

The accommodation made for students in the Specialized High Skills Major is a specified topic selection (stage 1) and a differentiation in the seminar presentation stage (stage 6). All of the handouts, worksheets and assessment tools are included in this CLA.

Context

Energy generation, energy consumption, and energy conservation are issues that are becoming increasingly important in Canada and around the world. The goal of the SHSM in Energy is to offer students the opportunity to explore the energy sector and to gain knowledge and skills that will allow them to participate in an economy in which energy is a significant factor.

Specifically, this ISU prepares students in the Energy SHSM for continuous learning about World Issues related to their sector. The goals of this unit are to have students gain skills and knowledge associated with global issues in the energy sector (i.e. energy generation, alternative energy, renewable energy, and energy conservation), and to gain an appreciation for the environmental, economic, and societal impacts of energy generation, consumption, and conservation within a global setting. This is accomplished by guiding the student through a credible research process related to a relevant global issue and by presenting the findings in a formal argumentative research report and a seminar to the class.

## Strategies:

The following is an overview of each of the stages that students will work through for the duration of the ISU. All of the handouts, worksheets and rubrics needed for each stage are included in this CLA plan.

### Stage 1: Proposal – Topic Selection and Preliminary Research:

- Students select topic for their ISU – see list
- Students complete Proposal Sheet Questions provided
- Student-Teacher Conference

### Stage 2: Creating Your Thesis and Outlining Essay Subtopics:

- Thesis – must be an argumentative essay – students are to follow instructions provided on the worksheet
- Outline the Essay Subtopics – topics for the 3 body paragraphs and an explanation of how they relates to the thesis
- Students use the template provided
- Peer Conferences, Student-Teacher Conferences

### Stage 3: Gathering and Reviewing Credible Research Sources

- Students locate credible and valid academic research from primary and secondary sources that will support the topic and thesis using a minimum 8 credible sources
- Students use the template provided for each source
- Summative – rubric provided

### Stage 4: Rough Copy of Argumentative Research Report

- Students begin the writing process using the research from the previous stage
- The goal is to introduce topic, state thesis, discuss 3 body paragraphs using evidence and form conclusions
- Students use the structure for essay writing that was provided
- Peer Editing Conferences – using the editing worksheet provided

### Stage 5: Final Copy of Research Report

- Research Report – Argumentative Style
- Make sure to consult all specific instructions for formatting and writing style expectations – see instructions and rubric provided. Make changes to the report based on the peer editing process.
- Summative – rubric provided

### Stage 6: Seminar Presentation

- 20 minute student led seminar presentation related to information of topic
- See student sheet for requirements.
- This stage has been specifically differentiated to fit the requirements of the Arts and Culture High Skill Major, but can be offered to any student enrolled in the course.
- This falls under the communication category on the final rubric for the seminar presentation.

### Accommodations:

- Conference with students to make sure that their thesis is aligned to their Specialist High Skills Major. Provide direction for those who need it.
- Check IEPs for necessary accommodations and/or modifications
- Opportunity for differentiated assessment for all students, particularly students enrolled in SHSM
- Book library periods for support with research
- Contact librarian for his/her input concerning research process and essay writing process for the class and for the SHSM student(s)
- Assess reading and writing over the course of this assignment with emphasis on the steps of the writing process

## Assessment and Evaluation of Student Achievement

[List all assessment and evaluation strategies and tasks and attach handouts, tests, assignments, exercises, etc.]

[As you plan, keep the following important considerations in mind:

How will we know students are learning?	How will we know students have learned?
• How will students demonstrate progress towards the desired learning? <b>establishing specific learning goals, student-teacher conferences</b>	• How will students demonstrate achievement of the desired learning? <b>editing process, conferencing, summative evaluation</b>
• What criteria will be used to determine whether students are learning? <b>peer feedback, student reflection</b>	• What criteria will be used to determine that students have learned? <b>conferencing process, summative assessment</b>
• What assessment strategies/tools will best gather evidence during learning? <b>conferencing, providing meaningful and descriptive feedback</b>	• What assessment strategies/tools will best gather evidence that students have learned? <b>specific expectation guidelines of the ISU process, summative final product of the ISU</b>
<p>• Will the assessment tasks provide opportunities for students to demonstrate the full range of their learning in a variety of ways?  <b>All categories of assessment for, of, and as learning are considered in this CLA. Students will engage in many forms of learning to fit these categories - Instructional strategies, student-teacher conferencing, peer conferencing and editing, and summative assessment.</b></p>	

Strategies/Tasks	Purpose [Assessment for, as, and of learning]
1. Proposal – Topic Selection and Preliminary Research	<b>Assessment FOR Learning</b> - Instructional strategies, provide descriptive feedback, student-teacher conferences, peer conferences
2. Creating Your Thesis and Outlining Essay Subtopics	<b>Assessment FOR and AS Learning</b> - Instructional strategies, provide descriptive feedback, student-teacher conferences, peer conferences, student to reflect on their initial research stages
3. Gathering and Reviewing Credible Research Sources	<b>Assessment OF Learning</b> - Summative stage of the ISU - To determine the student's level of achievement of the set expectations and to provide evidence to support professional judgment
4. Rough Copy of Argumentative Research Report	<b>Assessment AS Learning</b> - provide descriptive feedback, student-teacher conferences, peer conferences, student to reflect on how the editing process will enhance their final research report
5. Final Copy of Research Report	<b>Assessment OF Learning</b> - Summative stage of the final product of the ISU - To provide evidence to support professional judgment based on the requirements of the Independent Study Unit
6. Seminar Presentation	<b>Assessment OF Learning</b> - Summative stage of the final product of the ISU – To communicate results of the research in a creative and interesting format.

**Assessment tools**

Student-Teacher Conferencing Feedback

Peer Conferencing - editing

Rubrics

**Differentiation****Differentiation will be based on:**

Learner Profile

Interest

**Differentiation will take place through:**

Content

Product

## Additional Notes/Comments/Explanations

This CLA Is designed to follow the stages outlined - each stage being dependant on the previous one. The rationale for this is to chunk the work for the ISU to make it manageable for students to accomplish successfully.

It will be necessary for the teacher to provide instruction for various stages - i.e. thesis development, proper APA sourcing, argumentative essay writing process etc. This CLA provides some materials for Instruction to assist teachers. It may be necessary for the classroom teacher to add their own resources to the instruction provided to create a more comprehensive lesson on these expectations.

## Resources

Authentic workplace materials

Human resources

Teacher

Print resources

All handouts and attachments for each stage of the ISU

Video resources

Software

Microsoft Word, Internet

Websites

Credible Websites related to the student's research

APA formatting websites: <http://owl.english.purdue.edu/owl/resource/560/01/>

Other resources



## Accommodations

Individual Education Plans (IEP) should be followed at all times.

### Instructional Accommodations:

- Provide students with written instructions
- Provide Kurzweil-ready instructions for students with literacy challenges

### Assessment Accommodations:

- Allow students extra time to complete stages if required
- Chunk instruction and expectations

## List of Attachments

- 2 - ISU Introduction and Overview.docx
- 3 - ISU Topic List - Energy SHSM and General Topics.docx
- 4 - Stage 1 - Proposal.docx
- 5 - Stage 2 - Thesis Development and Essay Outline.docx
- 6 - Stage 3 - Gathering Credible Research Sources.docx
- 7 - Stage 4 - Research Report Rough Draft.docx
- 8 - Stage 5 - Final Copy of Research Report Rubric.docx
- 9 - Stage 6 - Seminar Presentation.docx