

Degree Level Expectations, Learning Outcomes, Indicators of Achievement and the Program Requirements that Support the Learning Outcomes

<b>Table 3. Mapping curriculum and degree level expectations (DLEs) (add rows as needed)</b>			
<b>DLE</b>	<b>Learning Outcomes</b>	<b>Relevant Courses, Academic Requirement</b>	<b>Indicators of Achievement</b>
<i>1. Depth and breadth of knowledge in the field of Sustainability</i>	This degree is awarded to students who demonstrate a thorough understanding of knowledge of sustainability, which will support the student’s future academic activities or professional practice with government, private or civil society sectors. This knowledge would include techniques, tools, perspectives, concepts, and/or theories from two or more disciplines and the ability to integrate this knowledge to advance the understanding of an environmental issue. Students will also demonstrate a critical awareness of the current issues in the area of sustainability.	ENSC 801 ENSC 802 1 Grad-level elective  Successful performance in both parts of the comprehensive exam, courses and finally PhD oral defense.  Successful feedback from seminar presentations and committee meetings.	Positive feedback from supervisor and advisory committee on progress.  Demonstrated depth of knowledge in sustainability as evidenced by a defensible well written thesis and ability to field questions related to environmental sustainability.

<p><i>2. Research and scholarship in Sustainability</i></p>	<p>This degree is awarded to students who are able to: conceptualize, design, and implement research for the generation of new knowledge, applications, or understanding of sustainability. The unique aspect of this program is that the thesis research must encompass two or more disciplines (i.e. toxicology and sociology; geography and philosophy; geology, biology and chemistry; planning and epidemiology). Students graduating from this program will recognize and appreciate the value of combining research in different disciplines to address problems related to environmental sustainability.</p>	<p>ENSC 801 ENSC 802 1 Grad-level elective Successful performance in the research proposal part of the comprehensive exam. Successful feedback from seminar presentations and thesis advisory meetings. Thesis research</p>	<p>It is expected that students will have the ability to conceptualize, design, and implement research for the generation of new knowledge, applications, or understanding at the forefront of the sustainability, and to adjust their research design or methodology in the light of unforeseen problems. It is expected that the dissertation research in sustainability will lead to original research, or other advanced scholarship, which merit publication. Positive feedback from supervisor and advisory committee on progress.</p> <p>Successful performance in comprehensive exam, courses and finally PhD oral defense.</p>
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<p><i>3. Application of knowledge and contribution to solutions to environmental challenges</i></p>	<p>This degree is awarded to students who make informed judgments on complex issues in the area of sustainability. This may include the application of knowledge, whereby graduates build on their science/social backgrounds and have incorporated methods from a variety of disciplines (politics, sociology, geography etc.) to ensure their results are meaningful to society and contribute to solutions to environmental challenges we face.</p>	<p>ENSC 801 ENSC 802 1 Grad-level elective Thesis research</p>	<p>Successful performance in courses and PhD oral defense.</p> <p>The ability to translate research findings for use by decision making in the form of white briefs and/or other types of publications.</p>
<p><i>4. Communication skills</i></p>	<p>This degree is awarded to students who demonstrate the ability to communicate their findings to experts in the area of sustainability via conference presentations and/or peer review publications.</p> <p>Traditional journals such as <i>Environmental Monitoring and Assessment</i>, and <i>Arctic</i> are accepting environmental studies research and new journals have emerged to service the needs of environmental studies researchers such as <i>Local Environment</i>, and <i>Society and Environment</i>.</p> <p>Less traditional work will include art, websites, blogs, video and other social media which examine the social aspects sustainability. For example, a previous SES MES student sculptured human hands and displayed them on Wolfe Island as an expression of the emotions involved in the sustainability issues surrounding the use of wind turbines for energy generation.</p>	<p>ENSC 801 ENSC 802 1 Grad-level elective Research Day presentations ENSC seminar presentation Thesis and oral defense</p>	<p>Positive feedback from supervisor and advisory committee on quality of presentations. Successful performance of oral PhD defense.</p> <p>The ability to communicate complex and/or ambiguous ideas, issues and conclusions clearly and effectively in public forums.</p>

<p><i>5. Autonomy and professional capacity</i></p>	<p>This degree is awarded to students who consistently demonstrate responsibility, integrity and intellectual independence.</p>	<p>ENSC 801 ENSC 802 1 Grad-level elective Thesis Research</p>	<p>Demonstration of ethical behavior consistent with academic integrity.</p>
<p><i>6. Appreciation of the limitations of their research in Sustainability</i></p>	<p>This degree is awarded to students who demonstrate the understanding of the limitations of their research methods, current literature and interpretation of results. This will occur through the student's understanding of the assumptions upon which their research is based and accepting that there are always different ways of understanding based on the perspectives we bring to research. A clear example of this issue involves research in Canada's north (an area of increasing interest among our faculty). Graduates will understand that their research, if based on western science, may be viewed by First Nation and aboriginal groups with skepticism, as these communities rely on a different knowledge system based on oral and traditional knowledge.</p>	<p>ENSC 801 ENSC 802 1 Grad-level elective Comprehensive examination Research Day presentations ENSC seminar presentation Thesis and oral defense</p>	<p>Reasoned response to questioning during presentations, comprehensive and PhD oral examinations that demonstrate a knowledge and understanding of research limitations and of the potential contributions of other interpretations, methods, and disciplines.</p>