



## COURSE OUTLINE: NRT235 - SUSTAIN RES MNGMNT

Prepared: Conor Mhelli

Approved: Sherri Smith, Chair, Natural Environment, Business, Design and Culinary

<b>Course Code: Title</b>	NRT235: SUSTAINABLE RESOURCE MANAGEMENT
<b>Program Number: Name</b>	5212: ADVENTURE RECREATION 5214: FISH/WILD CONSERVATN 5230: FORESTRY TECHNICIAN
<b>Department:</b>	NATURAL RESOURCES PRG
<b>Academic Year:</b>	2023-2024
<b>Course Description:</b>	The concept of sustainability guides resource management around the world. In this Program Embedded General Education Course students will discover the history of sustainable resource management and its similarities and differences from the concept of integrated resource management. With this starting point, weekly course topics will examine sustainability from the perspective of core contemporary issues: Climate change, biodiversity and extinction, pollution, and social justice. Material will examine current case studies in natural environment areas including old-growth forests, wetlands, protected areas, fish and wildlife management, mining and outdoor recreation. Classes will be delivered in the form of lectures, guest lectures, readings, small group discussions, and debates. Ultimately, students will gain an understanding of the impact of economic and social forces on the integrity of ecosystems and explore how concepts and practices of sustainability influence their lives.
<b>Total Credits:</b>	2
<b>Hours/Week:</b>	2
<b>Total Hours:</b>	28
<b>Prerequisites:</b>	There are no pre-requisites for this course.
<b>Corequisites:</b>	There are no co-requisites for this course.
<b>Substitutes:</b>	NET206, NRT220
<b>Vocational Learning Outcomes (VLO's) addressed in this course:</b>	<p><b>5212 - ADVENTURE RECREATION</b></p> <p>VLO 1 Demonstrate clear, concise and industry appropriate written, spoken and visual communication skills.</p> <p>VLO 7 Describe the scientific method and how it shapes our understanding of the ecology of the natural world.</p> <p>VLO 8 Demonstrate an understanding of sustainable development and apply the foundations in the natural environment.</p> <p>VLO 11 Analyze, evaluate and apply subjective and objective safety considerations for Adventure Recreation and Parks activities.</p> <p><b>5214 - FISH/WILD CONSERVATN</b></p> <p>VLO 1 Demonstrate clear, concise and industry appropriate written, spoken and visual communication skills</p>
<b>Please refer to program web page for a complete listing of program outcomes where applicable.</b>	



SAULT COLLEGE | 443 NORTHERN AVENUE | SAULT STE. MARIE, ON P6B 4J3, CANADA | 705-759-2554

VLO 3

VLO 6

VLO 7

VLO 8

VLO 11

**5230 - FORESTRY TECHNICIAN**

VLO 2

VLO 5

VLO 6

VLO 8

VLO 9

VLO 10

**Essential Employability Skills (EES) addressed in this course:**

EES 1

EES 2

EES 4

EES 5

EES 6

EES 7

EES 8

EES 9

EES 10

EES 11

**General Education Themes:**

- Demonstrate the ability to follow standardized protocols to collect field data on fish and wildlife populations in a variety of weather and site conditions.
- Understand the importance of managing fish and wildlife resources in Ontario and related federal, provincial and municipal legislation.
- Recognize the contributions and applications of various science disciplines in the understanding of natural environments.
- Demonstrate an understanding of sustainable development and apply these principles to the natural environment.
- Analyze, evaluate and apply subjective and objective safety considerations.

**5230 - FORESTRY TECHNICIAN**

- Assess soil characteristics, vegetation and wildlife habitats to identify their interactions within forest ecosystems.
- Contribute to sustainable forest management plans, including conservation and rehabilitation measures, taking into consideration the perspectives of a variety of stakeholders and the requirements of relevant legislation and regulations.
- Identify and analyze forest diseases, pests, invasive species and other disturbance events and implement mitigation strategies to maintain and improve forest ecosystems.
- Work independently and in a collaborative environment while applying effective teamwork, leadership and interpersonal skills.
- Communicate technical information to a variety of stakeholders in oral, written, visual and electronic forms.
- Develop strategies for ongoing professional development to enhance work performance in the forestry sector.

- Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.
- Respond to written, spoken, or visual messages in a manner that ensures effective communication.
- Apply a systematic approach to solve problems.
- Use a variety of thinking skills to anticipate and solve problems.
- Locate, select, organize, and document information using appropriate technology and information systems.
- Analyze, evaluate, and apply relevant information from a variety of sources.
- Show respect for the diverse opinions, values, belief systems, and contributions of others.
- Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.
- Manage the use of time and other resources to complete projects.
- Take responsibility for ones own actions, decisions, and consequences.

- Civic Life
- Social and Cultural Understanding

	Personal Understanding																
	Science and Technology																
<b>Course Evaluation:</b>	<p>Passing Grade: 50%, D</p> <p>A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.</p>																
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	Academic success is directly linked to attendance. Missing more than 1/3 of the course hours in a semester shall result in an F grade for the course.																
<b>Course Outcomes and Learning Objectives:</b>	<table border="1"> <thead> <tr> <th><b>Course Outcome 1</b></th> <th><b>Learning Objectives for Course Outcome 1</b></th> </tr> </thead> <tbody> <tr> <td>Understand the history of resource history in Canada and explain how the historical outlook of exploitation evolved to embrace the concept of sustainable resource management.</td> <td>           1.1 Distinguish between integrated resource management and sustainable resource management            1.2 Explain the pyramid structure of sustainability: environmental values, social values, economic values            1.3 Appreciate the impact of sustainability on society, from the perspective of social justice, environmental racism and settler colonialism         </td> </tr> <tr> <th><b>Course Outcome 2</b></th> <th><b>Learning Objectives for Course Outcome 2</b></th> </tr> <tr> <td>Define the concept of biological diversity and supporting elements of genetic and habitat diversity, and appreciate the role these elements play in ecosystem function.</td> <td>           2.1 Understand the threats to biodiversity, related to habitat loss due to human activities            2.2 Describe the extinction vortex, that is the conditions which lead to loss of biodiversity            2.3 Discuss the reasons why certain species are more prone to extinction than others            2.4 Appreciate the ways to mitigate extinction and support robust biodiversity         </td> </tr> <tr> <th><b>Course Outcome 3</b></th> <th><b>Learning Objectives for Course Outcome 3</b></th> </tr> <tr> <td>Develop an informed opinion on climate change and its impacts from the perspective of environmental, social and economic values.</td> <td>           3.1 Understand the role of the greenhouse effect and human industrial emissions in driving climate change            3.2 Define the concept of feedback cycles in magnifying rates of global warming            3.3 Appreciate the complexities of climate 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	areas and outdoor recreation, wetlands and ecosystem services, fisheries and wildlife management, non-renewable resource management; and reliable energy.	including fisheries, renewable energy and outdoor recreation 4.3 Appreciate the opportunities in engaging Indigenous communities to develop new protected areas to benefit from Traditional Ecological Knowledge while protecting biological diversity and promoting natural solutions to climate change 4.4 Discuss strategies to achieve compromises in difficult resource development decision-making processes, such as mining												
	<b>Course Outcome 5</b>	<b>Learning Objectives for Course Outcome 5</b>												
	Consider the importance engaging Indigenous communities in sustainable resource management.	5.1 Appreciate the differences between Western and Indigenous worldviews 5.2 Understand the legacy of colonization on Indigenous communities 5.3 Apply traditional Indigenous decision-making strategies in a group role play case study												
<b>Evaluation Process and Grading System:</b>	<table border="1"> <thead> <tr> <th>Evaluation Type</th> <th>Evaluation Weight</th> </tr> </thead> <tbody> <tr> <td>Final test</td> <td>20%</td> </tr> <tr> <td>Group discussion reflections</td> <td>20%</td> </tr> <tr> <td>Midterm test</td> <td>20%</td> </tr> <tr> <td>Opinion Essay</td> <td>20%</td> </tr> <tr> <td>Participation in Indigenous relations seminars</td> <td>20%</td> </tr> </tbody> </table>		Evaluation Type	Evaluation Weight	Final test	20%	Group discussion reflections	20%	Midterm test	20%	Opinion Essay	20%	Participation in Indigenous relations seminars	20%
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<b>Addendum:</b>	Please refer to the course outline addendum on the Learning Management System for further information.													