COURSE OUTLINE: NRT235 - SUSTAIN RES MNGMNT

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Approved: Bob Chapman - Dean

Course Code: Title	NRT235: SUSTAINABLE RESOURCE MANAGEMENT
Program Number: Name	5212: ADVENTURE RECREATION 5214: FISH/WILD CONSERVATN 5230: FORESTRY TECHNICIAN
Department:	NATURAL RESOURCES PRG
Academic Year:	2025-2026
Course Description:	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.
Total Credits:	2
Hours/Week:	2
Total Hours:	28
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Substitutes:	NET206, NRT220
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**5212 - ADVENTURE RECREATION** VLO 1 Demonstrate clear, concise and industry appropriate written, spoken and visual communication skills. VLO 7 Describe the scientific method and how it shapes our understanding of the ecology of the natural world. VLO 8 Demonstrate an understanding of sustainable development and apply the foundations in the natural environment. VLO 11 Analyze, evaluate and apply subjective and objective safety considerations for Adventure Recreation and Parks activities. **5214 - FISH/WILD CONSERVATN** VLO 1 Demonstrate clear, concise and industry appropriate written, spoken and visual communication skills

	VLO 3	Demonstrate the ability to follow standardized protocols to collect field data on fish and wildlife populations in a variety of weather and site conditions.
	VLO 6	Understand the importance of managing fish and wildlife resources in Ontario and related federal, provincial and municipal legislation.
	VLO 7	Recognize the contributions and applications of various science disciplines in the understanding of natural environments.
	VLO 8	Demonstrate an understanding of sustainable development and apply these principles to the natural environment.
	VLO 11	Analyze, evaluate and apply subjective and objective safety considerations.
	5230 - FORESTRY TECHNICIAN	
	VLO 2	Assess soil characteristics, vegetation and wildlife habitats to identify their interactions within forest ecosystems.
	VLO 5	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.
	VLO 6	Identify and analyze forest diseases, pests, invasive species and other disturbance events and implement mitigation strategies to maintain and improve forest ecosystems.
	VLO 8	Work independently and in a collaborative environment while applying effective teamwork, leadership and interpersonal skills.
	VLO 9	Communicate technical information to a variety of stakeholders in oral, written, visual and electronic forms.
	VLO 10	Develop strategies for ongoing professional development to enhance work performance in the forestry sector.
Essential Employability Skills (EES) addressed in this course:	EES 1	Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.
	EES 2	Respond to written, spoken, or visual messages in a manner that ensures effective communication.
	EES 4	Apply a systematic approach to solve problems.
	EES 5	Use a variety of thinking skills to anticipate and solve problems.
	EES 6	Locate, select, organize, and document information using appropriate technology and information systems.
	EES 7	Analyze, evaluate, and apply relevant information from a variety of sources.
	EES 8	Show respect for the diverse opinions, values, belief systems, and contributions of others.
	EES 9	Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.
	EES 10	Manage the use of time and other resources to complete projects.
	EES 11	Take responsibility for ones own actions, decisions, and consequences.
General Education Themes:	Civic Life Social and Cultural Understanding	

	Personal Understanding Science and Technology
Course Evaluation:	Passing Grade: 50%, D A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
Other Course Evaluation & Assessment Requirements:	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.

Course Outcomes and Learning Objectives:

Course Outcome 1	**Learning Objectives for Course Outcome 1**
1. 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.	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
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Define the concept of biological diversity and supporting elements of genetic and habitat diversity, and appreciate the role these elements play in ecosystem function.	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
Course Outcome 3	**Learning Objectives for Course Outcome 3**
3. Develop an informed opinion on climate change and its impacts from the perspective of environmental, social and economic values.	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 change from environmental, social and economic perspectives, and discuss strategies to respond 3.4 Differentiate between the concepts to mitigation and adaptations as responses to climate change
Course Outcome 4	**Learning Objectives for Course Outcome 4**
4. Develop an awareness of contemporary examples and issues in sustainable resource management, including forest management, protected	4.1 Define all of the values associated with forest resources, recreation and wetlands, including ecosystem services, recreation and cultural values, and develop strategies to maintain these attributes over time 4.2 Recognize and develop strategies to address the additional complexities of managing commercial species and resources,

	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
	Course Outcome 5	**Learning Objectives for Course Outcome 5**
	5. 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

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Final test	20%
Group discussion reflections	20%
Midterm test	20%
Opinion Essay	20%
Participation in Indigenous relations seminars	20%

Date: December 2, 2025

Addendum: Please refer to the course outline addendum on the Learning Management System for further information.