COURSE OUTLINE: ENV201 - CARBON MANAGEMENT

Prepared: Ngaire Roubal
Approved: Karen Hudson, Dean, Community Services and Interdisciplinary Studies

Course Code: Title	ENV201: CARBON MANAGEMENT
Program Number: Name	5250: CLIMATE CHANGE MIT. 5255: ENV. SUSTAINABILITY
Department:	NATURAL RESOURCES PRG
Academic Year:	2024-2025
Course Description:	Students will design and plan a basic inventory process, evaluate and apply quantification methods for the purpose of compiling a Greenhouse Gas inventory, and use basic math skills and knowledge perform emissions calculations. A general knowledge of GHG accounting and reporting fundamentals will be developed.
Total Credits:	3
Hours/Week:	3
Total Hours:	42
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**5250 - CLIMATE CHANGE MIT.** VLO 1 Design and implement resource surveys and sampling programs, including statistical analysis of environmental data to support climate change analysis. VLO 2 Interpret and apply international, national and regional level environmental and climate policy to support mitigation and adaptation strategies. VLO 5 Assess potential environmental threats to human health and natural systems due to climate change and propose adaptive strategies to address them. VLO 6 Apply an integrated ecosystem management approach to climate change to balance mitigation, intervention and adaptation strategies. VLO 8 Facilitate stakeholder engagement and collaboration, across various levels and branches of government and the community to secure support for various initiatives. VLO 9 Evaluate and apply quantification methods for the purpose of compiling a Greenhouse Gas inventory. **5255 - ENV. SUSTAINABILITY** VLO 1 Develop scientific reports to communicate data, analysis and conclusions to community stake holders. VLO 2 Design sampling and analysis of environmental data to implement resource surveys. VLO 3 Implement environmental audit standards, including the Environmental Assessment (EA) process to meet legal requirements across municipal, provincial and federal jurisdictions. VLO 4 Examine field samples using air, water and soil quality testing equipment to evaluate

		environmental conditions.
	VLO 5	Apply appropriate air and water pollution testing and abatement processes and technologies according to different segments of industrial and/or residential sectors.
	VLO 6	Interpret the effects of various environmental and climate impacts on plant, animal and human health.
	VLO 8	Apply principles of project management and leadership to complete projects on time and within scope.
	VLO 9	Develop and implement an interdisciplinary perspective to evaluate goals, objectives, and strategies for approaching environmental problems.
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 3	Execute mathematical operations accurately.
	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.
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. Demonstrate an understanding of climate change science and the concept of climate change mitigation.	1.1 Describe climate change and links to the global carbon cycle. 1.2 Discuss components of climate change mitigation.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Demonstrate an understanding of international and national GHG programs and	2.1 Outline international and national policy frameworks/protocols. 2.2 Understand processes and protocols applied to GHG accounting and reporting

	protocols.	2.3 List accounting and reporting requirements. 2.4 Identify advanced technologies used for carbon monitoring and accounting.
	Course Outcome 3	**Learning Objectives for Course Outcome 3**
	3. Understand the procedures for carbon measurement and reporting.	3.1 Understand the role of carbon trading and carbon markets. 3.2 Understand how 3rd party verification works. 3.3 Examine standards that describe processes and requirements for assessing the GHG emissions of organizations, projects and products.
	Course Outcome 4	**Learning Objectives for Course Outcome 4**
	4. Design and plan a basic inventory process.	4.1 Evaluate and apply quantification methods for the purpose of compiling a Greenhouse Gas inventory. 4.2 Identify GHG risks and reduction opportunities. 4.3 Use basic math skills and knowledge to perform emissions calculations. 4.4 Outline the components of a GHG report and how to track emissions overtime. 4.5 Collect and analyze forest carbon plot data.
	Course Outcome 5	**Learning Objectives for Course Outcome 5**
	5. Understand the environmental and social co-benefits of carbon management.	5.1 Outline how institutions influence land management, decision-making and livelihoods. 5.2 Discuss how policy can improve carbon management quality and effectiveness related to human dimensions. 5.3 Identify beneficiaries in carbon management and understand the value of monitoring societal impacts.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments	80%
Tests/Quizzes	20%

Date: July 15, 2024

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