
Course Outline

ENVS 020: Applied Carbon Management Economics & Policy

Hours: 50 hours

Delivery Mode: Online Asynchronous

Description

This applied, practitioner-focused course provides non-specialist professionals with the skills to evaluate carbon management project viability in the Canadian context. Through case studies, interactive tools, scenario-based exercises, and simplified quantitative assessments, you will learn how policy, regulation, carbon markets, incentives, and emissions data shape the economic feasibility of carbon management pathways. By the end of the course, you should be able to build and communicate simplified business cases grounded in real-world policy and market conditions.

Learning Outcomes

Upon completion of this course, you will be able to:

- Explain the foundational concepts that define carbon management systems and their purpose.

- Evaluate how Canadian federal and provincial climate policies shape carbon management project viability.

- Identify how regulatory and compliance requirements create costs and revenue opportunities in carbon management projects.

- Quantify emission reduction value and credit-generation potential using various carbon market standards.

- Determine incentive eligibility and stacking potential for carbon management projects across Canada

- Develop a simplified business case to assess and communicate the viability of a carbon management project.

Course Materials

The required learning materials for this course are provided in class or on the course website.

Required Equipment and Supplies

Students are responsible for providing their own computer for this fully online asynchronous course.

Required Technology and Software

Ensure that your computer meets [SAIT's Minimum Technical Requirements](#) to access materials in Brightspace and for online learning success.

Assessments

Students who earn a D (50%) or higher will pass this course.

NOTE: This course qualifies for a SAITMicro badge. Please visit our [SAITMicro](#) page to learn more.

Students who wish to earn a micro-credential and digital SAITMicro badge for this course must achieve a minimum grade of Letter A- (80%) or higher.

Assessments	Value
Assignment: 1 Carbon Management Systems, Policy & Regulatory Analysis	35%
Assignment: 2 Carbon Project Quantification, Business Case, and Feasibility	40%
Unit exercises – discussions and reflections	25%
Total:	100%

Unit 1: Fundamentals of Carbon Management & Project Viability

Outcome:

Explain the foundational concepts that define carbon management systems and their purpose.

Objectives:

- Identify and categorize major carbon management pathways (capture, utilization, storage, and removal).
- Describe the drivers of carbon management projects (policy, cost, markets, regulations, standards, strategy).
- Identify the carbon intensity of selected products and their key activities using simplified datasets.
- Summarize the stages of a carbon management project and their typical decision points.

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- Identify where carbon management is suitable for various sectors.

Unit 2: Canadian Climate Policy and Its Impact on Project Economics

Outcome:

Evaluate how Canadian federal and provincial climate policies shape carbon management project viability.

Objectives:

- Identify key federal and Alberta climate policies relevant to carbon management.
- Explain how carbon pricing, regulations, and compliance obligations influence project value.
- Interpret policy targets, timelines, and compliance requirements for carbon management.
- Compare policy impacts under multiple policy-change scenarios.
- Assess the implications of a policy change on project attractiveness using a structured worksheet.

Unit 3: Regulatory Frameworks for Capture, Transport & Storage

Outcome:

Identify how regulatory and compliance requirements create costs and revenue opportunities in carbon management projects.

Objectives:

- Describe Carbon Storage Frameworks (Capture, Transport, Storage, Monitoring)
- Identify the costs and opportunities for industry related to emission reductions (i.e. TIER, CFR, CER, etc.) in both short and long-term.
- Identify quantification protocols, international standards and their components
- Identify the main compliance activities over the course of a project using simplified guidance summaries

Unit 4: Carbon Markets & Credit Generation (Compliance and Voluntary)

Outcome:

Quantify emission reduction value and credit-generation potential using various carbon market standards.

Objectives:

- Differentiate between compliance and voluntary carbon market structures.
- Calculate potential emission reductions using simplified formulas and datasets.
- Determine the credit-generation opportunity for sample projects.
- Identify critical aspects of quantification protocols to project viability.

Unit 5: Funding & Incentives (Canada and Alberta)

Outcome:

Determine incentive eligibility and stacking potential for carbon management projects across Canada

Objectives:

- Compare global incentive frameworks.
- Identify eligibility for major incentives.
- Examine how the CCUS ITC works
- Identify the role of incentives in project decisions.

Unit 6: Business Case Development for Carbon Management Projects

Outcome:

Develop a simplified business case to assess and communicate the viability of a carbon management project.

Objectives:

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- Identify the key economic and policy factors that influence the viability of a carbon management project, including costs, carbon-credit revenue, incentives, and major assumptions.
 - Apply simplified financial analysis tools to estimate project performance using measures such as basic cash flow and breakeven carbon price.
 - Interpret simplified economic results to determine the strengths, limitations, and viability of a carbon management project.
 - Compare carbon management project options by evaluating economic performance, assumptions, and key trade-offs.
 - Justify a project recommendation using evidence from a simplified business case and identify factors that could improve project viability.

Contact Information:

For more information about this course or others, please contact:

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