Sustainability in Energy®
Micro-Credential
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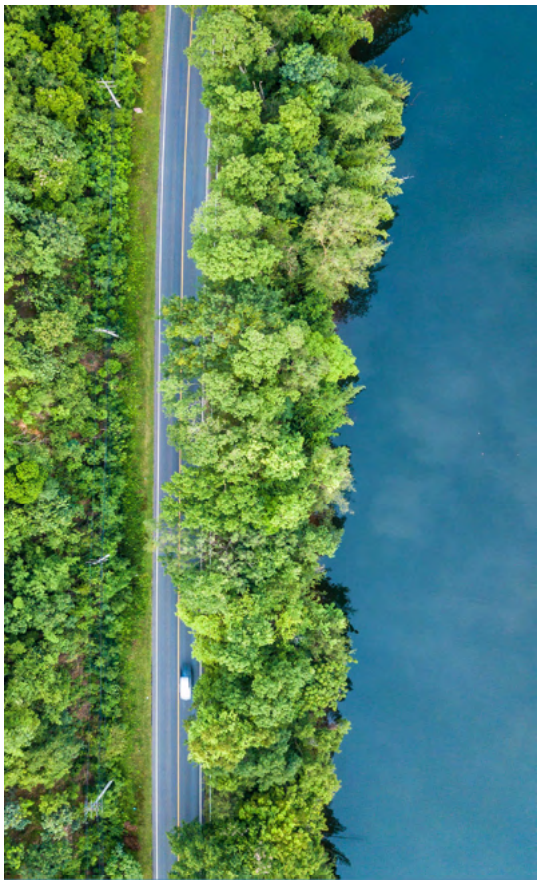
Sustainability in Energy®
Micro-Credential Syllabus

Micro-credential curriculum



The curriculum will address key sustainability and ESG knowledge challenges faced by learners. It is based on extensive industry and stakeholder guidance.

Curriculum (4 focus areas / 12 courses)

I. Sustainability and ESG in the Energy Industry

1. ESG & Sustainability in Energy
2. Measuring ESG Performance
3. ESG Reporting Fundamentals
4. Regulatory Trends and Environmental Legislation in Canada

II. Environment

1. Climate Change Risks & Opportunities
2. Emissions Sources & Measurement
3. Emissions Reduction & Transformational Technologies
4. Water Management
5. Land & Air Quality Management

III. Social

1. Social Practices
2. Indigenous Rights Holders in Canada

IV. Governance

1. Governance Practices

Total time commitment:

- Approximately 50 hours

Format:

- Self-paced e-learning

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Curriculum details

Topic	Course	Learning Objectives
I. Sustainability and ESG overview	ESG & Sustainability in Energy	• Examine energy system challenges and opportunities that arise related to the energy trilemma (sustainability/affordability/security). • Understand and compare the key concepts of sustainability and Environmental/Social/Governance (ESG) impacts. • Identify trends shaping energy system development in Canada. • Explore the role of professionals in a rapidly evolving industry and identify skills that are helpful to stay current in the energy industry.
	Measuring ESG Performance	• Identify various categories of mandatory disclosures and regulatory requirements at the provincial and federal levels • Recognize various global voluntary ESG standards and frameworks. Understand the process of disclosure selection using materiality assessment tools. • Relate comprehensive ESG measurements to improved ESG performance, increased investor confidence, and reduced regulatory risk. • Observe the application and use of data analytics tools, process, dashboards and visualizations.
	ESG Reporting Fundamentals	• Identify and define various stakeholder and rightsholders groups. Recognize varying needs for communication with different groups. • Understand ESG reporting communication classifications (e.g., topic specific, audience specific) and how these translate to fit-for-purpose communication methods (e.g., data sheets, website, dashboards, reports, public meetings, etc.). • Compare and understand defining features of common ESG standards (GRI, SASB, CDP, TCFD, UNSDG). • Recognize key considerations for building a comprehensive sustainability and ESG narrative, including accuracy, balance, comparability, and credibility.
	Regulatory Trends and Environmental Legislation in Canada	• Examine the differing roles of the Executive and Legislative branches of government as it relates to energy law. • Describe the role of the regulator at the federal and provincial level. Explain how government departments and regulators interact. • Differentiate between legislation and regulation as it relates to enacting energy law. • Explore various policy instruments and regulatory approaches (e.g., carrots and sticks) as they relate to notable energy issues.

Curriculum details - continued

Topic	Course	Learning Objectives
II. Environment	Climate Change Risks & Opportunities	• Identify the limiting factors shaping energy production and building energy systems. • Examine climate change global effects, effects on industry, and effects on Canada. • Categorize and describe climate change risks like physical and transition risks. Relate these risks to challenges for the oil and gas sector. • Discuss climate change opportunities in the categories of technological, economic, and social opportunities.
	Emissions Sources & Measurement	• Describe the effects and global warming potential of common greenhouse gases (GHGs). Distinguish between global effects of GHG emissions and localized effects of air pollution. • Understand the GHG emissions profile of the energy industry and examine emissions reporting requirements in Canada. • Identify the common standards for measuring GHG emissions and differentiate between direct and indirect GHG emissions (Scope 1, 2, 3 emissions).
	Emissions Reduction & Transformational Technologies	• Relate scenario projections and feasibility studies to recommended roadmaps to net zero emissions. • Discuss emissions reduction 'low hanging fruit' technologies, including addressing fugitive emissions, process optimization, and fuel switching. • Discuss emissions elimination technologies, including electrification of energy, carbon capture, and low-carbon fuels. • Explore potential non-combustion uses for hydrocarbons

Curriculum details – continued

Topic	Course	Learning Objectives
II. Environment	Water Management	• Describe the critical linkage between water, climate, and climate change. Recognize key challenges resulting from water scarcity. • Define common water management measurements, including water withdrawals, consumption, and intensity. • Explore approaches to managing oil and gas sector water use. Understand industry sub-sector water demands and management strategies. • Recognize key approaches to water management and water-use reduction, including conservation, water recycling, water alternatives, and safe disposal of produced water. • Identify important water governance legislation and regulations. Discuss the concept of cumulative water management.
	Land & Air Quality Management	• Identify key land and air quality management concerns for the energy sector, including land disturbance, tracking biodiversity, hydrocarbon spill prevention, and asset retirement. • Recognize best practice land and air quality management metrics, including area of land disturbance, biodiversity indicator species health, and volumes of hydrocarbon spills and recoveries. • Understand available options for land and air quality management approaches available, including project life cycle and cumulative effects land use planning, and planned management of retired assets. • Summarize the federal and provincial coverage of policies and agencies providing land and air quality regulation.

Curriculum details – continued

Topic	Course	Learning Objectives
III. Social	Social Practices	• Identify key factors that have advanced the safety culture of the Canadian Energy Industry, including guidelines prepared by industry-wide associations, management system audits, and occupational health & safety legislation. • Relate diversity, equity and inclusion (DEI) to building organizational resilience and innovation. Examine the accompanying disadvantages of potential organizational discord and social complexity. • Examine areas of social impact internal and external to energy companies, including employee development, diversity hiring practices, community engagement, social investment, and job creation.
	Indigenous Rights Holders in Canada	• Define and describe four sources of Indigenous rights: inherent rights, constitutional rights, treaty rights, and international rights • Recognize key elements of Numbered Treaties, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and the concept of Free, Prior, and Informed Consent (FPIC) • Describe the findings of the Truth and Reconciliation Commission of Canada (TRC) and accompanying 94 Calls to Action • Understand the importance of both formal and informal systems of consultation and engagement as well as the legal obligations involved in duty to consult • Examine through examples how industry is involved in economic reconciliation with Indigenous communities and define key business concepts, including impact benefits agreements, capacity building, Indigenous procurement, and equity partnerships
IV. Governance	Governance Practices	• Define the role and function of corporate governance, with emphasis on best practices for strong governance. • Recognize the link between governance systems and organizational oversight. Identify common governance disclosures required by securities regulations. • Describe how risk assessment leads to an expanding definition of materiality. Recognize how shareholder and stakeholder primacy both play a role in organizational decision making. • Identify common guiding principles of responsible business conduct and the organizations involved in providing thought leadership on this topic.

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