

# Cape Breton University

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## Overview

Cape Breton University is a small comprehensive University, in Nova Scotia, with a tremendous amount of research activity. They are home to a diverse collection of research institutes and centres as well as an industry liaison officer to assist researchers in exploring opportunities for early and mature research through industrial collaborations.

## Research Capabilities

### Mine Water Remediation & Management

- Mine water discharge remediation
- Natural, passive discharge of flooded mines
- Reduction of maintenance requirements

### Remediation Technology

- Toxicity assessment of organisms in contaminated waters
- Aquatic system contaminant risks to exposed organisms
- Ecosystem risks of acid mine water

### Marine Ecosystems

- Ecological and economical sustainability of marine resources
- Emerging fishery options
- Ethical seal harvest techniques
- Floor mapping
- Estimates of ecosystem goods and services

### Clean Energy from Coal

- Underground Coal Gasification (UCG)
- Coal Bed Methane (CBM)
- UCG and CBM Environmental Integrity
- Product development, including:
  - Clean Electricity
  - Clean Transportation Fuels
  - Hydrogen & Fortified Natural Gas
  - Methanol & derivatives
  - Synthetic Natural Gas (SNG)

## Renewable Energy

- Geothermal Energy
- Mine Water Geothermal
- Ground & waste water source geothermal
- Deep Geothermal Systems
- Biomass
- Willow energy crops
- Energy from waste
- Pellets, Torrefaction, & electricity co-generation
- Self-sufficient integrated systems, including wind & solar

## Molecular Spectroscopy

- How intermolecular forces affect physical and molecular properties
  - Vibrational Spectroscopy and quantum mechanical calculations
- Intermolecular interactions in Benzene
- Pseudo-hydrogen bond

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## Intangible Cultural Heritage

- Digitalization lab
- Ethnographic and performance research
- Ethnomusicology, folklore and intangible cultural heritage
- Endangered traditions
- Media tools and policies for safe-guarding a rich cultural heritage
- Natural history and biodiversity (herbarium)

## Religion & Society

- Religious attitudes, values and beliefs
- Values and insights (of Judaism, Christianity and Islam) applied to contemporary society problems

## Social Justice

- Child Rights and resilience
- Child Rights, respect and responsibility
- Kids health and family quality of life
- Violence against children
- Adolescents and Drug use
- Community Liaison Officer Program

## Aboriginal Business Studies

- Aboriginal tourism
- What “drives” success in Aboriginal Business
- National student recruitment in areas of post-secondary aboriginal business education
- Enhancement of post-secondary business curriculum
- Mentorship at the high school and post-secondary levels
- Membertou model for economic development
- The Unama’ki economic partnership model
- Best practices in Aboriginal economic development

## Integrated Sciences & Health

- “Two-Eyed Seeing” (Integrating Indigenous & Western world views)

## Psycholinguistics

- The relationship between syntax and phonology
- Sentence comprehension in children
- Phonology during sentence comprehension

## Contact

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