



# Earth Sciences at the University of Windsor

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<http://www.uwindsor.ca/earth>

# Earth Sciences is:

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- Geology
- Physical Geography
- The Environment

# Our Degree Programs

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- B.Sc. Geology\*
- B.Sc. Environmental Geoscience\*
- B.Sc. Physical Geography
- B.Sc. Geoinformatics (with Computer Science)
- B.Sc. Environmental Science (with Biology)
  
- B.E.S. Environmental Studies

\* includes a co-op option

# Graduate Studies & Research

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- M.Sc. in Earth Sciences
- Ph.D. in Earth Sciences
  - our program in September 2003 (anticipated)
  - currently through co-operation with other units and universities
- Main areas:
  - Geochemistry
  - Environmental Geoscience (including Geoinformatics)
  - Mineral Deposits
  - Sedimentary and Petroleum Geology

# Why U of Windsor for Earth Sciences?

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- Wide array of undergraduate program choices
- New programs in geoinformatics, environmental geoscience, and environmental studies
- Excellent blend of geology and physical geography faculty and staff
- State-of-the-art teaching and research facilities
- Small class sizes - lots of interaction

# Why U of Windsor for Earth Sciences?

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- Blend learning, research, and career development
- Research projects from the local to the global (Detroit River cleanup to the Australian outback).
- Professional licensure of geoscientists in Ontario - bill just passed.
- Earth Sciences now in high schools - teachers needed!

# The Geoscience Programs

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- Geology and Environmental Geoscience
- Year 1
  - Introductory geoscience
  - Foundation science (e.g. chemistry, math)
- Year 2
  - Core geoscience
  - Continuing foundation science
- Years 3 and 4
  - Advanced and applied geoscience
  - Geology: solid Earth courses
  - Environmental Geoscience: environmental courses

# Careers from Geoscience Degrees

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- Resource Industries
  - Mineral Exploration and Development
  - Oil and Gas Exploration and Development
  - Environmental Monitoring and Remediation
- Environmental & Engineering Consulting
- Government Agencies
  - Geological Survey of Canada
  - Provincial Surveys (e.g. Ontario Geological Survey)
  - Environment Canada
- Teaching
- Opportunities overseas

# Professional Registration of Geoscientists

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- In place in many provinces
- Required in Ontario starting 2001
- requires a 4 year Earth Science B.Sc. Degree
- Specified course requirements
- Must be registered to practice as a professional geoscientist

# Physical Geography

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- Year 1
  - Intro. geomorphology and climatology
  - two core subject areas from biology, chemistry, geology, math and physics
- Senior years
  - course depend on area of specialization
  - e.g. biogeography, geomorphology, climatology

# Careers from Physical Geography Degree

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- Largely designed for those intending to continue at the graduate level
- training for jobs in areas such as:
  - GIS and remote sensing
  - Environment Canada (for climatologists)
  - teaching
  - environmental field

# Geoinformatics

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- Unique in Canada!
- Core Earth Science and Computer Science
- Foundation Math & one other science
- Cartography, GIS, Remote Sensing
- Advanced Earth Science & Computer Science

# Careers from Geoinformatics degree

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- Spatial Data Management
- GIS Application Development
- Spatial Decision Support Systems
- Consulting: Applications & Analysis
- Resource Exploration & Assessment

# Environmental Studies

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- Year 1
  - geomorphology, climatology, biology, geology
- Senior Years
  - advanced geography, science
  - planning, law, policy
  - lots of flexibility

# Careers from Environmental Studies Degree

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- National and Provincial Parks management
- Regional conservation authorities
- Overseas development
- Private environmental industries
- Resource management using remote sensing and GIS (forestry, oceanography etc),
- Environmental law

# Environmental Science

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- Foundation Earth Science (incl. Geography), Biology, Chemistry, Math
- Required advanced environmental Earth Science and Biology
- Options: core and other areas