

EARTH SYSTEM SCIENCE (ESYS)

Website: mcgill.ca/earthsystemscience

About Earth System Science

The McGill interdepartmental **Major** program in Earth System Science (ESYS) is designed to equip students with the skills and knowledge to address six “Grand Challenges” that are fundamental to our understanding of the way in which the Earth operates. These Grand Challenges are being tackled with scientific and technological innovation and interdisciplinary research, creating bountiful employment opportunities for ESYS graduates in industry, research institutions, and government. They are:

- Global biogeochemical cycles;
- Climate variability and change;
- Land use and land cover change;
- Energy and resources;
- Earth hazards: volcanoes, earthquakes, and hurricanes; and
- Earth-atmosphere observation, analysis, and prediction.

Many of our graduates go on to M.Sc. or Ph.D. programs in a variety of scientific fields that address these grand challenges, including those arising from the interaction of human activities and natural systems.

Career opportunities after a B.Sc. are diverse and increasing. Our graduates work for environmental consulting firms (assessing suitable sites for new industrial facilities and predicting their environmental impact, and cleaning contaminated sites), research groups in re-insurance firms (evaluating risks of natural disasters), in product life cycle management (studying energy and resources use, and the effect of recycling or waste disposal), and software companies that develop algorithms to assist farmers on choices of crops and soil management practices, and business owners with inventory management.

The **Honours** program in Earth System Science (ESYS) prepares students for graduate studies in a wide range of transdisciplinary programs that address these challenges.

The ESS programs are offered jointly by the Department of Atmospheric and Oceanic Sciences (ATOC), the Department of Earth and Planetary Sciences (EPSC), and the Department of Geography (GEOG).

The individual departments, their disciplines, and specific courses offered by them are described in their respective entries in this publication.

Available Programs

- Earth System Science Honours (B.Sc.) (66 credits)
- Earth System Science Major (B.Sc.) (57 credits)
- Earth System Science Minor (B.Sc.) (18 credits)

Location

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