FACULTY OF SCIENCE

CERTIFICATE IN GEOGRAPHIC INFORMATION SCIENCE

GIVE *YOUR* DEGREE AN EDGE

The Certificate in Geographic Information Science will give your degree a competitive edge in today's market place.

DALHOUSIE UNIVERSITY

dal.ca/science/gis

Geographic Information Science

The **GIS CERTIFICATE PROGRAM** provides training and experience in geographic information science as part of an undergraduate degree program, usually in Earth Sciences, Environmental Science or Biology, and prepares students for further study or employment in the area. The Certificate requires the completion of GIS-related courses and completion of a major project that involves work with geographic information systems. Students enrol in the GIS Certificate by contacting the Certificate Coordinator. Students may enrol in their second, third or fourth year of study, but early enrolment is advised.

CERTIFICATE REQUIREMENTS:

1. **A minimum grade of B- in each of the following courses:**

- ENVS/ERTH/GEOG 3500.03: Geoscience Information Management
- ERTH/GEOG 4520.03: GIS Applications to Environmental and Geological Science

2. **A minimum grade of B- in a minimum of two of the following courses:**

- GEOG 2000.03: Cartography
- GEOG 2006.03: Space, Place and GIS
- BIOL/ENVS/GEOG 3633.03: Spatial Information and GIS in Ecology
- ERTH/GEOG 4530.03: Environmental Remote Sensing
- ENVS 2100.03: Environmental Informatics
- ENVS/GEOG 3400.03: Environment and Human Health

3. **Completion of a research project with an emphasis in geographic information science via one of the following sets of courses (minimum grade of B-). Research topics must be pre-approved by the Certificate Coordinator**

SET 1

- BIOL/MARI 4900.06 or 4901.03/4902.03: Honours Thesis
- ENVS 4901.03/4902.03: Honours Thesis
- ERTH 4100.06: Research Project
- ERTH 4200.06: Honours Thesis
- SUST 4900.06: Honours Thesis

SET 2

- SCIE/BIOL/ERTH/ENVS/GEOG 4850: Geographic Information Science Research Project

RESEARCH PROJECT GUIDELINES FOR THE CERTIFICATE IN GEOGRAPHIC INFORMATION SCIENCE

Students will learn how to design, manage and complete a research project that emphasizes the use of a geographic information system (GIS). Students will identify a suitable research problem and work to solve it through acquiring, organizing, analyzing and presenting data using GIS. A substantive analytical component involving GIS must be included. Projects should be undertaken after all or most of the coursework is completed, i.e., students should already be familiar with GIS concepts and functions, and be proficient in the use of at least one GIS package. Supervision and evaluation of research projects must include input from a professor or GIS technician competent in geographic information science, methods and technologies.

Students enrolled in an undergraduate program other than Biology, Earth Sciences, Environmental Science, or the College of Sustainability, may be able to complete the project through a directed readings or honours thesis course listed within their home department. The project must be pre-approved by a Certificate Coordinator. Non-thesis students, or honours students who wish to complete the certificate through a project that is not part of their thesis, who are in Biology, Earth Sciences or Environmental Science should complete the project through SCIE 4850: Geographic Information Science Research Project.

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