

# Environmental Science (ENSC)

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## Environmental Science (ENSC) Courses

### Institute of Environ Science

#### Faculty of Science

#### ENSC 1500 [0.5 credit]

##### Environmental Science Seminar

The purpose and nature of the program; society's view on the natural and human-modified environment; major environmental issues and their scientific aspects; preparation and presentation of paper and seminars. Prerequisite(s): enrolment in the Environmental Science program.

Lectures, seminars and workshops four hours a week.

#### ENSC 2000 [0.5 credit]

##### Environmental Science Field Camp

A ten-day field course taken before classes begin in the fall, including exercises from geological, hydro geological, chemical, biological, and geographic aspects of environmental science. A supplementary field camp fee may apply.

Prerequisite(s): EARTH 1006 and BIOL 1004 or BIOL 1104, CHEM 1001 and CHEM 1002 and permission of the Institute.

#### ENSC 2001 [0.5 credit]

##### Earth Resources and Natural Hazards: Environmental Impacts

Environmental impact of mineral, energy and water resource exploitation and impact of hazardous Earth processes such as volcanic eruptions, earthquakes and others: their prediction and mitigation.

Lectures three hours per week.

#### ENSC 2002 [0.5 credit]

##### Methods and Analysis in Environmental Science

Study and application of qualitative and quantitative techniques in environmental science, including data collection and assembly, database manipulation, data analysis, and strategy development. Example case studies focus on multidisciplinary environmental problems involving techniques, such as, life cycle analysis, environmental impact analysis and carbon footprint analysis.

Prerequisite(s): completion of ENSC 2000 and permission of the institute.

Lectures and seminars three hours a week.

#### ENSC 3000 [0.5 credit]

##### Environmental Science and Management: Theory and Practice

Theoretical and practical perspectives related to environmental science and management; Emphasis on real-world problems associated with human activities and development of solutions in natural and built environments; Hands-on experience with environmental monitoring and restoration. A supplementary fee will apply. Prerequisite(s): third-year standing in Environmental Science or permission of the Institute.

Field trips, lectures and workshops, 7 hours per week (delivered on a single day).

#### ENSC 3001 [0.5 credit]

##### Professional Practice in Environmental Science

Study of professional activities and the documentation of proposals, planning, accreditation and research; issues of health and safety, professional ethics and codes of certification; review of practicum, internship and co-op work terms, and the professional application of Environmental Science; Guest lectures and visits.

Prerequisite(s): third-year standing in Environmental Science or permission of the Institute.

Lectures, seminars and workshops three hours a week.

#### ENSC 3509 [0.5 credit]

##### Group Research Project

Major project relating to an issue involving environmental science; effective methods of team research and presentation of group work.

Prerequisite(s): third-year standing in the Environmental Science program or permission of the Institute.

Lectures, seminars and workshops three hours a week.

#### ENSC 3700 [0.5 credit]

##### Topics in Environmental Science

Specific topics of current interest. Topics may vary from year to year.

Prerequisite(s): Third year standing in the Environmental Science program or permission of the Institute.

#### ENSC 3906 [0.5 credit]

##### Research Techniques and Project Planning

Assists students in preparing a research plan and proposal for their fourth year Honours project; discussion and workshop experience in the fundamentals of scientific investigation, including use of literature, theory and data, preparation and evaluation of a scientific research proposal.

Prerequisite(s): ENSC 3509 and good standing in third year Environmental Science with a minimum CGPA of 6.0 or permission of the Program Director.

Discussion groups and workshops three hours a week.

**ENSC 3999 [0.0 credit]****Co-operative Work Term**

Practical experience for students enrolled in the Co-operative Option. To receive course credit a student must receive satisfactory evaluations from their work term employer. Written reports describing the work term project will be required. Graded Sat or Uns.

Prerequisite(s): registration in the Environmental Science Co-operative Option and permission of the Institute. Four-month work term.

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**ENSC 4001 [0.5 credit]****Environmental Science Practicum**

Experience in an external agency setting, translating the academic dimension into practical involvement with environmental issues. Requires a final report integrating the placement experience with the student's background knowledge. Graded Sat/Uns.

Prerequisite(s): fourth-year standing in the Environmental Science program.

**ENSC 4700 [0.5 credit]****Topics in Environmental Science**

Prerequisite: third-year standing in the Environmental Science program or permission of the Institute.

Lectures and discussion three hours a week.

**ENSC 4901 [0.5 credit]****Directed Projects**

Independent or group study, for fourth-year major students to explore a particular project, in consultation with a Faculty supervisor. May include directed reading, written assignments, tutorials, laboratory or field work.

Prerequisite(s): permission of the Institute. Students normally may not offer more than 1.0 credit of Directed Special Studies in their program.

**ENSC 4906 [1.0 credit]****Honours Research Project**

An independent investigation into an aspect of environmental science supervised by a member of the faculty. Approval of the topic and the research schedule must be obtained from the project supervisor and the course coordinator before the last date for late registration.

Prerequisite(s): fourth-year standing in the Honours Environmental Science program and permission of the Institute.

**Summer session:** some of the courses listed in this Calendar are offered during the summer. Hours and scheduling for summer session courses will differ significantly from those reported in the fall/winter Calendar. To determine the scheduling and hours for summer session classes, consult the class schedule at [central.carleton.ca](http://central.carleton.ca)

Not all courses listed are offered in a given year. For an up-to-date statement of course offerings for the current session and to determine the term of offering, consult the class schedule at [central.carleton.ca](http://central.carleton.ca)