

ENVIRONMENT AND RESOURCE MANAGEMENT CO-OP (ERM:C)

Department of Geography, Environment and Geomatics, College of Social and Applied Human Sciences

The major focuses on environmental interactions and problem solving by developing an integrated biophysical environment - human environment perspective. In ERM, students will gain knowledge across the natural sciences, an understanding of how they interact, the skills (tools and techniques) needed to support decision making, as well as the methods of management and governance that are critical for environmental decision making. Beginning in first year students learn in the classroom and through hands-on work in labs and in the field. Students are expected to design and conduct experiments and problem solve using state-of-the-art computing and analytical tools. This major provides the knowledge, skills and methods an environmental scientist requires as environmental consultant, environmental manager, environmental and/or resource planner, geographic information systems analyst or to facilitate future graduate work.

Program Requirements

The Co-op program in Environment and Resource Management is a four and a half year program including four work terms. Students must complete a Fall, Winter and Summer work term, and must follow the academic work schedule as outlined below (also found on the Co-operative Education website: <https://www.recrutguelfh.ca/cecs/>). Please refer to the Co-operative Education program policy with respect to adjusting this schedule.

Environment and Resource Management Academic and Co-op Work Term Schedule

Year	Fall	Winter	Summer
1	Academic Semester 1	Academic Semester 2; COOP*1100	Off
2	Academic Semester 3	COOP*1000 Work Term I	Academic Semester 4
3	COOP*2000 Work Term II	Academic Semester 5	COOP*3000 Work Term III
4	Academic Semester 6	Academic Semester 7	COOP*4000 Work Term IV
5	Academic Semester 8	N/A	N/A

To be eligible to continue in the Co-op program, students must meet a minimum 70% cumulative average requirement after second semester, as well as meet all work term requirements. Please refer to the Co-operative Education program policy with respect to work term performance grading, work term report grading and program completion requirements.

For additional program information students should consult with their Co-op Co-ordinator and Co-op Faculty Advisor, listed on the Co-operative Education web site.

Credit Summary

(21.50 Total Credits)¹

Code	Title	Credits
	Environmental Sciences Core	7.00
	Environment and Resource Management Required Courses	6.00
	Environment and Resource Management Restricted Electives, depending on course selection	2.00-2.50
	Free Electives, depending on course selection	4.50-5.00
	Co-op Work Terms	1.50
Total Credits		21.5

¹

COOP*4000 Co-op Work Term IV is optional and if completed the total number of credits will equal 22.00.

Note: A minimum of three Co-op work terms including a Summer, Fall, and Winter are necessary to complete the Co-op requirement.

Students are reminded that 6.00 credits of their B.Sc. (Env.) degree must be at the 3000-4000 level.

Students are encouraged to seek advice on their choices from their faculty advisor.

The recommended program sequence is outlined below.

Major

Code	Title	Credits
Semester 1 - Fall		
BIOL*1070	Discovering Biodiversity	0.50
CHEM*1040	General Chemistry I	0.50
ENVS*1030	Introduction to Environmental Sciences	1.00
MATH*1080	Elements of Calculus I	0.50
Semester 2 - Winter		
BIOL*1090	Introduction to Molecular and Cellular Biology	0.50
CHEM*1050	General Chemistry II	0.50
COOP*1100	Introduction to Co-operative Education	0.00
FARE*1040	Introduction to Environmental Economics, Law and Policy	1.00
GEOG*1300	Introduction to the Biophysical Environment	0.50
Semester 3 - Fall^{1,2}		
ENVS*2120	Introduction to Environmental Stewardship	0.50
GEOG*2000	Geomorphology	0.50
GEOG*2480	Mapping and GIS	0.50
	1.00 electives or restricted electives	1.00
Winter Semester		
COOP*1000	Co-op Work Term I	0.50
Semester 4 - Summer		
ECON*2100	Economic Growth and Environmental Quality ¹	0.50
STAT*2040	Statistics I ²	0.50
	1.50 electives or restricted electives	1.50
Fall Semester		

COOP*2000	Co-op Work Term II	0.50
Semester 5 - Winter		
GEOG*2110	Climate and the Biophysical Environment	0.50
GEOG*2210	Environment and Resources	0.50
GEOG*3480	GIS and Spatial Analysis	0.50
1.00 electives or restricted electives		1.00
Summer Semester		
COOP*3000	Co-op Work Term III	0.50
Semester 6 - Fall^{1,2}		
ENVS*4001	Project in Environmental Sciences	0.50
GEOG*3000	Fluvial Processes ³	0.50
GEOG*3110	Biogeography	0.50
GEOG*3210	Indigenous-Settler Relationships in Environmental Governance	0.50
0.50 electives or restricted electives		0.50
Semester 7 - Winter		
ENVS*4002	Project in Environmental Sciences	0.50
2.00 electives or restricted electives		2.00
Summer Semester (Optional)		
COOP*4000	Co-op Work Term IV	0.50
Semester 8 - Fall		
GEOG*4110	Environmental Systems Analysis	1.00
GEOG*4210	Environmental Governance	0.50
1.00 electives or restricted electives		1.00

1

FARE*2700 Survey of Natural Resource Economics may be substituted for ECON*2100 Economic Growth and Environmental Quality and may be taken in Semester 3 or 6.

2

GEOG*2460 Analysis in Geography may be substituted for STAT*2040 Statistics I and may be taken in Semester 3 or 6.

3

GEOG*3610 Environmental Hydrology may be substituted for GEOG*3000 Fluvial Processes and would be taken in Semester 7.

Restricted Electives

1. A minimum of 2 of the following courses:

Code	Title	Credits
ENVS*4390	Soil Variability and Land Evaluation	1.00
GEOG*4220	Local Environmental Management	0.50
GEOG*4230	Environmental Impact Assessment	0.50

2. An additional 1.00 credits in Geography (GEOG) at the 3000 level or higher.