

A multidisciplinary program for the future leaders in environmental science and sustainability. Available after CEGEP or the Science Profile (ECP). BSc Specialization or Honours only (no Major), Co-op offered.

### ESS Core Program (33 credits = 11 courses)

Chemistry:	CHEM 212 (Analytical Chemistry for Biologists) <sup>a</sup> or CHEM 217 (Introductory Analytical Chemistry I) <sup>a</sup> CHEM 283 (Air, Water and Soil Processes)
Biology:	BIOL 225 (Form and Function of Organisms) BIOL 226 (Biodiversity and Ecology) BIOL 322 (Biostatistics)
Geography/Geology:	GEOG 264 (Programming for Environmental Sciences) GEOG 272 (The Natural Environment: Air and Water) GEOG 290 (Environment and Society) GEOG 363 (Geographic Information Systems) GEOL 210 (Introduction to the Earth)
Capstone Seminar:	CHEM 487 (Capstone Seminar in Environmental Science, requires 30 core credits)

### ESS Specialization (Chemistry/Biochemistry Stream) = Core plus 30 credits:

3 credits from:	CHEM 218 (Introductory Analytical Chemistry II) <sup>a</sup> CHEM 234 (Physical Chemistry I: Thermodynamics) CHEM 235 (Physical Chemistry II: Kinetics of Chemical Reactions)
3 credits:	CHEM 312 (Intermediate Analytical Chemistry)
9 credits from (6 credits must be CHEM courses):	CHEM 221 (Introductory Organic Chemistry I) <sup>b</sup> CHEM 222 (Introductory Organic Chemistry II) <sup>b</sup> CHEM 241 (Inorganic Chemistry I: Introduction to Periodicity and Valence Theory) CHEM 271 (Biochemistry I) BIOL 261 (Molecular and General Genetics) GEOG 375 (Hydrology) GEOG 378 (The Climate System)
6 credits from:	BIOL 367 (Molecular Biology) CHEM 375 (Biochemistry II) CIVI 361 (Introduction to Environmental Engineering) GEOG 377 (Landform Evolution)
9 credits from:	CHEM 458 (Aquatic Biogeochemistry) CHEM 470 (Environmental Biochemistry) CHEM 472 (Chemical Toxicology) CHEM 498 (Advanced Topics in Chemistry, several different courses offered every year) BIOL 459 (Aquatic Ecology) CIVI 467 (Air Pollution and Emission Control) CIVI 468 (Waste Management) CIVI 469 (Geo-Environmental Engineering) GEOG 470 (Environmental Management) GEOG 475 (Water Resource Management) GEOG 476 (Indigenous and Environmental History of Americas since 1492) GEOG 478 (Climate Change: Science, Impacts and Policy) GEOL 440 (Seminar in Current Research on Environmental Earth Science)

### ESS Honours (Chemistry/Biochemistry Stream) = Core plus Specialization plus:

6 credits:	CHEM 450 (Research Project and Thesis)
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**In all cases: plus Elective Courses to Complete your Credit and Program Requirements**

**Co-op option available. Please e-mail [dr.x@concordia.ca](mailto:dr.x@concordia.ca)**

<sup>a</sup> Lab exemption possible for students entering from Dawson's Laboratory Technology – Analytical Chemistry program. <sup>b</sup> CEGEP equivalents of CHEM 221 and CHEM 222 can be used as prerequisites if they are declared upon application to the program.

