## Environmental Science, Bachelor of Science with a Concentration in Analytical Sciences

### Requirements

**Code** | **Title** | **Credits**
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ENVN 2010 | ENVIRONMENTAL PROBLEMS AND SOLUTIONS | 1
GEOL 1010 | ENVIRONMENTAL GEOLOGY | 3
GEOG 1050 | HUMAN-ENVIRONMENT GEOGRAPHY | 4
EN/GEOL/BIOL 4610 | ENVIRONMENTAL MONITORING AND ASSESSMENT | 3

A minimum of 3 credit hours in ENVN 4800 must be completed.

EN/BIOL 4800 | INTERNSHIP ENVIRONMENTAL MANAGEMENT AND PLANNING | 3
EN/GEOG 4820 | INTRODUCTION TO ENVIRONMENTAL LAW & REGULATIONS | 3

### Also required:

- An approved course in statistics: 3-4 credits
- An approved GIS course: 1-4 credits

### Analytical Sciences Concentration requirements:

- CHEM 1180 | GENERAL CHEMISTRY I | 3
- CHEM 1184 | GENERAL CHEMISTRY I LABORATORY | 1
- CHEM 1190 | GENERAL CHEMISTRY II | 3
- CHEM 1194 | GENERAL CHEMISTRY II LABORATORY | 1

Select one of the following organic chemistry sequences:

- CHEM 2210 & CHEM 2214 | FUNDAMENTALS OF ORGANIC CHEMISTRY and FUNDAMENTALS OF ORGANIC CHEMISTRY LABORATORY (5 cr)

**OR**

- CHEM 2250 & CHEM 2274 | ORGANIC CHEMISTRY I and ORGANIC CHEMISTRY LABORATORY (5 cr)
- CHEM 2260 | ORGANIC CHEMISTRY II (3 cr)

### Also Required:

- CHEM 2400 | QUANTITATIVE ANALYSIS | 3
- CHEM 2404 | QUANTITATIVE ANALYSIS LAB | 1
- CHEM 2500 | INTRODUCTION TO INORGANIC CHEMISTRY | 3
- CHEM 3650 | FUNDAMENTALS OF BIOCHEMISTRY | 3
- CHEM 3654 | FUNDAMENTALS OF BIOCHEMISTRY LABORATORY | 1
- CHEM 3030 | ENVIRONMENTAL CHEMISTRY | 3
- CHEM 4400 | INSTRUMENTAL ANALYSIS | 3
- CHEM 4404 | INSTRUMENTAL ANALYSIS LABORATORY | 1

### Required cognate courses:

- BIOL 1330 | ENVIRONMENTAL BIOLOGY | 3
- BIOL 2440 | THE BIOLOGY OF MICROORGANISMS | 4
- PHYS 2110 | GENERAL PHYSICS I - CALCULUS LEVEL | 4
- PHYS 1154 | GENERAL PHYSICS LABORATORY I | 1
- PHYS 2120 | GENERAL PHYSICS-CALCULUS LEVEL | 4
- PHYS 1164 | GENERAL PHYSICS LABORATORY II | 1

**Plus a minimum 11 hours selected from the following:**

- GEOL 1170 | INTRODUCTION TO PHYSICAL GEOLOGY (4 cr)
- GEOL 2600 | GEOHYDROLOGY (3 cr)
- GEOL 2750 & GEOL 2754 | MINERALOGY and MINERALOGY LABORATORY (4 cr)
- GEOL 2760 & GEOL 2764 | IGNEOUS AND METAMORPHIC PETROLOGY and IGNEOUS AND METAMORPHIC PETROLOGY LABORATORY (4 cr)
- GEOL 3300 & GEOL 3310 | STRUCTURAL GEOLOGY and STRUCTURAL GEOLOGY FIELD METHODS (4 cr)
- GEOL 4540 | GEOCHEMISTRY (3 cr)
- GEOL/GEOG 4640 | CRITICAL ZONE SCIENCE (4 cr)
- GEOG 3510 | METEOROLOGY (3 cr)
- GEOG 4010 | CONSERVATION OF NATURAL RESOURCES (3 cr)
- GEOG 4100 | BIOGEOGRAPHY (3 cr)
- GEOG 4260 | PROCESS GEOMORPHOLOGY (4 cr)
- GEOG 4320 | CLIMATOLOGY (3 cr)
- GEOG 4330 | SOIL GENESIS, MORPHOLOGY AND CLASSIFICATION (4 cr)
- GEOG 4340 | WATER RESOURCES (3 cr)
- GEOG 4020 | SPATIAL ANALYSIS IN GEOGRAPHY (3 cr)
- GEOG 4030 | COMPUTER MAPPING AND VISUALIZATION (3 cr)
- GEOG 4050 | GEOGRAPHIC INFORMATION SYSTEMS I (4 cr)
- GEOG 4630 | ENVIRONMENTAL REMOTE SENSING (4 cr)
- GEOG 4660 | GEOGRAPHIC INFORMATION SYSTEMS II (4 cr)
- BIOL 3020 | MOLECULAR BIOLOGY OF THE CELL (3 cr)
- BIOL 3340 | ECOLOGY (4 cr)
- BIOL 3530 | FLORA OF THE GREAT PLAINS (4 cr)
- BIOL 4120 | CONSERVATION BIOLOGY (3 cr)
- ENVN 4410 | WETLAND ECOLOGY AND MANAGEMENT (3 cr)

**Total Credits:** 80-87

### Writing in the Discipline

All students are required to take a writing in the discipline course within their major. For the environmental science major with a concentration in analytical science, the writing in the discipline requirement can be fulfilled by completing NSCI 3940 along with CHEM 3354 and an additional approved lab or by completing ENGL 3980.