

## **Environmental Specialization**

There are numerous environmental issues faced by society. The environmental specialization provides engineers with the knowledge to predict environmental impacts due to human developments and to solve problems associated with the environment (soil contamination, pollution of rivers and lakes, air pollution, wastewater treatment

Students who obtain a grade of “C” or better in the courses listed below will receive a notation of “environmental specialization” on their transcript at the time of graduation.

### **Group A: Science Electives (2 courses to complete)**

**Must complete the following course:**

SOIL 4060 Physical Properties of Soil

and

**Must choose one of the following courses:**

BIOE 2600 Plant and Animal Physiology for Engineers *(no longer offered as of Sept 2021)*

AGEC 2370 Principles of Ecology

BIOL 2300 Principles of Ecology

### **Group B: Biosystems Engineering Design Electives (choose 3 from the list)**

BIOE 4412 Design of Light-Frame Building Systems

BIOE 4460 Air Pollution Assessment and Management

BIOE 4590 Management of By-Products from Animal Production

BIOE 4600 Design of Water Management Systems

BIOE 4620 Remediation Engineering

BIOE 4700 Alternative Building Design *(no longer offered as of Sept 2021)*

### **Group C: Complementary Studies (choose 2 from the list)**

ABIZ 2390 Introduction to Environmental Economics (or equivalent)

ENVR 1000 Environmental Science 1 – Concepts

ENVR 2000 Environmental Science 2 - Issues

ENVR 2270 Environmental Problem Solving and Scientific Thinking

ENVR 3160 Environmental Responsibilities and the Law

ENVR 3400 Introduction to Environment and Health

ENVR 3750 Green Building and Planning

ENVR 3850 Sustainable Manitoba

ENVR 4050 Ecosystem Management

ENVR 4400 Advanced Issues in Environment and Health

GEOG 2520 Geography of Natural Resources

PHIL 2750 Environmental Ethics

### **Group D: Free Electives (choose 2 from the list)**

*(Note: additional courses from Group B or C can be used to fulfill Group D electives. AGECE 2370 can be counted if BIOE 2600 has been taken)*

AGEC 2370 Principles of Ecology (or equivalent)

CIVL 3690 Environmental Engineering Analysis

CIVL 3700 Environmental Engineering Design

CIVL 4350 Hazardous Waste Treatment

ENVR 2550 Environmental Chemistry

ENVR 3110 Environmental Conservation and Restoration

GEOG 3730 Geographic Information Systems

Note: Special permission may be granted by the Head of Department for courses not appearing on the list for Group C or Group D.