

# **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** (choose both courses)

BIOE 2600 Principles of Plant and Animal Physiology for Engineers  
SOIL 4060 Physical Properties of Soil

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

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

**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.)*

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.