

# **Bioresource Specialization**

Challenges remain in the production of food and renewable resources for a world of ever-increasing population. The bioresource specialization provides the educational background to enable engineers to devise strategies and technologies for producing food, fibre, bio-based products, and renewable energy efficiently and sustainably.

Students who obtain a grade of “C” or better in the courses listed below will receive a notation of “Bioresource 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)*

ANSC 3530 The Animal and its Environment

PLNT 2510 Fundamentals of Horticulture

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

BIOE 4390 Unit Operations 1

BIOE 4412 Design of Light-Frame Building Systems

BIOE 4420 Crop Preservation

BIOE 4440 Bioprocessing for Biorefining

BIOE 4560 Structural Design in Wood

BIOE 4590 Management of By-Products from Animal Production

BIOE 4600 Design of Water Management Systems

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

ABIZ 1000 Introduction to Agribusiness Management

ABIZ 1010 Economics of World Food Issues and Policies

ABIZ 3530 Farm Management

FOOD 1000 Food Safety Today and Tomorrow

GEOG 2520 Geography of Natural Resources

## **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. PLNT 2510 can be counted as a free elective if ANSC 3530 or BIOE 2600 is taken.)*

AGRI 1600 Introduction to Agrifood Systems

BIOE 2090 Machinery for Agricultural Production

BIOE 2222 Precision Agriculture Concepts and Applications

ENTM 3170 Crop Protection Entomology

FOOD 3010 Food Process 1

FOOD 4260 Water Management in Food Processing

PLNT 2500 Crop Production

PLNT 2510 Fundamentals of Horticulture

PLNT 3560 Organic Crop Production on the Prairies

SOIL 3520 Pesticides: Environment, Economics and Ethics

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