

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 (choose both courses)

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

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 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.)

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.