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 1500 Natural Resources and Primary Agricultural Production
- AGRI 1510 Production, Distribution and Utilization of Agricultural Products
- 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.