BIORESOURCE ENGINEERING (NON-THESIS): INTEGRATED FOOD AND BIOPROCESSING (M.SC.A.) (45 CREDITS)

Offered by: Bioresource Engineering (Faculty of Agricultural and Environmental Sciences)
Degree: Master of Science Applied
Program credit weight: 45

Program Description

The Master of Science(Applied) [M.Sc.(A.)] in Bioresource Engineering; Non-Thesis - Integrated Food and Bioprocessing program provides the tools to understand how food and agricultural production interact to better manage agricultural, food, and biomass systems for the adequate supply of wholesome food, feed, fiber, biofuel, and any other bio-based material. The program focuses on the skills needed to assess existing production, delivery, and quality management systems; introduce improvements; and communicate effectively with policymakers and colleagues in multi-disciplinary teams. The program provides up-to-date, world-class knowledge on techniques for adequate process design and management of biomass production strategies for the delivery of quality food, natural fiber, biochemicals, biomaterials, and biofuels, in a sustainable and environment-friendly way that benefits all. Training activities will include laboratory research and/or industrial/government internships.

Note: For information about Fall 2025 and Winter 2026 course offerings, please check back on May 8, 2025. Until then, the "Terms offered" field will appear blank for most courses while the class schedule is being finalized.

Requir ed Courses (6 credits)

Expand allContract all

Course	Title	Credits
BREE 600	Project/Internship Proposal.	1
BREE 651	Departmental Seminar M.Sc. 1.	1
BREE 652	Departmental Seminar M.Sc. 2.	1
BREE 699	Scientific Publication.	3

Complementary Courses (39 credits)

9 credits of any relevant graduate-level course chosen in consultation with the Program Director.

Minimum of 3 credits of graduate-level Statistics in any department

Minimum of 9 credits from courses selected from the following:

Expand allContract all

Course	Title	Credits
BREE 518	Ecological Engineering.	3
BREE 519	Advanced Food Engineering.	3
BREE 520	Food, Fibre and Fuel Elements.	3
BREE 530	Fermentation Engineering.	3
BREE 531	Post-Harvest Drying.	3
BREE 532	Post-Harvest Storage.	3
BREE 535	Food Safety Engineering.	3
BREE 603	Advanced Properties: Food and Plant Materials.	3

Minimum of 12 credits selected from the following:

Expand allContract all

Course	Title	Credits
BREE 601	Integrated Food and Bioprocessing Internship 1.	6
BREE 602	Integrated Food and Bioprocessing Internship 2.	6
BREE 671	Project 1.	6
BREE 672	Project 2.	6

Minimum of 3 credits selected from the following:

Expand allContract all

Course	Title	Credits
AGRI 510	Professional Practice.	3

Minimum of 3 credits selected from the following:

Expand allContract all

Course	Title	Credits
BTEC 502	Biotechnology Ethics and Society.	3
FDSC 519	Advanced Food Processing.	3
FDSC 538	Food Science in Perspective.	3
GEOG 515	Contemporary Dilemmas of Development.	3
NUTR 501	Nutrition in the Majority World.	3