Twin Cities Campus

Bioproducts and Biosystems Science, Engineering and Management Minor

Bioproducts and Biosystems Engineering

College of Food, Agricultural and Natural Resource Sciences

Link to a list of faculty for this program.

Contact Information:
Department of Bioproducts and Biosystems Engineering, Biosystems and Agricultural Engineering Building, 1390 Eckles Avenue, St. Paul, MN 55108 (612-625-7733; fax: 612-624-3005)
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Website: http://www.bbe.umn.edu

- Program Type: Graduate minor related to major
- Requirements for this program are current for Fall 2022
- Length of program in credits (Masters): 6
- Length of program in credits (Doctorate): 12
- This program does not require summer semesters for timely completion.

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The bioproducts and biosystems science engineering and management (BBSEM) graduate program provides a strong foundation in the basic sciences, engineering, and management in support of the renewable bio-resources utilization, environmental quality, and national security while improving our global competitiveness. The areas of specialization include bioproducts science and engineering, biosystems science and engineering, and bioproducts marketing and management.

Bioproducts science and engineering specialization focuses on the fundamental science and engineering of the various manufacturing processes used in the sustainable conversion of biomass into bio-based industrial and consumer products and their effective end-use applications. Bioproducts include "green" materials, chemicals and energy derived from bio-resources including biofuels, bioenergy, biocomposites, bio-based plastics, adhesives, pulp and paper, building materials, and more. Biosystems science and engineering specialization is designed for students who seek to develop a strong foundation in physical sciences and engineering principles, which are applied to important problems involving biological systems. Potential areas of interest include water and soil management and protection; livestock environment; food engineering and value-added processing; machinery systems design; grain quality; safety, health, and risk management; renewable energy systems; and waste management. Bioproducts marketing and management specialization is designed for graduate students who seek to build on a strong diverse background encompassing liberal arts, basic sciences, communications and product development, and marketing and management of bioproducts.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission

Other requirements to be completed before admission:
The student must be in good standing in their degree program to apply for this minor.

For an online application or for more information about graduate education admissions, see the General Information section of the catalog website.

Program Requirements

Use of 4xxx courses toward program requirements is permitted under certain conditions with adviser approval.

Program Sub-plans

Students are required to complete one of the following sub-plans.
Students may not complete the program with more than one sub-plan.

Masters

Select at least 6 credits of graduate-level BBE coursework in consultation with an adviser and approved by the director of graduate

studies in bioproducts and biosystems science engineering and management.

Doctoral

Select at least 12 credits of graduate-level BBE coursework in consultation with an adviser and approved by the director of graduate studies in bioproducts and biosystems science engineering and management.