

# BIOSYSTEMS ENGINEERING

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[\(https://umanitoba.ca/engineering/biosystems/\)](https://umanitoba.ca/engineering/biosystems/)

**Academic Staff:** For a complete listing of academic staff, please refer to the following website: <https://umanitoba.ca/engineering/faculty-staff/biosystems-engineering> (<https://umanitoba.ca/engineering/faculty-staff/biosystems-engineering/>)

The Department of Biosystems Engineering offers an accredited degree program in Biosystems Engineering. The discipline of Biosystems Engineering emphasizes the application of engineering principles to biologically-centred systems. Biosystems engineers help to create new technologies for the well-being of humans and animals, and the preservation and enhancement of natural resources and the environment. The Biosystems Engineering program is designed to give students knowledge of the fundamental principles of engineering and introduces biological concepts to enable these engineers to successfully interact with relevant professionals when solving engineering problems involving biological systems. The program is offered in both a traditional and a co-operative education format. The department offers three Specializations (Biomedical, Bioresource and Environmental) and one Minor (Agribusiness).

## Agribusiness Minor

A minor in Agribusiness is available to Biosystems Engineering students. The minimum requirement is 18 credit hours consisting of:

Course	Title	Hours
ECON 1010	Introduction to Microeconomic Principles	3
ECON 1020	Introduction to Macroeconomic Principles	3
ABIZ 1000	Introduction to Agribusiness Management	3
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
ABIZ 2520	Introduction to Management Sciences	3
3 credit hours from the Department of Agribusiness and Agricultural Economics		3
<b>Total Hours</b>		<b>18</b>

Students must meet all prerequisite requirements. A maximum of 3 courses (9 credit hours) of courses used for the minor may also be used to fulfil course requirements in Biosystems Engineering.

## Co-operative Education Program in Biosystems Engineering

Please refer Co-operative Education (<https://catalog.umanitoba.ca/undergraduate-studies/engineering/#cooperativeeducationandindustrialinternshipprogramstext>) and Industrial Internship Programs

## Programs

Degree/Diploma	Years to Completion	Total Credit Hours	Has Co-op Option
Biosystems Engineering, B.Sc. ( <a href="https://catalog.umanitoba.ca/undergraduate-studies/engineering/biosystems-engineering/biosystems-engineering-bsc/">https://catalog.umanitoba.ca/undergraduate-studies/engineering/biosystems-engineering/biosystems-engineering-bsc/</a> )	4-5	154-156	Yes