

BIOSYSTEMS ENGINEERING, M.ENG.

Biosystems Engineering

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Academic Staff: Please refer to the Biosystems Engineering website (<https://umanitoba.ca/engineering/faculty-staff/biosystems-engineering/>) for Faculty information.

Biosystems Engineering Program Information

The Department of Biosystems Engineering offers graduate programs leading to Master of Science, Master of Engineering, and Doctor of Philosophy degrees. The graduate programs in the department focus on applications of engineering in biological systems. Strong emphasis is placed on assisting graduate students to gain a broad range of skills and experience in conducting interdisciplinary research, in understanding the interrelationships among physical and biological factors, and in written and oral communication.

Admission Information

Admission to the Faculty of Graduate Studies

Application and Admission Procedures are found in the Academic Guide (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/application-admission-registration-policies/>).

Admission requirements for Master's students are found in the Master's Degrees General Regulations (https://catalog.umanitoba.ca/graduate-studies/academic-guide/masters-degrees-general-regulations/#Admission_FGSMasters) section of the Guide.

Biosystems Engineering M.Eng. Admission Requirements

For admission into the M.Eng. program applicants must have a minimum of a Bachelor's degree in engineering. In exceptional cases, based on the candidate's professional experience, this requirement may be waived on the recommendation of the Department Head.

Application Information

Students should complete and submit their online application with supporting documentation by the date indicated on the Biosystems Engineering M.Eng. program of study (<https://umanitoba.ca/explore/programs-of-study/biosystems-engineering-meng/>) page.

Degree Requirements

The M.Eng is a course-based degree. A minimum of 30 credit hours of coursework is required. The following conditions must be met:

- A minimum of 18 credit hours must be taken at the 7000 level.
GRAD 7050 may be used as a substitute for 6 credit hours of 7000

level coursework. The remaining credit hours must be taken at the 3000 level or above.

- A minimum of 18 credit hours must be taken from any of the Engineering departments including a minimum of 15 credit hours from the Department of Biosystems Engineering.

All courses must be approved by the department's appointed M.Eng. advisor.

Biosystems Engineering's Cooperative Education/Integrated Work program (Co-op/IIP) Graduate Option

Students may apply to the Biosystems Engineering M.Eng Cooperative Education/Integrated Work program (Co-op/IIP) graduate option. Students must complete one work term (minimum three months) to have the Co-op/IIP option acknowledged on their graduation parchment. For each work term, students must enroll in the appropriate zero credit hour course: ENG 7800. Upon completion of the work term, students must submit a written report to the Biosystems Engineering office that will be graded as pass/fail.

Expected time to graduate: 12-18 months

Progression Chart

Course	Title	Hours
Year 1		
GRAD 7300	Research Integrity Tutorial	0
GRAD 7500	Academic Integrity Tutorial	0
Select a minimum of 18 credit hours must be taken at the 7000 level		18
Select 12 credit hours at the 3000 level or above		12
Hours		30
Total Hours		30

Registration Information

Students should familiarize themselves with the Faculty of Graduate Studies 'GRAD' courses applicable to their program (<https://catalog.umanitoba.ca/graduate-studies/registration-information/>). If you have questions about which GRAD course(s) to register in, please consult your home department/unit.

Courses are subject to cancellation if there is insufficient enrolment. Courses with insufficient enrolment may be cancelled the first week of classes. Not all courses will be offered each year — contact the department for courses that will not be offered. All returning and newly admitted students must see an academic advisor or the department head prior to attempting to register.

Regulations

Students must meet the requirements as outlined in both Supplementary Regulation and BFAR documents as approved by Senate.

Supplementary Regulations

Individual units may require specific requirements above and beyond those of the Faculty of Graduate Studies, and students should consult unit supplementary regulations (<https://umanitoba.ca/graduate-studies/supplementary-regulations/>) for these specific regulations.

Bona Fide Academic Requirements (BFAR)

Bona Fide Academic Requirements (BFAR) (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/academic-performance-general/#BFAR>) represent the core academic requirements a graduate student must acquire in order to gain, and demonstrate acquisition of, essential knowledge and skills.

All students must successfully complete:

- GRAD 7300 prior to applying to any ethics boards which are appropriate to the student's research or within the student's first year, whichever comes first; and
- GRAD 7500 within the first term of registration;

unless these courses have been completed previously, as per Mandatory Academic Integrity Course (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/academic-performance-general/#GRAD7500>) and Mandatory Research Integrity Online Course (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/academic-performance-general/#GRAD7300>).

Students must also meet additional BFAR requirements (<https://umanitoba.ca/graduate-studies/student-experience/core-academic-requirements/#additional-requirements-by-program>) that may be specified for their program.

General Regulations

All students must:

- maintain a minimum degree grade point average of 3.0 with no grade below C+,
- meet the minimum and not exceed the maximum course requirements, and
- meet the minimum and not exceed the maximum time requirements (in terms of time in program and lapse or expiration of credit of courses).