ELECTRICAL AND COMPUTER ENGINEERING, M.ENG.

Electrical & Computer Engineering
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Academic Staff: Please refer to the Electrical and Computer Engineering (https://umanitoba.ca/engineering/faculty-staff/electrical-and-computer-engineering/) website for Faculty information.

Electrical & Computer Engineering (ECE) Program Information

The department offers programs leading to the Master of Engineering, Master of Science, and Doctor of Philosophy. Students may select either a specialized research-oriented activity, an interdisciplinary program, or collaboration with industry or research centres in Canada.

Admission Information

Admission to the Faculty of Graduate and Postdoctoral 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.

ECE M.Eng. Admission Requirements

A student must normally be employed as an engineer in Manitoba, and hold a Bachelor of Science Degree in Electrical or Computer Engineering (or its equivalent) from a recognized university.

Students must also receive tentative approval from a professor in the Department of Electrical & Computer Engineering prior to applying to the graduate program.

Pre-Master's Option

This unit offers a Pre-Master's program of study (https://catalog.umanitoba.ca/graduate-studies/academic-guide/general-regulations-pre-masters/). The Pre-Master's program of study is intended to bring a student's background up to the equivalent of the required 4-year degree in the major department/unit, and to provide the student with any necessary prerequisites for courses to be taken in the Master's program. Completing the Pre-Master's program does not guarantee acceptance to the Master's program.

Students applying to a Pre-Master's program in the Department of Electrical & Computer Engineering are evaluated on a case-by-case basis with the permission of the Prospective Academic Advisor (professor) and

Department. Students who do not meet the minimum GPA requirement of 3.0 / Department's requirement of 3.5; do not pass an English language exam; and do not hold a B.Sc. in a subject approved by the department will not be accepted.

Note: The Pre-Master's or Qualifying Student program is not meant for those students with GPAs below the University's or Department's minimum requirement or who have not passed an English Language Examination.

Application Information

Students should complete and submit their online application with supporting documentation by the date indicated on the ECE M.Eng. program of study (https://umanitoba.ca/explore/programs-of-study/electrical-and-computer-engineering-msc-meng/) page.

Degree Requirements

This program is meant to satisfy the particular needs of students and practicing engineers wishing to extend their studies on a broad basis of coursework and an engineering project.

The M.Eng. program in Electrical and Computer Engineering requires a minimum of 24 credit hours of advisor-approved coursework as follows:

- **Minimum:** 9 credit hours at or above the 7000 level from the ECE department
- **Maximum:** 9 credit hours of elective courses from the ECE department at or above the 4000 level and a maximum of 12 credit hours from other departments at or above the 3000 level
- **Project:** The student is required to complete an advisor-approved engineering project and proposal. The effort involved in this project should be at least the equivalent of 6 credit hours of coursework.

Expected Time to Graduate: 2 years

Progression Chart

Course	Title	Hours
Year 1		
GRAD 7300	Research Integrity Tutorial	0
GRAD 7500	Academic Integrity Tutorial	0
ECE 7XXX	ECE Courses designated 7000 level or higher [1-4]	9
Select courses from the following: [1-4]		9
ECE 7XXX	ECE Courses designated 7000 level or higher	
Related Studies 7XXX	Related Studies Courses designated 7000 level or higher	
Select courses from the following: [1-4]		6
ECE 4XXX	ECE Courses designated 4000 level or higher	
XXX 3000	Courses designated 3000 level or higher outside of ECE	
	Hours	**24**
Year 2		
GRAD 7000	Master's Thesis	0
	Hours	**0**
	Total Hours	**24**

[1] TBD (Course must be in the student's research field) – Must be approved by Academic Advisor. With permission from the Academic Advisor and Department students may take courses outside of ECE.

[2] A **minimum of at least 9 credit hours** at or above the 7000-level is required from the **Department of Electrical and Computer Engineering**.

[3] A **minimum of 18 credit hours** at the 7000-level or higher is required. Of these 18-Credit Hours :

- **9 credit hours** must be from the ECE Graduate Program
- **9 credit hours** may come from other Departments relevant to the student course of study
- It is permissible for the **entire 24 credit hours, at the 7000-level or higher, from the Department of Electrical & Computer Engineering**

[4] Up to 6 credit hours may come from the undergraduate program:

- **ECE Department:** At or above the 400/4000 level may make up the remainder of the required credit-hours
- **Other Department:** (within the student's study area): at or above the 300/3000 level may make up the remainder of the required credit-hours

Registration Information

Students should familiarize themselves with the Faculty of Graduate and Postdoctoral 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 and Postdoctoral 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).