

Master of Engineering (MEng) in Biomedical Engineering Program: Course Requirements 2025 - 2026

**MEng Graduate Program Office
March 2025**



Course based MEng programs in the Department of Biomedical Engineering

Two completion pathways available within the MEng Biomedical program, completion in 1 year and 2 years, each of which require completion of 10 courses (30 units):

MEng in Biomedical Engineering 2-year completion pathway

Year 1

BMEN core	1	required	BMEN 600	Biomedical Engineering Foundations	Fall
ENGG core	2	required	ENGG 680	Introduction to Digital Engineering	Fall
BMEN core	3	required	BMEN 609	Anatomy and Physiology for Biomedical Engineers	Winter
BMEN core	4	required	BMEN 631	Human Factors Engineering and User Centered Design	Winter
BMEN core	5	required	BMEN 668	Integrated Biomedical Engineering Topics I	Winter
Elective (4 out of 5)	7, 8, 9 or 10	elective	BMEN 623	Medical Imaging	Winter

Year 2

BMEN core	6	required	BMEN 633	Medical Technology Design and Innovation	Fall
Elective (4 out of 5)	7, 8, 9 or 10	elective	BMEN 624*	Multiscale Biomechanics	Fall
Elective (4 out of 5)	7, 8, 9 or 10	elective	BMEN 619.37	Advanced Topics in BMEN: Digital Health	Winter
Elective (4 out of 5)	7, 8, 9 or 10	elective	BMEN 663	Biosignals and Bioinstrumentation	Winter
Elective (4 out of 5)	7, 8, 9 or 10	elective	VETM 702**	Advanced Topics in Stem Cell Biology and Regenerative Medicine	Winter

*Students interested in maintaining full-time status, please consider choosing this elective course

**Course taken by thesis based students and MEng students will require instructor approval via [COR form](#), to enroll.

MEng in Biomedical Engineering 1-year completion pathway

Year 1

BMEN core	1	required	BMEN 600	Biomedical Engineering Foundations	Fall
BMEN core	2	required	BMEN 633	Medical Technology Design and Innovation	Fall
ENGG core	3	required	ENGG 680	Introduction to Digital Engineering	Fall
Elective (4 out of 5)	7, 8, 9 or 10	elective	BMEN 624	Multiscale Biomechanics	Fall
BMEN core	4	required	BMEN 609	Anatomy and Physiology for Biomedical Engineers	Winter
BMEN core	5	required	BMEN 631	Human Factors Engineering and User Centered Design	Winter
BMEN core	6	required	BMEN 668	Integrated Biomedical Engineering Topics I	Winter
Elective (4 out of 5)	7, 8, 9 or 10	elective	BMEN 619.37	Advanced Topics in BMEN: Digital Health	Winter
Elective (4 out of 5)	7, 8, 9 or 10	elective	BMEN 623	Medical Imaging	Winter
Elective (4 out of 5)	7, 8, 9 or 10	elective	BMEN 663	Biosignals and Bioinstrumentation	Winter
Elective (4 out of 5)	7, 8, 9 or 10	elective	BMEN 585	Molecular, Cellular and Tissue Engineering	Winter

Note: up to 2 courses (6 units) may be substituted from the additional electives course list appended below. Students interested in pursuing any course from this list are required to consult with the MEng BMEN Graduate Program Director and course instructor.



List of additional elective courses approved for MEng in Biomedical Engineering

Please note all the courses may not be available for enrolment. These are courses offered for MSc/PhD students, and approval of course instructor and the Graduate Program Director via [COR form](#) is required for enrolment.

- Biomedical Engineering 619
- Bioelectrical Engineering Theme
 - o Electrical Engineering 663
 - o Electrical Engineering 631
 - o Electrical Engineering 665
- Biomechanics Theme
 - o Biomedical Engineering 619.02
 - o Civil Engineering 653
 - o Mechanical Engineering 653
 - o Mechanical Engineering/Kinesiology/Medical Science 663
- Cell and Tissue Engineering (Biomaterials) Theme
 - o Chemical Engineering 659
- Medical Imaging Theme
 - o Electrical Engineering 697
 - o Medical Science 689.01
 - o Medical Science 689.02
 - o Medical Science 689.03
 - o Medical Science 689.04



MEng Graduate Program (course-based) FAQ

Student Status: Full-time students in the MEng program are normally registered during the Fall (September to December) and Winter (January to April) terms, with a regularly scheduled break during the Spring/Summer terms (May to August). Students will be considered full-time if they enroll in a minimum of 2 courses (6 units) per term during each of the Fall and Winter terms.

Degree Progression: Full-time students must follow the course requirements outlined above in the exact sequence. Students should not take courses in a different sequence than listed, as first-year and second-year courses are prioritized as needed.


Following the course requirements listed in this document will set students up for success. It will also eliminate any enrollment issues like scheduling conflicts, classes being full, inability to enroll due to pre-requisites, etc. If a student does not follow the required course sequencing, they run the risk of degree progression.

Course enrollment: Course enrollment for the Fall 2025 and Winter 2026 terms will begin on April 8, 2025. It is highly recommended that students complete their course enrollment for first year (F25 and W26) as soon as possible. This will help students secure a seat in their required program and option courses. For your second year (F26 and W27), students will be able to enroll by late winter/early spring of 2026.

Academic Standing: B- is the minimum passing grade for students enrolled in graduate programs at the University of Calgary. A student who receives a C+ or lower in any course will normally be required to withdraw from the program.

Students are also required to maintain a minimum Grade Point Average (GPA) of 3.0/4.0, each year. A student whose GPA is lower than 3.0 at the time of their registration anniversary will normally be required to withdraw from the program.

Payment of Tuition and other fees: Tuition will be assessed based on the number of courses a student has enrolled in. Once a student has completed the course enrollment, they will see the total amount ([Tuition and General Fees](#)) due under the 'My Financials' section of their [Student Centre](#). Students will use one of the methods outlined on [this page](#) to pay their fees. The tuition and general fee will be due by the 'Tuition and Fee Payment Deadline' for that term. To learn more about the deadlines please refer to the [Academic Schedule](#).



Change of Specialization: Students admitted to the MEng program can request to add/drop a specialization, if they wish to. The earliest a student can request this change is after the term break of the first term of classes. Normally, the term break (also known as reading week) will be closer to middle of the term. After this date, a student can submit the [change of specialization request form](#), to the MEng office. To know the exact dates of term break, please refer to the [Academic Schedule](#).

Submissions to add/drop a specialization request are subject to approval and will be dated for the next immediate term. Courses that a student has enrolled in for the first term of their original program, may or may not be applicable for the new specialization. Students are encouraged to review the courses they must enroll in for their first term against the list of courses for their intended specialization. If first-term courses are also approved courses for the intended specialization, a student could potentially use their current courses towards the new specialization. If not, the current courses will remain unused, and students will need to complete all the courses required by the program's new specialization. Additionally, students should ensure that they are certain about switching or dropping specializations, as a reversal will not be possible.

Change of Program: Students admitted to the MEng program can request to change their program to an MSc (thesis-based program) if they wish to. The first step in this process is to identify a supervisor. Please be advised that, without a supervisor, this change will not be possible. The earliest a student can request this change is after the term break of the first term of classes. Normally, the term break (also known as reading week) will be closer to the middle of the term. After this date, students can submit the [change of program request form](#), to the MEng office. To know the exact dates of term break, please refer to the [Academic Schedule](#).

A change of program request is subject to approval and will be dated for the next immediate term. Please be mindful that MEng program-approved courses that students enrol in for the first term, may or may not be applicable for the new MSc program; this will be determined by the department after the change of program request has been submitted. Additionally, students should be sure that they are certain about switching their program, as a reversal will not be possible.

University of Calgary Academic Calendar: For more detailed information on program regulations and requirements, please refer to the University of Calgary [Academic Calendar](#).

Connect with us: Students are encouraged to contact meng@ucalgary.ca or [connect with an advisor](#) if they have any questions.