



## Master of Engineering (MEng) in Biomedical Engineering Program: Course Requirements 2024 - 2025

### Student Status

Full-time students in the MEng program are normally registered during the Fall and Winter terms (September to April) with a regularly scheduled break during Spring/Summer terms (May to August).

Students will be considered full-time if they enroll in minimum of 2 courses (6 units) per term during each of the Fall and Winter terms.

### 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.

### University of Calgary Calendar

Please refer to the University of Calgary Academic Calendar 2024-2025 for more detailed information on program regulations and requirements. The Calendar is available on-line at [University of Calgary: Calendars \(ucalgary.ca\)](https://ucalgary.ca/academic-calendar)

Created: July 2024

## Course based MEng programs in Biomedical Engineering

### MEng in Biomedical Engineering

#### YEAR 1

	Course Count		Course Number	Course Name	Term
Core	(1)	required	<b>BMEN 600*</b>	Biomedical Engineering Foundations	Fall
Core	(2)	required	<b>ENGG 680</b>	Introduction to Digital Engineering	Fall
Core	(3)	required	<b>BMEN 668</b>	Integrated Biomedical Engineering Topics I	Winter
Core	(4)	required	<b>BMEN 609*</b>	Anatomy and Physiology for Biomedical Engineers	Winter
Core	(5)	required	<b>BMEN 631</b>	Human Factors Engineering and User Centered Design	Winter

#### YEAR 2

Core	(6)	required	<b>BMEN 633</b>	Medical Technology Design and Innovation	Fall
Elective	(4 of 5)	option	<b>BMEN 623</b>	Medical Imaging	Fall
Elective	(4 of 5)	option	<b>KNES 608</b>	Innovations in Wearable Technology	Fall
Elective	(4 of 5)	option	<b>BMEN 624*</b>	Multiscale Biomechanics	Winter
Elective	(4 of 5)	option	<b>BMEN 663</b>	Biosignals and Bioinstrumentation	Winter
Elective	(4 of 5)	option	<b>VETM 702*</b>	Advanced Topics in Stem Cell Biology and Regenerative Medicine	Winter

\*Courses taken by MSc/PhD thesis based & MEng course-based students

†From the above elective courses, students could choose any four courses to meet their 10-course requirement. Alternatively, if students wish to obtain more specialized training within an area of BMEN, they could choose two courses from the above elective courses and remaining two courses from a list of additional courses (see Table 1). However, the courses listed in Table 1 will include thesis-based students, and the MEng students will require the approval of instructor prior to enrollment.

Table 1 - List of additional courses that are counted as Elective courses for MEng Biomedical Engineering program. These are courses offered for MSc/PhD students, and instructor approval is required for enrolment.

Additional Courses
<ul style="list-style-type: none"><li>• Biomedical Engineering 619</li> <li>• Bioelectrical Engineering Theme<ul style="list-style-type: none"><li>o Electrical Engineering 663</li><li>o Electrical Engineering 631</li><li>o Electrical Engineering 665</li></ul></li> <li>• Biomechanics Theme<ul style="list-style-type: none"><li>o Biomedical Engineering 619.02</li><li>o Civil Engineering 653</li><li>o Mechanical Engineering 653</li><li>o Mechanical Engineering/Kinesiology/Medical Science 663</li></ul></li> <li>• Cell and Tissue Engineering (Biomaterials) Theme<ul style="list-style-type: none"><li>o Chemical Engineering 659</li></ul></li> <li>• Medical Imaging Theme<ul style="list-style-type: none"><li>o Electrical Engineering 697</li><li>o Medical Science 689.01</li><li>o Medical Science 689.02</li><li>o Medical Science 689.03</li><li>o Medical Science 689.04</li></ul></li></ul>