BIOMEDICAL ENGINEERING, M.SC.

Degree Requirements

A minimum of 12 credit hours plus a thesis are required in the BME program. The minimum must include 6 credit hours from the following 6 core courses:

Course	Title	Hours
BME 7012	Foundation of Physiology	2
ANAT 7014	Functional Human Anatomy	2
BME 7022	Biomedical Instrumentation	2
BME 7024	Basics of Electromagnetic	2
BME 7026	Basics of Biological Signal Analysis	2
BME 7028	Basics of Biomechanics	2

plus the 0 credit hour Ethics course (BME 7040) and the 0 credit hour BME Seminar course (BME 7000). Students from Engineering backgrounds normally have to take anatomy and physiology. Students from Science backgrounds should not enroll in anatomy and physiology.

In addition, 6 credit hours of the minimum requirement must be taken at the 7000 level relevant to the student's thesis from any departments of the faculties of Engineering, Science and Health Sciences or Department of Physiology and Pathophysiology based on the suggestions of the student's Advisory Committee.

The student's program of study must be recommended by the student's advisory committee and approved by the Chair of the Curriculum Committee or delegate. Students who lack the necessary background knowledge may be required, by their Advisory Committee, to take additional courses up to the maximum allowed by FGS regulations.

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
BME 7000	Biomedical Engineering Seminar [1,2]	0
BME M.Sc. Thesis Proposal		0
XXX 7000	Research courses at the 7000-level or 8000-level [3]	6
	Hours	**6**
Years 1-2		
BME 7040	Biomedical Ethics	0
Select 2 BME Core Courses [4,5,6]		6
	Hours	**6**
Year 2		
Complete BME Core Course Requirements [5]		
Complete Research Course Requirements		
GRAD 7000	Master's Thesis	0
Final Thesis Presentation [7]		
	Hours	**0**
	Total Hours	**12**

1. BME Graduate Students are required to enroll and attend the Biomedical Engineering Seminar each term until graduation.
2. BME M.Sc. student must present at least once at the BME Seminar before graduation.
3. **Research Courses** as determined by the Academic Advisor. Courses at the 7000-level or 8000-level relevant to the student's research from any departments in the Faculties of Engineering, Science and Health Sciences or from the Physiology and Pathophysiology Program based on the recommendations of the student's Advisor and/or Advisory Committee.
4. Any combination of courses from BME 7012, ANAT 7014, BME 7022, BME 7024, BME 7026, BME 7028.
5. Where a student has already completed similar courses to the BME core courses, the student may, with the recommendation of their Advisory Committee and with the approval of the Chair of the Curriculum Committee or delegate, be exempted from taking the equivalent core courses and allowed to fulfill the six (6) ch of core courses with six (6) ch of other courses taken at the 7000-8000 level from any department in the Faculties of Engineering, Science and Health Sciences or from the Physiology and Pathophysiology Program.
6. BME M.Sc. Program Requirements: http://umanitoba.ca/biomedical_engineering/current_students/msc.html#CourseReq (Engineering Student must take Life Science Core Courses and Life Science Students must take Engineering Core Courses)
7. http://umanitoba.ca/biomedical_engineering/current_students/msc.html#FinalThesisPresentation