

FACULTY OF ENGINEERING

DEPARTMENT OF BIOMEDICAL ENGINEERING

BIOMEDICAL ENGINEERING

Master of Science in Biomedical Engineering

Master of Science in Biomedical Engineering with Biomechanics

Master of Science in Biomedical Engineering with Cell and Tissue Engineering

Master of Science in Biomedical Engineering with Healthcare Artificial Intelligence

Master of Science in Biomedical Engineering with Biofluid Mechanics

Master of Science in Biomedical Engineering with Medical Devices

Postgraduate Diploma in Biomedical Engineering

Postgraduate Certificate in Biomedical Engineering

These regulations are to be read in conjunction with [General Academic Regulations - Postgraduate Taught Degree Programme Level](#).

Admission

1. See [General Academic Regulations - Postgraduate Taught Degree Programme Level](#).

Duration of Study

2. See [General Academic Regulations - Postgraduate Taught Degree Programme Level](#).

Mode of Study

3. The programmes are available by full-time and part-time study.

Curriculum

4. All students shall undertake an approved curriculum as follows:
 - i. for the Postgraduate Certificate no fewer than 60 credits
 - ii. for the Postgraduate Diploma no fewer than 120 credits
 - iii. for the degree of MSc no fewer than 180 credits including a project
5. As permitted by the [General Academic Regulations - Postgraduate Taught Degree Programme Level](#) and at the discretion of the Programme Leader, exemption from part of the programme may be granted to students submitting evidence of appropriate academic attainment or accredited prior experiential learning.

Compulsory Modules

Module Code	Module Title	Level	Credits
Either			
BE911	Engineering Science	5	20
Or			
BE915	Medical Science for Engineering	5	20
Plus			

BE918	Professional Studies in Biomedical Engineering	5	10
BE919	Research Methodology	5	10
BE909	Biomedical Electronics	5	10
BE908	Biomedical Instrumentation	5	10
Students for the degree of MSc only will undertake:			
BE907	Project	5	60

For the degree of MSc in Biomedical Engineering with Biomechanics:

Module Code	Module Title	Level	Credits
BE902	Prosthetics and Orthotics	5	10
BE904	Clinical and Sports Biomechanics	5	10
BE916	Introduction to Biomechanics	5	10

No fewer than 30 credits from the list of optional modules. The Project module BE907 will need to have been completed on a topic related to Biomechanics.

For the degree of MSc in Biomedical Engineering with Cell and Tissue Engineering:

Module Code	Module Title	Level	Credits
BE900	Tissue Mechanics	5	10
BE901	Regenerative Medicine & Tissue Engineering	5	10
BE906	Biomaterials and Biocompatibility	5	10

No fewer than 30 credits from the list of optional modules. The Project module BE907 will need to have been completed on a topic related to Cell and Tissue Engineering.

For the degree of MSc in Biomedical Engineering with Healthcare AI:

Module Code	Module Title	Level	Credits
BE9xx	Biomedical Artificial Intelligence	5	10
BE924	Medical Robotics	5	10
BE905	Biosignal Processing and Analysis	5	10

No fewer than 30 credits from the list of optional modules. The Project module BE907 will need to have been completed on a topic related to Healthcare Artificial Intelligence.

For the degree of MSc in Biomedical Engineering with Biofluid Mechanics:

Module Code	Module Title	Level	Credits
BE923	Haemodynamics for Engineers	5	10
BE925	Numerical Modelling in Biomedical Engineering	5	10
BE903	Cardiovascular Devices	5	10

No fewer than 30 credits from the list of optional modules. The Project module BE907 will need to have been completed on a topic related to Biofluid Mechanics.

For the degree of MSc in Biomedical Engineering with Medical Devices:

Module Code	Module Title	Level	Credits
BE903	Cardiovascular Devices	5	10
BE920	The Medical Device Regulatory Process	5	10
BE924	Medical Robotics	5	10

No fewer than 30 credits from the list of optional modules. The Project module BE907 will need to have been completed on a topic related to Medical Devices.

For the degree of MSc in Biomedical Engineering:

No fewer than 60 credits from the list of optional modules.

Optional Modules

Module Code	Module Title	Level	Credits
BE916	Introduction to Biomechanics	5	10
BE904	Clinical and Sports Biomechanics	5	10
BE900	Tissue Mechanics	5	10
BE905	Biosignal Processing and Analysis	5	10
BE906	Biomaterials and Biocompatibility	5	10
BE901	Regenerative Medicine & Tissue Engineering	5	10
BE903	Cardiovascular Devices	5	10
BE902	Prosthetics and Orthotics	5	10
BE912	Anatomy & Physiology	5	10
BE920	The Medical Device Regulatory Process	5	10

BE923	Haemodynamics for Engineers	5	10
BE924	Medical Robotics	5	10
BE925	Numerical Modelling in Biomedical Engineering	5	10
BE928	Rehabilitation Technology	5	10
BE954	Biomedical Photonics	5	10
BE953	Biomedical Artificial Intelligence	5	10

Students for the **Postgraduate Diploma only** in addition will have the optional module:

Module Code	Module Title	Level	Credits
BE914	Biomedical Engineering Dissertation	5	20

Examination, Progress and Final Assessment

- See [General Academic Regulations - Postgraduate Taught Degree Programme Level](#).
- The final award will be based on performance in the examinations, coursework and the Project where undertaken.

Award

- Degree of MSc:** In order to qualify for the award of the degree of MSc, a candidate must have performed to the satisfaction of the Board of Examiners and must have accumulated no fewer than 180 credits including those for all the compulsory modules within the curriculum and the Project BE907.
- Postgraduate Diploma:** In order to qualify for the award of the Postgraduate Diploma in Biomedical Engineering, a candidate must have accumulated no fewer than 120 credits from the programme curriculum.
- Postgraduate Certificate:** In order to qualify for the award of the Postgraduate Certificate in Biomedical Engineering, a candidate must have accumulated no fewer than 60 credits from the taught modules of the programme curriculum.