FACULTY OF ENGINEERING

DEPARTMENT OF BIOMEDICAL ENGINEERING

BIOMEDICAL ENGINEERING

MSc in Biomedical Engineering
MSc in Biomedical Engineering with Biomechanics
MSc in Biomedical Engineering with Cell and Tissue Engineering
Postgraduate Diploma in Biomedical Engineering
Postgraduate Certificate in Biomedical Engineering

Course Regulations
[These regulations are to be read in conjunction with General Postgraduate Regulations]

Admission
19.42.30 Regulations 19.1.1, 19.1.2 and 19.1.3 shall apply (see General Postgraduate Regulations).

Duration of Study
19.42.31 Regulations 19.1.5 and 19.1.6 shall apply (see General Postgraduate Regulations).

Mode of Study
19.42.32 The courses are available by full-time and part-time study.

Curriculum
19.42.33 All students shall undertake an approved curriculum as follows

for the Postgraduate Certificate no fewer than 60 credits
for the Postgraduate Diploma no fewer than 120 credits
for the degree of MSc no fewer than 180 credits including a project

Compulsory Classes

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Level</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE 911</td>
<td>Engineering Science</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>BE 915</td>
<td>Medical Science for Engineering</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>BE 918</td>
<td>Professional Studies in Biomedical Engineering</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>BE 919</td>
<td>Research Methodology</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>BE 909</td>
<td>Biomedical Electronics</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>BE908</td>
<td>Biomedical Instrumentation</td>
<td>5</td>
<td>10</td>
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</tbody>
</table>
As permitted by Regulation 19.1.3 (see General Postgraduate Regulations) and at the discretion of the Course Director, exemption from part of the course may be granted to students submitting evidence of appropriate academic attainment or accredited prior experiential learning.

For the degree of MSc in Biomedical Engineering with Biomechanics

BE 902  Prosthetics and Orthotics  5  10
BE 904  Clinical and Sports Biomechanics  5  10
BE 916  Introduction to Biomechanics  5  10

No fewer than 30 credits from the list of optional classes

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

BE 900  Tissue Mechanics  5  10
BE 901  Regenerative Medicine & Tissue Engineering  5  10
BE 906  Biomaterials and Biocompatibility  5  10

No fewer than 30 credits from the list of optional classes

For the degree of MSc in Biomedical Engineering

No fewer than 60 credits from the list of optional classes

Optional Classes

No fewer than 60 credits chosen from

BE 916  Introduction to Biomechanics  5  10
BE 904  Clinical and Sports Biomechanics  5  10
BE 900  Tissue Mechanics  5  10
BE 906  Biomaterials and Biocompatibility  5  10
BE 901  Regenerative Medicine & Tissue Engineering  5  10
BE 903  Cardiovascular Devices  5  10
BE 902  Prosthetics and Orthotics  5  10
BE 912  Anatomy & Physiology  5  10
BE 920  The Medical Device Regulatory Process  5  10
BE 923  Haemodynamics for Engineers  5  10
BE 924  Medical Robotics  5  10
BE 925  Numerical Modelling in Biomedical Engineering  5  10
BE 928  Rehabilitation Technology  5  10
Students for the Postgraduate Diploma only in addition will have the optional class

BE 914 Biomedical Engineering Dissertation 5 20

Students for the degree of MSc only in addition will undertake

BE 907 Project 5 60

Examination, Progress and Final Assessment

19.42.34 Regulations 19.1.25 – 19.1.33 shall apply (see General Postgraduate Regulations).

19.42.35 The final assessment will be based on performance in the examinations, coursework and the Project where undertaken.

Award

19.42.36 **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 classes within the curriculum and the Project BE907.

19.42.37 **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 course curriculum.

19.42.38 **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 classes of the course curriculum.