Overview

Biomedical Engineering is the application of engineering principles to developing technologies and solving problems in a diverse range of health care related fields e.g. implantable bionics, drug delivery systems, medical imaging, radiotherapies, orthopedic devices, telemedicine, robotic surgery, cell and tissue engineering, records management, physical rehabilitation and others.

This Graduate Diploma program provides graduates with opportunities to extend their professional knowledge. Candidates may undertake interdisciplinary studies and, subject to approval, are able to take courses from any school in the Engineering Faculty, other Faculties of the University and other universities or institutions. Consequently, study programs may be constructed to best suit the individual needs of particular candidates.
Faculty
Faculty of Engineering

Campus
Kensington

Study Level
Postgraduate

Typical duration
1 Years

Delivery Mode
Face-to-face

Intake Period
Term 1, Term 3

Academic Calendar
3+ Calendar

Minimum Units of Credit
48

Award type
Graduate Diploma

Award(s)
Graduate Diploma - GradDip

CRICOS Code
000845K
Learning Outcomes

1. Graduates will have acquired disciplinary knowledge and skills in biomedical engineering, and an ability to apply these in a range of contexts.

   Professionals  Scholars

2. Graduates will have developed advanced critical thinking and problem solving skills.

   Professionals  Scholars  Leaders

3. Graduates will have an awareness of international issues within their field of study.

   Global Citizens  Professionals

4. Graduates will be able to work effectively in groups.

   Scholars  Global Citizens  Professionals  Leaders

5. Graduates will be able to communicate effectively to a range of audiences, and be capable of independent and collaborative enquiry and working effectively with others.

   Professionals  Scholars

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Graduate Capabilities:

For more information on Graduate Capabilities, please click on this link.
### Program Structure

Students must complete 48 UOC as a standalone program.

### Biomedical Engineering Courses

Students must take at least 24 UOC (4 courses), up to a maximum of 48 UOC (8 courses) from the following list of courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>UOC</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOM9027</td>
<td>6</td>
<td>Medical Imaging</td>
</tr>
<tr>
<td>BIOM9311</td>
<td>6</td>
<td>Mass Transfer in Medicine</td>
</tr>
<tr>
<td>BIOM9332</td>
<td>6</td>
<td>Biocompatibility</td>
</tr>
<tr>
<td>BIOM9333</td>
<td>6</td>
<td>Cellular and Tissue Engineering</td>
</tr>
<tr>
<td>BIOM9410</td>
<td>6</td>
<td>Regulatory Requirements of Biomedical Technology</td>
</tr>
<tr>
<td>BIOM9420</td>
<td>6</td>
<td>Clinical Laboratory Science</td>
</tr>
<tr>
<td>BIOM9450</td>
<td>6</td>
<td>Biomedical and Health Informatics</td>
</tr>
<tr>
<td>BIOM9541</td>
<td>6</td>
<td>Mechanics of the Human Body</td>
</tr>
<tr>
<td>BIOM9551</td>
<td>6</td>
<td>Biomechanics of Physical Rehabilitation</td>
</tr>
</tbody>
</table>
### BIOM9561 | 6 UOC
Mechanical Properties of Biomaterials

### BIOM9621 | 6 UOC
Biological Signal Analysis

### BIOM9640 | 6 UOC
Biomedical instrumentation

### BIOM9650 | 6 UOC
Biosensors and Transducers

### BIOM9660 | 6 UOC
Bionics and Neuromodulation

### BIOM9701 | 6 UOC
Dynamics of the Cardiovascular System

### BIOM9711 | 6 UOC
Modelling Organs, Tissues and Devices

## Free Electives

Students can take up to a maximum of 24 UOC (4 courses) from the following list of courses with written approval prior to enrolment.

- ANAT2511 - Fundamentals of Anatomy (6 UOC)
- PHSL2121 - Principles of Physiology 1A (6 UOC)
- PHSL2221 Principles of Physiology 1B (6 UOC)
- any other postgraduate course, subject to School approval

**Note:** For students with an engineering or physical sciences background, ANAT2511 Fundamentals of Anatomy, PHSL2121 Principles of Physiology 1A and PHSL2221 Principles of Physiology 1B are highly recommended.

### ANAT2511 | 6 UOC
Fundamentals of Anatomy

*any level 9 course*
Sample Programs

To access sample program(s), please visit:

Engineering (Biomedical Eng)

Enrolment Disclaimer

Unless advised otherwise by your program authority, you should follow the rules for the handbook for the year you commenced your program. You are also responsible for ensuring you enrol in courses according to your program requirements. myUNSW enrolment checks that you have met enrolment requirements such as pre-requisites for individual courses but not that a course will count towards your program requirements.
Admission Requirements

Entry Requirements

- A 3-year Bachelor of Engineering degree with honours (minimum 65% average) or
- A 3-year Bachelors degree in a biomedical health-related discipline with honours (either embedded or as a single honours year) (minimum 65% average) and 2 courses of first-year university level mathematics or equivalent.

For more information about admission requirements for various UNSW programs, visit the following website(s):

Domestic Students
International Student
Program Requirements

Progression Requirements

Progression rules are in accordance with university policy.

For more information on university policy on progression requirements please visit Academic Progression.
Pathways

Articulation Arrangements

Other program(s) within articulated suite:

Master of Biomedical Engineering - MBiomedE

8660 Biomedical Engineering

Faculty: Faculty of Engineering
Campus: Kensington
Units of Credit: 72
Typical Duration: 1.7 Years

Read More
Program Fees

At UNSW fees are generally charged at course level and therefore dependent upon individual enrolment and other factors such as student's residency status. For generic information on fees and additional expenses of UNSW programs, click on one of the following:

Domestic Students
Commonwealth Supported Students
International Students
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

Pre-2019 Handbook Editions
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Authorised by Deputy Vice-Chancellor (Academic)
CRICOS Provider Code 00098G
ABN: 57 195 873 179