

APPROVED

Bachelor of Engineering in Biomedical Engineering
Faculty of Engineering & Science

Award Class					
Awards					
BEng					
Programme Code	CR_EBIME_7	Mode of Delivery	Full Time	No. of Semesters	6
NFQ Level	7	Embedded Award	No	Programme Credits	180
Next Review Date					
Review Type				Date	
Programmatic Review				01/11/2021	
Department	MECHANICAL, BIOMEDICAL & MANUFACTURING ENGINEERING				
Field of Study	5212 - Biomedical Engineering				

Programme Outcomes

Upon successful completion of this programme the graduate will be able to demonstrate... :

#	PO Domains	Programme Learning Outcome
PO1	Knowledge - Breadth	A specialised knowledge of areas of mathematics, biology, materials science, biomechanics, ICT, design, business and engineering practice relevant to the biomedical engineering technologist.
PO2	Knowledge - Kind	Recognising any inherent limitations, the ability to apply knowledge of mathematics, biology, materials science, biomechanics, ICT, design, business and engineering practice to the solution of common biomedical engineering technology problems.
PO3	Skill - Range	The ability to use the techniques, skills and modern computer-based engineering tools necessary for engineering practice.
PO4	Skill - Selectivity	The ability to contribute to the design of a system, component or process to meet specified needs and to carry out a technical performance of the design.
PO5	Competence - Context	The ability to identify and solve common engineering technology problems in the field of biomedical engineering.
PO6	Competence - Role	The ability to work autonomously and as a member of a multidisciplinary team; to take a leadership role within work teams; and to supervise staff in well-defined work settings.
PO7	Competence - Learning to Learn	The ability to identify and address learning needs at the personal and professional levels and an awareness of the need for continued professional development.
PO8	Competence - Insight	A detailed understanding of the wider social, political, business and economic context within which engineering operates and the need for high ethical standards in the practice of engineering, including the responsibilities of the engineering profession towards people and the environment

Semester Schedules

Year 1 / Semester 1

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
BIOL6002	<u>Applied Biology of the Cell</u>	Brigid Lucey	4	5
CMOD6001	<u>Creativity Innovation&Teamwork</u>	MARESE BERMINGHAM	3	5
MECH6008	<u>Introductory CAD</u>	NIAL MORRIS	4	5
MECH6011	<u>Materials & Processes</u>	NIAL MORRIS	3	5
MATH6014	<u>Technological Mathematics 1</u>	David Goulding	5	5
MECH6007	<u>Thermofluids</u>	NIAL MORRIS	3	5

Year 1 / Semester 2

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
PHOL6001	<u>Applied Anatomy and Physiology</u>	Brigid Lucey	5	5
MECH6040	<u>Intro 3-D Parametric Modelling</u>	NIAL MORRIS	3	5
MECH6029	<u>Mechanics</u>	NIAL MORRIS	2	5
MECH6017	<u>Pneumatics</u>	NIAL MORRIS	2	5
MATH6015	<u>Technological Mathematics 2</u>	David Goulding	4	5
Elective				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
BIOE6001	<u>Biomedical Devices</u>	NIAL MORRIS	2	5
FREE6001	<u>Free Choice Module</u>	PAUL GALLAGHER	3	5

Year 2 / Semester 1

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
MECH6021	<u>3-D Mech Analysis & Design</u>	NIAL MORRIS	4	5
BIOE6002	<u>Biomechanic,Statics & Dynamics</u>	NIAL MORRIS	2	5
MECH6032	<u>Electro-Pneu. & M/C maint.</u>	NIAL MORRIS	3	5
MANU6012	<u>Metrology & Quality Control</u>	NIAL MORRIS	3	5
MATH6040	<u>Technological Mathematics 201</u>	David Goulding	5	5
Elective				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
FREE6001	<u>Free Choice Module</u>	PAUL GALLAGHER	3	5
MECH6014	<u>Mechanical Workshop Practice</u>	NIAL MORRIS	2	5

Year 2 / Semester 2

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
MANU6005	<u>Advanced Manufacturing Tech.</u>	GER KELLY	4	5
PHYS6009	<u>Instrumentation & Measurement</u>	Donagh OMahony	2	5
STAT6010	<u>Intro. to Probability & Stats</u>	David Goulding	1	5
MECH6025	<u>Material Science</u>	NIAL MORRIS	3	5
BIOM6009	<u>Microbes & Control Principles</u>	Brigid Lucey	1	5
BIOE6003	<u>Thermofluids for Biomed Eng</u>	NIAL MORRIS	2	5

Year 3 / Semester 1

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
BIOE7001	<u>Biomaterials</u>	NIAL MORRIS	3	5
BIOE6004	<u>Biomedical Devices-Respiratory</u>	NIAL MORRIS	2	5
MECH7010	<u>CAE & Mechanical Design</u>	NIAL MORRIS	4	5
MECH7016	<u>Project Research & Design</u>	GER KELLY	3	5
MATH7020	<u>Technological Mathematics 301</u>	David Goulding	4	5
Elective				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
INTR7011	<u>Biomedical Electronic Systems</u>	JOSEPH CONNELL	3	5
FREE6001	<u>Free Choice Module</u>	PAUL GALLAGHER	3	5

Year 3 / Semester 2

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
BIOE7002	<u>Biomechanics & Biofluids</u>	NIAL MORRIS	2	5
BIOE7003	<u>Biomedical Devices – Clinical</u>	NIAL MORRIS	3	5
BIOE7004	<u>Biomedical Manufacture</u>	NIAL MORRIS	2	5
MANU7003	<u>Engineering Management</u>	NIAL MORRIS	2	5
MECH7015	<u>Project Realisation</u>	NIAL MORRIS	2	10

