



Institiúid Teicneolaíochta Chorcaí
Cork Institute of Technology

APPROVED

Awards	
Higher Certificate in Eng	
Programme Code:	CR_EBIME_6
Mode of Delivery:	Full Time
No. of Semesters:	4
NFQ Level:	6
Embedded Award:	No
Programme Credits:	120
programmeReviewDate:	February 2019
Department:	MECHANICAL, BIOMEDICAL & MANUFACTURING ENGINEERING

Programme Outcomes

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

PO1	Knowledge - Breadth
(a)	A knowledge of areas of mathematics, science, ICT, design, business and engineering practice relevant to the biomedical engineering technician.
PO2	Knowledge - Kind
(a)	The ability to apply knowledge of mathematics, science, ICT, design, business and engineering practice to the solution of well-defined biomedical engineering technology problems.
PO3	Skill - Range
(a)	The ability to use basic techniques, skills and modern computer-based engineering tools necessary for engineering practice.
PO4	Skill - Selectivity
(a)	The ability to assist in the design of a system, component or process to meet specified needs and to contribute to the assessment of the technical performance of the design.
PO5	Competence - Context
(a)	The ability to contribute to the solution of common engineering technology problems in biomedical engineering.
PO6	Competence - Role
(a)	The ability to work autonomously and as a member of a multidisciplinary team and to supervise staff in well-defined work settings.
PO7	Competence - Learning to Learn
(a)	The ability to identify and address learning needs within a structured learning environment and an awareness of the need for continued professional development.
PO8	Competence - Insight
(a)	An 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

Stage 1 / Semester 1

Mandatory	
Module Code	Module Title
BIOL6002	Applied Biology of the Cell
MECH6007	Thermofluids
MECH6011	Materials & Processes
MECH6008	Introductory CAD
MATH6014	Technological Mathematics 1
CMOD6001	Creativity Innovation&Teamwork

Stage 1 / Semester 2

Mandatory	
Module Code	Module Title
MECH6029	Mechanics
PHOL6001	Applied Anatomy and Physiology
MECH6040	Intro 3-D Parametric Modelling
MATH6015	Technological Mathematics 2
MECH6017	Pneumatics

Elective	
Module Code	Module Title
BIOE6001	Biomedical Devices
FREE6001	Free Choice Module

Stage 2 / Semester 1

Mandatory	
Module Code	Module Title
BIOE6002	Biomechanic, Statics & Dynamics
MECH6021	3-D Mech Analysis & Design
PHYS6009	Instrumentation & Measurement
MATH6040	Technological Mathematics 201
MANU6012	Metrology & Quality Control
MECH6014	Mechanical Workshop Practice

Stage 2 / Semester 2

Mandatory	
Module Code	Module Title
MECH6025	Material Science
BIOM6009	Microbes & Control Principles
MECH6032	Electro-Pneu. & M/C maint.
BIOE6003	Thermofluids for Biomed Eng.
MANU6005	Advanced Manufacturing Tech.
Group Elective 1	
Module Code	Module Title
STAT6010	Intro. to Probability & Stats
STAT7003	Technological Mathematics 302