



Institiúid Teicneolaíochta Chorcaí  
Cork Institute of Technology

APPROVED

<b>Awards</b>					
BEng					
<b>Programme Code:</b>	CR_EBIME_7	<b>Mode of Delivery:</b>	Full Time	<b>No. of Semesters:</b>	6
<b>NFQ Level:</b>	7				
<b>Embedded Award:</b>	No	<b>Programme Credits:</b>	180		
<b>programmeReviewDate:</b>	November 2021				
<b>Department:</b>	MECHANICAL, BIOMEDICAL & MANUFACTURING ENGINEERING				
<b>Field of Study:</b>	Biomedical Engineering				

## Programme Outcomes

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

<b>PO1</b>	Knowledge - Breadth
	(a) A specialised knowledge of areas of mathematics, biology, materials science, biomechanics, ICT, design, business and engineering practice relevant to the biomedical engineering technologist.
<b>PO2</b>	Knowledge - Kind
	(a) 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.
<b>PO3</b>	Skill - Range
	(a) The ability to use the techniques, skills and modern computer-based engineering tools necessary for engineering practice.
<b>PO4</b>	Skill - Selectivity
	(a) 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.
<b>PO5</b>	Competence - Context
	(a) The ability to identify and solve common engineering technology problems in the field of biomedical engineering.
<b>PO6</b>	Competence - Role
	(a) 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.
<b>PO7</b>	Competence - Learning to Learn
	(a) The ability to identify and address learning needs at the personal and professional levels and an awareness of the need for continued professional development.
<b>PO8</b>	Competence - Insight
	(a) 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

### Stage 1 / Semester 1

Mandatory	
Module Code	Module Title
BIOL6002	<a href="#">Applied Biology of the Cell</a>
CMOD6001	<a href="#">Creativity Innovation&amp;Teamwork</a>
MECH6007	<a href="#">Thermofluids</a>
MECH6008	<a href="#">Introductory CAD</a>
MECH6011	<a href="#">Materials &amp; Processes</a>
MATH6014	<a href="#">Technological Mathematics 1</a>

### Stage 1 / Semester 2

Mandatory	
Module Code	Module Title
MECH6029	<a href="#">Mechanics</a>
MECH6040	<a href="#">Intro 3-D Parametric Modelling</a>
MECH6017	<a href="#">Pneumatics</a>
MATH6015	<a href="#">Technological Mathematics 2</a>
PHOL6001	<a href="#">Applied Anatomy and Physiology</a>

  

Elective	
Module Code	Module Title
FREE6001	<a href="#">Free Choice Module</a>
BIOE6001	<a href="#">Biomedical Devices</a>

Stage 2 / Semester 1

Mandatory	
Module Code	Module Title
MANU6012	<a href="#">Metrology &amp; Quality Control</a>
BIOE6002	<a href="#">Biomechanic, Statics &amp; Dynamics</a>
MECH6032	<a href="#">Electro-Pneu. &amp; M/C maint.</a>
MECH6021	<a href="#">3-D Mech Analysis &amp; Design</a>
MATH6040	<a href="#">Technological Mathematics 201</a>
Elective	
Module Code	Module Title
FREE6001	<a href="#">Free Choice Module</a>
MECH6014	<a href="#">Mechanical Workshop Practice</a>

Stage 2 / Semester 2

Mandatory	
Module Code	Module Title
MECH6025	<a href="#">Material Science</a>
BIOM6009	<a href="#">Microbes &amp; Control Principles</a>
MANU6005	<a href="#">Advanced Manufacturing Tech.</a>
BIOE6003	<a href="#">Thermofluids for Biomed Eng.</a>
PHYS6009	<a href="#">Instrumentation &amp; Measurement</a>
STAT6010	<a href="#">Intro. to Probability &amp; Stats</a>

Stage 3 / Semester 1

Mandatory	
Module Code	Module Title
BIOE7001	<a href="#">Biomaterials</a>
MECH7010	<a href="#">CAE &amp; Mechanical Design</a>
MATH7020	<a href="#">Technological Mathematics 301</a>
MECH7016	<a href="#">Project Research &amp; Design</a>
BIOE6004	<a href="#">Biomedical Devices-Respiratory</a>
Elective	
Module Code	Module Title
FREE6001	<a href="#">Free Choice Module</a>
INTR7011	<a href="#">Biomedical Electronic Systems</a>

Stage 3 / Semester 2

Mandatory	
Module Code	Module Title
BIOE7002	<a href="#">Biomechanics &amp; Biofluids</a>
MANU7003	<a href="#">Engineering Management</a>
MECH7015	<a href="#">Project Realisation</a>
BIOE7004	<a href="#">Biomedical Manufacture</a>
BIOE7003	<a href="#">Biomedical Devices – Clinical</a>