



Institiúid Teicneolaíochta Chorcaí
Cork Institute of Technology

APPROVED

Awards	
MEng	
Programme Code:	CR_CSTEN_9
Mode of Delivery:	Full Time, Part Time, ACCS
No. of Semesters:	10
NFQ Level:	9
Embedded Award:	No
Programme Credits:	300
programmeReviewDate:	September 2024
Department:	CIVIL, STRUCTURAL & ENVIRONMENTAL ENGINEERING
Field of Study:	Civil Engineering

Programme Outcomes

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

PO1	Knowledge - Breadth
	(a) A wide and systematic knowledge of scientific principles and the design process in Structural Engineering; an understanding of the key parameters and the technical, economic, environmental and social issues pertaining to Structural Engineering
PO2	Knowledge - Kind
	(a) A critical awareness of current issues in Structural Engineering, a knowledge of the latest mathematical, scientific and ICT techniques and their limitations in their practical application to ill defined complex problems of Structural Engineering
PO3	Skill - Range
	(a) Mastery of a range of specialised research and design tools and methods of investigation and analysis in the field of Structural Engineering; the ability to use engineering principles to design and develop new solutions to complex Structural Engineering problems
PO4	Skill - Selectivity
	(a) The ability to select appropriate advanced skills and use new methods required for novel situations and the ability to develop, to a high level, new skills in emerging techniques as required in Structural Engineering design and analysis; the ability to undertake analysis of a design and justify decisions throughout a particular design process
PO5	Competence - Context
	(a) The ability to act at a variety of professional levels, particularly in the initiation, development and promotion of design solutions in Structural Engineering; the ability to identify potential projects and opportunities, conduct appropriate research and undertake the design and development of solutions to ill-defined and complex engineering problems
PO6	Competence - Role
	(a) The technical competence necessary to take significant responsibility for the work of individuals and groups, lead and initiate activity in Structural Engineering
PO7	Competence - Learning to Learn
	(a) The ability to evaluate their own learning, identify knowledge gaps, and take responsibility for the pursuit of academic professional development pathways
PO8	Competence - Insight
	(a) An awareness of the impacts of Structural Engineering infrastructure on society and the ability to critically evaluate the technical, economic, environmental and social implications of Structural Engineering solutions.

Semester Schedules

Stage 1 / Semester 1

Mandatory	
Module Code	Module Title
CMOD6001	Creativity Innovation&Teamwork
CIVL6034	Design Graphics
MECH6009	Engineering Mechanics
PHYS6003	Engineering Physics 1
MATH6005	Engineering Maths 101
CHEM6001	Engineering Chemistry

Stage 1 / Semester 2

Mandatory	
Module Code	Module Title
MATH6031	Engineering Computing 1
MATH6006	Engineering Maths 102
CIVL6006	Mechanics of Materials
CIVL6013	Properties of Materials
DESI6031	AEC Design Thinking

Elective	
Module Code	Module Title
INTR7018	Collaborative BIM 1
INTR6021	3D Built Environment Modelling
FREE6001	Free Choice Module

Stage 2 / Semester 1

Mandatory	
Module Code	Module Title
MATH7006	Engineering Mathematics 211
CIVL6031	Health and Safety - Built Env
CIVL7012	Soil Mechanics and Geology
CIVL7034	Solid Mechanics and Structures
CIVL7028	Struct Steel & Timber Design
Elective	
Module Code	Module Title
MATH7015	Numerical Methods 1
FREE6001	Free Choice Module

Stage 2 / Semester 2

Mandatory	
Module Code	Module Title
MECH7006	Fluid Mechanics
CIVL7035	Land Surveying Data Capture
CIVL7027	Civil & Struc Eng Construction
CIVL7036	Structural Analysis of Beams &
CIVL7003	Communication
CIVL7026	Reinforced Concrete Design

Stage 3 / Semester 1

Mandatory	
Module Code	Module Title
MATH8003	Engineering Mathematics 311
CIVL8033	Water Services Engineering
CIVL8007	Engineer in Society
CIVL8034	Structural Modelling
CIVL8036	RC Design & Concrete Technology
Elective	
Module Code	Module Title
CIVL8011	Harbour & Coastal Engineering
INTR8044	GIS and Remote Sensing
FREE6001	Free Choice Module

Stage 3 / Semester 2

Mandatory	
Module Code	Module Title
CIVL8035	River Basin Engineering
CIVL8027	Steel & Timber Design Studio
STAT8005	Statistics for Engineering
CIVL8008	Environmental & Energy Eng
CIVL8010	Geotechnical Engineering
CIVL8031	AEC Project & Contract Mgmt

Stage 4 / Semester 1

Mandatory	
Module Code	Module Title
CIVL8009	Foundation Engineering
INTR8032	Interdisciplinary Project
CIVL8038	Adv. Struct. Design & Fire Eng.
CIVL8039	Advanced Structural Analysis
CIVL8032	Prestressed Concrete and Mason.
INTR9005	Sustainability in Engineering

Stage 4 / Semester 2

Mandatory	
Module Code	Module Title
PLAC8017	Work Placement (MEng)

Stage 5 / Semester 1

Mandatory	
Module Code	Module Title
INTR9006	Engineering Research Skills
CIVL9001	Adv Geotech and Foundation Eng
CIVL9005	Bridge Engineering
CIVL9004	Structural Engineering
MECH9001	Computational Solid Modelling
Elective	
Module Code	Module Title
INTR9017	Infrastructure Asset Mgmt
INTR9007	Eng. Project Management

Stage 5 / Semester 2

Mandatory	
Module Code	Module Title
CIVL9003	Structural Design Office (Exp)
INTR9019	Eng. Project Realisation