

APPROVED

Bachelor of Engineering (Honours) in Structural Engineering
Faculty of Engineering & Science

Award Class					
Awards					
BEng (Hons)					
Programme Code	CR_CSTRU_8	Mode of Delivery	Full Time, Part Time, ACCS	No. of Semesters	8
NFQ Level	8	Embedded Award	No	Programme Credits	240
Next Review Date					
Review Type				Date	
Programmatic Review				01/09/2024	
Department	CIVIL, STRUCTURAL & ENVIRONMENTAL ENGINEERING				
Field of Study	5822 - Civil Engineering				

Programme Outcomes

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

#	PO Domains	Programme Learning Outcome
PO1	Knowledge - Breadth	An in-depth knowledge of areas of mathematics, science, ICT, design, business and engineering practice relevant to the structural engineer.
PO2	Knowledge - Kind	The ability to apply knowledge of mathematics, science, ICT, design, business and engineering practice to the analysis and solution of complex problems in structural engineering.
PO3	Skill - Range	The ability to use modelling and analytical techniques, skills and modern computer-based engineering tools necessary for engineering practice.
PO4	Skill - Selectivity	The ability to design a system, component or process to meet specified needs, to design and conduct experiments and to analyse and interpret data.
PO5	Competence - Context	The ability to assume personal responsibility for the development and application of engineering science and knowledge, particularly in research, design and construction of civil and structural engineering works.
PO6	Competence - Role	The ability to work autonomously, in teams and in multi-disciplinary settings to give authoritative technical advice and to assume responsibility for the direction of important tasks in structural engineering. The ability to communicate effectively with the engineering community and with society at large.
PO7	Competence - Learning to Learn	The capacity to identify learning needs and to undertake continuous learning (including lifelong learning and continuing professional development), incorporating the ability to closely and continuously follow progress in structural engineering by consulting newly published works, assimilating such information and applying it independently.
PO8	Competence - Insight	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

Year 1 / Semester 1

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
CMOD6001	<u>Creativity Innovation&Teamwork</u>	MARESE BERMINGHAM	3	5
CIVL6034	<u>Design Graphics</u>	DES WALSH	1	5
CHEM6001	<u>Engineering Chemistry</u>	Donagh OMahony	5	5
MATH6005	<u>Engineering Maths 101</u>	David Goulding	5	5
MECH6009	<u>Engineering Mechanics</u>	DES WALSH	4	5
PHYS6003	<u>Engineering Physics 1</u>	Donagh OMahony	3	5

Year 1 / Semester 2

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
DESI6031	<u>AEC Design Thinking</u>	DES WALSH	3	5
MATH6031	<u>Engineering Computing 1</u>	David Goulding	2	5
MATH6006	<u>Engineering Maths 102</u>	David Goulding	5	5
CIVL6006	<u>Mechanics of Materials</u>	DES WALSH	4	5
CIVL6013	<u>Properties of Materials</u>	DES WALSH	4	5
Elective				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
INTR6021	<u>3D Built Environment Modelling</u>	DES WALSH	2	5
INTR7018	<u>Collaborative BIM 1</u>	DES WALSH	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>
MATH7006	<u>Engineering Mathematics 211</u>	David Goulding	5	5
CIVL6031	<u>Health and Safety - Built Env</u>	DES WALSH	3	5
CIVL7012	<u>Soil Mechanics and Geology</u>	DES WALSH	4	5
CIVL7034	<u>Solid Mechanics and Structures</u>	DES WALSH	1	5
CIVL7028	<u>Struct Steel & Timber Design</u>	DES WALSH	4	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
MATH7015	<u>Numerical Methods 1</u>	David Goulding	3	5

Year 2 / Semester 2

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
CIVL7027	<u>Civil & Struc Eng Construction</u>	DES WALSH	2	5
CIVL7003	<u>Communication</u>	DES WALSH	4	5
MECH7006	<u>Fluid Mechanics</u>	NIALL MORRIS	4	5
CIVL7035	<u>Land Surveying Data Capture</u>	DES WALSH	1	5
CIVL7026	<u>Reinforced Concrete Design</u>	DES WALSH	4	5
CIVL7036	<u>Structural Analysis of Beams &</u>	DES WALSH	1	5

Year 3 / Semester 1

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
CIVL8007	<u>Engineer in Society</u>	DES WALSH	3	5
MATH8003	<u>Engineering Mathematics 311</u>	David Goulding	4	5
CIVL8036	<u>RC Design & Concrete Technology</u>	DES WALSH	1	5
CIVL8034	<u>Structural Modelling</u>	DES WALSH	1	5
CIVL8033	<u>Water Services Engineering</u>	DES WALSH	1	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
INTR8044	<u>GIS and Remote Sensing</u>	DES WALSH	1	5
CIVL8011	<u>Harbour & Coastal Engineering</u>	DES WALSH	3	5

Year 3 / Semester 2

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
CIVL8031	<u>AEC Project & Contract Mgmt</u>	DES WALSH	1	5
CIVL8008	<u>Environmental & Energy Eng</u>	DES WALSH	4	5
CIVL8010	<u>Geotechnical Engineering</u>	DES WALSH	3	5
CIVL8035	<u>River Basin Engineering</u>	DES WALSH	1	5
STAT8005	<u>Statistics for Engineering</u>	David Goulding	3	5
CIVL8027	<u>Steel & Timber Design Studio</u>	DES WALSH	3	5

Year 4 / Semester 1

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
CIVL8038	<u>Adv. Struct. Design & Fire Eng</u>	DES WALSH	1	5
CIVL8009	<u>Foundation Engineering</u>	DES WALSH	3	5
INTR8032	<u>Interdisciplinary Project</u>	JOSEPH HARRINGTON	1	5
INTR8016	<u>Project - Research Phase</u>	Ted Scully	1	5

Elective				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
CIVL8039	<u>Advanced Structural Analysis</u>	DES WALSH	1	5
FREE6001	<u>Free Choice Module</u>	PAUL GALLAGHER	3	5
CIVL8011	<u>Harbour & Coastal Engineering</u>	DES WALSH	3	5
CIVL8032	<u>Prestressed Concrete and Mason</u>	DES WALSH	1	5

Year 4 / Semester 2

Mandatory				
<i>Code</i>	<i>Title</i>	<i>Module Coordinator</i>	<i>Version</i>	<i>Credits</i>
INTR8015	<u>Project - Implementation Phase</u>	Donagh OMahony	1	10
CIVL8018	<u>Structural Design Office</u>	DES WALSH	4	5
CIVL8041	<u>Sustainable Infrastructure</u>	DES WALSH	1	5
PLAC8015	<u>Work Placement in CSE Eng</u>	DES WALSH	2	10

