Engineering							
Module Code	**Module Title**	**ECTS Credits**	**Semester/ Duration**	**% Exam**	**% CA**	**Pre-requisite**	**Notes**
CE7E05	Water Quality and Hydrological Modelling	5	Semester 2	70	30	basic chemistry	
CE7E06	Water Resource Planning and Climate Change	5	Semester 2	80	20	No specific pre-requisite, but previous engineering hydrology module helpful	
CE7J01	Wind Energy	5	Semester 2	80	20	None	
CE7J06	Wave and Hydro Energy	5	Semester 2	80	20	None	
CE7S04	Bridge Engineering	5	Semester 2	0	100	None	
CE7S06	Soil Structure Interaction - instead Offshore geotechnical engineering	5	Semester 2	80	20	CEU33A5, CEU44A51	
CE7T04	Transportation Data and Evaluation	5	Semester 2	75	25	Engineering or Sciences Primary Degree	
CEU11E07	Mechanics	5	Semester 2	90	10	None	
CEU11E09	Engineering Design I: Graphics and CAE	5	Semester 2	80	20	None	
CEU33A04	Structural Analysis	5	Semester 2	100	0	Ability to analyse statically determinate structures	
CEU33A08	Geology for Engineers	5	Semester 2	100	0	None	
CEU33A10	Surveying and Geo-spatial Planning	5	Semester 2	50	50	None	This module has quite a lot of practical elements associated with it and comprises 50% CA.
CEU33A11	Fluids and Environment	5	Semester 2	60	40	None	
CEU44A01	Civil Engineering Materials	5	Semester 2	80	20	basic chemistry and material science	

CEU44A02	Groundwater and Pollution Control	5	Semester 2	100	0		UPDATE: This module is incorrectly named on the Module Enrolment Form as Hydrogeology and Engineering Geology. The correct name is Groundwater and Pollution Control. If you want this module, please choose **CEU44A02** on the form.
CEU44A62	Structures 2: Advanced Design of Structures	5	Semester 2	85	15	None	
EE5C01	Motion Picture Engineering	10	Semester 2	0	100	**Only suitable for visiting students in year 4 or 5 of their respective universities** and requires they would have taken some kind of Signals and Systems or or DSP introduction in their home universities beforehand. An introduction to DSP and Image Processing would be useful	
EE5M02	Microelectronics	5	Semester 2	80	20	EEU33C03 or equivalent	
EEP55C24	Simulations for Geophysical Modelling	5	Semester 2	40	60	None	
EEP55C25	Algorithms for Quantum Computing	5	Semester 2	40	60	None	
EEP55M08	Image and Video Processing	5	Semester 2	75	25	EEU33C01 (Signals and Systems)	
EEU11E06	Electrical Engineering	5	Semester 2	85	15	Leaving Cert Honours Mathematics (or equivalent)	
EEU22E10	Engineering design IV: Project	10	Semester 2	0	100	None	

EEU22E12	Computational Science and Engineering	5	Semester 2	65	35	**2E12 is a Second year undergraduate module and is only suitable for visiting students who are also starting year 2 or maybe year 3 in their home universities.** Mathematics (JF), Physics, Basic knowledge of Linear Algebra (JF Level)	
EEU33C03	Analogue Circuits	5	Semester 2	85	15	EEU22E06 or equivalent	
EEU33C05	Telecommunications	5	Semester 2	70	30	None	
EEU33C07	Digital Systems Design	5	Semester 2	50	50	EE1E6 or equivalent	
EEU33C08	Digital Circuits Design	5	Semester 2	0	100	Intermediate Multisim Proficiency	
EEU33C09	Analogue Circuit Design	5	Semester 2	100	0	EEU22E06 or equivalent	Module Co-requisite EEU33C03 (suggested)
EEU33E03	Probability and Statistics	5	Semester 2	100	0	Engineering Mathematics (up to Year 2 incl.)	
EEU44C02	Microelectronic Circuits	5	Semester 2	80	20	EEU33C03 or equivalent	
EEU44C08	Digital Image and Video Processing	5	Semester 2	75	25	EEU33C01 (Signals and Systems)	
EEU44C21	Open Reconfigurable Networks	5	Semester 2	20	80	None	
ME5B03	Advanced Thermal Fluid Sciences	10	Semester 2	15	85	4B4 Heat Transfer, 4B13 Fluid Mechanics	
ME5BIO3	Tissue Engineering	5	Semester 2	75	25	MEU44BM6	Co-Requisite: ME5M20 (If MEU44BM6 has not been taken previously)
ME5BIO7	Advanced Medical Imaging	5	Semester 2	65	35	None	
ME5MM1	Additive Manufacturing and Laser Processing	5	Semester 2	100	0	None	
MEP55BM8	Active Implanted Devices and Systems	10	Semester 2	100	0	3BIO1 Anatomy and Physiology, 4C5 Digital Signal Processing	**Must be from a Biomedical engineering background**

MEU22E05	Thermo-fluids	5	Semester 2	70	30	None	**Need a basis in engineering mathematics. This 2nd year module is introductory in nature so its level might be below that expected of a visiting student**
MEU33B01	Thermodynamics	5	Semester 2	80	20	2E5 Thermo-fluids	
MEU33B03	Mechanics of Solids	5	Semester 2	90	10	1E7 Mechanics (or equivalent) and 2E4 Solids and Structures (or equivalent)	
MEU33B05	Mechanics of Machines	5	Semester 2	80	20	MEU11E07 Mechanics	
MEU33B07	Manufacturing Technology I	5	Semester 2	0	100	None	
MEU44B01	Mechanics of Solids	5	Semester 2	85	15	MEU33M03 Mechanics of Solids	
MEU44B02	Forensic Materials Engineering	5	Semester 2	70	30	3B4 Mechanical Engineering Materials or equivalent	
MEU44B06	Manufacturing Systems and Project Management	5	Semester 2	0	100	None	
MEU44B09	Control Engineering	5	Semester 2	85	15	None	
MEU44B10	Turbomachinery	5	Semester 2	100	0	3B1 Thermodynamics, 3B2 Fluid Mechanics, 4B13 Fluid Mechanics	
MEU44B12	Introduction to Autonomous Mobile Robotics	5	Semester 2	30	70	None	
MEU44B14	Engineering Vibration and Noise	5	Semester 2	75	25	None	

For more information on module descriptors please click the module code

Please note that Modules relate to the 2023/24 Academic Year and are subject to change