

BE (HONS) (ENERGY) ENGINEERING

Programme Requirements

Code	Title	Credits
Year 1		
Students take 60 credits as follows:		
<i>Core Modules</i>		
CE1003	Introduction to Structural and Civil Engineering	5
CE1005	Engineering Computation and Problem Solving	5
CM1001	Chemistry for Engineers	5
EE1007	Introduction to Electrical and Electronic Engineering	5
MA1011	Mathematical Methods I	5
MA1012	Mathematical Methods II	5
ME1002	Engineering Thermodynamics	5
NE1001	Introduction to Energy Engineering	5
PE1003	Introduction to Process and Chemical Engineering	5
PY1006	Physics for Engineers II	5
PY1012	Physics for Engineers 1	10
Year 2		
Students take 60 credits as follows:		
<i>Core Modules</i>		
EG2002	Numerical Methods and Programming	5
CE2001	Solid and Structural Mechanics I	5
CE2003	Fluids I	5
CE2004	Fluids II	5
EE2012	Linear Circuit Analysis	5
EE2013	Non-Linear Circuit Analysis	5
EE2014	Signals and Systems 1	5
EE2015	Signals and Systems 2	5
EE2016	Electrical Power Engineering I	5
EE2017	Electrical Power Engineering II	5
NE2001	Primary Energy Engineering	5
ST1051	Introduction to Probability and Statistics	5
Year 3		
Students take 60 credits as follows:		
<i>Core Modules</i>		
CE3006	Construction Project Management	5
CE3007	Hydraulics I	5
CE3009	Environmental Engineering	5
EE3011	Power Electronics & AC Machines and Systems	5
EE3012	Electric Vehicle Energy Systems	5
EE3016	Control Engineering I	5
ME3003	Mechanical Systems	5
ME3004	Applied Thermodynamics and Work Transfer	5
NE3002	Energy in Buildings	5
NE3003	Sustainable Energy	5
NE3004	Transportation and Energy	5
NE3005	Energy Systems Modelling	5
Year 4		

BE (Hons)

Students take **60** credits as follows – all listed core modules (**35** credits) and **25** credits of elective modules:

Core Modules

EE4010	Electrical Power Systems	5
MG4052	Management in Practice	5
NE4005	Sustainability, Bioenergy and Circular Economy Systems	5
NE4006	Energy Systems in Buildings	5
NE4007	Computer Aided Design VII (Heating, Ventilation and Air Conditioning)	5
NE4020	Energy Engineering Project	10

Elective Modules

Students take modules to the value of **25** credits from the following: **25**

EE4001	Energy Systems, Power Electronics and Drives (5)
EE4002	Control Engineering II (5)
EE4014	Industrial Automation and Control (5)
NE4002	Wind Energy (5)
NE4003	Ocean Energy (5)
NE4008	Photovoltaic Systems (5)
NE4009	BE Energy Placement (5)

Total Credits **240**

Examinations

Full details and regulations governing Examinations for each programme will be contained in the *Marks and Standards Book* and for each module in the *Book of Modules*.