BE (HONS) (PROCESS AND CHEMICAL) ENGINEERING

Programme Requirements

Code	Title	Credits
Year 1		
Students take **60** credits as follows:		
Core Modules		
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:		
Core Modules		
EG2001	Engineering Mechanics with Transform Methods	5
EG2002	Numerical Methods and Programming	5
CE2001	Solid and Structural Mechanics I	5
CE2003	Fluids I	5
CM2010	Introduction to Organic Chemistry for Process and Chemical Engineers	5
PE2003	Heat Transfer	5
PE2004	Communication and Ethics in Engineering	5
PE2005	Introduction to Biochemical Engineering	5
PE2008	Phase Equilibrium and Mass Transfer	5
PE2009	Chemical Reaction Engineering	5
PE2013	Data Analysis for Process and Product Development	5
PE2014	Experimental Methods in Chemical Engineering	5
Year 3		
Students take **60** credits as follows – all listed core modules (**55** credits) and **5** credits of elective modules:		
Core Modules		
CM3029	Organic Chemistry II for Process and Chemical Engineering	5
CM3030	Intermediate Stereochemistry, Reactivity and Mechanisms in Organic Chemistry	5
PE3001	Applied Thermodynamics and Fluid Mechanics	5
PE3002	Unit Operations and Particle Technology	5
PE3003	Phase Equilibrium and Mass Transfer	5
PE3005	Process Equipment; Design, Integrity & Materials	5
PE3007	Process Dynamics and Control	5
PE3011	Sustainability and Environmental Protection I	5
PE3014	Food and Bioprocess Engineering	5
PE3015	Process Safety	5
PE3016	Process Design and Feasibility Analysis	5
Elective Modules [1]		
Students take modules to the value of **5** credits from the following:		5
NE3002	Energy in Buildings (5)	
PE3009	Pharmaceutical Engineering (5)	
Year 4		
Students take **60** credits as follows – all listed core modules (**35** credits) and **25** credits of elective modules:		
Core Modules		
PE4002	Optimisation and Continuous Process Improvement	5
PE4007	Mechanical Design of Process Equipment	5
PE4016	Pharmaceutical Process Validation	5
PE4050	Design Project	15
MG4052	Management in Practice	5
Elective Modules [1]		
Students take modules to the value of **20** credits from the following:		20
CE4016	Energy Systems in Buildings (5)	
CE4024	Progressing Toward Sustainable Industry (5)	
FE4002	Global Food Policy (5)	
ME3004	Applied Thermodynamics and Work Transfer (5)	
MG2003	Consumer Behaviour and Sustainable Consumption (5)	
NE4005	Sustainability, Bioenergy and Circular Economy Systems (5)	
PE4021	BE Work Placement (5)	
Plus modules to the value of **5** credits from the following:		5
NE3003	Sustainable Energy (5)	
PE4010	BioPharmaceutical Engineering (5)	
Total Credits		**240**

[1] Some modules may be pre-requisites for elective modules in subsequent years. While there is no upper limit on the number of students who may take a particular elective module, modules may be withdrawn if there are insufficient entrants.

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*.