

ME PATHWAY (PROCESS AND CHEMICAL) ENGINEERING

Programme Requirements

Code	Title	Credits
Year 1 - Engineering		
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 I	10
Year 2 - Process and Chemical Engineering		
Students take 60 credits as follows:		
<i>Core Modules</i>		
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 - Process and Chemical Engineering		
Students take 60 credits as follows – all listed core modules (55 credits) and 5 credits of elective modules:		
<i>Core Modules</i>		
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:

NE3002	Energy in Buildings	
PE3009	Pharmaceutical Engineering	

Year 4 - ME Pathway Process and Chemical Engineering

Students take **60** credits as follows – all listed core modules (**30** credits) in Part A and a Placement module **30** credits in Part B:

<i>Part A</i>		
<i>Core Modules</i>		
PE4007	Mechanical Design of Process Equipment	5
PE4016	Pharmaceutical Process Validation	5
PE4050	Design Project	15
NE3003	Sustainable Energy	5
or PE4010	BioPharmaceutical Engineering	

<i>Part B</i>		
<i>Core Modules</i>		
PE6060	ME Work Placement	30

Year 5 - ME (Process and Chemical) Engineering

ME (Process and Chemical) Engineering (<https://ucc-ie-public.courseleaf.com/programmes/mepe/>)

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*.