

B.Eng (Hons) in Chemical and Biomolecular Engineering (ABP)

AY2024 - 2025 Intake onwards

with Professional Attachment (CBE ABP)

Programme	Year of Study	Number of Academic Units (AUs)					
		Major Requirement		Interdisciplinary Collaborative Core		Broadening and Deepening Electives (BDE)	Total
		Core (C)	Major PE (MPE)	Common Core (CC)	Foundational Core (FC)		
Chemical & Biomolecular Engineering	1	24/25*		9		6	39/40*
	2	28		8	3		39
	3	25	3		7	9	44
	4		3			11	14
	Total	77/78*	6	17	10	26	136/137*

CBE Accelerated Bachelor Programme (ABP)

Category		AU	Total AU
Interdisciplinary Collaborative Core (ICC)	Common Core (University-level)		
	CC0001 Inquiry and Communication in the Interdisciplinary World	2	17
	CC0002 Navigating the Digital World	2	
	CC0003 Ethics & Civics in a Multi-Cultural World	2	
	CC0005 Healthy Living & Wellbeing	3	
	CC0006 Sustainability: Society, Economy & Environment	3	
	CC0007 Science & Technology for Humanity	3	
	ML0004 Career and Entrepreneurial Development for the Future World	2	
	Foundational Core (College-level)		
Major Requirement	HW0288 Engineering Communication	2	10
	CB0494 Introduction to Data Science and Artificial Intelligence	3	
	CH3910 Professional Attachment	5	
Major Requirement	CBE Core		12/13*
	EG1001 Engineers In Society	2	
	MH1810 Math 1	3	
	PH1011* Physics	3	
	CB1102 Introduction to Chemical and Biomedical Engineering	1	
	CB1103 Organic Chemistry For Engineers	3	

Major Requirement	CB1117	Engineering Mathematics	4	65
	CB1131	Introduction to Biomolecular Engineering	3	
	CH1104	Materials & Energy Balance	3	
	CH1801	Chemical & Biomolecular Engineering Laboratory 1A	1	
	CH1802	Chemical & Biomolecular Engineering Laboratory 2	1	
	CH2010	Engineering Statistics	3	
	CH2103	Fluid Systems	3	
	CH2107	Introduction to Computational Thinking	3	
	CH2108	Thermodynamics	3	
	CH2112	Chemical Reaction Engineering	3	
	CH2114	Heat & Mass Transfer in Chemical and Biological Systems	3	
	CH2123	Chemical Thermodynamics	3	
	CH2151	Unit Operations: Fluid-Solid Separation	3	
	CH2801	Chemical & Biomolecular Engineering Laboratory 2A	2	
	CH2802	Chemical & Biomolecular Engineering Laboratory 2B	2	
	CH3104	Biochemical Engineering	3	
	CH3109	Decision Tools for Business & Engineering	3	
	CH3111	Process Control and Dynamics	3	
	CH3121	Chemical, Biological & Plant Safety	2	
	CH3140	Unit Operations: Fluid-Fluid Separation	3	
	CH3802	Chemical & Biomolecular Engineering Laboratory 5	3	
	CH4801	Final Year Design Project	8	
	CBE Major Prescribed Electives (MPE)			
Broadening and Deepening Electives (BDE)				26
Total				136/137*

**Students without 'A' Level Physics will take 'PH1012 Physics A' (4AU).*

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Suggested Study Plan for AY2024-2025 intake

with Professional Attachment (CBE ABP)**Year 1 Semester 1**

Course		Type	AU
CB1102	Introduction to Chemical and Biomedical Engineering	C	1
CB1131	Introduction to Biomolecular Engineering	C	3
CH1801	Chemical & Biomolecular Engineering Laboratory 1A	C	1
MH1810	Math 1	C	3
PH1011	Physics	C	3
PH1012	Physics A (*For students without 'A' Level Physics) <i>or</i> Physics A (*For students without 'A' Level Physics)		4
CC0001	Inquiry and Communication in the Interdisciplinary World	CC	2
CC0002	Navigating the Digital World	CC	2
	BDE 1	BDE	3
			*
			18 19

Year 2 Semester 1

Course		Type	AU
CH2103	Fluid Systems	C	3
CH2107	Introduction to Computational Thinking	C	3
CH2108	Thermodynamics	C	3
CH2010	Engineering Statistics	C	3
CH2801	Chemical & Biomolecular Engineering Laboratory 2A	C	2
CC0006	Sustainability: Society, Economy & Environment	CC	3
ML0004	Career and Entrepreneurial Development for the Future World	CC	2
			19

Year 3 Semester 1

Course		Type	AU
CH3104	Biochemical Engineering	C	3
CH3109	Decision Tools for Business & Engineering	C	3
CH3111	Process Control and Dynamics	C	3
CH3121	Chemical, Biological & Plant Safety	C	2
CH3140	Unit Operations: Fluid-Fluid Separation	C	3
CH3802	Chemical & Biomolecular Engineering Laboratory 5	C	3
CH4801	Final Year Design Project	C	4
HW0288	Engineering Communication	FC	2
			23

Year 4 Semester 1

Course		Type	AU
	CBE PE 2	MPE	3
	BDE 6	BDE	3
	BDE 7	BDE	3
	BDE 8	BDE	3
	BDE 9	BDE	2
			14

Year 1 Semester 2

Course		Type	AU
CB1103	Organic Chemistry For Engineers	C	3
CB1117	Engineering Mathematics	C	4
CH1104	Materials & Energy Balance	C	3
CH1802	Chemical & Biomolecular Engineering Laboratory 2	C	1
EG1001	Engineers in Society	C	2
CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
CC0005	Healthy Living & Wellbeing	CC	3
	BDE 2	BDE	3
			21

Year 2 Semester 2

Course		Type	AU
CH2112	Chemical Reaction Engineering	C	3
CH2114	Heat & Mass Transfer in Chemical and Biological Systems	C	3
CH2123	Chemical Thermodynamics	C	3
CH2151	Unit Operations: Fluid-Solid Separation	C	3
CH2802	Chemical & Biomolecular Engineering Laboratory 2B	C	2
CC0007	Science & Technology for Humanity	CC	3
CB0494	Introduction to Data Science and Artificial Intelligence	FC	3
			20

Year 3 Semester 2

Course		Type	AU
CH4801	Final Year Design Project	C	4
	CBE PE 1	MPE	3
	BDE 3	BDE	3
	BDE 4	BDE	3
	BDE 5	BDE	3
Year 3 Special Term			
CH3910	Professional Attachment	FC	5
			21

Year 4 Semester 2

Course		Type	AU
			0
Total (AU)			136
			137*

*Students without 'A' Level Physics will take 'PH1012 Physics A' (4AU).