

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

AY2026 - 2027 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)	Professional Series (PS)	Care, Serve, Learn (CSL)		
Chemical & Biomolecular Engineering	1	24		7		3	3	37
	2	28		7	3		2	40
	3	25	3		6		9	43
	4		3		2		11	16
	Total	77	6	14	11		25	136
		78*						137*

CBE Accelerated Bachelor Programme (ABP)

Category		AU	Total AU
Interdisciplinary Collaborative Core (ICC)	Common Core (CC)		
	CC0001 Inquiry and Communication in the Interdisciplinary World	2	14
	CC0003 Ethics & Civics in a Multi-Cultural World	2	
	CC0006 Sustainability: Society, Economy & Environment	3	
	CC0007 Science & Technology for Humanity	3	
	CC0015 Health & Wellbeing	2	
	ML0004 Career Design & Workplace Readiness in a Dynamic World	2	
	Professional Series (PS)		
	CB0494 Introduction to Data Science and Artificial Intelligence	3	11
	HW0288 Engineering Communication	2	
	MLXXXX Professional Preparation	1	
	CH3910 Professional Attachment	5	
	Care, Service, Learn (CSL)		
	Service Learning	3	3
Major Requirement	CBE Core		
	EG1001 Engineers In Society	2	12
	MH1810 Math 1	3	
	PH1011* Physics	3	
	CB1102 Introduction to Chemistry, Chemical Engineering 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)				25
Total				136

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**Students without 'A' Level/Senior High School Physics will take 'PH1012 Physics A' (4AU)*

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

Suggested Study Plan for AY2026-2027 intake

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

Course		Type	AU
CB1102	Introduction to Chemistry, Chemical Engineering 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
	<i>or</i>		
PH1012	Physics A (<i>*For students without 'A' Level Physics</i>)	C	4
CC0001	Inquiry and Communication in the Interdisciplinary World	CC	2
	BDE 1	BDE	3

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16 17**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
CC0007	Science & Technology for Humanity	CC	3
ML0004	Career Design & Workplace Readiness in a Dynamic World	CC	2
	Service Learning	CSL	3

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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
CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
	BDE 2	BDE	2

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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
CC0006	Sustainability: Society, Economy & Environment	CC	3
CC0015	Health & Wellbeing	CC	2
CB0494	Introduction to Data Science and Artificial Intelligence	PS	3

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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
MLXXXX	Professional Preparation	PS	1

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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	PS	5
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Year 4 Semester 1

Course		Type	AU
	CBE PE 2	MPE	3
HW0288	Engineering Communication	PS	2
	BDE 6	BDE	3
	BDE 7	BDE	3
	BDE 8	BDE	3
	BDE 9	BDE	2

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Year 4 Semester 2

Course		Type	AU
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Total (AU)

136

137*

*Students without 'A' Level/Senior High School Physics will take 'PH1012 Physics A' (4AU)