

B.Eng (Hons) in Chemical and Biomolecular Engineering with 2nd Major in Entrepreneurship

with Professional Internship

AY2022 - 2023 Intake onwards (CBET)

Programme	Year of Study	Number of Academic Units (AU)					
		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 with Second Major Entrepreneurship (CBET)	1	24/25*		9		6	39/40*
	2	28		8	3	6	45
	3	17			7	5	29
	4	8	6			13	27
	Total	77/78*	6	17	10	30	140/141*

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)		
	HW0288 Engineering Communication	2	5
	CB0494 Introduction to Data Science and Artificial Intelligence	3	
Major Requirement	CBE Core		
	EG1001 Engineers In Society	2	22
	MH1810 Math 1	3	
	PH1011* Physics	3	
	CB1102 Introduction to Chemical and Biomedical Engineering	1	
	CB1103 Organic Chemistry For Engineers	3	
	CB1117 Engineering Mathematics	4	
	CB1131 Introduction to Biomolecular Engineering	3	
	CH1104 Materials & Energy Balance	3	

Major Requirement	CH1801	Chemical & Biomolecular Engineering Laboratory 1A	1	55
	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)			
2nd Major in Entrepreneurship (BDEs)	Compulsory Courses			35^
	ET5211	Technopreneurial Mindset	3	
	ET5212	Entrepreneurial Ecosystems	3	
	ET5213	Managing New Ventures	3	
	ET5214	Financing Entrepreneurial Ventures	3	
	Compulsory Experiential Programme			
	EG3902	Overseas Entrepreneurship Programme (OEP)	10^	
	OR			
	BG3880	Professional Internship (PI)		
Elective Courses (at least 4 courses)			13	
Total				140/141*

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

^5 AU out of the 10AU is from ICC Foundational Core

B.Eng. (Chemical & Biomolecular Engineering) with 2nd Major in in Entrepreneurship
Suggested Study Plan for AY2022-2023 intake (CBET)
with Professional Internship

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 <i>Physics A (* For students without 'A' Level Physics)</i>		4
CC0001 Inquiry and Communication in the Interdisciplinary World	CC	2
CC0002 Navigating the Digital World	CC	2
ET5211 Technopreneurial Mindset	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
ET5212 Entrepreneurial Ecosystems	BDE	3
		22

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
HW0288 Engineering Communication	FC	2
		19

Year 4 Semester 1

Course	Type	AU
CH4801 Final Year Design Project	C	4
CBE PE 1	MPE	3
CBE PE 2	MPE	3
Entrepreneurship Elective 1	BDE	3
Entrepreneurship Elective 2	BDE	4
		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
CC0003 Ethics & Civics in a Multi-Cultural World	CC	2
CC0005 Healthy Living & Wellbeing	CC	3
ET5213 Managing New Ventures	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
ET5214 Financing Entrepreneurial Ventures	BDE	3
		23

Year 3 Semester 2

Course	Type	AU
EG3902 Overseas Entrepreneurship Programme	FC/ BDE	10
OR		
BG3880 Professional Internship	FC/ BDE	
		10

Year 4 Semester 2

Course	Type	AU
CH4801 Final Year Design Project	C	4
Entrepreneurship Elective 3	BDE	3
Entrepreneurship Elective 4	BDE	3
		10
Total (AU)		140
		141*

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