

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

with Professional Internship

AY2023 - 2024 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			12		29
	4	8	6			13	27
	Total	77/78*	6	17	15	25	140/141*

Category		AU	Total AU
Interdisciplinary Collaborative Core (ICC)	<b>Common Core (University-level)</b>		
	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	
	<b>Foundational Core (College-level)</b>		
	HW0288 Engineering Communication	2	5
	CB0494 Introduction to Data Science and Artificial Intelligence	3	
Major Requirement	<b>CBE Core</b>		
	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)	<b>Compulsory Courses</b>			35^
	ET5211	Technopreneurial Mindset	3	
	ET5212	Entrepreneurial Ecosystems	3	
	ET5213	Managing New Ventures	3	
	ET5214	Financing Entrepreneurial Ventures	3	
	<b>Compulsory Experiential Programme</b>			
	CH3940	Overseas Entrepreneurship Programme (OEP)	10^	
	OR			
BG3920	Professional Internship (PI)			
<b>Elective Courses</b> (at least 4 courses)			13	
<b>Total</b>				
			<b>140/141*</b>	

\*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 AY2023-2024 intake (CBET)**  
**with Professional Internship**

Year 1 Semester 1				Year 1 Semester 2			
Course		Type	AU	Course		Type	AU
CB1102	Introduction to Chemical and Biomedical Engineering	C	1	CB1103	Organic Chemistry For Engineers	C	3
CB1131	Introduction to Biomolecular Engineering	C	3	CB1117	Engineering Mathematics	C	4
CH1801	Chemical & Biomolecular Engineering Laboratory 1A	C	1	CH1104	Materials & Energy Balance	C	3
MH1810	Math 1	C	3	CH1802	Chemical & Biomolecular Engineering Laboratory 2	C	1
PH1011	Physics	C	3	EG1001	Engineers in Society	C	2
PH1012	Physics A (* For students without 'A' Level Physics)		4	CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
CC0001	Inquiry and Communication in the Interdisciplinary World	CC	2	CC0005	Healthy Living & Wellbeing	CC	3
CC0002	Navigating the Digital World	CC	2	ET5213	Managing New Ventures	BDE	3
ET5211	Technopreneurial Mindset	BDE	3				
			18				21
			19				
Year 2 Semester 1				Year 2 Semester 2			
Course		Type	AU	Course		Type	AU
CH2103	Fluid Systems	C	3	CH2112	Chemical Reaction Engineering	C	3
CH2107	Introduction to Computational Thinking	C	3	CH2114	Heat & Mass Transfer in Chemical and Biological Systems	C	3
CH2108	Thermodynamics	C	3	CH2123	Chemical Thermodynamics	C	3
CH2010	Engineering Statistics	C	3	CH2151	Unit Operations: Fluid-Solid Separation	C	3
CH2801	Chemical & Biomolecular Engineering Laboratory 2A	C	2	CH2802	Chemical & Biomolecular Engineering Laboratory 2B	C	2
CC0006	Sustainability: Society, Economy & Environment	CC	3	CC0007	Science & Technology for Humanity	CC	3
ML0004	Career and Entrepreneurial Development for the Future World	CC	2	CB0494	Introduction to Data Science and Artificial Intelligence	FC	3
ET5212	Entrepreneurial Ecosystems	BDE	3	ET5214	Financing Entrepreneurial Ventures	BDE	3
			22				23
Year 3 Semester 1				Year 3 Semester 2			
Course		Type	AU	Course		Type	AU
CH3104	Biochemical Engineering	C	3	CH3940	Overseas Entrepreneurship Programme	FC/ BDE	10
CH3109	Decision Tools for Business & Engineering	C	3		OR		
CH3111	Process Control and Dynamics	C	3	CH3920	Professional Internship	FC/ BDE	
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				10
Year 4 Semester 1				Year 4 Semester 2			
Course		Type	AU	Course		Type	AU
CH4801	Final Year Design Project	C	4	CH4801	Final Year Design Project	C	4
	CBE PE 1	MPE	3		Entrepreneurship Elective 3	BDE	3
	CBE PE 2	MPE	3		Entrepreneurship Elective 4	BDE	3
	Entrepreneurship Elective 1	BDE	3				
	Entrepreneurship Elective 2	BDE	4				
			17				10
							140
							141*

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