

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

with Professional Internship

AY2023 - 2024 Intake onwards (CBBM)

Programme	Year of Study	Number of Academic Unit (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 in Business	1	24/25*		9		6	39/40*
	2	28		8	3	6	45
	3	17			12	6	35
	4	8	6			12	26
	Total	77/78*	6	17	15	30	145/146*

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	15
	CB0494 Introduction to Data Science and Artificial Intelligence	3	
	CH3920 Professional Internship	10	
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)			6
2nd Major in Business (BDEs)	<b>Foundation Business Courses</b>			30
	AB1201	Financial Management	3	
	AB1301	Business Law	3	
	AB1501	Marketing	3	
	AB1601	Organisational Behaviour & Design	3	
	AD1102	Financial Accounting	3	
	BE1402	Business Operations & Process	3	
	<b>Advanced Business Courses</b>			
	AD2102	Management Accounting	3	
	BE2602	Management in Principles, Skills & Competencies	3	
	BF2219	Investments	3	
	BM2509	Consumer Insights	3	
<b>Total</b>				<b>145/146*</b>

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

<b>B.Eng. (Chemical &amp; Biomolecular Engineering) with 2nd Major in Business (Mainstream)</b>					
Suggested Study Plan for AY2023-2024 intake (CBBM)					
<u>with Professional Internship</u>					
<b>Year 1 Semester 1</b>			<b>Year 1 Semester 2</b>		
<b>Course</b>	<b>Type</b>	<b>AU</b>	<b>Course</b>	<b>Type</b>	<b>AU</b>
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)	C	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	AB1501 Marketing	BDE	3
AB1201 Financial Management	BDE	3			
		*			
	<b>18</b>	<b>19</b>			<b>21</b>
<b>Year 2 Semester 1</b>			<b>Year 2 Semester 2</b>		
<b>Course</b>	<b>Type</b>	<b>AU</b>	<b>Course</b>	<b>Type</b>	<b>AU</b>
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
AD1102 Financial Accounting	BDE	3	AB1601 Organisational Behaviour & Design	BDE	3
	<b>22</b>				<b>23</b>
<b>Year 3 Semester 1</b>			<b>Year 3 Semester 2</b>		
<b>Course</b>	<b>Type</b>	<b>AU</b>	<b>Course</b>	<b>Type</b>	<b>AU</b>
CH3104 Biochemical Engineering	C	3	CH3920 Professional Internship	FC	10
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			
AB1301 Business Law	BDE	3			
AD2102 Management Accounting	BDE	3			
	<b>25</b>				<b>10</b>
<b>Year 4 Semester 1</b>			<b>Year 4 Semester 2</b>		
<b>Course</b>	<b>Type</b>	<b>AU</b>	<b>Course</b>	<b>Type</b>	<b>AU</b>
CH4801 Final Year Design Project	C	4	CH4801 Final Year Design Project	C	4
CBE PE 1	MPE	3	BE1402 Business Operations and Processes	BDE	3
CBE PE 2	MPE	3	BM2509 Consumer Insights	BDE	3
BE2602 Management in Principles, Skills & Competencies	BDE	3			
BF2219 Investments	BDE	3			
	<b>16</b>				<b>10</b>
			<b>Total (AU)</b>		<b>145</b>
					<b>146*</b>

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