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

<u>with Professional Internship</u> AY2022 - 2023 Intake onwards

		Number of Academic Unit (AU)						
Programme	Year of Study	Major Requirement		Interdisciplinary Collaborative Core		Broadening and Deepening	Total	
		Core (C)	Major PE (MPE)	Common Core (CC)	Foundational Core (FC)	Electives (BDE)		
Chemical &	1	24/25*		9		6	39/40*	
Biomolecular	2	28		8	3	6	45	
Engineering with	3	17			12	6	35	
Second Major in	4	8	6			12	26	
Business	Total	77/78*	6	17	15	30	145/146*	

Category			AU	Total AU
	Common C	Core (University-level)		
	CC0001 Inc	quiry and Communication in the Interdisciplinary	2	
	CC0002 Na	vigating the Digital World	2	
Interdisciplinary Collaborative Core (ICC)	CC0003 Eth	nics & Civics in a Multi-Cultural World	2	
	CC0005 He	althy Living & Wellbeing	3	17
	CC0006 Su	stainability: Society, Economy & Environment	3	
	CC0007 Sci	ence & Technology for Humanity	3	
	ML0004 Ca Future Wo	reer and Entrepreneurial Development for the rld	2	
	F	and Cove (College Lovel)	I	
	1	nal Core (College-level)		
	HW0288 E	ngineering Communication	2	
	CB0494 Int	roduction to Data Science and Artificial Intelligence	3	15
	CH3880 Pr	ofessional Internship	10	
	1		1	T
	CBE Core		_	
	EG1001	Engineers In Society	2	
	MH1810	Math 1	3	
	PH1011*	Physics	3	
Major Requirement	CB1102	Introduction to Chemical and Biomedical Engineering	1	22
	CB1103	Organic Chemistry For Engineers	3	
	CB1117	Engineering Mathematics	4	
	CB1131	Introduction to Biomolecular Engineering	3	
	CH1104	Materials & Energy Balance	3	

		Chemical & Biomolecular Engineering Laboratory		
	CH1801	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 Seperation	3	
Major Requirement	CH2801	Chemical & Biomolecular Engineering Laboratory 2A	2	55
	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 I	Prescribed Electives (MPE)		6
	Foundation	Business Courses		
	AB1201	Financial Management	3	
	AB1301	Business Law	3	
	AB1501	Marketing	3	
	AB1601	Organisational Behaviour & Design	3	
	AD1102	Financial Accounting	3	
2nd Major in	BE1402	Business Operations & Process	3	30
Business (BDEs)	Advanced E	Business Courses		
	AD2102	Management Accounting	3	
	BE2602	Management in Principles, Skills & Competencies	3	
	BF2219	Investments	3	
	BM2509	Consumer Insights	3	
Total				1/15 /1/4/5*
Total				145/146*

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

Year 1 S Course	emester 1	Type	AU		Year 1 Se Course	emester 2	Type	AU
CB1102	Introduction to Chemical and Biomedical	С	1	-	CB1103	Organic Chemistry For Engineers	С	3
CB1131	Engineering Introduction to Biomolecular Engineering	С	3		CB1117	Engineering Mathematics	С	4
CH1801	Chemical & Biomolecular Engineering	С	1		CH1104		С	3
λΠ 10U I	Laboratory 1A	C	'		CH1104	Materials & Energy Balance	C	3
ИН1810	Math 1	С	3		CH1802	Chemical & Biomolecular Engineering Laboratory 2	С	1
PH1011	Physics	С	3		EG1001 CC0003	Engineers in Society Ethics & Civics in a Multi-Cultural World	C CC	2
PH1012	or Physics A (* For students without 'A' Level Physics)	С	4			Healthy Living & Wellbeing	CC	3
CC0001	Inquiry and Communication in the Interdisciplinary World	СС	2		AB1501	Marketing	BDE	3
CC0002 AB1201	Navigating the Digital World Financial Management	CC BDE	2					
	<u> </u>		18	* - 19				21
			10	13				41
	emester 1					emester 2		
Course CH2103	Fluid Systems	Type C	<u>AU</u> 3	-	Course CH2112	Chemical Reaction Engineering	Type C	AL 3
	•					Heat & Mass Transfer in Chemical and		
CH2107	Introduction to Computational Thinking	С	3		CH2114	Biological Systems	С	3
CH2108 CH2010	Thermodynamics Engineering Statistics	C C	3 3		CH2123 CH2151	Chemical Thermodynamics Unit Operations: Fluid-Solid Seperation	C C	3
CH2801	Chemical & Biomolecular Engineering Laboratory 2A	С	2		CH2802	Chemical & Biomolecular Engineering Laboratory 2B	С	2
C0006	Sustainability: Society, Economy & Environment	CC	3		CC0007	Science & Technology for Humanity	CC	3
	Career and Entrepreneurial Development for	00	_			Introduction to Data Science and Artificial	F0	2
ИL0004		CC	2		CB0494		FC	3
ML0004 AD1102	the Future World Financial Accounting	BDE	2 3 22	-	AB1601	Intelligence Organisational Behaviour & Design	BDE	3
AD1102 Year 3 S	the Future World		3	-	AB1601	Intelligence		23
Year 3 S Course CH3104	the Future World Financial Accounting emester 1 Biochemical Engineering	Type C	3 22 AU 3	-	Year 3 Se	Organisational Behaviour & Design	BDE	3 23 AL
Year 3 S Course CH3104 CH3109	emester 1 Biochemical Engineering Decision Tools for Business & Engineering	Type C C	3 22 AU 3 3	-	Year 3 Se	Intelligence Organisational Behaviour & Design emester 2	BDE	3 23 AL
Year 3 S Course CH3104 CH3109 CH3111	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics	Type C	3 22 AU 3	-	Year 3 Se	Intelligence Organisational Behaviour & Design emester 2	BDE	3 23 Al
Year 3 S Course CH3104 CH3109	emester 1 Biochemical Engineering Decision Tools for Business & Engineering	Type C C C	3 22 AU 3 3 3 3	-	Year 3 Se	Intelligence Organisational Behaviour & Design emester 2	BDE	3 2: Al
Year 3 S Course CH3104 CH3109 CH3111 CH3121	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering	Type C C C C	3 22 AU 3 3 3 2	-	Year 3 Se	Intelligence Organisational Behaviour & Design emester 2	BDE	3 23 Al
Year 3 S Course CH3104 CH3109 CH3111 CH3121 CH3802	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering Laboratory 5	Type C C C C C	3 22 AU 3 3 3 2 3 3	-	Year 3 Se	Intelligence Organisational Behaviour & Design emester 2	BDE	3 23 Al
Year 3 S Course CH3104 CH3109 CH3111 CH3121 CH3121 CH3802 HW0288	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering Laboratory 5 Engineering Communication Business Law	Type C C C C	3 22 AU 3 3 3 2 3	-	Year 3 Se	Intelligence Organisational Behaviour & Design emester 2	BDE	3 23 Al
Year 3 S Course CH3104 CH3109 CH3111 CH3121 CH3140 CH3802 HW0288 AB1301	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering Laboratory 5 Engineering Communication	Type C C C C C F C	3 22 AU 3 3 3 2 3 3 2		Year 3 Se	Intelligence Organisational Behaviour & Design emester 2	BDE	3 23 Al
Year 3 S Course CH3104 CH3109 CH3111 CH3121 CH3140 CH3802 HW0288 AB1301	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering Laboratory 5 Engineering Communication Business Law	Type C C C C C FC BDE	3 22 AU 3 3 3 2 3 3 2 3	-	Year 3 Se	Intelligence Organisational Behaviour & Design emester 2	BDE	3 2: Al
Year 3 S Course CH3104 CH3109 CH3111 CH3121 CH3121 CH3802 HW0288 AB1301 AD2102	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering Laboratory 5 Engineering Communication Business Law Management Accounting	Type C C C C C FC BDE	3 22 AU 3 3 3 2 3 3 2 3 3 2	-	Year 3 Se Course CH3880	Intelligence Organisational Behaviour & Design emester 2 Professional Internship	BDE	2: All
Year 3 S Course CH3104 CH3109 CH3111 CH3121 CH3121 CH3802 HW0288 AB1301 AD2102	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering Laboratory 5 Engineering Communication Business Law	Type C C C C C FC BDE	3 22 AU 3 3 3 2 3 3 2 3 3 2	-	Year 3 Se Course CH3880	Intelligence Organisational Behaviour & Design emester 2	BDE	2: All
Year 3 S Course CH3104 CH3109 CH3111 CH3121 CH3121 CH3802 HW0288 HB1301 LD2102	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering Laboratory 5 Engineering Communication Business Law Management Accounting	Type C C C C C C BDE BDE	3 22 AU 3 3 3 2 3 3 2 3 3 2 2 3	-	Year 3 Se Course CH3880	Intelligence Organisational Behaviour & Design emester 2 Professional Internship	Type FC	AI 10
Year 3 S Course CH3104 CH3109 CH3111 CH3121 CH3121 CH3802	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering Laboratory 5 Engineering Communication Business Law Management Accounting emester 1 Final Year Design Project CBE PE 1	Type C C C C C FC BDE BDE Type C MPE	3 22 AU 3 3 3 2 3 3 2 3 3 2 4 3	-	Year 3 Se Course CH3880 Year 4 Se Course CH4801 BE1402	Intelligence Organisational Behaviour & Design emester 2 Professional Internship emester 2 Final Year Design Project Business Operations and Processes	Type FC Type C BDE	10 Al
Year 3 S Course CH3104 CH3109 CH3111 CH3121 CH3121 CH3802 W0288 B1301 ND2102	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering Laboratory 5 Engineering Communication Business Law Management Accounting emester 1 Final Year Design Project CBE PE 1 CBE PE 2 Management in Principles, Skills &	Type C C C C C C FC BDE BDE Type C	3 22 AU 3 3 3 2 3 3 2 3 3 2 4	-	Year 3 Se Course CH3880 Year 4 Se Course CH4801 BE1402	Intelligence Organisational Behaviour & Design emester 2 Professional Internship emester 2 Final Year Design Project	Type FC Type C	10 Al
Year 3 S Course CH3104 CH3109 CH3111 CH3121 CH3140 CH3802 HW0288 NB1301 ND2102 Year 4 S Course CH4801	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering Laboratory 5 Engineering Communication Business Law Management Accounting emester 1 Final Year Design Project CBE PE 1 CBE PE 2	Type C C C C C C BDE BDE Type C	3 22 AU 3 3 3 2 3 3 2 3 3 2 4 4 3 3	-	Year 3 Se Course CH3880 Year 4 Se Course CH4801 BE1402	Intelligence Organisational Behaviour & Design emester 2 Professional Internship emester 2 Final Year Design Project Business Operations and Processes	Type FC Type C BDE	10 Al
Year 3 S Course CH3104 CH3109 CH3111 CH3121 CH3140 CH3802 HW0288 NB1301 ND2102 Year 4 S Course CH4801	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering Laboratory 5 Engineering Communication Business Law Management Accounting emester 1 Final Year Design Project CBE PE 1 CBE PE 2 Management in Principles, Skills & Competencies	Type C C C C C FC BDE BDE Type C MPE MPE BDE	3 22 AU 3 3 3 2 3 3 2 3 3 2 4 3 3 3 3 3 3 3 3 3		Year 3 Se Course CH3880 Year 4 Se Course CH4801 BE1402	Intelligence Organisational Behaviour & Design emester 2 Professional Internship emester 2 Final Year Design Project Business Operations and Processes	Type FC Type C BDE	10 Al
Year 3 S Course CH3104 CH3109 CH3111 CH3121 CH3121 CH3802	emester 1 Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation Chemical & Biomolecular Engineering Laboratory 5 Engineering Communication Business Law Management Accounting emester 1 Final Year Design Project CBE PE 1 CBE PE 2 Management in Principles, Skills & Competencies	Type C C C C C FC BDE BDE Type C MPE MPE BDE	3 22 AU 3 3 3 2 3 3 2 3 3 2 4 3 3 3 3 3 3 3 3 3	-	Year 3 Se Course CH3880 Year 4 Se Course CH4801 BE1402	Intelligence Organisational Behaviour & Design emester 2 Professional Internship emester 2 Final Year Design Project Business Operations and Processes	Type FC Type C BDE	10 Al

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