## Double Degree in Engineering and Economics B.Eng (Hons) in Chemical & Biomolecular Engineering and BSocSci (Hons) in Economics

AY2022 - 2023 Intake onwards with Professional Internship

Programme		Number of Academic Units (AUs)						
	Year of Study	Major Requirement			isciplinary rative Core	Broadening and		
	·	Core (C)	Major PE (MPE)	Common Core (CC)	Foundational Core (FC)	Deepening Electives	Total	
Double Degree in	1	36/37*		9			45/46*	
Double Degree in	2	34		8	3		45	
Chemical & Biomolecular	3	20			12		32	
	4	14	22				36	
Engineering and Economics (PI)	5		14			3	17	
Economics (Pi)		104/105*	36	17	15	3	175/176*	
		Individu	al Degree	e Require	ments			
	1	24/25*		9				
Chemical &	2	28		8	3			
Biomolecular	3	17			12			
Engineering (PI)	4	8	6					
Linginieering (Fi)	5							
	Total	77/78*	6	17	15	21	136/137*	
	1	12		9				
	2	6		8	3			
Economics	3	3			12			
Leonomics	4	14	16					
	5		14					
	Total	35	30	17	15	30	127	

## B.Eng (Hons) in Chemical & Biomolecular Engineering and BSocSci (Hons) in Economics

Category			AU	Total AU
Interdisciplinary Collaborative Core (ICC)  Four HW CBC	CC0001 In Interdiscip CC0002 N CC0003 Et CC0005 H CC0006 Su Environme CC0007 So ML0004 C	Core (University-level) Iquiry and Communication in the olinary World Environmental World Shics & Civics in a Multi-Cultural World ealthy Living & Wellbeing Sustainability: Society, Economy & Sent Science & Technology for Humanity Career and Entrepreneurial Development ture World	2 2 2 3 3 3 2	17
	HW0288 E CB0494 In Intelligend	Engineering Communication Stroduction to Data Science and Artificial Sce Trofessional Internship	2 3 10	15
	CBE Core	(6)		T
Major Requirement	EG1001	Engineers In Society  Math 1	2 3 3 1 3 4 3 1	39
	CH2010 CH2103	Engineering Statistics Fluid Systems	3	
	CH2107	Introduction to Computational Thinking	3	
	CH2108 CH2112	Thermodynamics Chemical Reaction Engineering	3 3	

Total				175/176*
Broadening and [	Deepening E	Electives (BDE)		3
		······ (5 55 5. 555)		
	CBE Majo Econs Lev	escribe Electives (MPE) r Prescribed Electives (2 courses) rel 3xxx (6 courses) rel 4xxx (3 courses)	6 18 12	36
	MH1820	Statistical Methods	3	
	HE3002 HE3003	Macroeconomics III Econometrics II Introduction to Probability and	3	
	HE2003 HE3001	Econometrics I Microeconomics III	3	27
	HE2002	Macroeconomics II	3	
	HE1001 HE1002 HE2001	Microeconomics I Macroeconomics I Microeconomics II	3 3 3	
	Econs Coi	• •	2	
Requirement	CH4801	Final Year Design Project	8	
Major Requirement	CH3802	Chemical & Biomolecular Engineering Laboratory 5	3	
	CH3140	Unit Operations: Fluid-Fluid Separation	3	
	CH3121	Chemical, Biological & Plant Safety	2	
	CH3111	Process Control and Dynamics	3	
	CH3109	Decision Tools for Business & Engineering	3	
	CH3104	Laboratory 2B Biochemical Engineering	3	38
	CH2802	Chemical & Biomolecular Engineering	2	
	CH2801	Chemical & Biomolecular Engineering Laboratory 2A	2	
	CH2151	Unit Operations: Fluid-Solid Seperation	3	
	CH2123	Chemical Thermodynamics	3	
	CH2114	Heat & Mass Transfer in Chemical and Biological Systems	3	

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

Year 1 Sei	mester 1				Year 1 Sem	ester 2		
Course	Introduction to Chemical and Biomedical	Type	AU	_	Course		Type	A
CB1102	Engineering	С	1		CB1103	Organic Chemistry For Engineers	С	3
CB1131	Introduction to Biomolecular Engineering	С	3		CB1117	Engineering Mathematics	С	4
CH1801	Chemical & Biomolecular Engineering Laboratory 1A	С	1		CH1104	Materials & Energy Balance	С	3
41.14.04.0	Math 1	С	0		0114000	Chemical & Biomolecular Engineering Laboratory	С	
MH1810			3		CH1802	2		1
PH1011	Physics <u>or</u>	С	3		EG1001 CC0003	Engineers in Society Ethics & Civics in a Multi-Cultural World	C CC	2
PH1012	Physics A (* For students without 'A' Level Physics)		4		CC0005	Healthy Living & Wellbeing	CC	3
	Inquiry and Communication in the Interdisciplinary							
CC0001	World	CC	2		HE2001	Microeconomics II	С	3
CC0002	Navigating the Digital World	CC	2		HE2002	Macroeconomics II	С	3
HE1001 HE1002	Microeconomic I Macroeconomic I	C C	3 3					
12.002				*				
			21	22				2
rear 2 Sei	mester 1				Year 2 Sem	ester 2		
Course	Fluid Courts	Type	AU	_	Course	Observiced Parentin 5	Туре	Α
CH2103	Fluid Systems	С	3		CH2112	Chemical Reaction Engineering Heat & Mass Transfer in Chemical and Biological	С	3
CH2107	Introduction to Computational Thinking	С	3		CH2114	Systems	С	3
CH2108	Thermodynamics	С	3		CH2123	Chemical Thermodynamics	С	3
CH2010	Engineering Statistics	С	3		CH2151	Unit Operations: Fluid-Solid Seperation	С	3
CH2801	Chemical & Biomolecular Engineering Laboratory 2A	С	2		CH2802	Chemical & Biomolecular Engineering Laboratory 2B	С	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
HE3001	Microeconomics III	С	3		MH1820	Introduction to Probability and Statistical Methods	С	3
HE3001	Microeconomics III	С	22		MH1820	Introduction to Probability and Statistical Methods	С	
Year 3 Sei Course	mester 1	Туре	22 AU	-	Year 3 Sem Course	iester 2	Туре	2: Al
Year 3 Ser Course CH3104 CH3109	mester 1  Biochemical Engineering Decision Tools for Business & Engineering	Type C C	22 AU 3 3	-	Year 3 Sem			2: Al
Year 3 Sei Course CH3104 CH3109 CH3111	mester 1  Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics	Type C C C	22 AU 3 3 3	-	Year 3 Sem Course	iester 2	Туре	2 A
Year 3 Sei Course CH3104 CH3109 CH3111 CH3121	mester 1  Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety	Type C C C	22 AU 3 3 3 2	-	Year 3 Sem Course	iester 2	Туре	2 A
Year 3 Ser Course CH3104 CH3109 CH3111 CH3121 CH3140	mester 1  Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation	Type C C C C	22 AU 3 3 3 2 3	-	Year 3 Sem Course	iester 2	Туре	2 A
Year 3 Ser Course CH3104 CH3109 CH3111 CH3121 CH3140 CH3802	mester 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	22 AU 3 3 3 2 3 3	-	Year 3 Sem Course	iester 2	Туре	2: Al
Year 3 Ser Course CH3104 CH3109 CH3111 CH3121 CH3140 CH3802 HW0288	mester 1  Biochemical Engineering Decision Tools for Business & Engineering Process Control and Dynamics Chemical, Biological & Plant Safety Unit Operations: Fluid-Fluid Separation	Type C C C C	22 AU 3 3 3 2 3	-	Year 3 Sem Course	iester 2	Туре	2 A
Year 3 Ser Course CH3104 CH3109 CH3111 CH3121 CH3140	mester 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	22 AU 3 3 3 2 3 3 2	-	Year 3 Sem Course	iester 2	Туре	23 AI 10
Year 3 Sei Course CH3104 CH3109 CH3111 CH3121 CH3140 CH3802 HW0288 HE3002	mester 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 Macroeconomics III	Type C C C C C	22 AU 3 3 3 2 3 3 2 3	-	Year 3 Sem Course CH3880	Professional Internship	Туре	23 AI 10
Year 3 Ser Course CH3104 CH3109 CH3111 CH3140 CH3140 CH3802 HW0288 HE3002	mester 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 Macroeconomics III	Type C C C C C	22 AU 3 3 3 2 3 3 2 3	-	Year 3 Sem Course	Professional Internship	Туре	23 AA 10
Year 3 Sei Course CH3104 CH3109 CH3111 CH3121 CH3140 CH3802 HW0288 HE3002	mester 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 Macroeconomics III	Type C C C C C C C C	22 AU 3 3 3 2 3 3 2 3	-	Year 3 Sem Course CH3880	Professional Internship	Type FC	23 Al 10 Al
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Year 3 Sei Course CH3104 CH3109 CH3111 CH3111 CH3140 CH3802 HW0288 HE3002 Year 4 Sei Course	mester 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 Macroeconomics III  mester 1  Final Year Design Project CBE PE 1 Econometrics I	Type C C C C C Type C	22 AU 3 3 3 2 3 2 3 2 4 AU 4 3 3 3 3 3		Year 3 Sem Course CH3880 Year 4 Sem Course	Professional Internship  Dester 2  Final Year Design Project CBE PE 2 Econometrics II	Type FC  Type C MPE C	23 AA 10 AA 4 3 3 3 3 3
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Year 3 Sei Course CH3104 CH3109 CH3111 CH31121 CH3121 CH3802 HW0288 HE3002 Year 4 Sei Course CH4801 HE2003	mester 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 Macroeconomics III  mester 1  Final Year Design Project CBE PE 1 Econometrics I Econ PE3XXX 1 Econ PE3XXX 2 Econ PE3XXX 3	Type C C C C C Type C MPE C MPE MPE MPE MPE MPE	22 AU 3 3 3 2 3 2 2 4 3 3 3 3 1 9 AU 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		Year 3 Sem Course CH3880 Year 4 Sem Course CH4801 HE3003	Professional Internship  Hester 2  Final Year Design Project CBE PE 2 Econometrics II Econ PE3XXX 4 Econ PE4XXX 1	Type FC  Type C MPE C MPE MPE	10 A A 3 3 3 4 4
Year 3 Sei Course CH3104 CH3109 CH3111 CH31121 CH3121 CH3802 HW0288 HE3002 Year 4 Sei Course CH4801 HE2003	mester 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 Macroeconomics III  mester 1  Final Year Design Project CBE PE 1 Econometrics I Econ PE3XXX 1 Econ PE3XXX 2 Econ PE3XXX 3  mester 1  BDE 1 Econ PE3XXX 5 Econ PE3XXX 6 Econ PE4XXX 6 Econ PE4XXX 2	Type C C C C C C Type C MPE	22 AU 3 3 3 2 3 2 2 4 4 3 3 3 3 1 19 AU 3 3 4		Year 3 Sem Course CH3880 Year 4 Sem Course CH4801 HE3003	Professional Internship  Hester 2  Final Year Design Project CBE PE 2 Econometrics II Econ PE3XXX 4 Econ PE4XXX 1	Type FC  Type C MPE C MPE MPE	2. AA 11 11 AA 33 33 44 11 11 11 11 11 11 11 11 11 11 11 11
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<sup>\*</sup>Students without 'A' Level Physics will take 'PH1012 Physics A' (4AU).