

**B.Eng (Hons) in Chemical and Biomolecular Engineering
with 2nd Major in Future Foods**

with Professional Internship

AY2026 - 2027 Intake onwards (CBFF)

Programme	Year of Study	Number of Academic Unit (AU)						
		Major Requirement		Interdisciplinary			Broadening and Deepening Electives (BDE)	Total
		Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Service, Learn (CSL)		
Chemical & Biomolecular Engineering with Second Major in FF	1	24		7		3		34
	2	28	3 [3]	7			3	41
	3	17			13			30
	4	8	3 [3]		3		21	35
	Total	77	6 [6]	14	16	3	24	140

*78

141*

Category		AU	Total AU
Interdisciplinary Collaborative Core (ICC)	Common Core (CC)		
	CC0001 Inquiry and Communication in the Interdisciplinary World	2	14
	CC0003 Ethics & Civics in a Multi-Cultural World	2	
	CC0006 Sustainability: Society, Economy & Environment	3	
	CC0007 Science & Technology for Humanity	3	
	CC0015 Health & Wellbeing	2	
	ML0004 Career Design & Workplace Readiness in a Dynamic World	2	
	Professional Series (PS)		
	CB0494 Introduction to Data Science and Artificial Intelligence	3	16
	HW0288 Engineering Communication	2	
	MLXXXX Professional Preparation	1	
	CH3920 Professional Internship	10	
	Care, Service, Learn (CSL)		
	Service Learning	3	3
	CBE Core		
	EG1001 Engineers In Society	2	
	MH1810 Math 1	3	
	PH1011* Physics	3	
	CB1102 Introduction to Chemistry, Chemical Engineering 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	
	CH1801 Chemical & Biomolecular Engineering Laboratory 1A	1	

Major Requirement	CH1802	Chemical & Biomolecular Engineering Laboratory 2	1	77	
	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)				
	CH5220^	Food Standard - Food Safety & Risk Assessment	3^	6	
CH5222^	Future Foods - Introduction to Advanced Meat Alternatives	3^			
2nd Major in Future Foods (BDEs)	FF Core Courses			24	
	CH5210	Food Process Technologies and New Production Systems	3		
	CH5211	Data Analytics in Food Systems	3		
	CH5220^	Food Standard - Food Safety & Risk Assessment	-		
	CH5222^	Future Foods - Introduction to Advanced Meat Alternatives	-		
	CM5101	Food Chemistry & Nutrition	3		
	FF Electives				
5 Electives / Minimum 15AU		15			
Total				140	

141*

*Students without 'A' Level/Senior High School Physics will take 'PH1012 Physics A' (4AU)

^Counted towards 2nd Major in FF requirement (total 6AU)

[] AU of courses that could be used to fulfil Core/MPE requirement and 2nd Major requirement concurrently

B.Eng. (Chemical & Biomolecular Engineering) with 2nd Major in Future Foods

Suggested Study Plan for AY2026-2027 intake (CBFF)

with Professional Internship

Year 1 Semester 1				Year 1 Semester 2			
Course		Type	AU	Course		Type	AU
CB1102	Introduction to Chemistry, Chemical Engineering 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	<i>or</i>			CC0007	Science & Technology for Humanity	CC	3
	Physics A (* For students without 'A' Level Physics)	C	4	ML0004	Career Design & Workplace Readiness in a Dynamic World	CC	2
CC0001	Inquiry and Communication in the Interdisciplinary World	CC	2		Service Learning	CSL	3
			13				21
			14				*
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
CC0003	Ethics & Civics in a Multi-Cultural World	CC	2	CH5220 ^A	Food Standard - Food Safety and Risk Assessment	MPE	3
CM5101	Food Chemistry & Nutrition	BDE	3	CC0006	Sustainability: Society, Economy & Environment	CC	3
			19	CC0015	Health & Wellbeing	CC	2
							22
Year 3 Semester 1				Year 3 Semester 2			
Course		Type	AU	Course		Type	AU
CH3104	Biochemical Engineering	C	3	CH3920	Professional Internship	PS	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				
MLXXXX	Professional Preparation	PS	1				
HW0288	Engineering Communication	PS	2				
			20				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
CH5210	Food Process Technologies and New Production System	BDE	3	CB0494	Introduction to Data Science and Artificial Intelligence	PS	3
	FF Elective 1	BDE	3	CH5222 ^A	Future Foods - Introduction to Advanced Meat Alternatives	MPE	3
	FF Elective 2	BDE	3	CH5211	Data Analytics in Food Systems	BDE	3
	FF Elective 3	BDE	3		FF Elective 4	BDE	3
			16		FF Elective 5	BDE	3
							19
							140
							141*
							Total (AU)

*Students without 'A' Level/Senior High School Physics will take 'PH1012 Physics A' (4AU)

^ACounted towards 2nd Major in FF requirement (total 6U)