

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 Collaborative Core			Broadening and Deepening Electives (BDE)	Total
		Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve, Learn (CSL)		
Chemical & Biomolecular Engineering with Second Major in Future Foods (FTFD)	1	24		6				30
	2	30	3 [3]	8	1		3	45
	3				10		12	22
	4	23	3 [3]		5	3	9	43
	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	

Major Requirement	CB1102	Introduction to Chemical and Biomedical Engineering	1	77
	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	
	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
	CH5220^	Food Standard - Food Safety & Risk Assessment	3^	
	CH5222^	Future Foods - Introduction to Advanced Meat	3^	

Second Major in Future Foods (BDE)	FF Core Courses		
	CH5210 Food Process Technologies and New Production Systems	3	9
	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	15
	FF Electives		
	5 Electives / Minimum 15AU		
Total			140
			141*

**Students without 'A' Level 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 Future Foods

Suggested Study Plan for AY2026-2027 intake (CBFF)

with Professional Internship**Year 1 Semester 1**

Course	Type	AU
CB1102 Introduction to Chemical and Biomedical Engineering	C	1
CB1131 Introduction to Biomolecular Engineering	C	3
CH1801 Chemical & Biomolecular Engineering Laboratory 1A	C	1
MH1810 Math 1	C	3
PH1011 Physics	C	3
<i>or</i>		
PH1012 Physics A (* For students without 'A' Level Physics)	C	4
CC0001 Inquiry and Communication in the Interdisciplinary World	CC	2
	13	14

Year 1 Semester 2

Course	Type	AU
CB1103 Organic Chemistry For Engineers	C	3
CB1117 Engineering Mathematics	C	4
CH1104 Materials & Energy Balance	C	3
CH1802 Chemical & Biomolecular Engineering Laboratory 2	C	1
EG1001 Engineers in Society	C	2
CC0003 Ethics & Civics in a Multi-Cultural World	CC	2
CC0015 Healthy Living & Wellbeing	CC	2
		17

Year 2 Semester 1

Course	Type	AU
CH2103 Fluid Systems	C	3
CH2107 Introduction to Computational Thinking	C	3
CH2108 Thermodynamics	C	3
CH2010 Engineering Statistics	C	3
CH2801 Chemical & Biomolecular Engineering Laboratory 2A	C	2
CC0006 Sustainability: Society, Economy & Environment	CC	3
ML0004 Career Design & Workplace Readiness in the V.U.C.A World	CC	2
CM5101 Food Chemistry & Nutrition	BDE	3
	22	

Year 2 Semester 2

Course	Type	AU
CH2112 Chemical Reaction Engineering	C	3
CH2114 Heat & Mass Transfer in Chemical and Biological Systems	C	3
CH2123 Chemical Thermodynamics	C	3
CH2151 Unit Operations: Fluid-Solid Separation	C	3
CH2802 Chemical & Biomolecular Engineering Laboratory 2B	C	2
CH5220 ^A Food Standard - Food Safety and Risk Assessment	MPE	3
CC0007 Science & Technology for Humanity	CC	3
		20

Year 3 Semester 1

Course	Type	AU
CH3104 Biochemical Engineering	C	3
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	

Year 3 Semester 2

Course	Type	AU
CH3920 Professional Internship	PS	10
		10

Year 4 Semester 1

Course	Type	AU
CH4801 Final Year Design Project	C	4
Service Learning	CSL	3
CH5210 Food Process Technologies and New Production System	BDE	3
FF Elective 1	BDE	3
FF Elective 2	BDE	3
FF Elective 3	BDE	3
	19	

Year 4 Semester 2

Course	Type	AU
CH4801 Final Year Design Project	C	4
CB0494 Introduction to Data Science and Artificial Intelligence	PS	3
CH5222 ^A Future Foods - Introduction to Advanced Meat Alternatives	MPE	3
CH5211 Data Analytics in Food Systems	BDE	3
FF Elective 4	BDE	3
FF Elective 5	BDE	3
	19	

Total (AU)**140****141***

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

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