

B.Eng (Hons) in Bioengineering with 2nd Major in Future Foods

with Professional Internship

AY2026 - 2027 Intake (BEFF)

Programme	Year of Study	Number of Academic Unit (AU)						
		Major Requirement		Interdisciplinary Collaborative			Broadening and Deepening Electives (BDE)	Total
		Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve, Learn (CSL)		
Bioengineering with Second Major in Future Foods	1	21		7		3		31
	2	27	3 [3]	7			3	40
	3	13			13		6	32
	4	11	9 [3]		3		15	38
	Total	72	12 [6]	14	16	3	24	141
		73		142				

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)		16
	CB0494 Introduction to Data Science and Artificial Intelligence	3	
	HW0288 Engineering Communication	2	
	MLXXXX Professional Preparation	1	
	BG3920 Professional Internship	10	
	Care, Service, Learn (CSL)		
	Service Learning	3	3
	BIE 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	
	BG1141 Cellular & Molecular Biology for Bioengineers	3	
	BG1801 Bioengineering Lab 1A	1	
	BG1802 Bioengineering Lab 1B	1	

Major Requirement	CB2002	Introduction to Chemical and Biological Safety	1	72
	BG2103	Biosignal Processing	3	
	BG2104	Electronics for Biomedical Engineering	3	
	BG2110	Bioelectricity	3	
	BG2119	Anatomy and Physiology	3	
	BG2131	Biomaterials	3	
	BG2142	Biological Thermodynamics	3	
	BG2209	Mechanics for Bioengineers	3	
	BG2211	Introduction to Computational Thinking	3	
	BG2801	Bioengineering Lab 2A	1	
	BG2802	Bioengineering Lab 2B	1	
	BG3102	Control in Biosystems	3	
	BG3104	Biomedical Imaging	3	
	BG3105	Biomedical Instrumentation	3	
	BG3112	Cardiovascular Engineering	3	
	BG3801	Bioengineering Lab 3	1	
	BG4104	Machine Learning and Optimization for Bioengineers	3	
		BG4801 Final Year Project OR BG4123 Capstone Project	8	
	BIE Major Prescribed Electives (MPE)			
		BIE PE	6	12
	CH5220^	Food Standard - Food Safety & Risk Assessment	3^	
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				141

142*

*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. (Bioengineering) with 2nd Major in Future Foods

Suggested Study Plan for AY2026-2027 intake (BEFF)

with Professional Internship**Year 1 Semester 1**

Course	Type	AU
CB1102 Introduction to Chemistry, Chemical Engineering and Biomedical Engineering	C	1
BG1141 Cellular & Molecular Biology for Bioengineers	C	3
BG1801 Bioengineering Lab 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 2 Semester 1**

Course	Type	AU
BG2119 Anatomy and Physiology	C	3
BG2131 Biomaterials	C	3
BG2142 Biological Thermodynamics	C	3
BG2211 Introduction to Computational Thinking	C	3
BG2801 Bioengineering Lab 2A	C	1
CC0003 Ethics & Civics in a Multi-Cultural World	CC	2
CM5101 Food Chemistry & Nutrition	BDE	3
		18

Year 3 Semester 1

Course	Type	AU
BG3102 Control in Biosystems	C	3
BG3104 Biomedical Imaging	C	3
BG3105 Biomedical Instrumentation	C	3
BG3112 Cardiovascular Engineering	C	3
BG3801 Bioengineering Lab 3	C	1
MLXXXX Professional Preparation	PS	1
HW0288 Engineering Communication	PS	2
FF Elective 1	BDE	3
FF Elective 2	BDE	3
		22

Year 4 Semester 1

Course	Type	AU
Final Year Project OR Capstone Project	C	4
BG4104 Machine Learning and Optimization for Bioengineers	C	3
BIE PE 3	MPE	3
CH5210 Food Process Technologies and New Production System	BDE	3
FF Elective 3	BDE	3
FF Elective 4	BDE	3
		19

Year 1 Semester 2

Course	Type	AU
CB1103 Organic Chemistry For Engineers	C	3
CB1117 Engineering Mathematics	C	4
BG1802 Bioengineering Lab 1B	C	1
EG1001 Engineers in Society	C	2
CC0007 Science & Technology for Humanity	CC	3
ML0004 Career Design & Workplace Readiness in a Dynamic World	CC	2
Service Learning	CSL	3
		18

Year 2 Semester 2

Course	Type	AU
BG2103 Biosignal Processing	C	3
BG2104 Electronics for Biomedical Engineering	C	3
BG2110 Bioelectricity	C	3
BG2209 Mechanics for Bioengineers	C	3
BG2802 Bioengineering Lab 2B	C	1
CB2002 Introduction to Chemical and Biological Safety	C	1
CC0006 Sustainability: Society, Economy & Environment	CC	3
CC0015 Health & Wellbeing	CC	2
CH5220 ^A Food Standard - Food Safety and Risk Assessment	MPE	3
		22

Year 3 Semester 2

Course	Type	AU
BG3920 Professional Internship	PS	10
		10

Year 4 Semester 2

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

Total (AU)**141****142***

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

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