

## B.Eng (Hons) in Bioengineering with 2nd Major in Entrepreneurship

*with Professional Internship*

AY2025 - 2026 Intake onwards (BEET)

Programme	Year of Study	Number of Academic Units (AU)						Total
		Major Requirement		Interdisciplinary Collaborative Core			Broadening and Deepening Electives (BDE)	
Bioengineering with Second Major in Entrepreneurship (BEET)	1	21		6			6	33
	2	27		8	3		6	44
	3	13			13 [5]		3	29 [5]
	4	17	6			3	10	36
	Total	78	6	14	16 [5]	3	25	142
		79*						143*

Category		AU	Total AU
Interdisciplinary Collaborative Core (ICC)	<b>Common Core (CC)</b>		
	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 the V.U.C.A World	2	
	<b>Professional Series (PS)</b>		16
	CB0494 Introduction to Data Science and Artificial Intelligence	3	
	HW0288 Engineering Communication	2	
	MLXXXX Professional Preparation	1	
	BG3940 Overseas Entrepreneurship Programme (OEP) OR BG3920 Professional Internship (PI)	10	
	<b>Care, Service, Learn (CSL)</b> Service Learning	3	3
Major Requirement	<b>BIE Core</b>		20
	EG1001 Engineers In Society	2	
	MH1810 Math 1	3	
	PH1011* Physics	3	
	CB1102 Introduction to Chemical 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	

Major Requirement	BG1802	Bioengineering Lab 1B	1	58
	CB2002	Introduction to Chemical and Biological Safety	1	
	BG2103	Signal Processing in Biosystems	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	
	BG4122	Medical Device Design	6	
	BG4801	Final Year Project	8	
BIE Major Prescribed Electives (MPE)				6
2nd Major in Entrepreneurship (BDEs)	<b>Compulsory Courses</b>			25
	ET5211	Technopreneurial Mindset	3	
	ET5212	Entrepreneurial Ecosystems	3	
	ET5213	Managing New Ventures	3	
	ET5214	Financing Entrepreneurial Ventures	3	
	<b>Compulsory Experiential Programme</b>			
	BG3940	Overseas Entrepreneurship Programme (OEP) OR	NA	
	BG3920	Professional Internship (PI)		
<b>Elective Courses</b> (at least 4 courses)		13		
<b>Total</b>			<b>142</b>	

**143\***

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

^Counted towards 2nd Major in Entrepreneurship requirement (total 10AU)

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

**B.Eng. (Bioengineering) with 2nd Major in Entrepreneurship**  
**Suggested Study Plan for AY2025-2026 intake (BEET)**  
**with Professional Internship**

Year 1 Semester 1			
Course		Type	AU
CB1102	Introduction to Chemical 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
PH1012	or Physics A (* For students without 'A' Level Physics)	C	4
CC0001	Inquiry and Communication in the Interdisciplinary World	CC	2
ET5211	Technopreneurial Mindset	BDE	3
			*
			16 17

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
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2
CC0006	Sustainability: Society, Economy & Environment	CC	3
ET5212	Entrepreneurial Ecosystems	BDE	3
			21

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
HW0288	Engineering Communication	PS	2
MLXXXX	Professional Preparation	PS	1
	Entrepreneurship Elective 1	BDE	3
			19

Year 4 Semester 1			
Course		Type	AU
BG4104	Machine Learning and Optimization for Bioengineers	C	3
BG4122	Medical Device Design	C	3
BG4801	Final Year Project	C	4
	BIE PE 1	MPE	3
	Entrepreneurship Elective 2	BDE	4
			17

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
CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
CC0015	Health & Wellbeing	CC	2
ET5213	Managing New Ventures	BDE	3
			17

Year 2 Semester 2			
Course		Type	AU
BG2103	Signal Processing in Biosystems	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
CC0007	Science & Technology for Humanity	CC	3
CB0494	Introduction to Data Science and Artificial Intelligence	PS	3
ET5214	Financing Entrepreneurial Ventures	BDE	3
			23

Year 3 Semester 2			
Course		Type	AU
^BG3940	Overseas Entrepreneurship Programme	PS	10
OR			
^BG3920	Professional Internship	PS	
			10

Year 4 Semester 2			
Course		Type	AU
BG4122	Medical Device Design	C	3
BG4801	Final Year Project	C	4
	BIE PE 2	MPE	3
	Entrepreneurship Elective 3	BDE	3
	Entrepreneurship Elective 4	BDE	3
			16
Total (AU)			139
			140*

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

^Counted towards 2nd Major in Entrepreneurship requirement (total 5AU)