

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

*with Professional Internship*

*AY2025 - 2026 Intake onwards (BEBM)*

Programme	Year of Study	Number of Academic Unit (AU)						Total
		Major Requirement		Interdisciplinary Collaborative Core			Broadening and Deepening Electives (BDE)	
Bioengineering with Second Major in Business	1	21		6			6	33
	2	27		8	3		6	44
	3	13			13		6	32
	4	17	6			3	12	38
	Total	78	6	14	16	3	30	147
		79*						148*

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	
	BG3920 Professional Internship	10	
	<b>Care, Service, Learn (CSL)</b>		3
	Service Learning	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 Business (BDEs)	<b>Foundation Business Courses</b>			30
	AB1201	Financial Management	3	
	AB1301	Business Law	3	
	AB1501	Marketing	3	
	AB1601	Organisational Behaviour & Design	3	
	AD1102	Financial Accounting	3	
	BE1402	Business Operations & Process	3	
	<b>Advanced Business Courses</b>			
	AD2102	Management Accounting	3	
	BE2602	Management in Principles, Skills & Competencies	3	
	BF2219	Investments	3	
	BM2509	Consumer Insights	3	
<b>Total</b>				<b>147</b>

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

**B.Eng. (Bioengineering) with 2nd Major in Business (Mainstream)**

Suggested Study Plan for AY2025-2026 intake (BEBM)

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 Physics A ( <i>*For students without 'A' Level Physics</i> )	C	4
CC0001 Inquiry and Communication in the Interdisciplinary World	CC	2
AB1201 Financial Management	BDE	3

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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
AD1102 Financial Accounting	BDE	3

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**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
AB1301 Business Law	BDE	3
AD2102 Management Accounting	BDE	3

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**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
Service Learning	CSL	3
BE2602 Management in Principles, Skills & Competencies	BDE	3
BF2219 Investments	BDE	3

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**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
AB1501 Marketing	BDE	3

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**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
AB1601 Organisational Behavior and Design	BDE	3

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**Year 3 Semester 2**

Course	Type	AU
BG3920 Professional Internship	PS	10

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**Year 4 Semester 2**

Course	Type	AU
BG4122 Medical Device Design	C	3
BG4801 Final Year Project	C	4
BIE PE 1	MPE	3
BIE PE 2	MPE	3
BE1402 Business Operations and Processes	BDE	3
BM2509 Consumer Insights	BDE	3

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**Total (AU)**

147

148\*

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