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

with Professional Internship
AY2024 - 2025 Intake onwards (BEBM)

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)	Foundational Core (FC)		
Bioengineering with Second Major in Business	1	21/22*		9		6	36/37*
	2	26		8	3	6	43
	3	13			12	6	31
	4	17	6			12	35
	Total	77/78*	6	17	15	30	145/146*

Category		AU	Total AU
Interdisciplinary Collaborative Core (ICC)	**Common Core (University-level)**		
	CC0001 Inquiry and Communication in the Interdisciplinary World	2	
	CC0002 Navigating the Digital World	2	
	CC0003 Ethics & Civics in a Multi-Cultural World	2	
	CC0005 Healthy Living & Wellbeing	3	17
	CC0006 Sustainability: Society, Economy & Environment	3	
	CC0007 Science & Technology for Humanity	3	
	ML0004 Career and Entrepreneurial Development for the Future World	2	
	Foundational Core (College-level)		
	HW0288 Engineering Communication	2	
	CB0494 Introduction to Data Science and Artificial Intelligence	3	15
	BG3920 Professional Internship	10	
Major Requirement	**BIE Core**		
	EG1001 Engineers In Society	2	
	MH1810 Math 1	3	
	PH1011* Physics	3	
	CB1102 Introduction to Chemical and Biomedical Engineering	1	20
	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	57
	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)	**Foundation Business Courses**			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	
	Advanced Business Courses			
	AD2102	Management Accounting	3	
	BE2602	Management in Principles, Skills & Competencies	3	
	BF2219	Investments	3	
	BM2509	Consumer Insights	3	
Total				**145/146***

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

B.Eng. (Bioengineering) with 2nd Major in Business (Mainstream)
Suggested Study Plan for AY2024-2025 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 _or_	C	3
PH1012	Physics A *(*For students without 'A' Level Physics)*	C	4
CC0001	Inquiry and Communication in the Interdisciplinary World	CC	2
CC0002	Navigating the Digital World	CC	2
AB1201	Financial Management	BDE	3
		18	**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
CC0003	Ethics & Civics in a Multi-Cultural World	CC	2
CC0005	Healthy Living & Wellbeing	CC	3
AB1501	Marketing	BDE	3
			18

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
CC0006	Sustainability: Society, Economy & Environment	CC	3
ML0004	Career and Entrepreneurial Development for the Future World	CC	2
AD1102	Financial Accounting	BDE	3
			21

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
CC0007	Science & Technology for Humanity	CC	3
CB0494	Introduction to Data Science and Artificial Intelligence	FC	3
AB1601	Organisational Behavior and Design	BDE	3
			22

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	FC	2
AB1301	Business Law	BDE	3
AD2102	Management Accounting	BDE	3
			21

Year 3 Semester 2

Course		Type	AU
BG3920	Professional Internship	FC	10
			10

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
BE2602	Management in Principles, Skills & Competencies	BDE	3
BF2219	Investments	BDE	3
			19

Year 4 Semester 2

Course		Type	AU
BG4122	Medical Device Design	C	3
BG4801	Final Year Project	C	4
	BIE PE 2	MPE	3
BE1402	Business Operations and Processes	BDE	3
BM2509	Consumer Insights	BDE	3
			16
		Total (AU)	**145**
			146*

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