

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

with Professional Internship

AY2023- 2024 Intake onwards BEBM(ITG)

Programme	Year of Study	Number of Academic Units (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 - ITP	1	21/22*		9		6	36/37*
	2	26		8	3	11	48
	3	13			12	6	31
	4	17	6			8	31
	Total	77/78*	6	17	15	31	146/147*

Category		AU	Total AU
Interdisciplinary Collaborative Core (ICC)	Common Core (University-level)		
	CC0001 Inquiry and Communication in the Interdisciplinary World	2	17
	CC0002 Navigating the Digital World	2	
	CC0003 Ethics & Civics in a Multi-Cultural World	2	
	CC0005 Healthy Living & Wellbeing	3	
	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)		
Major Requirement	HW0288 Engineering Communication	2	15
	CB0494 Introduction to Data Science and Artificial Intelligence	3	
	BG3920 Professional Internship	10	
	BIE Core		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	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)			
2nd Major in Business - International Trading (BDEs)	Business (ITP) Courses			31
	AB1201	Financial Management	3	
	AB1501	Marketing	3	
	AD1102	Financial Accounting	3	
	AD2102	Management Accounting	3	
	BE1402	Business Operations & Process	3	
	BF2226	Trade Incoterms & Ship Chartering	3	
	BF2227	Commodity Markets	3	
	BF2302	International Tax & Trading Law	2	
	BF3212	Trade, Structured & Supply Chain Finance	2	
	BF3213	Enterprise Risk Management in Commodity Markets	2	
	BF3214	Commodities Trading	2	
	BF3226	Strategic Management in Commodity Market	2	
Total				146/147*

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

B.Eng. (Bioengineering) with 2nd Major in Business (International Trading)

Suggested Study Plan for AY2023-2024 intake BEBM(ITG)

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 <i>or</i> 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

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18 19**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
BF2227 Commodity Markets	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	FC	2
AD2102 Management Accounting	BDE	3
BF2226 Trade Incoterms and Ship Chartering	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
BIE PE 1	MPE	3
BF2302 International Tax and Trading Law	BDE	2
BF3226 Strategic Management in Commodity Market	BDE	2

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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
CC0005 Healthy Living & Wellbeing	CC	3
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
CC0007 Science & Technology for Humanity	CC	3
CB0494 Introduction to Data Science and Artificial Intelligence	FC	3
BE1402 Business Operations and Processes	BDE	3
BF3214 Commodities Trading	BDE	2

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Year 3 Semester 2

Course	Type	AU
BG3920 Professional Internship	FC	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 2	MPE	3
BF3212 Trade, Structured and Supply Chain Finance	BDE	2
BF3213 Enterprise Risk Management	BDE	2

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Total (AU)

146

147*

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