

Double Degree in Engineering and Economics

B.Eng (Hons) in Bioengineering and BSocSci (Hons) in Economics

AY2026 - 2027 Intake

with Professional Internship (BEEC)

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)	Professional Series (PS)	Care, Serve, Learn (CSL)		
Double Degree in Bioengineering and Economics	1	33		7		3		43
	2	30	3	7	3			43
	3	16	3		13			32
	4	17	22					39
	5		17				1	18
	Total	96	45	14	16	3	1	175
97*								176*
<i>Individual Degree Requirements</i>								
Bioengineering	1	21		7		3	3	34
	2	27		7	3		3	40
	3	13			13		3	29
	4	11	12				10	33
	5							
	Total	72	12	14	16	3	19	136
73*								137*
Economics	1	12		6				
	2	3	3	8	3			
	3	3	3		13			
	4	14	13			3		
	5		14					
	Total	32	33	14	16	3	27	125

B.Eng (Hons) in Bioengineering and BSocSci (Hons) in Economics

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)		
	CB0494 Introduction to Data Science and Artificial Intelligence	3	16
	HW0288 Engineering Communication	2	
	MLXXXX Professional Preparation	1	
	BG3920 Professional Internship	10	
	Care, Service, Learn (CSL)		
	Service Learning	3	3
Major Requirement	BIE Core (C)		
	EG1001 Engineers In Society	2	31
	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	
	CB2002 Introduction to Chemical and Biological Safety	1	
	BG2103 Biosignal Processing	3	
	BG2104 Electronics for Biomedical Engineering	3	
	BG2110 Bioelectricity	3	

Major Requirement	BG2119	Anatomy and Physiology	3	41
	BG2131	Biomaterials	3	
	BG2142	Biological Thermodynamics	3	
	BG2209	Mechanics for Bioengineers	3	
	BG2211	Introduction to Computational	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 <u>OR</u> BG4123 Capstone Project	8	
	Econs Core (C)			24
	HE1001	Microeconomics I	3	
	HE1002	Macroeconomics I	3	
	HE2001	Microeconomics II	3	
	HE2002	Macroeconomics II	3	
	HE2003	Econometrics I	3	
	HE3001	Microeconomics III	3	
	HE3002	Macroeconomics III	3	
	HE3003	Econometrics II	3	
	Major Prescribe Electives (MPE)			45
	BIE Major Prescribed Electives (2 courses)		12	
	MH1820	Introduction to Probability and Statistical Methods	3	
	Econs Level 3xxx (6 courses)		18	
	Econs Level 4xxx (3 courses)		12	
Broadening and Deepening Electives (BDE)			1	
Total			175	

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

B.Eng (Hons) in Bioengineering and BSocSci (Hons) in Economic:

AY2026 - 2027 Intake onwards

*with Professional Internship (BEEC)***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
HE1001 Microeconomic I	C	3
HE1002 Macroeconomic I	C	3

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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
CC0015 Health & Wellbeing	CC	2
HE3001 Microeconomics III	C	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
MLXXX Professional Preparation	PS	1
HE3002 Macroeconomics III	C	3
Econ PE3XXX 1	MPE	3

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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 1	MPE	3
HE2003 Econometrics I	C	3
Econ PE3XXX 2	MPE	3
Econ PE3XXX 3	MPE	3

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Year 5 Semester 1

Course	Type	AU
BIE PE 2	MPE	3
BDE 1	BDE	1
Econ PE3XXX 5	MPE	3
Econ PE3XXX 6	MPE	3
Econ PE4XXX 2	MPE	4
Econ PE4XXX 3	MPE	4

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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
CC0007 Science & Technology for Humanity	CC	3
ML0004 Career Design & Workplace Readiness in a Dynamic World	CC	2
HE2001 Microeconomics II	C	3
HE2002 Macroeconomics II	C	3
Service Learning	CSL	3

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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
CB0494 Introduction to Data Science and Artificial Intelligence	PS	3
MH1820 Introduction to Probability and Statistical Methods	MPE	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
Final Year Project OR Capstone Project	C	4
BIE PE 2	MPE	3
BIE PE 3	MPE	3
HE3003 Econometrics II	C	3
Econ PE3XXX 4	MPE	3
Econ PE4XXX 1	MPE	4

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Year 5 Semester 2

Course	Type	AU

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Total (AU)

175

176*

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