

B.Eng (Hons) in Bioengineering (ABP)

AY2026 - 2027 Intake

with Professional Attachment (BIE ABP)

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)		
Bioengineering	1	21		7		3	6	37
	2	27		7	3		3	40
	3	21	9		6		6	42
	4	3	3		2		9	17
	Total	72	12	14	11	3	24	136
73*137*								

BIE Accelerated Bachelor Programme (ABP)

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	11
	HW0288 Engineering Communication	2	
	MLXXXX Professional Preparation	1	
	BG3910 Professional Attachment	5	
	Care, Service, Learn (CSL)		
	Service Learning	3	3
Major Requirement	BIE Core		
	EG1001 Engineers In Society	2	12
	MH1810 Math 1	3	
	PH1011* Physics	3	
	CB1102 Introduction to Chemistry, Chemical Engineering and Biomedical Engineering	1	
	CB1103 Organic Chemistry For Engineers	3	

Major Requirement	CB1117	Engineering Mathematics	4	60
	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	
	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	
		BG4801 Final Year Project	8	
	<u>OR</u> BG4123 Capstone Project			
BIE Major Prescribed Electives (MPE)				12
Broadening and Deepening Electives (BDE)				24
Total				136

137*

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

B.Eng (Hons) in Bioengineering (ABP)

Suggested Study Plan for AY2026-2027 intake

with Professional Attachment (BIE ABP)**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
	<u>or</u>		
PH1012	Physics A (*For students without 'A' Level Physics)	C	4
CC0001	Inquiry and Communication in the Interdisciplinary World	CC	2
	BDE 1	BDE	3
			*
			16 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
CC0007	Science & Technology for Humanity	CC	3
ML0004	Career Design & Workplace Readiness in a Dynamic World	CC	2
	Service Learning	CSL	3
	BDE 2	BDE	3
			21

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
	BDE 3	BDE	3
			18

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
CC0015	Health & Wellbeing	CC	2
CB0494	Introduction to Data Science and Artificial Intelligence	PS	3
			22

Year 3 Semester 1

Course		Type	AU
	Final Year Project <u>OR</u> Capstone Project	C	4
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
MLXXXX	Professional Preparation	PS	1
			18

Year 3 Semester 2

Course		Type	AU
	Final Year Project <u>OR</u> Capstone Project	C	4
	BIE PE1	MPE	3
	BIE PE2	MPE	3
	BIE PE3	MPE	3
	BDE 4	BDE	3
	BDE 5	BDE	3
Year 3 Special Term			
BG3910	Professional Attachment	PS	5
			24

Year 4 Semester 1

Course		Type	AU
BG4104	Machine Learning and Optimization for Bioengineers	C	3
	BIE PE4	MPE	3
HW0288	Engineering Communication	PS	2
	BDE 6	BDE	3
	BDE 7	BDE	3
	BDE 8	BDE	3
			17

Year 4 Semester 2

Course		Type	AU
			0
Total (AU)			136
			137*

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