## **B.Eng (Hons) in Bioengineering (ABP)**

AY2025 - 2026 Intake onwards

with Professional Attachment (BIE ABP)

Programme	Year of Study	Number of Academic Units (AU)							
		Major Requirement		Interdis	ciplinary Coll Core	Broadening and Deepening			
		Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve, Learn (CSL)	Electives (BDE)	Total	
Bioengineering	1	21		6			9	36	
	2	27		8	3		3	41	
	3	27	3		6		6	42	
	4	3	3		2	3	6	17	
	Total	78	6	14	11	3	24	136	
								137*	

**BIE Accelerated Bachelor Programme (ABP)** 

Category			AU	Total AU
	Common	Core (CC)		
	CC0001	Inquiry and Communication in the Interdisciplinary World	2	
	CC0003	Ethics & Civics in a Multi-Cultural World	2	
	CC0006	Sustainability: Society, Economy & Environment	3	14
	CC0007	Science & Technology for Humanity	3	
	CC0015	Health & Wellbeing	2	
	ML0004	Career Design & Workplace Readiness in the V.U.C.A World	2	
Interdisciplinary				
Collaborative	Professio	nal Series (PS)		
Core (ICC)	CB0494	Introduction to Data Science and Artificial Intelligence	3	
	HW0288	Engineering Communication	2	11
	MLXXXX		1	
	BG3910	Professional Attachment	5	
	Cara Cara	vice Leave (CCI)		
	Care, Serv	vice, Learn (CSL) Service Learning	3	3
	BIE Core			
	EG1001	Engineers In Society	2	
Major Requirement	MH1810	Math 1	3	
	PH1011*	•	3	12
	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		
	BG1802	Bioengineering Lab 1B	1		
	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		
Major	BG2209	Mechanics for Bioengineers	3	66	
Requirement	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)				
Broadening and Deepening Electives (BDE)					
Total					
Total					

137\*

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

Suggeste	ons) in Bioengineering (ABP) d Study Plan for AY2025-2026 intake ssional Attachment (BIE ABP)							
Year 1 Semester 1 Course		Туре	AU		Year 1 Se Course	Year 1 Semester 2		
CB1102	Introduction to Chemical and Biomedical Engineering	С	1	_	CB1103	Organic Chemistry For Engineers	<b>Type</b> C	<b>AU</b> 3
BG1141	Cellular & Molecular Biology for Bioengineers	С	3		CB1117	Engineering Mathematics	С	4
BG1801	Bioengineering Lab 1A	С	1		BG1802	Bioengineering Lab 1B	С	1
MH1810	Math 1	С	3		EG1001	Engineers in Society	С	2
PH1011	Physics	С	3		CC0003	Ethics & Civics in a Multi-Cultural World	СС	2
	<u>or</u>				CC0015	Health & Wellbeing	СС	2
PH1012	Physics A (*For students without 'A' Level Physics)	С	4			BDE 2	BDE	3
CC0001	Inquiry and Communication in the Interdisciplinary World	СС	2			BDE 3	BDE	3
	BDE 1	BDE	3					
			16	_* 17				20
Year 2 Se	mester 1	_			Year 2 Se	mester 2	_	
Course BG2119	Anatomy and Physiology	Type C	<b>AU</b> 3	_	BG2103	Signal Processing in Biosystems	Type C	<b>AU</b> 3
BG2131	Biomaterials	С	3		BG2104	Electronics for Biomedical Engineering	С	3
BG2142 BG2211	Biological Thermodynamics Introduction to Computational Thinking	C C	3 3		BG2110 BG2209	Bioelectricity Mechanics for Bioengineers	C C	3
BG2801	Bioengineering Lab 2A	С	1		BG2802	Bioengineering Lab 2B	С	1
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	СС	2		CB2002	Introduction to Chemical and Biological Safety	С	1
CC0006	Sustainability: Society, Economy & Environment	CC	3		CC0007	Science & Technology for Humanity	CC	3
	BDE 4	BDE	3		CB0494	Introduction to Data Science and Artificial Intelligence	PS	3
			21	_				20
Year 3 Se Course	mester 1	Type	AU		Year 3 Se Course	mester 2	Type	AU
BG3102	Control in Biosystems	С	3	_	BG4122	Medical Device Design	С	3
BG3104	Biomedical Imaging	С	3		BG4801	Final Year Project	С	4
BG3105 BG3112	Biomedical Instrumentation Cardiovascular Engineering	C C	3 3			BIE PE1 BDE 5	MPE BDE	3 3
BG3801	Bioengineering Lab 3	С	1			BDE 6	BDE	3
BG4122	Medical Device Design	С	3			552 0	DDL	0
BG4801	Final Year Project	С	4			ecial Term		
MLXXXX	Professional Preparation	PS	1	_	BG3910	Professional Attachment	PS	5
			21					21
Year 4 Semester 1 Course		Туре	AU	_	Year 4 Se Course	mester 2	Туре	AU
BG4104	Machine Learning and Optimization for Bioengineers	С	3					
LBAGGGG	BIE PE2	MPE	3					
HW0288	Engineering Communication Service Learning	PS CSL	2 3					
	BDE 7	BDE	3					
	BDE 8	BDE	3					
			17	_		Total (AU)		0 136
						i otai (AO)		136

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