

B.Eng. (Bioengineering)
Summary of Programme Requirement and Academic Units

Programme Requirement	Academic Units (AU)	
University Requirement		
General Education Requirement Core (GER-Core)		12
HW0110 Effective Communication	2	
HW0210 Technical Communication	2	
HW0310 Professional Communication	2	
BG4901 Engineers and Society	3	
BG4903 Environmental Sustainability	3	
General Education Requirement Elective (GER-Elective)		15
GER-Elective in Arts, Humanities and Social Sciences (AHSS)	3	
GER-Elective in Business and Management (BM)	3	
GER-Elective in Science, Technology and Society (STS)	3	
GER-Elective in Liberal Studies (LS)	3	
GER-Elective in any areas (AHSS, BM, STS or LS)	3	
Unrestricted Elective (UE)		11
Unrestricted Elective	11	
English Proficiency* (for students who have not passed or been exempted from the Qualifying English Test at the time of admission)		
Bioengineering Major Requirement		
Core Course (BIE-Core)		97
FE1011 Physics	3	
BG1102 Engineering Physics	3	
BG1103 Chemistry for Engineers	3	
BG1004 Mathematics 1	3	
BG1105 Materials Science	3	
BG1106 Mathematics for Engineers A	3	
BG1107 Mathematics for Engineers B	3	
BG1108 Organic Chemistry and Spectrophotometry	3	
BG1109 Anatomy and Physiology	3	
BG1131 Biomolecular Engineering I	3	
BG1801 Bioengineering Lab 1A	1	
BG1802 Bioengineering Lab 1 B	1	
BG2104 Electronics for Biomedical Engineers	3	
BG2105 Biomolecular Engineering II	3	
BG2109 Biomechanics	3	
BG2110 Bioelectricity	3	
BG2111 Computational Methods in Biomedical Engineering	3	
BG2112 Bio-fluid Systems	4	

BG2131 Biomaterials	3	
BG2141 Mechanics of Materials	3	
BG2142 Biological Thermodynamics	3	
BG2801 Bioengineering Lab 2A	1	
BG2802 Bioengineering Lab 2B	1	
BG3102 Control in Biosystems	3	
BG3103 Signal Processing in Biosystems	3	
BG3104 Biomedical Imaging	3	
BG3105 Biomedical Instrumentation	3	
BG3106 Advanced Bio-computational Methods	3	
BG3801 Bioengineering Lab 3	1	
BG3820 Industrial Attachment	8	
BG4103 Biomedical Project Design and Management	3	
BG4801 Final Year Project	8	
Core Elective (BIE-Elective)		3
1 x BIE-Elective	3	
TOTAL		138
BIE Elective (Please note the courses listed are subject to availability.)		
BIE Elective Group 1: Bioinstrumentations and Bioelectronics		
BG4210 Advanced Biomedical Instrumentation	3	
BG4213 Bioelectronics	3	
BG4214 Biomedical Optics	3	
BG4215 Biomedical Nanotechnology	3	
BIE Elective Group 2: Biomaterials and Tissue Engineering		
BG4231 Advanced Biomaterials	3	
BG4234 Stem Cell Fundamentals	3	
BG4237 Gene Therapy Fundamentals	3	
BG4308 Therapeutic Engineering	3	