



APPROVED

Awards	
Honours Bachelor Degree	
Mode of Delivery:	Full Time, ACCS
No. of Semesters :	8
NFQ Level:	8
Programme Credits:	240
Language of Instruction:	English
Department:	Aerospace, Mechanical & Electronic Engineering

Semester Schedules

Stage 1 / 60 ECTS / Semester 1

Elective Regulation

All learners must achieve a minimum mark of 40% in each assessable element of each module.

Mandatory	
Module Code	Module Title
MATH C1611	Mathematics and Computer Applications 1
ELEC C1611	Electrical and Electronic Fundamentals
PROG C1607	Programming Systems
ZBIO C1103	Physiology and Cell Biology 1

Stage 1 / 60 ECTS / Semester 2

Elective Regulation

All learners must achieve a minimum mark of 40% in each assessable element of each module.

Mandatory	
Module Code	Module Title
MATH C1612	Mathematics and Computer Applications 2
ELEC C1612	Electrical and Electronic Circuits
TECH C1602	Technical Communications
DSGN C1604	Prototyping
ZBIO C1104	Physiology and Cell Biology 2

Stage 2 / 60 ECTS / Semester 1

Mandatory	
Module Code	Module Title
MATH C2609	Engineering Mathematics 1
DIGT C2602	Analogue and Digital Electronics 1
SYST C2610	System Design and Test
PROG C2605	Computer Programming
ZBIO C2101	Fundamentals of Microbiology 1

Stage 2 / 60 ECTS / Semester 2

Elective Regulation

Students may EXIT after this stage of the programme with a Higher Certificate in Biomedical Electronics (Embedded Exit Award), provided they have achieved the required Level 6 learning outcomes. Academic regulations apply.

Mandatory	
Module Code	Module Title
MATH C2610	Engineering Mathematics 2
DIGT C2603	Analogue and Digital Electronics 2
SYST C2611	Embedded Systems 1
ZBIO C2103	Fundamentals of Microbiology 2
LABS C2602	Medical Devices and Instrumentation

Stage 2 Exit Only Award : Higher Certificate

Stage 3 / 60 ECTS / Semester 1

Elective Regulation

Mandatory	
Module Code	Module Title
MATH C3604	Engineering Mathematics 3
SYST C3605	Embedded Systems 2
COMM C3601	Digital Communications
ANAL H3601	Analysis of Analogue Circuits
ZBIO C3100	Molecular Biology and Immunology 1

Stage 3 / 60 ECTS / Semester 2

Elective Regulation

Learners who have successfully achieved all of the required Level 7 programme learning outcomes and have accumulated 180 credits may then apply to progress to Stage 4 of the Bachelor of Engineering (Honours) in Biomedical Electronics. Academic regulations apply.

Mandatory	
Module Code	Module Title
WKPL C3603	Work Placement
LAWS C3603	Medical Device Standards and Regulations

Elective	
Module Code	Module Title
ZBIO C3104	Molecular Biology and Immunology 2
AUTO C3601	Network Programmability and Automation
TRON C3603	Software Defined Radio
PROJ C3603	Development Project (Engineering)

Stage 4 / 60 ECTS / Semester 1

Mandatory	
Module Code	Module Title
PROJ C4604	Research Project (Engineering) (Part 1 of 2)
DSGN C4601	Microelectronic Design 1
LANG C4601	Hardware Description Language
SYST C4601	Signals and Systems 1
TRON C4603	Power Electronics for Biomedical Systems

Stage 4 / 60 ECTS / Semester 2

Mandatory	
Module Code	Module Title
SYST C4602	Digital Systems
SYST C4603	Signals and Systems 2
STUD C4601	Professional Studies
PROC C4601	Biomedical Signal Processing
PROJ C4604	Research Project (Engineering) (Part 2 of 2)