



APPROVED

Awards	
Honours Bachelor Degree	
Mode of Delivery:	Full Time, Part 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

Mandatory	
Module Code	Module Title
PROG C1604	Robotics Programming 1
MATH C1605	Engineering Mathematics 1
MECH C1605	Static Mechanics
ELEC C1611	Electrical and Electronic Fundamentals
DSGN C1601	Computer Aided Drafting

Stage 1 / 60 ECTS / Semester 2

Mandatory	
Module Code	Module Title
PROJ C1602	Robotics Project
MATH C1608	Engineering Mathematics 2
PHYS C1601	Dynamic Mechanics
ELEC C1612	Electrical and Electronic Circuits

Stage 1 Award : Undeclared

Stage 2 / Semester 1

Mandatory	
Module Code	Module Title
MATH C2607	Engineering Mathematics 3
PROJ C2603	Robotics Programming 2
INDL C2603	Industrial Automation and Robotics
SYST C2603	Drives and Actuators
PHYS C2601	Dynamics 2

Stage 2 / Semester 2

Elective Regulation

Learners may apply to EXIT after this stage of the programme with a Higher Certificate in Engineering in Robotics & Automated Systems (Embedded Exit Award), provided they have achieved the required Level 6 learning outcomes and have accumulated 120 credits. Academic regulations apply.

Mandatory	
Module Code	Module Title
MATH C2608	Engineering Mathematics 4
SYST C2611	Embedded Systems 1
SYST C2609	Introduction to Systems and Control
PROJ C2604	Mechatronics Project
PROJ C2605	Robotics Programming 3

Stage 2 Exit Only Award : Higher Certificate

Stage 3 / Semester 1

Mandatory	
Module Code	Module Title
MATH C3603	Engineering Mathematics 5
INDL C3601	Industrial Compliance, Safety and Law
SYST C3603	Robotic Operating Systems
SYST C3604	Control and Human Interfacing
NETW C3607	Computer Networks 1

Stage 3 / Semester 2

Elective Regulation

Learners will complete Work Placement as part of this Level 8 programme. In exceptional circumstances, and only with the formal approval of the Programme Board, learners may be enrolled on the other elective modules as a contingency for not being in a position to take the Work Placement module. Learners may apply to EXIT after this stage of the programme with a Bachelor in Engineering in Robotics & Automated Systems (Embedded Exit Award), provided they have achieved the required Level 7 learning outcomes and have accumulated 180 credits. Academic regulations apply.

Mandatory	
Module Code	Module Title
INDL C3604	Industrial Studies
WKPL C3603	Work Placement
Elective	
Module Code	Module Title
AUTO C3601	Network Programmability and Automation
TRON C3603	Software Defined Radio
NETW C3610	Computer Networks 2
PROJ C3603	Development Project (Engineering)

Stage 3 Exit Only Award : Ordinary Bachelor Degree

Stage 4 / Semester 1

Mandatory	
Module Code	Module Title
PROJ C4607	Final Year Project (Part 1 of 2)
SYST C4604	Autonomous Robotics
COMP C4602	Computer Vision
ELEC C4602	Artificial Intelligence and Machine Learning
INDL C4601	Industrial Networks for Robotics

Stage 4 / Semester 2

Mandatory	
Module Code	Module Title
SYST C4605	Advanced PLCs
SYST C4606	Deep Learning
SYST C4604	Power Electronics & Electrical Systems
PROJ C4606	Robot Mechanics
PROJ C4607	Final Year Project (Part 2 of 2)

Stage 4 Exit Only Award : Honours Bachelor Degree