

# Bachelor of Engineering Technology B1408 (Electrical and Renewable Energy Engineering)

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Start Date: Semester 1 2024

Industrial Control & Automation Focus

Year 1 – 2024	Semester 1 Units	CP	Semester 2 Units	CP
	MAS164 Fundamentals of Mathematics <sup>1</sup>	3	MAS182 Applied Mathematics	3
ENG101 Engineering Fundamentals	3	ENG102 Engineering Design for Sustainability	3	
ENG103 Principles of Engineering	3	PEN120 General Physics <sup>2</sup>	3	
ENG109 Engineering Computing Systems	3	Engineering Elective	3	
	12	<b>Total</b>	12	
Year 2 - 2025	Semester 1 Units	CP	Semester 2 Units	CP
	MAS161 Calculus and Matrix Algebra	3	BUS368 Cultures of Innovation	3
ENG214 Electrical and Electronic Circuits	3	ENG216 Dynamic Systems and Control	3	
ENG215 Systems Engineering	3	ENG231 Renewable Energy Systems	3	
ENG251 PLC Systems (Engineering Elective)	3	ENG252 Embedded Systems (Engineering Elective)	3	
	<b>Total</b>	12	<b>Total</b>	12
Year 3 – 2026	Semester 1 Units	CP	Semester 2 Units	CP
	ENG344 Electromechanical Energy Conversion	3	ENG336 Finance, Ethics and Law	3
MAS220 Mathematical Methods	3	ENG381 Electrical Power Systems	3	
ENG360 Engineering Design Project	3	ENG382 Power Electronics	3	
ENG392 SCADA and Instrumentation Systems (Engineering Elective) OR ENG391 Process Control (Engineering Elective)	3	ENG360 Engineering Design Project	3	
	<b>Total</b>	12	<b>Total</b>	12

**TOTAL CREDIT POINTS 72**

<sup>1</sup> Students who have achieved a final scaled score of 55% or more in ATAR Mathematics Specialist, WACE Mathematics Specialist 3C/3D or TEE Calculus may not enrol in this unit and should consult their Academic Chair.

<sup>2</sup> Students who have achieved a final scaled score of 60% or more in ATAR Physics or WACE Physics 3A/3B may not enrol in this unit and should consult their Academic Chair.

## Elective Units

KAC102 Wandju Boodja (Welcome to Country)  
CHE140 - Fundamentals of Chemistry  
ENV102 Foundations of the Environment  
ENG300 Environmental Technology for Sustainability  
ENG221 Pollution & its Control  
ENG341 Water Conservation & Auditing  
ENV243 - Water and Earth Science  
ENV242 - Atmospheric and Climate Science  
ENV303 - GIS for Environmental Management and Planning  
ENV331 - Environmental Management  
ENG391 - Process Control  
ENG251 - PLC Systems  
ENG392 - SCADA and Instrumentation Systems  
ENG252 Embedded Systems  
PEN152 Principles of Physics  
ICT158 Introduction to Information Systems  
MAS183 Statistical Data Analysis

Spine - ENG100 Engineering Professional Practice (0 CP)

Bachelor of Engineering Honours students should complete 450 hours of approved work experience to complete the requirements of the course.

**Please note:** This course plan is a sample only and must be read in conjunction with the full course structure, unit prerequisites and enrolment options as outlined in the [Handbook](#).