

Bachelor of Engineering Honours H1287 (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 ¹ | 3 | MAS182 Applied Mathematics | 3 |
| ENG101 Engineering Fundamentals | 3 | ENG102 Engineering Design for Sustainability | 3 | |
| ENG103 Principles of Engineering | 3 | PEN120 General Physics ² | 3 | |
| ENG109 Engineering Computing Systems | 3 | Engineering Elective | 3 | |
| | Total | 12 | Total | 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 | |
| | Total | 12 | Total | 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 | |
| ENG391 Process Control (Engineering Elective) | 3 | ENG382 Power Electronics | 3 | |
| ENG392 SCADA and Instrumentation Systems (Engineering Elective) | 3 | Engineering Elective | 3 | |
| | Total | 12 | Total | 12 |
| Year 4 - 2027 | Semester 1 Units | CP | Semester 2 Units | CP |
| | ENG535 Power Electronic Converters and Applications | 3 | ENG534 Power Systems Operation, Control and Protection | 3 |
| ENG532 Renewable Energy Resources and Technologies OR ENG631 Distributed Power System and Microgrid Planning and Reliability | 3 | ENG470 Engineering Thesis | 9 | |
| ENG537 Power System Modelling and Analysis | 3 | | | |
| ENG470 Engineering Thesis | 3 | | | |
| | Total | 12 | Total | 12 |

TOTAL CREDIT POINTS 96

¹ 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.

² 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](#).