

H1287 Bachelor of Engineering Honours (Electrical and Renewable Energy Engineering)

Academic Chair: For 1st year & Advanced Standing enquiries: [Sheikh Izzal Azid](#) **Start Date:** Semester 2 2026
For 2nd, 3rd and 4th year enquiries: [Martina Calais](#)

Major in Electrical and Renewable Energy Engineering, **Minor** in Industrial Control and Automation Engineering

Year	Semester 1 Units	CP	Semester 2 Units	CP
	Year 1 – 2026			MAS164 Fundamentals of Mathematics ¹
			PEN120 General Physics ²	3
			ENG101 Engineering Fundamentals	3
			ENG102 Engineering Design for Sustainability	3
			Total	12
Year 2 – 2027	Semester 1 Units	CP	Semester 2 Units	CP
	MAS182 Introductory Calculus with Applications	3	MAS161 Calculus and Matrix Algebra	3
	ENG109 Engineering Computing Systems	3	ENG103 Principles of Engineering	3
	ENG208 Fundamentals of DC Circuits	3	ENG209 Fundamentals of AC Circuits	3
	MAS162 Discrete Mathematics and Logic ³ (or Specified Elective)	3	ENG252 Embedded Systems ⁴ (or Specified Elective)	3
	Total	12	Total	12
Year 3 – 2028	Semester 1 Units	CP	Semester 2 Units	CP
	MAS220 Mathematical Methods and Multivariable Calculus	3	ENG216 Dynamic Systems and Control	3
	ENG215 Systems Engineering	3	ENG231 Renewable Energy Systems	3
	ENG251 PLC Systems ⁴ (or Specified Elective)	3	ENG381 Electrical Power Systems	3
	ENG344 Electromechanical Energy Conversion	3	ENG382 Power Electronics	3
	Total	12	Total	12
Year 4 – 2029	Semester 1 Units	CP	Semester 2 Units	CP
	ENG391 Process Control ⁴ (or Specified Elective)	3	ENG470 Engineering Honours Thesis (H option) ⁵	3
	ENG392 SCADA and Instrumentation Systems ⁴ (or Specified Elective)	3	ENG100 Engineering Professional Practice (H option)	0
	ENG535 Power Electronic Converters and Applications	3	ENG336 Engineering Finance, Management and Law	3
	ENG537 Power System Modelling and Analysis	3	ENG534 Power Systems Operation, Control and Protection	3
			Discovery Study Unit (see here for options)	3
	Total	12	Total	12
Year 5 – 2030	Semester 1 Units	CP	Semester 2 Units	CP
	ENG470 Engineering Honours Thesis (H option)	9		
	ENG100 Engineering Professional Practice (H option)	0		
	ENG532 Renewable Energy Resources and Technologies OR ENG631 Distributed Power System and Microgrid Planning and Reliability	3		
	Total	12	Total	

TOTAL CREDIT POINTS 96

¹ Check the Enrolment Rules for MAS164 in the [Handbook](#). If you are ineligible to enrol, you should consult the Academic Chair.

² Check the Enrolment Rules for PEN120 in the [Handbook](#). If you are ineligible to enrol, you should consult the Academic Chair.

³ Recommended Specified Elective for students studying the Minor in Industrial Control and Automation Engineering

⁴ The units ENG251, ENG252, ENG391 and ENG392 form the minor in Industrial Control and Automation Engineering, which is recommended for students studying the Electrical and Renewable Energy Engineering major. If students do not wish to complete this minor, they can choose other Specified Electives for all or some of these units (see below).

⁵ Note that enrolling in ENG470 requires that the full unit fee (12 CP) be paid at the beginning of the teaching period.

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.	
Specified Electives	
CHE140 Fundamentals of Chemistry (S1, S2) PEN152 Principles of Physics (S1, S2) MAS162 Discrete Mathematics and Logic (S1, S2) ENG341 Water Conservation & Auditing (S1) ENG251 PLC Systems (S1) ENG391 Process Control (S1) ENG392 SCADA and Instrumentation Systems (S1)	ENG221 Pollution & Its Control (S2) ENG252 Embedded Systems (S2) ENG300 Environmental Technology for Sustainability(S2) BUS368 Cultures of Innovation (S2)
Notes: <ol style="list-style-type: none">1. A maximum of 30 CP of 100-level units may be completed as part of the course.2. Review the specified elective units' corequisites and prerequisites carefully before making any selection.3. Any other elective units are subject to approval from the Academic Chair.	

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](#). Students should note that, due to unit prerequisites, commencing study in Semester 2 may extend the course duration. This information is correct as of 29/05/26.