

H1287 Bachelor of Engineering Honours (Industrial Control and Automation Engineering)

Academic Chair: For first year enquiries: [Amir Yazdani](#)
For all other enquiries: [Travis Woodward](#)

Start Date: Semester 1 2025

Recommended Electives Focus: Electrical and Renewable Energy Engineering

Year 1 – 2025	Semester 1 Units	CP	Semester 2 Units	CP
	MAS164 Fundamentals of Mathematics ¹	3	MAS182 Introductory Calculus with Applications	3
	ENG101 Engineering Fundamentals	3	PEN120 General Physics ²	3
	ENG103 Principles of Engineering	3	ENG102 Engineering Design for Sustainability	3
	ENG109 Engineering Computing Systems	3	BUS368 Cultures of Innovation	3
	Total	12	Total	12
Year 2 - 2026	Semester 1 Units	CP	Semester 2 Units	CP
	MAS161 Calculus and Matrix Algebra	3	ENG216 Dynamic Systems and Control	3
	ENG214 Electrical and Electronic Circuits	3	Specified Elective	3
	ENG215 Systems Engineering	3	ENG252 Embedded Systems	3
	ENG251 PLC Systems	3	ENG336 Engineering Finance, Management and Law	3
	Total	12	Total	12
Year 3 - 2027	Semester 1 Units	CP	Semester 2 Units	CP
	MAS220 Mathematical Methods and Multivariable Calculus	3	ENG231 Renewable Energy Systems (Elective)	3
	ENG391 Process Control	3	ENG381 Electrical Power Systems (Elective)	3
	ENG392 SCADA and Instrumentation Systems	3	ENG382 Power Electronics (Elective)	3
	ENG344 Electromechanical Energy Conversion (Elective)	3	ICT515 Foundations of Data Science	3
	Total	12	Total	12
Year 4 - 2028	Semester 1 Units	CP	Semester 2 Units	CP
	ENG470 Engineering Honours Thesis (Y option)	3	ENG470 Engineering Honours Thesis (Y option)	9
	ENG100 Engineering Professional Practice (Y)	0	ENG100 Engineering Professional Practice (Y)	0
	ENG551 Microcontrollers and Data Communication	3	Specified Elective	3
	ENG552 Industrial Control Systems	3		
	ENG553 Industrial Process Control	3		
	Total	12	Total	12

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.

Recommended Specified Electives	
CHE140 Fundamentals of Chemistry (S1, S2) ENG341 Water Conservation & Auditing (S1) ENG344 Electromechanical Energy Conversion (S1) SIK102 Wandju Boodja (Welcome to Country) (S1, S2)	ENG221 Pollution & Its Control (S2) ENG231 Renewable Energy Systems (S2) ENG300 Environmental Technology for Sustainability(S2) ENG381 Electrical Power Systems (S2) ENG382 Power Electronics (S2)
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](#). Students should note that due to unit prerequisites, commencing study in Semester 2 may extend the duration of the course. This information is correct as at 27/11/24.