

# Bachelor of Engineering Honours H1287 (Industrial Control & Automation Engineering)

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Start Date: Semester 1 2024

Year 1 – 2024	Semester 1 Units		CP	Semester 2 Units		CP
	MAS164 Fundamentals of Mathematics		3	MAS182 Applied Mathematics		3
	ENG101 Engineering Fundamentals		3	ENG102 Engineering Design for Sustainability		3
	ENG103 Principles of Engineering		3	PEN120 General Physics		3
	ENG109 Engineering Computing Systems		3	Engineering Elective (100-level)		3
	<b>Total</b>		12	<b>Total</b>		12
Year 2 - 2025	Semester 1 Units		CP	Semester 2 Units		CP
	MAS161 Calculus and Matrix Algebra		3	ENG215 Systems Engineering		3
	ENG214 Electrical and Electronic Circuits		3	ENG216 Dynamic Systems and Control		3
	ENG251 PLC Systems		3	ENG252 Embedded Systems		3
	Engineering Elective (200-level)		3	ENG231 Renewable Energy Systems (Engineering Elective)		3
	<b>Total</b>		12	<b>Total</b>		12
Year 3 – 2026	Semester 1 Units		CP	Semester 2 Units		CP
	ENG391 Process Control		3	BUS368 Cultures of Innovation		3
	ENG392 SCADA and Instrumentation Systems		3	ENG336 Finance, Ethics and Law		3
	MAS220 Mathematical Methods		3	ICT515 Foundations of Data Science		3
	ENG344 Electromechanical Energy Conversion (Engineering Elective)		3	ENG381 Electrical Power Systems (Engineering Elective)		3
	<b>Total</b>		12	<b>Total</b>		12
Year 4 - 2027	Semester 1 Units		CP	Semester 2 Units		CP
	ENG551 Microcontrollers and Data Communication		3	ENG382 Power Electronics (Engineering Elective)		3
	ENG552 Industrial Control Systems		3	ENG470 Engineering Thesis		9
	ENG553 Industrial Process Control		3			
	ENG470 Engineering Thesis		3			
	ENG100 Engineering Professional Practice		0			
	<b>Total</b>		12	<b>Total</b>		12

**TOTAL CREDIT POINTS 96**

Semester 1 notes	Semester 2 notes
<p>1. For MAS164, 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.</p> <p>2. 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.</p>	<p>1. For PEN120, 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.</p> <p>2. The elective units could be selected from: KAC102 Wandju Boodja (Welcome to Country); ENV102 Foundations of the Environment; PEN152 Principles of Physics; ICT158 Introduction to Information Systems; MAS183 Statistical Data Analysis; ENG221 Pollution &amp; its Control; ENV243 Water and Earth Science; ENV242 Atmospheric and Climate Science</p>

**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 23/11/23.