

Enrolment Course Structure

Course Code – EN8.MEC

Course Name – Bachelor of Engineering (Mechanical Engineering) (Honours)

First Year			
Unit Code	Unit Name	Unit Rules	CR Points
Semester 1			
ENGRG 1001	Computational Skills for Engineers	EX: ENGIN1004	
ENGRG 1002	Physics for Engineers 1	EX: ENGIN1002	
ENGRG 1003	Engineering Design 1	EX: ENGIN1005	
MATHS 1100	Applied Mathematics 1	EX: MATHS1001	
Semester 2			
COOPE 1001	Professional Identity (Engineering)	PR: Must be enrolled in EN8 or EN8.MIN or EN8.EIE or EN8.CIV	
ENGRG 1004	Physics for Engineers 2	EX: ENGIN1002 & ENGIN1003	
ENGRG 1005	Engineering Design 2	EX: ENGIN1004 & ENGIN3002	
MATHS 2100	Applied Mathematics 2	EX: MATHS1005 & MATHS1102	
Second Year			
Unit Code	Unit Name	Unit Rules	CR Points
Semester 1			
ENGRG 2301	Solid Mechanics	PR: ENGRG1003	
ENGRG 2304	Thermodynamics	PR: ENGRG1002 & ENGRG1004 EX: ENGIN3304	
ENGRG 2307	Engineering Computer Applications and Interactive Design	PR: ENGRG1001 EX: ENGIN3401	
	Minor Unit 1		
Semester 2			
ENGRG 2303	Engineering Dynamics	PR: ENGRG1002 EX: ENGIN2302	
ENGRG 2302	Fluid Mechanics	PR: ENGRG1002 & ENGRG1004 EX: ENGIN3301	
MATHS 3100	Applied Mathematics 3	PR: MATHS1100 EX: MATHS3001	
	Minor Unit 2		

Third Year			
Unit Code	Unit Name	Unit Rules	CR Points
Semester 1			
COOPE 2011	Cooperative Placement 1 (Engineering)	PR: COOPE1001 & At least 105 credit points from ENGRG subject-area at any level EX: BUGEN3751 & BUGEN3752 & SCCOR3003 & SCCOR3014	
ENGRG 3303	Energy Materials and Manufacturing	PR: ENGRG1004 EX: ENGIN3305	
	Minor Unit 3		
Semester 2			
COOPE 2012	Cooperative Placement 2 (Engineering)	PR: COOPE1001 & At least 105 credit points from ENGRG subject-area at any level	
ENGRG 3304	Industrial Automation and IoT	PR: ENGRG1004 EX: ENGIN2403, ENGRG9302	
	Minor Unit 4		
Fourth Year			
Unit Code	Unit Name	Unit Rules	
Semester 1			
ENGRG 4001	Engineering Design Project	PR: At least 300 credit points EX: ENGIN3002	
ENGRG 4002	Engineering Capstone Project 1	PR: At least 300 credit points EX: ENGIN4001	
ENGRG 4201	Control System Engineering	PR: ENGRG1004 EX: ENGIN3404	
ENGRG 9101	Modelling and Simulation in Engineering	PR: MATHS2100 or ENGRG2301 or must be in EZ9 EX: ENGIN5302	
Semester 2			
ENGRG 4003	Engineering Capstone Project 2	PR: ENGRG4002 EX: ENGIN4002	30
ENGRG 4302	Design of Mechanical Systems	PR: ENGRG2305 EX: ENGIN5304	15
ENPG 9307	Energy Conversion	PR: ENGRG9304	15

Course Coordinator



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Minor Units

ARTIFICIAL INTELLIGENCE

ITECH 1400 Foundations of Programming

ITECH 1503 Data and Information Systems

ITECH 2500 Algorithms for Artificial Intelligence

ITECH 2501 Business Analytics and Decision Support

BUSINESS ENTREPRENEURSHIP

BUMGT 1100 Introduction to Management

BUMGT 1103 Contemporary Human Resource Management

BUMGT 3105 Leadership and Change

BUMGT 3106 Human Resource Practice and Strategy

MINING TECHNOLOGY

ENGRG 2306 Surface Mining Operations and Equipment

ENGRG 2404 Rock Mechanics Application

ENGRG 3403 Underground Production Systems

ENGRG 2403 Rock Fragmentation

SOFTWARE DEVOLPMENT

ITECH 1400 Foundations of Programming

ITECH 1501 User Centred Design

ITECH 2509 Data Structure and Algorithms

ITECH 2306 Agile Coding

INFRASTRUCTURE SYSTEMS

ENPGG9110 Road and Traffic Engineering

ENGRG2106 Hydrology and Hydraulics

ENGRG2107 Construction Engineering

ENGRG4106 Intelligent Technologies for Sustainable Construction

ELECTRICAL AND ELECTRONICS SYSTEMS

ENGRG 2201 Digital Logic and Electronic Systems

ENGRG2204 Renewable Energy principles

ENGRG2205 Electrical Machines fundamentals

ENGRG9202 Electrical Demand, Forecasting and Management

Additional Information

This course structure applies to students commencing from 2026. Students who commenced prior to 2026 should refer to the continuing enrolments page.

Glossary

Semester: designated teaching period.

PR: Pre-requisite, a unit/s that must be completed prior to undertaking another unit.

CO: Co-requisite, a unit/s that must be completed simultaneously, or prior to, undertaking another unit.

EX: Exclusion, a unit/s that may not be taken.