

Enrolment Course Structure

Course Code – EN8.EIE

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

Location: MTH

First Year			
Unit Code	Unit Name	Unit Rules	CR Points
Semester 1			
ENGRG 1001	Computational Skills for Engineers		15
ENGRG 1002	Physics for Engineers 1		15
ENGRG 1003	Engineering Design 1		15
MATHS 1100	Applied Mathematics 1	PR: MATHS1001	15
Semester 2			
COOPE 1001	Professional Identity (Engineering)	PR: Students must be enrolled in one of the following courses: EN8, EN8.MIN, EN8.MEC, EN8.EIE, EN8.CIV	15
ENGRG 1004	Physics for Engineers 2	EX: ENGIN1002 & ENGIN1003	15
ENGRG 1005	Engineering Design 2	EX: ENGIN1004 & ENGIN3002	15
MATHS 2100	Applied Mathematics 2	EX: MATHS1005 & MATHS1102	15
Second Year			
Unit Code	Unit Name	Unit Rules	CR Points
Semester 1			
ENGRG 2201	Digital Logic and Electronic Systems	EX: ENGIN2105	15
ENGRG 2204	Renewable Energy Principles	PR: ENGRG1004 EX: ENGIN2103	15
ENGRG 3201	Power System Analysis	PR: ENGRG2205 EX: ENGIN3102	15
	Minor Unit 1		15
Semester 2			
ENGRG 2203	Communication Engineering	PR: ENGRG1004 EX: ENGIN3104	15
MATHS 3100	Applied Mathematics 3	PR: MATHS1100 EX: MATHS3001	15

ENGRG 2205	Electrical Machines Fundamentals	EX: ENGIN2404	15
	Minor Unit 2		15
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	30
ENGRG 3304	Industrial Automations and IoT		
	Minor Unit 3		15
Semester 2			
COOPE 2012	Cooperative Placement 2 (Engineering)	PR: COOPE1001 & At least 105 credit points from ENGRG subject-area at any level	30
ENGRG 3202	Power System Protection	PR: ENGRG3201 EX: ENGIN3103	15
	Minor Unit 4		15
Fourth Year			
Unit Code	Unit Name	Unit Rules	CR Points
Semester 1			
ENGRG 4001	Engineering Design Project	PR: At least 300 credit points EX: ENGIN3002	15
ENGRG 4002	Engineering Capstone Project 1	PR: At least 300 credit points EX: ENGIN4001	15
ENGRG 4201	Control System Engineering	PR: ENGRG1004 EX: ENGIN3404	15
ENGRG 9206	Microgrids and Energy Storage System	PR: ENGRG2204 EX: ENGIN5102	15
Semester 2			
ENGRG 4003	Engineering Capstone Project 2	PR: ENGRG4002 EX: ENGIN4002	30
ENGRG 4202	Electrical Power Transmission Distribution and Protection		
ENGRG 9202	Electrical Demand, Forecasting and Management	PR: ENGRG3201 or ENGRG9205 EX: ENGIN5103	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 DEVELOPMENT

ITECH 1400 Foundations of Programming

ITECH 1501 User Centred Design

ITECH 2509 Data Structure and Algorithms

ITECH 2306 Agile Coding

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.