

Enrolment Course Structure

Course Code – EN8.MIN

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

Location: MTH

First Year			
Unit Code	Unit Name	Unit Rules	CR Points
Semester 1			
ENGRG1001	Computational Skills for Engineers		15
ENGRG1002	Physics for Engineers 1		15
ENGRG1003	Engineering Design 1		15
MATHS1100	Applied Mathematics 1	EX: MATHS1001	15
Semester 2			
COOPE1001	Professional Identity (Engineering)	PR: Students must be enrolled in one of the following courses: EN8, EN8.MIN, EN8.MEC, EN8.EIE, EN8.CIV	15
ENGRG1004	Physics for Engineers 2	EX: ENGIN1002 & ENGIN1003	15
ENGRG1005	Engineering Design 2	EX: ENGIN1004 & ENGIN3002	15
MATHS2100	Applied Mathematics 2	EX: MATHS1005 & MATHS1102	15
Second Year			
Unit Code	Unit Name	Unit Rules	CR Points
Semester 1			
ENGRG2301	Solid Mechanics	PR: ENGRG1003	15
ENGRG2302	Fluid Mechanics	PR: ENGRG1002 & ENGRG1004 EX: ENGIN3301	15
ENGRG2403	Rock Fragmentation	EX: ENGIN2505	15
	Minor Unit 1		15
Semester 2			
ENGRG2402	Mining Geology and Mineral Processing		15
ENGRG2306	Rock Fragmentation	PR: If undertaking an Undergraduate Course THEN must have completed ENGIN2502 EX: ENMIN3070, ENMIN5018	15

ENGRG2404	Rock Mechanics Application	EX: ENGIN5507	15
	Minor Unit 2		15
Third Year			
Unit Code	Unit Name	Unit Rules	CR Points
Semester 1			
COOPE2011	Cooperative Placement 1 (Engineering)	PR: COOPE1001 & At least 105 credit points from ENGRG subject-area at any level EX: BUGEN3751, BUGEN3752, SCCOR3003, SCCOR3014, COOPC2025, COOPC2005	30
ENGRG3402	Surface and Underground Mining Systems	PR: ENGRG2402	15
	Minor Unit 3		15
Semester 2			
COOPE2012	Cooperative Placement 2 (Engineering)	PR: COOPE1001 & At least 105 credit points from ENGRG subject-area at any level	30
ENGRG3403	Underground Production Systems	PR: If undertaking an Undergraduate Course THEN must have completed ENGIN2502 EX: ENMIN3020, ENGIN3501	15
	Minor Unit 4		15
Fourth Year			
Unit Code	Unit Name	Unit Rules	CR Points
Semester 1			
ENGRG4001	Engineering Design Project	PR: At least 300 credit points EX: ENGIN3002	15
ENGRG4002	Engineering Capstone Project 1	PR: At least 300 credit points EX: ENGIN4001	15
ENGRG4401	Mine Planning and Scheduling	PR: ENGRG3401 EX: ENGIN5505	15
	Specialisation Elective Unit 1		15
Semester 2			
ENGRG4003	Engineering Capstone Project 2	PR: ENGRG4002 EX: ENGIN4002	30
ENGRG9406	Mine Surveying		15
	Specialisation Elective Unit 2		15

Course Coordinator

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Minor Units

AI IN ENGINEERING

ITECH1400 Foundations of Programming

ITECH1504 Connected Systems

ITECH2500 Algorithms for Artificial Intelligence

ITECH3500 Machine Learning 1

BUSINESS ENTREPRENEURSHIP (ECONOMICS AND FINANCE)

BUECO1300 Introduction to Economics

BUECO2301 Financial Markets and Digital Innovations

BUECO2302 Investment and Portfolio Management

BUECO3304 Sustainability and Development

CIVIL ENGINEERING

ENGRG2101 Construction Engineering 1

ENGRG2102 Geotechnical Engineering 1

ENGRG2105 Road and Traffic Engineering

ENGRG2106 Hydrology and Hydraulics

COMPUTATIONAL ENGINEERING

ENGRG9101 Modelling and Simulation in Engineering

ITECH1400 Foundations of Programming

ITECH2500 Algorithms for Artificial Intelligence

ITECH2509 Data Structures and Algorithms

ELECTRICAL POWER GRID

ENGRG2204 Renewable Energy Principles

ENGRG2205 Electrical Machines Fundamentals

ENGRG3201 Power System Analysis

ENGRG3202 Power System Protection

ENERGY STUDIES

ENGRG2302 Fluid Mechanics

ENGRG2304 Thermodynamics

ENGRG9101 Modelling and Simulation in Engineering

ENGRG9304 Energy Conversion

ENVIRONMENTAL ENGINEERING

SCENV2400 Wetlands and Water Resources

SCENV3120 Landscape Restoration and Mine Site Rehabilitation

SCENV3500 Climate and Environmental Issues in a Changing World

SCGEO1104 Landscape Evolution
SCGEO2106 Hydrology
SCSUS1500 Sustainable Earth

INDUSTRY 4.0

ENGRG4201 Control System Engineering
ENGRG9203 Advanced Control System Engineering
ENGRG9301 Computer Aided Manufacturing
ITECH1502 Cybersecurity Fundamentals
ITECH1503 Data and Information Systems
ITECH1504 Connected Systems

PROJECT MANAGEMENT

ENGIN5205 Engineering Project Management Theory
ENGIN5208 Sustainable Engineering Practice
ENGIN5209 Engineering Project Resource Planning
ENGIN5210 Engineering Project Execution

RENEWABLE ENERGY ENGINEERING

ENGRG2201 Digital Logic and Electronic Systems
ENGRG2202 Power Electronics
ENGRG2204 Renewable Energy Principles
ENGRG2205 Electrical Machines Fundamentals

SOFTWARE ENGINEERING

ITECH1400 Foundations of Programming
ITECH1503 Data and Information Systems
ITECH2004 Data Modelling
ITECH2306 Agile Coding

STATISTICAL DATA SCIENCE

ITECH5007 Data Science for All
STATS1000 Statistical Methods
STATS2100 Experimental Design & Analysis
STATS2101 Statistics for Prediction

Specialisation Elective Unit 1

ENPG9409 Mine Safety and Environmental Engineering

Specialisation Elective Unit 2

ENPG9407 Smart Engineering Technologies

Additional Information

This course structure applies to students commencing from 2025. Students who commenced prior to 2025 should refer to the continuing enrolments page.

TEQSA have advised that, in accordance with B1.1.3 of [Higher Education Standards Framework \(Threshold Standards\) 2021](#) all Higher Education Providers are required to show their TEQSA Provider number and Provider Category on all relevant public material. ITS have ensured that our website and email signature templates have been amended to ensure compliance and have provided a knowledge article to assist you to update your signatures. Marketing are working to update the brand library and all social media accounts.

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.