

Enrolment Course Structure

Course Code – EN8.CIV

Course Name – Bachelor of Engineering (Civil) (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)		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
Semester 1			
ENGRG2101	Construction Engineering 1	PR: ENGRG1004 EX: ENGIN2202	15
ENGRG2105	Road and Traffic Engineering	PR: ENGRG1002 & ENGRG1004 EX: ENGIN3205	15
ENGRG2106	Hydrology and Hydraulics	PR: ENGRG1002 EX: ENGIN2201	15
	Minor Unit 1		15
Semester 2			
ENGRG2102	Geotechnical Engineering 1	PR: ENGRG1002 EX: ENGIN2204	15
ENGRG2103	Water and Wastewater System	PR: ENGRG1002 EX: ENGIN3206	15
ENGRG2104	Structural Engineering 1	PR: ENGRG1002 EX: ENGIN2203 & ENGIN2301	15
	Minor Unit 2		15

Third Year	Unit Code	Unit Name	Unit Rules
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	30
ENGRG3101	Structural Engineering 2	PR: ENGRG2104 EX: ENCIV3310 & ENGIN3201	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
ENGRG4101	Geomatics Engineering	PR: ENGRG2105 EX: ENGIN3204	15
	Minor Unit 4		15
Fourth Year	Unit Code	Unit Name	Unit Rules
Semester 1			
ENGRG3102	Geotechnical Engineering 2	PR: ENGRG2102 EX: ENGIN3202	15
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
	Specialisation Elective Unit 1		15
Semester 2			
ENGRG4102	Construction Engineering 2	PR: ENGRG2101 EX: ENGIN4203	15
ENGRG4003	Engineering Capstone Project 2	PR: ENGRG4002 EX: ENGIN4002	30
	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

COMPUTATIONAL ENGINEERING

ENGRG9101 Modelling and Simulation in Engineering
ITECH1400 Foundations of Programming
ITECH2500 Algorithms for Artificial Intelligence
ITECH2509 Data Structures and Algorithms

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

MINING TECHNOLOGY

ENGRG2401 Introduction to Mining Engineering and Technologies
ENGRG2404 Rock Mechanics Application
ENGRG3401 Surface and Underground Mining Systems
ENGRG4401 Mine Planning and Scheduling

PROJECT MANAGEMENT

ENGIN5205 Engineering Project Management Theory

ENGIN5208 Sustainable Engineering Practice
ENGIN5209 Engineering Project Resource Planning
ENGIN5210 Engineering Project Execution

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

ENGRG9101 Modelling and Simulation in Engineering
ENGRG9103 Water Resource Management

Specialisation Elective Unit 2

ENGRG9104 Structural Engineering 3
ENGRG9105 Geotechnical Engineering 3

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.