

# Bachelor of Engineering (Honours)

## Specialisation in Civil Engineering

### ASSUMED KNOWLEDGE

- HSC Mathematics Advanced (Band 4) or equivalent. If you don't have the assumed knowledge, you're advised to undertake a bridging course in mathematics.

### RECOMMENDED STUDIES

- HSC Mathematics Extension 1 or HSC Mathematics Extension 2
- HSC Physics, or equivalent.
- HSC Software Design and Development or equivalent.

### COURSE STRUCTURE

#### ESSENTIAL UNITS: Complete each unit below 60 cp

ENGG1000	Introduction to Engineering	10 CP
ENGG1050	Engineering Design	10 CP
ENGG2000	Engineering Practice	10 CP
ENGG2050	Engineering Systems and Design Thinking	10 CP
ENGG3000	Engineering Project Practice	10 CP
ENGG3050	Engineering Leadership and Entrepreneurship	10 CP
ENGG4099	PACE: Industry Experience	No CP

#### CAPSTONE UNIT: Complete the capstone unit below 10 cp

ENGG4001	Professional Practice	10 CP
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**Essential Units Total = 70 Credit Points**

#### Flexible zone 40 cp

**40cp of elective units. You can use your flexible zone to enrol in any Undergraduate unit for which you meet the requisites. You may also use your flexible zone to complete a minor.**

Options include: Ancient History, Anthropology, Astronomy and Astrophysics, Biology, Biotechnology, Business Administration, Business Analytics, Business Information Systems, Chemistry, Chinese Studies, Creative Writing, Criminology, Critical Indigenous Studies, Cyber Security Governance, Earth and Environmental Sciences, Economics, English, French and Francophone Studies, Gender Studies, Geography, German Studies, Health, Wellbeing and Society, Human Biology, Human Resource Management, Interactive Design, International Business, International Relations, Japanese Studies, Journalism and Non-Fiction Writing, Management and Leadership, Marine Science, Mathematics, Media, Culture and Communications, Modern History, Music Studies, Performing Arts and Entertainment Industries, Physics, Philosophy, Politics, Psychological Science, Public Relations and Social Media, Radio, Podcasting and Audio Media, Screen Practice and Production, Sociology, Spanish and Latin American Studies, Statistical Data Science, Strategy, Innovation and Entrepreneurship, and Work, Life and Technology.

**Flexible Zone = 40 Credit Points**

**Degree = 320 Credit Points**

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#### Complete all units below. Each unit is 10 cp

CIVL1001	Introduction to Civil Engineering
MATH1010	Calculus and Linear Algebra I
MATH1020	Calculus and Linear Algebra II
COMP1000	Introduction to Computer Programming
PHYS1510	Engineering Physics
CIVL2101	Water and Wastewater Engineering
CIVL2201	Soil Mechanics
CIVL2205	Geotechnical Engineering
CIVL2301	Structural Analysis
MATH2055	Engineering Mathematics II
MECH2002	Fluid Mechanics
CIVL3101	Hydraulics and Hydrology
CIVL3201	Transport Engineering
CIVL3301	Design of Concrete Structures
CIVL3305	Design of Steel and Timber Structures
CIVL3401	Construction Management
CIVL4090	Civil Engineering Research Thesis A
CIVL4091	Civil Engineering Research Thesis B
CIVL4201	Geotechnical and Transportation Project
CIVL4301	Integrated Structural Design and Construction
CIVL4401	Health and Safety in Construction

**Specialisation = 210 Credit Points**

**Degree = 320 Credit Points**

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