



Specialisation

Civil Engineering (8621)

CVENYS

96 Units of Credit

Overview

Two Year Masters - Civil Engineering

The program in which the stream belongs aligns with the Structure of Postgraduate Coursework Policy and procedures.

The stream of Civil Engineering enables students to specialise, and gain depth of knowledge across a broad range of areas, including project management, transport engineering, structural engineering, geotechnical engineering, water resources and waste water treatment.

ENTRY REQUIREMENTS

Entry is open to students with a four year non-accredited (under the Washington Accord) Bachelor of Civil Engineering degree or equivalent. Alternatively, eligible applicants include those who hold a three year Engineering Science degree, at least equivalent to the first three years of a relevant Civil Engineering degree accredited under the Washington Accord.

For entry details, please [click here](#).

Faculty

Faculty of Engineering

School

School of Civil and Environmental Engineering

Study Level

Postgraduate

Minimum Units of Credit

96

Specialisation Type

Specialisation

Available in Program(s)

Program(s) in which this specialisation is available

Master of Engineering - **ME**

8621 Engineering

Faculty: Faculty of Engineering

Campus: Kensington

Units of Credit: 96

Typical Duration: 2 Years

Specialisation Structure

Students must complete 96 UOC.

Advanced Core Courses

Students must take 18 UOC of the following courses.

CVEN9000 | 6 UOC

Civil Engineering Design Practice

CVEN9451 | 4 UOC

Masters Project A

CVEN9452 | 4 UOC

Masters Project B

CVEN9453 | 4 UOC

Masters Project C

Civil Engineering Core Courses

Students must take 24 UOC of the following courses.

CVEN3303 | 6 UOC

Steel Structures

CVEN3304 | 6 UOC

Concrete Structures

CVEN9525 | 6 UOC

Fundamentals of Geomechanics

CVEN9625 | 6 UOC

Fundamentals of Water Engineering

Level 4 Engineering and the Environment Electives

Students must take at least 6 UOC, up to a maximum of 18 UOC of the following courses.

CVEN4104 | 6 UOC

Sustainability in Construction

CVEN4705 | 6 UOC

Environmental Sustainability - Methods, Tools, Management

CVEN9898 | 6 UOC

Fundamentals of Sustainable Infrastructure

Level 4 Management Electives

Students must take at least 12 UOC of the following courses.

CVEN4101 | 6 UOC

Problem Solving for Engineers

CVEN4102 | 6 UOC

Operations and Projects

CVEN4103 | 6 UOC

Engineering Contracts

CVEN9727 | 6 UOC

Construction Estimating and Tendering

CVEN9741 | 6 UOC

Engineering Construction

CVEN9742 | 6 UOC

Professional Civil Engineering

CVEN9743 | 6 UOC

Construction Engineering Practices

CVEN9744 | 6 UOC
Civil Engineering Practices

GSOE9010 | 6 UOC
Engineering Postgraduate Coursework Research Skills

GSOE9360 | 6 UOC
Academic Discourse in Engineering

Level 4 Prescribed Electives

Students can take up to a maximum of 6 UOC of the following courses.

CVEN4201 | 6 UOC
Rock and Slope Engineering

CVEN4202 | 6 UOC
Advanced Topics in Geotechnical Engineering

CVEN4204 | 6 UOC
Ground Improvement and Monitoring Techniques

CVEN4301 | 6 UOC
Advanced Concrete Structures

CVEN4308 | 6 UOC
Structural Dynamics

CVEN4309 | 6 UOC
Sustainable Timber Engineering

CVEN4310 | 6 UOC
Deformation Monitoring Surveys

CVEN4402 | 6 UOC
Transport Systems - Part 1: Network Analysis

CVEN4507 | 6 UOC
Advanced Water Engineering

CVEN4800 | 6 UOC
Satellite Remote Sensing and Applications

GMAT4220 | 6 UOC
Geospatial Information Science

Level 5 Electives

Students must take 30 UOC of the following courses with a maximum of 18 UOC from any one discipline group.

CVEN9405 | 6 UOC
Urban Transport Planning Practice

CVEN9407 | 6 UOC
Transport Modelling

CVEN9415 | 6 UOC
Transport Systems Part 2

CVEN9421 | 6 UOC
Transport Logistics Engineering

CVEN9422 | 6 UOC
Traffic Management and Control

CVEN9511 | 6 UOC
Geotechnical Models and Site Investigation

CVEN9512 | 6 UOC
Geomechanics

CVEN9513 | 6 UOC

Advanced Foundation Engineering

CVEN9514 | 6 UOC

Numerical Methods in Geotechnical Engineering

CVEN9521 | 6 UOC

Slope Instability and Stabilisation

CVEN9522 | 6 UOC

Rock Engineering

CVEN9523 | 6 UOC

Pavement Engineering and Analysis

CVEN9524 | 6 UOC

Geotechnical Engineering of Dams

CVEN9526 | 6 UOC

Earthquake Engineering and Foundation Dynamics

CVEN9611 | 6 UOC

Urban Hydrology and Stormwater Management

CVEN9612 | 6 UOC

Catchment and Water Resources Modelling

CVEN9620 | 6 UOC

Channels, Rivers and Estuaries

CVEN9630 | 6 UOC

Groundwater Hydrology and Resources Analysis

CVEN9640 | 6 UOC

Coastal Engineering

CVEN9701 | 6 UOC

Engineering Economics and Financial Management

CVEN9702 | 6 UOC

Project Planning and Control

CVEN9706 | 6 UOC

Human Resources Management

CVEN9707 | 6 UOC

Contracts Management

CVEN9710 | 6 UOC

Management of Risk

CVEN9714 | 6 UOC

Resource Management

CVEN9720 | 6 UOC

Problem Solving and Decision Making

CVEN9723 | 6 UOC

Design of Construction Operations

CVEN9726 | 6 UOC

Legal Studies and Professional Practice

CVEN9731 | 6 UOC

Project Management Framework

CVEN9802 | 6 UOC

Structural Stability

CVEN9806 | 6 UOC

Prestressed Concrete Design

CVEN9809 | 6 UOC
Reinforced Concrete Design

CVEN9818 | 6 UOC
Bridge Engineering

CVEN9820 | 6 UOC
Computational Structural Mechanics

CVEN9822 | 6 UOC
Steel and Composite Structures

CVEN9824 | 6 UOC
Advanced Materials Technology

CVEN9855 | 6 UOC
Water and Wastewater Analysis and Quality Requirements

GMAT9600 | 6 UOC
Principles of Remote Sensing

Maximum Level 5 Geotechnical Engineering UOC

Students may only undertake a maximum of 18 UOC of the following courses.

CVEN9511 | 6 UOC
Geotechnical Models and Site Investigation

CVEN9512 | 6 UOC
Geomechanics

CVEN9513 | 6 UOC
Advanced Foundation Engineering

CVEN9514 | 6 UOC

Numerical Methods in Geotechnical Engineering

CVEN9521 | 6 UOC

Slope Instability and Stabilisation

CVEN9522 | 6 UOC

Rock Engineering

CVEN9523 | 6 UOC

Pavement Engineering and Analysis

CVEN9524 | 6 UOC

Geotechnical Engineering of Dams

CVEN9526 | 6 UOC

Earthquake Engineering and Foundation Dynamics

Maximum Level 5 Project & Construction Mgmt UOC

Students may only undertake a maximum of 18 UOC of the following courses.

CVEN9701 | 6 UOC

Engineering Economics and Financial Management

CVEN9702 | 6 UOC

Project Planning and Control

CVEN9706 | 6 UOC

Human Resources Management

CVEN9707 | 6 UOC

Contracts Management

CVEN9710 | 6 UOC

Management of Risk

CVEN9714 | 6 UOC
Resource Management

CVEN9720 | 6 UOC
Problem Solving and Decision Making

CVEN9723 | 6 UOC
Design of Construction Operations

CVEN9726 | 6 UOC
Legal Studies and Professional Practice

CVEN9731 | 6 UOC
Project Management Framework

Maximum Level 5 Structural Engineering UOC

Students may only undertake a maximum of 18 UOC of the following courses.

CVEN9802 | 6 UOC
Structural Stability

CVEN9806 | 6 UOC
Prestressed Concrete Design

CVEN9809 | 6 UOC
Reinforced Concrete Design

CVEN9818 | 6 UOC
Bridge Engineering

CVEN9820 | 6 UOC
Computational Structural Mechanics

CVEN9822 | 6 UOC
Steel and Composite Structures

CVEN9824 | 6 UOC

Advanced Materials Technology

Maximum Level 5 Transport Engineering UOC

Students may only undertake a maximum of 18 UOC of the following courses.

CVEN9405 | 6 UOC

Urban Transport Planning Practice

CVEN9407 | 6 UOC

Transport Modelling

CVEN9415 | 6 UOC

Transport Systems Part 2

CVEN9421 | 6 UOC

Transport Logistics Engineering

CVEN9422 | 6 UOC

Traffic Management and Control

Maximum Level 5 Water Engineering UOC

Students may only undertake a maximum of 18 UOC of the following courses.

CVEN9611 | 6 UOC

Urban Hydrology and Stormwater Management

CVEN9612 | 6 UOC

Catchment and Water Resources Modelling

CVEN9620 | 6 UOC

Channels, Rivers and Estuaries

CVEN9630 | 6 UOC

Groundwater Hydrology and Resources Analysis

CVEN9640 | 6 UOC

Coastal Engineering

CVEN9855 | 6 UOC

Water and Wastewater Analysis and Quality Requirements

Enrolment Disclaimer

Unless advised otherwise by your program authority, you should follow the rules for the handbook for the year you commenced your program. You are also responsible for ensuring you enrol in courses according to your program requirements. myUNSW enrolment checks that you have met enrolment requirements such as pre-requisites for individual courses but not that a course will count towards your program requirements.

Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

[Pre-2019 Handbook Editions](#)

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Authorised by Deputy Vice-Chancellor (Academic)

CRICOS Provider Code 00098G

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