

# CIVL 5001 BUILDING ENGINEERING

**Credit Points** 10

**Coordinator** Brendan Kirkland ([https://directory.westernsydney.edu.au/search/name/Brendan Kirkland/](https://directory.westernsydney.edu.au/search/name/Brendan%20Kirkland/))

**Description** This subject provides students with an understanding of the factors that contribute to decisions in building design, particularly compliance with the National Construction Code and related standards. Students apply their learning to real world contexts as they integrate the construction codes, standards and engineering structural principles to building engineering. Students build their skillset to assess the structural performance acceptability of buildings.

**School** Eng, Design & Built Env

**Discipline** Building Services Engineering

**Student Contribution Band** HECS Band 2 10cp

Check your HECS Band contribution amount via the Fees ([https://www.westernsydney.edu.au/currentstudents/current\\_students/fees/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Postgraduate Coursework Level 5 subject

**Equivalent Subjects** CIVL 7011 - Building Engineering

## Restrictions

Students enrolled in the 3693 Master of Engineering (Civil Engineering) cannot enrol in this subject.

Students enrolled in Undergraduate Construction programs can enrol in this subject with the approval of the Director of Academic Programs for PG Construction.

## Learning Outcomes

1. Analyse the underlying concepts of building engineering.
2. Interpret soil classification and its implication on footing systems.
3. Determine structural design actions and strength of various structural members through simple performance evaluation.
4. Interpret the performance requirements of the structural provisions of the National Construction Code as they relate to all classes of buildings.
5. Apply various standards and codes of practice related to structural engineering.
6. Evaluate existing structures in terms of the acceptability of their performance.

## Subject Content

1. Structural provisions of the National Construction Code (Volumes 1 and 2)
2. Structural design actions: dead and live load, wind effect
3. Load combinations and Limit State Design
4. Soil classification and footing systems
5. Structural engineering concepts
6. Behaviour of structural materials
7. Reinforced concrete members and prestressed concrete
8. Structural timber members and connections
9. Structural steel members: beams, columns, and tension members
10. Steel connections, frames, and composite members

## Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/Group Task
Quiz	3 x 30 minutes	30	N	Individual
Report	4000 words	40	N	Individual
Final Exam	2 hours	30	N	Individual

Teaching Periods

## Spring (2022)

Online

Online

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View timetable ([https://classregistration.westernsydney.edu.au/even/timetable/?subject\\_code=CIVL5001\\_22-SPR\\_ON\\_0#subjects](https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=CIVL5001_22-SPR_ON_0#subjects))

## Spring (2023)

Online

Online

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