

CIVL 7011 BUILDING ENGINEERING

Credit Points 10

Legacy Code 300713

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Description The aim of this subject is to provide students with an understanding of the factors that contribute to decisions in building design in respect of compliance with building regulations and standards. Topics include soil classification for construction, footing systems, loadings and their evaluation, structural materials and systems, structural behaviour and strength, and failure and rectification.

School Eng, Design & Built Env

Discipline Building Services Engineering

Student Contribution Band HECS Band 2 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Postgraduate Coursework Level 7 subject

Equivalent Subjects CUVL5001 - Building Engineering
LGYB 8310 - Building Engineering

Restrictions

Students must be enrolled in a postgraduate program.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. describe the underlying concepts of building engineering
2. explain the soil classification and its implication on footing systems
3. discuss loading and structural behaviour of various structural members and perform simple performance evaluation
4. carry out rudimentary review of designs for NCCA compliance
5. assess existing structures in terms of the acceptability of their performance.
6. apply various codes of practice related to structural engineering in assessing a design solution.

Subject Content

1. Structural design actions: dead and live load, wind effect
2. Load combinations and Limit State Design
3. Soil classification and footing systems
4. Structural engineering concepts
5. Behaviour of structural materials
6. Reinforced concrete members and prestressed concrete
7. Structural timber members and connections
8. Structural steel members: beams, columns and tension members
9. 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