CIVL 3002 CONCRETE STRUCTURES (UG)

Credit Points 10

Legacy Code 300736

Coordinator Ee Loon Tan (https://directory.westernsydney.edu.au/search/name/Ee Loon Tan/)

Description This subject covers the basic elements of structural behaviour and design with reinforced and pre-stressed concrete. Students will learn to analyse the section capacity of reinforced concrete beams, slabs, and columns, and design simple suspended structures. The subject places a strong emphasis on the process of structural design.

School Eng, Design & Built Env

Discipline Structural 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 Undergraduate Level 3 subject

Pre-requisite(s) CIVL 2007

Co-requisite(s) CIVL 3014

Equivalent Subjects CIVL 3001 - Concrete Structures (UG)

Assumed Knowledge

Knowledge of engineering mechanics and statics.

Learning Outcomes

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

1. Discuss the properties of fresh and hardened concrete
2. Apply limit state design concepts to concrete elements and whole structures
3. Determine design actions for and analyse concrete structures to obtain internal design action effects
4. Design concrete elements based on evaluated design action effects
5. Apply relevant Australian Standards for concrete structures and loading in the designing of concrete structural elements
6. Analyse and interpret the behaviour of concrete structural elements subjected to appropriate design loads

Subject Content

Materials, the design process, Standards
Beams: flexural strength analysis, flexural behaviour, shear, deflections and cracking.
Basic pre-stressed design.
Columns: ultimate strength, slenderness effects.
Slabs: simplified design, simple analysis for deflections.

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
Report	approx. 20 pages	30	N	Group
Intra-session Exam	1 hr - Closed book	20	N	Individual
Final Exam	2 hrs - Closed Book	50	N	Individual

Teaching Periods

Sydney City Campus - Term 3 (2023)

Sydney City

On-site

Subject Contact Ankit Agarwal (https://directory.westernsydney.edu.au/search/name/Ankit Agarwal/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=CIVL3002_23-SC3_SC_1#subjects)

Autumn (2024)

Penrith (Kingswood)

On-site

Subject Contact Ee Loon Tan (https://directory.westernsydney.edu.au/search/name/Ee Loon Tan/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=CIVL3002_24-AUT_KW_1#subjects)

Parramatta City - Macquarie St

On-site

Subject Contact Ee Loon Tan (https://directory.westernsydney.edu.au/search/name/Ee Loon Tan/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=CIVL3002_24-AUT_PC_1#subjects)

Sydney City Campus - Term 2 (2024)

Sydney City

On-site

Subject Contact Ee Loon Tan (https://directory.westernsydney.edu.au/search/name/Ee Loon Tan/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=CIVL3002_24-SC2_SC_1#subjects)