CIVL 3012 STEEL STRUCTURES

Credit Points 10

Legacy Code 300730

Coordinator Fidelis Mashiri (https://directory.westernsydney.edu.au/search/name/Fidelis Mashiri/)

Description This subject covers the basic behaviour of steel members and structures, the appropriate methods to analyse them and the design criteria and methods used to proportion them.

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 3013 - Steel Structures

Learning Outcomes

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

1. Recognise different steel grades
2. Apply limit state design concepts to structural steel elements
3. Determine design actions for and analyse steel structures to obtain internal design action effects
4. Design structural steel elements based on evaluated design action effects
5. Apply relevant Australian Standards for steel structures and loading in the designing of structural steel elements
6. Analyse and interpret the behaviour of structural steel elements subjected to a variety of design loads
7. Use engineering software to determine internal design action effects
8. Work effectively as a team member to analyse and report on a structural steel design problem

Subject Content

Plastic Analysis
Biaxial Bending
Shear and bearing beam webs
Bolted and Welded Connections
Frames

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	Mandatory
Applied Project	Approximately 20 pages design report	30	N	Group	N
Professional Task	Exam type assignment questions and 2 hour Mid Semester exam quizzes	20	N	Individual	N
Final Exam	2 hours	50	N	Individual	N

Teaching Periods

Sydney City Campus - Term 2 (2025)
Sydney City
On-site
Subject Contact Eileen An (https://directory.westernsydney.edu.au/search/name/Eileen An/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=CIVL3012_25-SC2_SC_1#subjects)

Spring (2025)
Penrith (Kingswood)
Hybrid
Subject Contact Fidelis Mashiri (https://directory.westernsydney.edu.au/search/name/Fidelis Mashiri/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=CIVL3012_25-SPR_KW_3#subjects)

Parramatta City - Macquarie St
Hybrid
Subject Contact Fidelis Mashiri (https://directory.westernsydney.edu.au/search/name/Fidelis Mashiri/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=CIVL3012_25-SPR_PC_3#subjects)