CIVL 7006 ADVANCED STRUCTURAL ANALYSIS

Credit Points 10

Legacy Code 300594

Coordinator Haiping Zhu (https://directory.westernsydney.edu.au/search/name/Haiping Zhu/)

Description This unit will introduce students at postgraduate level to structural analysis of trusses, beams, frames and plates. It covers the slope defection method and matrix method for analysis of beams, trusses and frames, and the bending and buckling analysis of beams and plates under various loading conditions. The theories learned in classes will be reinforced in practical sessions by using computer software packages.

School Eng, Design & Built Env

Discipline Civil Engineering

Student Contribution Band HECS Band 2 10cp

Level Postgraduate Coursework Level 7 subject

Incompatible Subjects LGYA 5845 - Linear and Nonlinear Analysis of Structures LGYA 5976 - Advanced Structural Engineering LGYA 5837 - Numerical and Finite Element Methods

Restrictions

Students must be enrolled in a postgraduate program.

Assumed Knowledge

Students must have knowledge in engineering mathematics, engineering mechanics at intermediate level and structural analysis at fundamental level.

Learning Outcomes

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

1. improve the skills to analyse beams and frames using the slope deflection method
2. enhance the ability to use the matrix method to analyse complex structures
3. analyse bending and buckling of beams and plates
4. use software packages to analyse structures

Subject Content

Slope deflection method for beams and frames
Matrix method for statically indeterminate structures
Bending of beams and plates
Buckling of beams and plates

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.

Item	Length	Percent	Threshold	Individual/Group Task
Final Exam	2 hours	55	N	Individual
Intra-session Exam	1.5 hours	25	N	Individual
Quiz	1 hour	10	N	Individual
Numerical Problem Solving	Tutorial question solutions	10	N	Individual

Teaching Periods

Autumn

Parramatta City - Macquarie St

Day

Subject Contact Haiping Zhu (https://directory.westernsydney.edu.au/search/name/Haiping Zhu/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=CIVL7006_22-AUT_PC_D#subjects)