CIVL 2013 SOIL MECHANICS (WSTC ASSOCD)

Credit Points 10

Legacy Code 700245

Coordinator Upeka Kuruppu (https://directory.westernsydney.edu.au/search/name/Upeka Kuruppu/)

Description This subject is an introductory subject covering the use of soil, and the water in it, as an engineering material. It will provide students with a basic understanding of the physical and mechanical properties of soils, simple soil testing methods to characterise soil strength and deformation behaviour and how to apply basic techniques to assess the hydro-mechanical response of soils subjected to loading.Offerings of alternate subjects are dependent on there being sufficient student enrolment numbers. If enrolments are low, the College may cancel delivery of the alternate subject.

School Eng, Design & Built Env

Discipline Civil 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 2 subject

Pre-requisite(s) MATH 1017

Equivalent Subjects CIVL 2011 - Soil Engineering CIVL 2012 - Soil Mechanics

Restrictions

Students must be enrolled at Western Sydney University, The College in 7022 Associate Degree in Engineering

Learning Outcomes

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

1. Explain the concepts of soil mechanics
2. Apply soil mechanics concepts to soil engineering problems
3. Analyse the response of soil and the water in it when subjected to loading
4. Apply basic laboratory tests to measure the engineering properties of soils
5. Solve simple design problems in soil engineering

Subject Content

1. Soil formation
2. Clay mineralogy
3. Soil classification
4. Soil compaction
5. Effective stress in soils
6. Flow of water in soils
7. Flow nets and the engineering effects of water movements
8. Consolidation and settlement
9. Stress increases in soils
10. Shear strength in soils
11. Lateral stresses in soils

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
Quiz	30 minutes each	15	N	Individual	N
Practical	Equivalent to 1,500 words each	15	N	Group/ Individual	N
Intra-session Exam	1 hour	20	N	Individual	N
Final Exam	2 hours	50	N	Individual	N

Teaching Periods

Quarter 2 (2025)

Penrith (Kingswood)

Hybrid

Subject Contact Upeka Kuruppu (https://directory.westernsydney.edu.au/search/name/Upeka Kuruppu/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=CIVL2013_25-Q2_KW_3#subjects)