

CIVL 7013 DEEP FOUNDATIONS

Credit Points 10

Legacy Code 301015

Coordinator Samantha Liyanapathirana (<https://directory.westernsydney.edu.au/search/name/SamanthikaLiyanapathirana/>)

Description This unit covers advanced analysis and design criteria for deep foundations. Both statically and dynamically loaded deep foundations are covered including the site investigation methods and field testing methods adopted in practice for determining integrity and load carrying capacity. Appropriate computer software will be introduced to carry out the deep foundation design according to the Australian Standards.

School Eng, Design & Built Env

Discipline Geotechnical Engineering

Student Contribution Band HECS Band 2 10cp

Level Postgraduate Coursework Level 7 subject

Restrictions

Students must be enrolled in a postgraduate program

Learning Outcomes

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

1. Design piled raft foundations
2. Interpret and apply Australian standards for design of deep foundations
3. Identify pile load and integrity testing methods suitable for different conditions
4. Describe site investigation methods appropriate for different site conditions
5. Evaluate settlement, lateral deformation and load carrying capacity of deep foundations

Subject Content

1. Site investigation
2. Analysis and design of deep foundations subjected to axial and lateral loading, according to Australian Standards.
3. Piled raft foundations
4. Design of deep foundations for seismically active regions
5. Pile load and integrity testing methods for Deep foundations

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
Quiz (Online)	1 hour	20	N	Individual
Design Project (Individual)	40 pages	30	Y	Individual
Final exam	2 hour	50	Y	Individual

Teaching Periods

Autumn

Parramatta City - Macquarie St

Day

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