CVEN90027 Geotechnical Applications

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 44 hours of combined lectures and tutorials together with 4 hours of computer lab sessions per semester Total Time Commitment: 120 hours per semester
Prerequisites:	# **421-306 Geotechnical Engineering (/view/2009/421-306)** or # 421-509 Geotechnical Engineering commences 2011 or # Equivalent
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
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Subject Overview:	Topics covered include shallow footings, bearing capacity solutions, settlement on sand and clays; raft foundations, compensated foundations, soil improvement, deep foundations; capacity and settlement of single piles and pile groups; construction methods related to foundations; contaminated soils and effects of chemicals on soil properties; waste disposal systems, site assessment/site selection, remediation techniques, liners, leachate collection systems; deep excavation; and rock mass behaviour.
Objectives:	On completion of this unit students should be able to: # Analyse for both the bearing capacity and settlement characteristics of foundations subjected to a variety of loadings # Apply geotechnical engineering principles to solve contaminated soils and waste disposal problems # Describe rock mass behaviour under natural and imposed loads # Recognise the construction methods related to foundations and deep excavation
Assessment:	A 3-hour end of semester examination (60%)Three 1000 word assignments due at times equally spaced throughout the semester (40%)

Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	# Ability to undertake problem identification, formulation, and solution # Ability to utilise a systems approach to complex problems and to design and operational performance # Ability to manage information and documentation
Related Course(s):	Graduate Certificate in Engineering (Environmental Engineering) Master of Engineering Structures Master of Engineering Structures Master of Environment Master of Environment Master of Environmental Engineering Master of Environmental Engineering Master of Water Resource Management Master of Water Resource Management Postgraduate Certificate in Engineering Postgraduate Certificate in Environment Postgraduate Diploma in Environment