CVEN90050 Geotechnical Engineering

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2013.
Time Commitment:	Contact Hours: 48 hours, comprising of three hours of lectures and one 1-hour tutorial per week Total Time Commitment: 120 hours
Prerequisites:	Students must have completed BOTH the following subjects, or equivalent to enrol in this subject: **Subject** | **Study Period Commencement:** | **Credit Points:** ENEN20002 Earth Processes for Engineering | Not offered 2013 | 12.50 CVEN30010 Systems Modelling and Design | Not offered 2013 | 12.50
Corequisites:	None
Recommended Background Knowledge:	Learning in this subject will be assisted by knowledge gained in the following subject: **Subject** | **Study Period Commencement:** | **Credit Points:** CVEN90044 Engineering Site Characterisation | Not offered 2013 | 12.50
Non Allowed Subjects:	Students cannot enrol in and gain credit for this subject and: # 421-306 Geotechnical Engineering
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability
Contact:	Dr Guillermo A. Narsilio **narsilio@unimelb.edu.au (mailto:narsilio@unimelb.edu.au)**
Subject Overview:	Students completing this unit should understand how to make simplifications to complex soil conditions, how to establish strength/deformation characteristics of the soil and how to apply fundamental geomechanics knowledge learned in earlier units to solve problems involving the stability of an earth mass. Topics covered include a detailed review of porewater pressures and effective stress, soil strength and compressibility, consolidation, compaction and their applications to geotechnical design in selected areas such as foundations, earth retaining structures, reinforced soil, slope stability and pavements
Objectives:	On completion of this subject students should be able to: # Make simplifications to complex soil conditions # Establish strength/deformation characteristics of soil

	# Apply fundamental geomechanics knowledge learned in earlier units to solve problems involving the stability of an earth mass
Assessment:	Three 1000 word assignments, due throughout the semester (30%) One 3-hour examination, end of semester (70%) Hurdle requirement: Students must pass BOTH assignment and exam components to pass the subject
Prescribed Texts:	Course notes will be made available in LMS or for purchase from the University Bookroom
Recommended 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 apply knowledge of basic science and engineering fundamentals # Ability to communicate effectively, not only with engineers but also with the community at large # Ability to undertake problem identification, formulation and solution # Ability to utilise systems approach to design adn operational performance # Ability to function effectively as an individual in multi-disciplinary and multicultural teams, with the capacity to be a leader or manager as well as an effective team member # Expectation of the need to undertake lifelong learning and the capacity to do so # Capacity for independent critical through, rational inquiry and self-directed elarning # Intellectual curiousity and creativity, including understanding of the philosophical and methodological bases of research activity
Related Course(s):	Bachelor of Engineering (Civil Engineering) Bachelor of Engineering (Civil) and Bachelor of Arts Bachelor of Engineering (Civil) and Bachelor of Commerce Bachelor of Engineering (Civil) and Bachelor of Science Master of Philosophy - Engineering Ph.D.- Engineering
Related Majors/Minors/ Specialisations:	B-ENG Civil Engineering stream Master of Engineering (Civil) Master of Engineering (Environmental) Master of Engineering (Structural)