

CVEN90050 Geotechnical Engineering

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2011.
Time Commitment:	Contact Hours: 48 hours (Lectures: 3 hours per week, Tutorials: 1 hour per week) Total Time Commitment: 120 hours
Prerequisites:	Students must have completed BOTH the following subjects to enrol in this subject: # ENEN20002 Earth Processes for Engineering (../view/2011/ENEN20002) OR equivalent # CVEN30010 Systems Modelling and Design (../view/2011/CVEN30010) OR equivalent
Corequisites:	None
Recommended Background Knowledge:	Learning in this subject will be assisted by knowledge gained in the following subject: # CVEN90044 Engineering Site Characterisation (../view/2011/CVEN90044)
Non Allowed Subjects:	This subject replaces: # 421-306 Geotechnical Engineering
Core Participation Requirements:	For the purposes of considering requests 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/
Contact:	Dr Guillermo A. Narsilio narsilio@unimelb.edu.au (mailto:narsilio@unimelb.edu.au)
Subject Overview:	Student 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:	One 3-hour examination, end of semester (70%) Three 1000 word assignments, due throughout the semester (30%) Hurdle requirement: Students must pass BOTH assignment and exam components to pass the subject
Prescribed Texts:	Course notes will be made available 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:	<ul style="list-style-type: none"> # 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 and 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 thought, rational inquiry and self-directed learning # Intellectual curiosity and creativity, including understanding of the philosophical and methodological bases of research activity
Related Course(s):	Bachelor of Engineering (Civil) and Bachelor of Arts Bachelor of Engineering (Civil) and Bachelor of Commerce Bachelor of Engineering (Civil) and Bachelor of Laws Bachelor of Engineering (Civil) and Bachelor of Science Master of Engineering Structures Master of Engineering Structures
Related Majors/Minors/Specialisations:	B-ENG Civil Engineering stream Master of Engineering (Civil) Master of Engineering (Environmental) Master of Engineering (Structural)