

CVEN90044 Engineering Site Characterisation

Credit Points:	12.50						
Level:	9 (Graduate/Postgraduate)						
Dates & Locations:	This subject is not offered in 2013.						
Time Commitment:	Contact Hours: 48 hours (Lectures: 24 hours, Tutorials/Worshops/Computer Labs: 15 hours, Field Practicals: 9 hours) per semester Total Time Commitment: 120 hours						
Prerequisites:	<p>Must have completed ENEN20002 or equivalent:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>ENEN20002 Earth Processes for Engineering</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	ENEN20002 Earth Processes for Engineering	Not offered 2013	12.50
Subject	Study Period Commencement:	Credit Points:					
ENEN20002 Earth Processes for Engineering	Not offered 2013	12.50					
Corequisites:	None						
Recommended Background Knowledge:	None						
Non Allowed Subjects:	None						
Core Participation Requirements:	<p><p>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.</p> <p>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</p></p>						
Contact:	<p>Dr Guillermo A. Narsilio narsilio@unimelb.edu.au (mailto:narsilio@unimelb.edu.au)</p>						
Subject Overview:	<p>Characterisation of sites is an important step in any engineering study or design. Important aspects include topography; industrial history; soil stratigraphy for soil strength and other geotechnical parameters; hydrogeology and chemistry assessment; risk of catastrophic events such as flood, fire, seismic events; aesthetic outlook and in-look; proximity and sensitivity of neighbours to cross boundary effects of engineering activity.</p> <p>This subject will examine typical technical tools for characterising a site for infrastructure development, covering a range of the above aspects that are relevant to the site and development. In doing so students will learn the skills and an approach to conduct site assessments, including the ability to select the appropriate geo-environmental tools for site investigations</p>						
Objectives:	<p>On completion of this subject students should be able to:</p> <ul style="list-style-type: none"> # Conduct a simple topographic survey of a site # Evaluate the soil and geology of the site as it impacts the intended development # Evaluate the relationships of a site and its intended changes with its neighbours # Select the appropriate geo-environmental technical tools for site investigations # Estimate critical design parameters # Identify, assess and document the risk arising from natural disasters # Examine planning requirements 						

	# Write a report to communicate key aspects of the character of a site as it affects the design of changes to the site
Assessment:	Three group reports (approx 1000 words), due throughout the semester (25%) Six on-line assignments, due throughout the semester (20%) One individual report (approx 500 words), due week 3 (5%) One 2 hour examination, end of semester (50%) Hurdle requirements: Attendance at 3 field activities Students must pass BOTH assignment and examination components to pass the subject as a whole
Prescribed Texts:	Mayne, P.W.; Christopher, B.R., and DeJong, J.T. 2002, Manual on Subsurface Investigations FHWA Publication No. FHWA NHI-01-031, 294 pp. (available on LMS)
Recommended Texts:	<ul style="list-style-type: none"> # Clayton, C.R.I.; Matthews, M.C., and Simons, N.E. 1995 Site investigation Oxford [England] ; Cambridge, Mass., USA : Blackwell Science, vii, 584 pp (available on LMS) # Guide to the investigation and sampling of sites with potentially contaminated soil Australian Standard AS 4482.1 – 2005 (available from UoM library) # Geotechnical site investigations Australian Standard AS 1726 – 1993 (available from UoM library) # Methods of testing soils for engineering purposes; Method 6.3.2: Soil strength and consolidation tests—Determination of the penetration resistance of a soil—9 kg dynamic cone penetrometer test Australian Standard AS 1289.6.3.2 – 1997 (available from UoM library)
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 science and engineering fundamentals # Understanding of social, cultural, global, and environmental responsibilities and the need to employ principles of sustainable development # Ability to utilise a systems approach to complex problems and to design and operational performance # Ability to communicate effectively, with the engineering team and with the community at large # Ability to manage information and documentation # Ability to function effectively as an individual and in multidisciplinary and multicultural teams, as a team leader or manager as well as an effective team member # Capacity for lifelong learning and professional development
Related Course(s):	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)