CVEN40008 Infrastructure Design

Credit Points:	12.50
Level:	4 (Undergraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 24 hours lectures and 24 hours practical classes. Total 48 hours. Total Time Commitment: 120 hours
Prerequisites:	The prerequisite for this subject

Subject	Study Period Commencement:	Credit Points:
421-516 Hydraulics and Hydrology	Not offered 2010	
421-306 Geotechnical Engineering	Not offered 2010	

Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	421-447 Transport Engineering
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:	This subject integrates engineering science in the areas of hydraulics, hydrology and geotechnical engineering in applications of transport, water drainage and reticulation infrastructure. Topics covered in lectures include urban stormwater drainage systems; urban water supply, treatment and distribution systems; water supply pipeline design and surge protection; sewerage, wastewater collection and treatment; and hydraulic design of common hydraulic structures, the transport planning process, traffic survey methods, traffic flow theory, capacity of unsignalised intersections, traffic signal timing analysis, geometric design of roads, and pavement design. Two group design projects allow students to practice their design skills.
Objectives:	At the completion of this subject students should be able to: # Demonstrate their ability to work in a team on a complex engineering project # Design free surface drainage systems for storm water and sewage # Design pressurised reticulation systems

	# Design geometry, pavements and foundations for wheeled traffic # Design simple transport networks
Assessment:	One group assignment (2,000 words per student equivalent) in the first half of semester (35%)One group assignment (2,000 words per student equivalent) in the second half of semester (35%)One end of semester exam (30%)Passing of the exam is a hurdle requirement of the subjectTeam co-operation and contributions will be taken into account in awarding individual marks for team outcomes
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 apply knowledge of basic science and engineering fundamentals # Ability to undertake problem identification, formulation and solution # Ability to function effectively as an individual and in multi-disciplinary and multi-cultural 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
Notes:	# The subject is last offered in 2010
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 Laws Bachelor of Engineering (Civil) and Bachelor of Science Bachelor of Engineering (EngineeringManagement) Civil