CVEN90060 Integrated Design - Civil

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 32 hours (Lectures: 20 hours per semester; Workshops: 12 hours per semester) Total Time Commitment: 200 hours
Prerequisites:	

Subject	Study Period Commencement:	Credit Points:
CVEN30010 Systems Modelling and Design	Semester 2	12.50
CVEN90043 Sustainable Infrastructure Engineering	Semester 1	12.50
CVEN90044 Engineering Site Characterisation	Semester 1	12.50
CVEN90045 Engineering Project Implementation	Semester 2	12.50

Corequisites:	None
Recommended Background Knowledge:	This subject should be taken in the final or penultimate semester of study for the Master of Engineering degree.
Non Allowed Subjects:	

Subject	Study Period Commencement:	Credit Points:
CVEN90052 Integrated Design	Not offered 2016	25

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
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Subject Overview:	**AIMS** This subject involves a major design project that concentrates on conducting a more detailed design of a piece of civil infrastructure such as railway station, airport, school, sports stadium, shopping centre, etc. The design would have scope for structural solutions, site works, innovative energy and water supplies, etc., and would be based on a broad conceptual design proposal that has been given to the design team. The design proposal will be presented at a

	functional level where the broad specifications of the design and how it might be constructed are generated and evaluated, rather than detailed specifications required for construction.
Learning Outcomes:	**INTENDED LEARNING OUTCOMES** Having completed this subject the student is expected to: 1 Conduct thorough investigations to scope an engineering design problem 2 Generate alternative solutions to within a predefined conceptual framework 3 Assess and choose optimal engineering solutions using a multi-criteria assessment incorporating net present value, social and environmental considerations 4 Demonstrate ability to work in a team to design a complex engineering project with definite deliverables and completion dates 5 Apply core management techniques to the team activities 6 Communicate design solutions via written and oral reports.
Assessment:	As individuals, publish a 4 page literature review on an aspect of the project context on the project web site (10%) requiring approximately 20 hours of work per person, due week 6. Intended Learning Outcomes (ILOs) 1 and 6 are addressed in this review In teams of 4, prepare a preliminary report on the design criteria and options, and provide a critical review on the reports of two other teams (15%) requiring about 60 hours of work per team member, due week 6 and week 7. ILOs 2, 3 and 6 are adddressed in this assessment In teams of 4, prepare a final design report (55%) requiring about 100 hours of work per team member, due week 12. ILOs 3, 4 and 6 are addressed in this report In teams of 4, maintain a weekly project management log (i.e. 10 - 12 entries) (10%) requiring about 10 hours of work per team member, due weekly. ILO 5 is addressed in this assessment In teams, present & participate in 10-minute oral reports on the final design (10%) requiring about 5 hours work per team member, due during the examination period. ILO 6 is addressed in this assessment
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 research and apply critical thought to formulate engineering solutions # Potential for innovation and creativity # Proficiency in report writing # Capacity to summarise and present design concepts and outcomes # Understanding of how to engage with and work constructively and productively in an integrated multi-disciplinary team to achieve mutually agreed outcomes in a constrained time frame.
Related Course(s):	Master of Engineering Project Management
Related Majors/Minors/ Specialisations:	Master of Engineering (Civil with Business) Master of Engineering (Civil) Master of Engineering (Environmental) Master of Engineering (Structural)