CVEN90057 Integrated Design (Construction)

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2014.
Time Commitment:	Contact Hours: 36 hours, comprising one 2- hour lectures and one 1- hour tutorial per week Total Time Commitment: 120 hours
Prerequisites:	Students are required to obtain permission from the course coordinator to undertake this subject
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	Students cannot enrol in and gain credit for this subject and:

Subject	Study Period Commencement:	Credit Points:
CVEN90052 Integrated Design	Year Long	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
Contact:	Tuan Ngo Email: **dtngo@unimelb.edu.au (mailto:dtngo@unimelb.edu.au)**
Subject Overview:	**AIMS** This subject is intended for students who have completed the project component of CVEN90052 Integrated Design on exchange with NUS over the summer period OR equivalent design project. Students will complete the construction engineering component of CVEN90052 Integrated Design with the student cohort enrolled in the year-long CVEN90052. This subject aims to apply previously learnt skills and knowledge through a large industry driven infrastructure project. The first semester has a substantial industry presence with top engineers from a range of leading firms in Australia presenting on a range of civil and environmental topics with a practical focus on construction, project planning & management, surveying, geotechnical engineering and civil works. Parallel to the industry lectures, students will develop research and report writing skills and will learn how to prepare industry standard reports. **INDICATIVE CONTENT** Technical lectures and case studies include a construction focus on pilling, temporary works, basements, ground water management, pipelines and earthworks, structural design and surveying. Additional lectures include sustainable power generation, urban development, performance assessment and net present value and report writing and referencing.
Learning Outcomes:	**INTENDED LEARNING OUTCOMES (ILO)** Having completed this unit the student is expected to: 1. Conduct thorough research and prepare industry standard reports relating to a given engineering topic 2. Identify key issues in construction engineering specifically relating to basements, earthworks and groundwater

	3. Assess and choose optimal engineering solutions using a multi-criteria assessment incorporating net present value, social and environmental considerations 4. Demonstrate a basic ability to work in a team 5. Apply core management techniques to project execution
Assessment:	One written technical assignment of two parts (total 1000 words per person), due around week 4 of Semester 1 (10%) ILO 2 & 3 A 2 hour mid semester examination, end of Week 7 (60%) ILO 2 & 3 A group scoping report (2000 words total), due late Semester 1 (10%), ILO 6 & 7 A 2000 word individual feasibility report, due around week 11 of semester 1 (20%). ILO 1 & 2
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 # Understanding of how to engage and work productively in an integrated multi-disciplinary team
Notes:	**LEARNING AND TEACHING METHODS** This subject is industry driven by a range of leading engineers from a variety of backgrounds. Numerous case studies are presented and related back to the design project. Students are introduced engineering design in semester one through a preliminary feasibility study and conceptual design assignment. Tutorials support learning throughout the first semester consolidating knowledge in a range of construction engineering practices. **INDICATIVE KEY LEARNING RESOURCES** Introduction and training links to Bentley Microstation, libguide for research **http://unimelb.libguides.com/content.php?pid=111013&hs=w (http://unimelb.libguides.com/content.php?pid=111013&hs=w)** Planning overlays from DPCD **http://services.land.vic.gov.au/maps/pmo.jsp (http://services.land.vic.gov.au/maps/pmo.jsp)** Geovic maps and GIS data **http://er-info.dpi.vic.gov.au/sd_weave/anonymous.html (http://er-info.dpi.vic.gov.au/sd_weave/anonymous.html)** **CAREERS / INDUSTRY LINKS** Multiple industry firms will present aspects of the subject ensuring a strong industry link.