CVEN90045 Engineering Project Implementation

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: 36 hours (Lectures: 2 hours per week; Tutorials: 1 hour per week) Total Time Commitment: 200 hours
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	Knowledge gained in the following subjects will assist learning:

Subject	Study Period Commencement:	Credit Points:
CVEN90043 Sustainable Infrastructure Engineering	Semester 1	12.50
CVEN90044 Engineering Site Characterisation	Semester 1	12.50

Non Allowed Subjects:	Credit will not be given for this subject and the following subject: ENGM40001 Management for Engineers 3
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
Coordinator:	Dr Lihai Zhang
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Subject Overview:	**AIMS** Project management provides an organization with powerful tools that improve its ability to plan, organize and manage resources to bring about the successful completion of specific project goals and objectives. In undertaking this subject students will explore the principles and distinct technical skills of engineering management that are needed to implement a project. The subject is of particular relevance to students wishing to establish a career in engineering project management, but is also of relevance to a range of engineering design disciplines where design for the total life cycle of the product or infrastructure should be considered. This subject is part of a trio of subjects that consider different aspects of infrastructure projects; Engineering Site Characterisation studies how to determine the character of a site for a infrastructure project, Sustainable Infrastructure Engineering examines how the a project relates to the broader social, political, economic and environmental context, while project implementation concentrates on the operational aspects of implementing a project. **INDICATIVE CONTENT** Topics covered include key aspects of the management principles, project planning & scheduling, management systems & control and management practices to enable execution of the project in a timely and financially prudent manner.

	Note: This subject has been integrated with the Skills Towards Employment Program (STEP) and contains activities that can assist in the completion of the Engineering Practice Hurdle (EPH).
Learning Outcomes:	**INTENDED LEARNING OUTCOMES (ILO)** On completion of this subject the student is expected to: 1 Utilise a range of management techniques, such as critical path method, program evaluation & review, time-cost optimisation, earned value and resource levelling, to enable execution of a project in a timely and financially prudent manner 2 Describe the management principles with regard to project management process, organisation structure, professional ethics and Occupational, Health and Safety 3 Explore issues in management practices with regard to building clients and stakeholders' requirements, consulting engineering practice and management, specification preparation, and professional documentation 4 Identify key issues in management systems and control with regard to quality management in the framework of ISO9000 series.
Assessment:	One 2-hour examination (60%) end of semester. Intended Learning Outcomes (ILOs) 1 to 4 are addressed in this examination Two assignments (30%) totalling 3000 words, due mid-semester and end of semester, requiring approximately 40 – 45 hours of work, including preparation. ILOs 1 to 4 are addressed in these assignments Attendance and contribution to discussion in tutorials during semester (10%). ILOs 1 to 4 are addressed in this assessment.
Prescribed Texts:	Samson, D. (2000) Management for Engineers (3rd Edition). Longman. Uher, T. E., and Zantis, A. S. (2011). Programming and Scheduling Techniques (2nd Edition). UNSW Press.
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 problem identification, formulation, and solution # Ability to utilise a systems approach to complex problems and to design and operational performance # Ability to conduct an engineering project # Ability to communicate effectively, with the engineering team and with the community at large # Ability to manage information and documentation # Understanding of professional and ethical responsibilities, and commitment to them # 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.
Notes:	**LEARNING AND TEACHING METHODS** Learning and teaching methods include lectures with the involvement of experienced industry professionals who present case studies in their area of expertise, computer laboratory based tutorials and consultation sessions. **INDICATIVE KEY LEARNING RESOURCES** Samson, D. (2000) *Management for Engineers* (3rd Edition). Longman. Uher, T. E., and Zantis, A. S. (2011). *Programming and Scheduling Techniques* (2nd Edition). UNSW Press. **CAREERS / INDUSTRY LINKS** Engineers Australia Career Development Centre **http://www.engineersaustralia.org.au/professional-development/career-development-centre (http://www.engineersaustralia.org.au/professional-development/career-development-centre)** This subject invites experienced project managers from the engineering industry to present case studies and provides themes for the assignments.
Related Course(s):	Master of Architectural Engineering Master of Engineering Management Master of Engineering Project Management

	Master of Engineering Structures Master of Spatial Information Science
Related Majors/Minors/ Specialisations:	B-ENG Civil Engineering stream Master of Engineering (Civil with Business) Master of Engineering (Civil) Master of Engineering (Environmental) Master of Engineering (Spatial) Master of Engineering (Structural)