ENGM90007 Project Management Practices

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2015, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 36 hours, comprising of two hours of lectures and one 1-hour tutorial per week. Total Time Commitment: 200 hours
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	Knowledge gained from the following subjects will assist learning in this subject:

Subject	Study Period Commencement:	Credit Points:
CVEN90043 Sustainable Infrastructure Engineering	Semester 1	12.50
CVEN90045 Engineering Project Implementation	Semester 2	12.50

Non Allowed Subjects:	None
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:	Prof Colin Duffield
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Subject Overview:	**AIMS** In this subject students will learn about how to evaluate the feasibility of a project and then to define, structure and organise the initial planning phase for both construction projects and complex projects (e.g. IT, high technology projects). The interaction between commercial expectations and project management approaches will be considered broadly based on process and systems thinking. The subject builds on and integrates knowledge from CVEN90043 Sustainable Infrastructure Engineering and/or MCEN90010 Finance and Human Resources for Engineers where the fundamentals of economic appraisal is described, the planning approaches detailed in subject CVEN90045 Engineering Project Implementation and the fundamentals of risk management for which detailed approaches are provided in MULT90014 Business Risk Management. The subject is particularly important for students wishing to understand how to structure and scope projects such that they are well planned on the basis of triple bottom line thinking and the project management processes are efficiently structured. **INDICATIVE CONTENT** Techniques considered include the use of logic maps, business cases and system based project management concepts. Details include the development of acquisition strategies,

	system life-cycle, boundaries, scope management and mechanisms to control of client expectations and assist them to make sound project decisions leading to the sanctioning of a project. Expected value and Monte Carlo techniques are used as tools to refine project decisions based on risk evaluation. Project governance arrangements are considered along with cultural context, resourcing requirements of a project and how this is organised and managed. Specific areas considered include the selection of consultants or contractors, communication processes, industrial relations, occupational health and safety, meetings, delegation and leadership.
Learning Outcomes:	**INTENDED LEARNING OUTCOMES (ILO)** Having completed this subject the student is expected to be able to: 1 Assist project owners to sensibly consider the feasibility of projects 2 Develop investment logic maps 3 Structure an acquisition strategy for either traditional projects or a complex engineering or IT project 4 Clarify a project's scope and establish boundaries to the scope of complex projects 5 Analyse and evaluate project risks and project decisions 6 Develop and communicate projects in a consolidated project management plan that considers client interface, governance, organizational structure and resources to assist in the management and control of projects to achieve targeted key performance indicators 7 Understand the influence of cultural differences when resourcing large international projects.
Assessment:	One 2000 word report, due mid-semester, requiring approximately 35-40 hours of work (30%). Associated with Intended Learning Outcomes (ILOs) 1, 2 and 6. One 50 minute test, due mid-semester (10%). Associated with ILOs 1, 5 and 6. One 10 minute poster presentation, during the semester, requiring approximately 13-15 hours of work (10%). Associated with ILOs 3 and 4. One 2-hour examination, held in the end of semester examination period (50%). Associated with ILOs 1 to 7.
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 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** The subject is based principally on presentations by experienced industry and academic professionals who outline both theory and project management processes as illustrated by project case studies. A major case study is dissected throughout the subject with students working in groups and as individuals to explore the strengths and weaknesses of the project management practices adopted. Workshop dialogue sessions are convened by the lecturer to assist students reflect on the topics presented. In addition to specific assignment work students prepare and present a poster on an aspect of systems based project management. **INDICATIVE KEY LEARNING RESOURCES** Background reading on a systems approach to project management is available: Blanchard, B.S. and Fabrycky, W.J., 2005, *Systems Engineering and Analysis*. Upper Saddle River: Prentice Hall International. **CAREERS / INDUSTRY LINKS**

	Presenters from industry provide insights via the case studies presented. Reference materials are frequently industry based guidelines. Students who are already working in the industry can base their assignment on a project related to their workplace. The main case study dissected throughout the subject is a real and current project.
Related Course(s):	Master of Engineering Management Master of Engineering Project Management Master of Engineering Structures Master of Philosophy - Engineering Ph.D.- Engineering
Related Majors/Minors/ Specialisations:	B-ENG Civil Engineering stream Master of Engineering (Civil)