ENGR90021 Engineering Communication

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2011, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus. Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 36 hours (Lectures: 1 hour per week, Workshops: 2 hours per week) Total Time Commitment: 120 hours
Prerequisites:	# Entry into the Master of Engineering OR the Master of Engineering Management OR # 200 points of undergraduate study
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	Credit points will not be given for the following subjects when taking this subject

Subject	Study Period Commencement:	Credit Points:
ENGR10004 Engineering Systems Design 1	Semester 1, Semester 2	12.50
ENGR10003 Engineering Systems Design 2	Not offered 2011	12.50

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/
Coordinator:	Assoc Prof Roger Hadgraft
Contact:	Assoc Prof Roger Hadgraft **roger.hadgraft@unimelb.edu.au (mailto:roger.hadgraft@unimelb.edu.au)**
Subject Overview:	The subject introduces the nature of engineering work, at the heart of which is communication and problem solving using sustainability principles. Specific topics include: # The nature of engineering practice # Engineering problem solving # Systems thinking and design # Teamwork # Meetings and group dynamics # Use of library services and information services # Sharing information and knowledge management # Oral and written communication # Technical drawing and modelling # Creation of alternative solutions # Evaluation and decision making processes using sustainability
Objectives:	# Describe the role of engineers in an engineering organisation

	# Work effectively in a small team, including evaluating peer and team performance # Use a systems approach to simplify a complex problem # Identify information needs related to a problem and seek answers to these needs # Document, store and transmit information for the benefit of the team # Present information orally, in writing and in drawings # Create and research alternative solutions to a problem # Evaluate solutions against sustainability criteria
Assessment:	Team charter (team submission), research paper (pairs of students), problem definition submission (team submission), team presentation (individually assessed) totalling 1,000 words due week 4 (20%)Summary of alternative designs plus design criteria (individual and team components), team presentation (individualyl assessed) totalling 1,500 words due week 7 (3x10%=30%)Analysis of alternative designs and recommended design totalling 1,500 words due week 10. Team submission (20%) plus Individual (10%)Debates on proposed projects (individual) plus peer assessment 500 words due week 12 (10%)500 word individual journal in the form of e-portfolio entries due week 12 (10%)
Prescribed Texts:	Engineering Your Future (D Dowling, A Carew & R Hadgraft), Wiley, 2010
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 communicate effectively, with the engineering team and with the community at large # 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 # Ability to undertake problem identification, formulation and solution # Ability to utilise a systems approach to complex problems and to design and operational performance # Understanding of social, cultural, global and environmental responsibilities and the need to employ principles of sustainable development # Ability to manage information and documentation # Capacity for lifelong learning and professional development
Related Course(s):	Master of Engineering Management Master of Engineering Management Master of Engineering Project Management Master of Engineering Project Management
Related Majors/Minors/ Specialisations:	Master of Engineering (Biomedical) Master of Engineering (Biomolecular) Master of Engineering (Chemical) Master of Engineering (Civil) Master of Engineering (Electrical) Master of Engineering (Environmental) Master of Engineering (Geomatics) Master of Engineering (Mechanical) Master of Engineering (Mechatronics) Master of Engineering (Software) Master of Engineering (Structural)