

436-284 Organisational Engineering

Credit Points:	12.50
Level:	2 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 1, - Taught on campus. On campus only
Time Commitment:	Contact Hours: Unit 1: 12 hours of lectures and 12 hours of tutorial/practice classes. Unit 2: 16 hours of lectures and 8 hours of tutorial/practice classes Total Time Commitment: 120 hours
Prerequisites:	620-141 Maths A or 620-121 Maths A (Advanced); and 620-143 Applied Maths or 620-123 Applied Maths (Advanced)
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	436-203 Manufacturing Studies 1, 436-363 Manufacturing Studies 2, 436-383 Design & Industrial Psychology.
Core Participation Requirements:	<p><p>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.</p> <p>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</p></p>
Coordinator:	Dr Alan John Russell Smith
Subject Overview:	<p>This subject provides an introduction to management for mechatronics and mechanical engineers, focused around the achievement of organisational goals, and covering the major topics of strategy, systems, structure and resources, particularly people and money.</p> <p>Unit 1, Industrial Psychology, may include the following topics individual and group behaviour in organisations, particularly in small organisations; motivation, leadership and morale; organisational culture, group dynamics, conflict and its resolution; power, politics and ethics; and organisational change.</p> <p>Unit 2, Engineering Economics, may include the following topics theory of perfectly competitive markets, theory of the firm, consumer theory, methods of competing and increasing gross margin; recording of business transactions, break-even calculations, sources of income, capital and operating expenditure; preparation of budgets and performance measurements, analysis and interpretation of financial statements (financial position, financial performance, funds movement), cash budgets; organisation charts and corporate structure; operation of service departments, decision making and personal communications; and costing of designs and services, criteria for equipment purchase and management information systems.</p>
Objectives:	<p>Unit 1, Industrial Psychology: Upon completion of this unit, students should have gained knowledge of human behaviour in work organisations; be able to identify relationships among organisational variables including formal structure, interpersonal relations, groups, managers and motivation theory; and be able to transfer their knowledge and skills to the behavioural problems of the future employers.</p> <p>Unit 2, Engineering Economics: Upon completion, students should understand how engineers contribute to business (including costing and financial management); have acquired knowledge for measuring economic performance of people; be aware of competitive methods; and be</p>

	able to assess equipment purchase proposals, cost a design and comprehend the principal ingredients required to manufacture and manage efficiently.
Assessment:	Two examinations of 2 hours at the end of semester (70%), syndicate participation and presentations held throughout the semester (15%), four individual assignments each up to 1000 words excluding computations, tables, graphs, etc. due throughout the semester (15%). All components of assessment must be satisfactorily completed to pass the subject.
Prescribed Texts:	Schermerhorn, J.R., Hunt, J.G. and Osborn, R.N., Core Concepts of Organisational Behaviour, J.Wiley & Sons, 2004.
Recommended Texts:	Colville, E.J., Financial and Management Guidelines for Manufacturers - Introduction to Engineering Economics, Research Publications 2002.
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:	<ul style="list-style-type: none"> # ability to undertake problem identification, formulation and solution # ability to utilise a systems approach to design and operational performance # ability to function effectively as an individual and in multi-disciplinary and multi-cultural teams, with the capacity to be a leader or manager as well as an effective team member # openness to new ideas and unconventional critiques of received wisdom
Notes:	MCEN20006 Organisational Engineering was formerly 436-284 Organisational Engineering Students may only gain credit for one of 436-284, 436-203 Manufacturing Studies 1, 436-363 Manufacturing Studies 2 or 436-383 Design & Industrial Psychology.
Related Course(s):	Bachelor of Engineering (Biomedical) Biomechanics Bachelor of Engineering (EngineeringManagement)Mechanical&Manufacturing Bachelor of Engineering (Mechanical &Manufacturing)& Bachelor of Science Bachelor of Engineering (Mechatronics) and Bachelor of Computer Science