

955AM Bachelor of Engineering (Mechanical & Manufacturing)/ Bachelor of Commerce

Year and Campus:	2011 - Parkville
CRICOS Code:	009724B
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Level:	Undergraduate
Duration & Credit Points:	500 credit points taken over 60 months full time. This course is available as full or part time.
Coordinator:	A/Prof. Andrew Seng Hock Ooi
Contact:	Melbourne School of Engineering Office courseinfo@eng.unimelb.edu.au (mailto:courseinfo@eng.unimelb.edu.au) http://www.eng.unimelb.edu.au (http://www.eng.unimelb.edu.au)
Course Overview:	<p>THERE IS NO FURTHER ENTRY INTO THIS COURSE</p> <p>Students who commenced 4th year in 2010 and have not completed, or failed the fourth year subjects required, should speak to a course advisor.</p> <p>The combined degree of Bachelor of Engineering (Mechanical & Manufacturing)/Bachelor of Commerce requires a total of 500 points over five years. Students are required to complete 300 points of Engineering subjects and 200 points of Commerce subjects.</p> <p>The commerce points must include the five compulsory subjects 316-101 Introductory Macroeconomics, 316-102 Introductory Microeconomics, 316-130 Quantitative Methods 1, 325-201 Organisational Behaviour (students who commenced Bachelor of Commerce double degree in 2005 are not required to complete this subject) and at least one of 316-206 Quantitative Methods 2 or 316-205 Introductory Econometrics or 325-210 Managerial Decision Analysis or 325-212 Market Research; at least 50 points at 100-level; and at least 50 points at 300-level (these must be completed at The University of Melbourne). First-year students acquire a broad scientific training in mathematics and computing and an introduction to engineering and to economics.</p> <p>Fifth year includes a major project and electives in advanced engineering; in manufacturing, bioengineering, applied mechanics, fluids, energy, mechatronics and management. Students planning to enter industry directly after graduating can choose how best to prepare for their careers, bearing in mind that many design and research engineers move into management. Many students participate in industry challenges such as the Formula SAE-A competition, or other build and demonstrate projects that are world competitive.</p> <p>Graduate research programs are available in aspects of mechanical, mechatronics, manufacturing and bioengineering. The department is internationally regarded in fluid mechanics, advanced automotive engineering technology, machine dynamics, mechatronics and biomedical engineering.</p>
Objectives:	<p>On completion of this course graduates should:</p> <ul style="list-style-type: none"> # Have a sound fundamental understanding of the scientific principles underlying technology; # Have acquired the educational and professional standards of the professional institutions with which the School's courses are accredited # Possess a broad knowledge base of their chosen discipline and of other disciplines to facilitate effective communication with those other professionals with whom engineers routinely communicate; # Be able to apply the basic principles underlying the management of physical, human and financial resources; # Have acquired the mathematical and computational skills necessary for the solution of theoretical and practical problems; # Possess analytical, problem-solving and design skills, including those appropriate for sustainable development; # Have verbal and written communication skills that enable them to contribute substantially to society; # Have acquired lifelong learning skills for further development professionally and for meeting future changes in technology;

	<ul style="list-style-type: none"> # Have acquired a sense of professional ethics and responsibility towards the profession and the community; # Have developed the interpersonal and management skills required by engineers in undertaking professional activities; and # Be able to enact the social, cultural, global and environmental responsibilities of the professional engineer, and the need for sustainable development. 																																				
Course Structure & Available Subjects:	<p>THE COURSE STRUCTURE BELOW ONLY APPLIES TO RE-ENROLLING STUDENTS WHO COMMENCED THEIR STUDIES PRIOR TO 2008</p> <p>The recommended or standard course structures are listed below. When setting the timetable every effort will be made to avoid clashes between the times of classes associated with these sets of subjects. Students should be aware however, that if it proves to be impossible to achieve a timetable without clashes in these sets of subjects, the Faculty reserves the right to modify course structures in order to eliminate the conflicts. Students will be advised during the enrolment period of the semester if the recommended courses need to be varied. Where the courses include elective subjects these should be chosen so that timetable clashes are avoided. In particular, students in combined degrees should plan their courses so that the subjects chosen in the other faculty do not clash with those recommended for the engineering component.</p>																																				
Subject Options:	<p>Fourth Year</p> <p>The following subjects are available in 2011 -</p> <table border="1" data-bbox="389 925 1485 1301"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>MCEN90012 Design and Manufacturing 1</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>MCEN90008 Fluid Dynamics</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>MCEN90015 Thermodynamics</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>MCEN90013 Design and Manufacturing 2</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>ELEN90055 Control Systems</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> <p>Commerce Subject(s) as required</p> <p>Fifth Year</p> <p>Year Long</p> <table border="1" data-bbox="389 1451 1485 1599"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>MCEN40020 Major Project and Professional Practice</td> <td>Year Long</td> <td>25</td> </tr> </tbody> </table> <p>Mechanical Elective Group 1 (12.5 points) Mechanical Elective Group 2 (12.5 points) Commerce subject(s) as required (50 points)</p> <p>Mechanical Electives Group 1 Select one of the following electives:</p> <table border="1" data-bbox="389 1794 1485 2056"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>MCEN40010 Thermofluids 4</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>MCEN40018 Control Systems 2</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>MCEN40009 Mechanics 4</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> <p>Mechanical Electives Group 2</p>	Subject	Study Period Commencement:	Credit Points:	MCEN90012 Design and Manufacturing 1	Semester 1	12.50	MCEN90008 Fluid Dynamics	Semester 2	12.50	MCEN90015 Thermodynamics	Semester 1	12.50	MCEN90013 Design and Manufacturing 2	Semester 2	12.50	ELEN90055 Control Systems	Semester 1	12.50	Subject	Study Period Commencement:	Credit Points:	MCEN40020 Major Project and Professional Practice	Year Long	25	Subject	Study Period Commencement:	Credit Points:	MCEN40010 Thermofluids 4	Semester 1	12.50	MCEN40018 Control Systems 2	Semester 1	12.50	MCEN40009 Mechanics 4	Semester 1	12.50
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MCEN40003 Quality Engineering	Semester 2 12.50
MCEN40002 Optimisation	Not offered 2011 12.50
MCEN40011 Advanced Computational Mechanics	Semester 2 12.50
MCEN40015 Advanced Engineering Materials	Semester 2 12.50
MCEN40006 Computational Biomechanics	Not offered 2011 12.50
Entry Requirements:	There will be no further entry into this course.
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/
Graduate Attributes:	The Bachelor of Engineering is a professional degree. Graduates can obtain professional recognition by joining Engineers Australia who has accredited these programs. The Bachelor of Engineering also delivers on the University graduate attribute http://www.unimelb.edu.au/about/attributes.html