B-ENG Bachelor of Engineering

Year and Campus:	2011 - Parkville
CRICOS Code:	003626G
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Level:	Undergraduate
Duration & Credit Points:	400 credit points taken over 48 months full time. This course is available as full or part time.
Coordinator:	Professor Jamie Evans
Contact:	**Eastern Precinct Student Centre** The Eastern Precinct (building 138) (between Doug McDonell building and Eastern Resource Centre) *Enquiries* Phone: 13 MELB (13 6352) Email: **13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au)**
Course Overview:	**THIS COURSE IS FOR THOSE STUDENTS COMMENCING 2008 AND BEYOND.** The Bachelor of Engineering is a four-year full time program, which caters to students who wish to obtain an accredited engineering degree (400 points, 100 points of credit earned each year). To satisfy course requirements students must take the set of core engineering subjects prescribed for the branch of engineering being studied. This program is for those students commencing in 2008 and beyond (compared to the pre-2008 program) and offers enhanced flexibility and breadth opportunities, and allows a common first year with the Engineering Systems majors in the Bachelor of Science and maintains alternative pathways between Engineering and Science (for example Electrical or Mechanical Engineering and Physics, and Software Engineering and Mathematics or Computer Science) for up to two full years. Students commencing in 2008 and beyond study two breadth subjects in first year followed by another one or two (depending upon the stream chosen) breadth subjects in second year. Students will make use of the Engineering Learning Centre, which provides out-of-class study and meeting spaces for students. Students will be able to access on-line information such as the Learning Management System (LMS), study on their own and meet and collaborate with other students on project work and classwork, within a comfortable and supportive environment. Specialised learning spaces have been developed for students to participate in problem-based learning opportunities, commencing in first year with Engineering Systems Design 1 and 2, common subjects for all Bachelor of Engineering streams. Honours Upon completion of the four year Bachelor of Engineering, it is possible for a student to be awarded a Bachelor of Engineering with Honours where the student has achieved a consistently high level of academic performance throughout their course. Eligibility for the Honours award is dependent on a calculated honours score. The honours score will include core and restricted elective subjects weighted by points and not the year level, and, for each stream, would include all core subjects in second, third and fourth year of the standard full time sequence, plus all the subjects that were restricted-choice or technical electives in second, third and fourth year of the standard full time sequence but not including any free-choice electives or breadth (or Study Abroad or Exchange studies. **Engineering Practice Hurdle Requirement** Students enrolled in the Bachelor of Engineering will need to satisfy the requirements of the Engineering Practice hurdle prior to being awarded the degree. **Hurdle Objectives** Before completion of the degree students should be able to ＃ analyse job advertisements and selection criteria to identify the graduate attributes an employer is seeking ＃ compare evidence of their attribute acquisition with those sought by employers

plan the further development of their attributes to meet career goals
prepare a portfolio of evidence of acquisition of attributes that meet a particular employers' needs.

Hurdle Requirement

Preparation and submission of two portfolios totalling 2000 words in the final semester of their degree to the satisfaction of the course co-ordinator. Completion of the degree will not be approved until they meet this requirement. Details of the required submissions will be provided early in Semester 1.

Objectives:	On completion of this course graduates should: # 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; # 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:	400 points of study normally undertaken full time over four years. A student's choice of engineering stream will determine which subjects must be taken. The Bachelor of Engineering includes a breadth component – studies taken outside areas of engineering, science and technology.
Majors/Minors/ Specialisations	<table><tr><td>**Major/Minor/Specialisation**</td></tr><tr><td>B-ENG Chemical and Biomolecular Engineering stream</td></tr><tr><td>B-ENG Chemical Engineering stream</td></tr><tr><td>B-ENG Electrical Engineering stream</td></tr><tr><td>B-ENG Mechanical Engineering stream</td></tr><tr><td>B-ENG Software Engineering stream</td></tr><tr><td>B-ENG Civil Engineering stream</td></tr></table>
Subject Options:	**(../../view/2010/355-AA)** Subject options are dependent upon the student's intended stream of engineering.
Breadth Options:	Breadth subjects offer you the opportunity to choose additional subjects from outside your major study area (**learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html)**) .

	View breadth subjects for this course (/faces/htdocs/user/breadth/ BreadthSearchResults.jsp?breadthcourse=B-ENG&year=2011) .
Breadth Tracks:	Available Breadth Tracks
Entry Requirements:	**(../../view/2010/355-AA)** No new first year intake into this course after 2010. Students enquiring about later year intake (e.g. students intending to transfer into Engineering after completion of a least one year full time equivalent of relevant engineering studies) should contact the EPSC for advice.
Core Participation Requirements:	The Faculty of Engineering welcomes applications from students with disabilities. It is University and Faculty policy to take all reasonable steps to enable the participation of students with disabilities, and reasonable adjustments will be made to enhance a student's participation in the Faculty's programs.The inherent academic requirements for study in the Faculty of Engineering are:The ability to comprehend complex Engineering related information.The ability to clearly and independently communicate a knowledge and application of Engineering principles and practices during assessment tasks.The ability to actively and safely contribute in laboratory and fieldwork/excursion activities.Students who feel their disability will prevent them from participating in tasks involving these inherent cademic requirements are encouraged to contact the Disability Liaison Unit. http://www.services.unimelb.edu.au/disability/
Further Study:	On completion of a Bachelor of Engineering, students may choose to apply for candidature in a Masters by Research (Master of Philosophy) or PhD degree. They may also apply to undertake a range of Specialised Masters coursework degrees.
Graduate Attributes:	The Bachelor of Engineering is a professional degree. Graduates can obtain professional recognition by joining Engineers Australia, which has accredited these programs. For details, see 'Objectives'.
Professional Accreditation:	Accreditation has been received from: # Engineers Australia (all specialisations) # Australian Computer Society (Software specialisation) # IChemE (Chemical, and Chemical and Biomolecular specialisations)
Generic Skills:	An Engineering graduate has a unique skill set comprising a blend of technical, business and interpersonal skills. Upon completion of the Bachelor of Engineering at the University of Melbourne, students will have strong analytical skills, the ability to lead teams and projects and the creativity to look at problems in a way that provides innovative solutions. Our graduates are known for their high standards and professionalism, their understanding of global issues and their outstanding communication skills. For details, see 'Objectives'.