355SE Bachelor of Engineering (Software 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.
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Contact:	Melbourne School of Engineering **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:	The BE and BE(IT) courses in the School of Electrical Engineering and Computer Science offer three distinct streams of the BE degree: electrical engineering, computer engineering and software engineering. The three streams have most first-year subjects in common, and with the appropriate selection of subjects it is possible to defer the choice of stream until the commencement of second year, and in some cases, until the middle of second year. Each of the three streams may be taken in the combined degrees: BE/BA, BE(IT)/BA (with an arts major in any department in the Faculty of Arts); BE/BCom, BE(IT)/BCom (with a commerce major in any department in the Faculty of Business and Economics); BE/LLB, BE(IT)/LLB; and BE/BSc, BE(IT)/BSc (with a major in any department in the Faculty of Science, with the majority of students undertaking a major in computer science, physics or mathematics, however students in the software engineering stream of the BE or BE(IT) are not permitted to take a computer science major in the BSc). Computer science as a Science Faculty major may be combined with a BE in chemical, civil, environmental and mechanical engineering through the BE/BSc degree program. The single degree, Bachelor of Engineering (Software) requiries the completion of 400 points over four years.
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:	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.

Subject Options:

Note: The course structure outlined below is provided for students who commenced the Bachelor of Engineering prior to 2008. Students who commenced the program in 2008 or 2009 should refer to the revised Bachelor of Engineering (355AA) course description .

Students who commenced 3rd year in 2010 and have not completed (or who have failed) the third year subjects required in the Bachelor of Engineering degree please see a course adviser

Final Year

Group of subjects are:

Subject	Study Period Commencement:	Credit Points:
SWEN40001 Advanced Software Engineering Project	Not offered 2011	25

CSSE 300-level or Advanced-level elective(s) (50 points in total)

Elective(s) (25 points in total)

The 62.5 points labelled CSSE electives must be selected, subject to prerequisites being satisfied, from the 300-level, 400-level and (with the approval of the Department) masters-level subjects
offered by the Department and must include at least 37.5 points selected from: 433-332 Operating Systems-or equivalent , 433-351 Database Systems or equivalent , 433-353 Networks and Communications or equivalent , 433-371 Interactive System Design or equivalent and 433-441 System Modelling or equivalent and Analysis. SWEN9003 IT Project Management is strongly recommended. 12.5 points of other elective subjects may be used for additional computer science or electrical engineering subjects. The selection of elective subjects may be restricted by timetable and prerequisite requirements.

Note that in 2005 the Department of Computer Science and Software Engineering introduced restrictions to the computing subjects offered by other departments which can be taken as electives in the BCS, BE (Software), BE (Eng Mgt) Software and BE (Biomedical) Bioinformatics programs. Students are advised to visit the Engineering Student Centre Community in LMS for details when choosing their subjects.

Electrical Engineering Electives

For Electrical Engineering Electives please refer to **355EE Bachelor of Engineering (Electrical Engineering) (../../view/2011/355EE)**

Computer Science Electives

Subject	Study Period Commencement:	Credit Points:
COMP30017 Operating Systems and Network Services	Not offered 2011	12.50
COMP30019 Graphics and Interaction	Not offered 2011	12.50
COMP30021 Theoretical Computer Science	Not offered 2011	12.50
COMP30020 Declarative Programming	Not offered 2011	12.50
COMP30018 Knowledge Technologies	Not offered 2011	12.50

Computer Science and Software Engineering Advanced Electives

Subject	Study Period Commencement:	Credit Points:
COMP90044 Research Methods	Not offered 2011	12.50
SWEN90002 Engineering for Internet Applications	Not offered 2011	12.50

Entry Requirements:	Please refer to the following website for admissions requirements: **http://www.eng.unimelb.edu.au/Undergrad/beng.html (http://www.eng.unimelb.edu.au/Undergrad/beng.html)**
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/
Further Study:	On completion of a Bachelor of Engineering, students may choose to apply for candidature in a masters by research or PhD degree. They may also apply to undertake an a one year Advanced Masters coursework degree.
Graduate Attributes:	Graduate Attributes:Ability to undertake problem identification, formulation, and solutionAbility to utilise a systems approach to complex problems and to design and operational performanceCapacity for creativity and innovationAbility to manage information and documentation
Professional Accreditation:	Accreditation has been received from: Engineers Australia Australian Computer Society
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”.
Notes:	None