355CE Bachelor of Engineering (Computer Engineering)

Year and Campus:	2010 - Parkville
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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Course Overview:	**THE COURSE STRUCTURE BELOW ONLY APPLIES TO RE-ENROLLING STUDENTS WHO COMMENCED THEIR STUDIES PRIOR TO 2008** 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.
Objectives:	Completing the Electrical Engineering degree will enable students to rigorously integrate the mathematics of signals, systems and information with the science of electrical phenomena, in the formulation and solution of problems in areas such as telecommunications, monitoring and automation, energy distribution, and digital computing. We aim to develop: scientific understanding of electrical phenomena as a basis for mathematical modelling and abstraction in analysis and design; problem-solving and design skills; the ability to construct simulations and laboratory experiments; and good communication skills.
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: Students who commenced 3rd year in 2009 and have not completed, (or who have failed) the third year subjects required in the Bachelor of Engineering degree please see a course adviser.

The following 300 Level Electrical Subjects are available in 2010

Subject	Study Period Commencement:	Credit Points:
ELEN30002 Stochastic Signals and Systems	Semester 1	12.50
ELEN30001 Control 1 (Classical Control)	Semester 1	12.50
ELEN30007 Electronic Circuit Design 2	Semester 1	12.50
ELEN30005 Fields and Transmission Lines	Semester 1	12.50
SWEN20003 Object Oriented Software Development	Semester 2	12.50
ELEN30003 Communication Systems	Semester 2	12.50
ELEN30011 Electrical Device Modelling	Semester 2	12.50
ELEN30013 Electronic System Implementation	Semester 2	12.50

Credit may not be obtained for:

both 431-330 Design laboratory and 431-305 Electronic System Implementation

both431-303 Electrical Device Modelling and431-328 Digital Systems3

Fourth year

Subject	Study Period Commencement:	Credit Points:
ELEN40001 Project Work	Year Long	25
ELEN40010 Digital Systems 4: High Speed Systems	Semester 2	12.50
433-353 Networks and Communications	Not offered 2010	
COMP30017 Operating Systems and Network Services	Semester 1	12.50

Approved CSSE 300 level 12.5

Elective(s) (37.5 points in total) - *Elective subjects may be taken from Electrical Engineering electives, 300-level and 400-level Computer Science subjects and subjects offered by other departments.*

Computer Engineering students choosing the elective subjects are reminded they must include 25 points from management or non-technical subjects. The selection of elective subjects may be restricted by timetable and pre-requisite requirements.

Electrical Engineering Electives

Subject	Study Period Commencement:	Credit Points:
ELEN40003 Digital Communications	Semester 1	12.50
ELEN40004 Signal Processing 2	Semester 1	12.50
ELEN40005 Communication Networks	Semester 1	12.50
ELEN40006 Directed Study 4.1	Semester 1	12.50
ELEN40013 Electronic Circuit Design 3	Semester 1	12.50
ELEN40008 Wireless Communication	Semester 2	12.50

ELEN40007 Control 2 (Advanced Control)	Semester 2	12.50
ELEN40009 RF, Microwave and Optoelectronic Systems	Semester 2	12.50
ELEN40010 Digital Systems 4: High Speed Systems	Semester 2	12.50
ELEN40011 Directed Study 4.2	Semester 2	12.50

Computer Science Electives

300-level Electives

Note: These electives may not be offered every year

Subject	Study Period Commencement:	Credit Points:
433-332 Operating Systems	Not offered 2010	
433-380 Graphics and Computation	Not offered 2010	
COMP30013 Directed Study 3A	Summer Term, Semester 1, Semester 2	12.50
COMP30014 Directed Study 3B	Summer Term, Semester 1, Semester 2	12.50
COMP30017 Operating Systems and Network Services	Semester 1	12.50
COMP30005 Professional Issues in Computing	Semester 2	12.50
433-361 Programming Language Implementation	Not offered 2010	
SWEN30006 Software Modelling and Design	Semester 1	12.50
SWEN30007 Software Systems Project	Semester 2	12.50

400-level Electives

Note: These electives may not be offered every year

Subject	Study Period Commencement:	Credit Points:
433-421 Web Technologies and Applications	Not offered 2010	
433-484 Machine Learning	Not offered 2010	
COMP40020 Directed Study 4A	Summer Term, Semester 1, Semester 2	12.50
COMP40021 Directed Study 4B	Summer Term, Semester 1, Semester 2	12.50
433-441 System Modelling and Analysis	Not offered 2010	
433-421 Web Technologies and Applications	Not offered 2010	
SWEN90006 Software Engineering Methods	Semester 2	12.50
433-450 Computational Gene Expression	Not offered 2010	

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 attributehttp://www.unimelb.edu.au/about/attributes.html
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”.