

## 355-CE Bachelor of Engineering (Computer Engineering)

<b>Year and Campus:</b>	2009															
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>															
<b>Level:</b>	Undergraduate															
<b>Duration &amp; Credit Points:</b>																
<b>Contact:</b>	<p>Engineering Student Centre            Ground Floor, Old Engineering Building            The University of Melbourne            Victoria 3010 AUSTRALIA</p> <p>Tel: +61 3 8344 6703            Fax: +61 3 9349 2182            Email <a href="http://eng-unimelb.custhelp.com">http://eng-unimelb.custhelp.com</a> (<a href="http://eng-unimelb.custhelp.com/">http://eng-unimelb.custhelp.com/</a>)</p>															
<b>Course Overview:</b>	<p><b>THE COURSE STRUCTURE BELOW ONLY APPLIES TO RE-ENROLLING STUDENTS WHO COMMENCED THEIR STUDIES PRIOR TO 2008</b></p> <p>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 Economics and Commerce); 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.</p>															
<b>Objectives:</b>	-															
<b>Course Structure &amp; Available Subjects:</b>	<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>															
<b>Subject Options:</b>	<p>Note: Students who commenced 2nd year in 2008 who have not completed, (or who have failed) the second year subjects required in the Bachelor of Engineering degree please see a course adviser.</p> <p><b>Third year</b></p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>431-328 Digital Systems 3: Circuits and Systems</td> <td>Semester 2</td> <td>12.500</td> </tr> <tr> <td>431-330 Design Laboratory</td> <td>Semester 1, Semester 2</td> <td>12.500</td> </tr> <tr> <td>433-313 Computer Design</td> <td>Semester 2</td> <td>12.500</td> </tr> <tr> <td>431-325 Stochastic Signals and Systems</td> <td>Semester 1</td> <td>12.500</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	431-328 Digital Systems 3: Circuits and Systems	Semester 2	12.500	431-330 Design Laboratory	Semester 1, Semester 2	12.500	433-313 Computer Design	Semester 2	12.500	431-325 Stochastic Signals and Systems	Semester 1	12.500
Subject	Study Period Commencement:	Credit Points:														
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431-330 Design Laboratory	Semester 1, Semester 2	12.500														
433-313 Computer Design	Semester 2	12.500														
431-325 Stochastic Signals and Systems	Semester 1	12.500														

433-294 Object Oriented Software Development	Semester 2	12.500
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or

Elective(s) (37.5 points in total) - *Elective subjects may be used for additional Electrical Engineering or Computer Science subject. However, at least 25 points of non-technical subjects must be completed during the degree.*

Computer Engineering students should be aware that 431-327 Communication Systems in their third year, is a pre-requisite for many 400-level electrical engineering elective subjects.

#### Fourth year

Subject	Study Period Commencement:	Credit Points:
431-400 Project Work	Year Long	25.000
431-467 Digital Systems 4: High Speed Systems	Semester 2	12.500
433-332 Operating Systems	Semester 1	12.500
433-353 Networks and Communications	Semester 2	12.500

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:
431-460 Digital Communications	Semester 1	12.500
431-461 Signal Processing 2	Semester 1	12.500
431-462 Communication Networks	Semester 1	12.500
431-463 Directed Study 4.1	Semester 1	12.500
431-481 Electronic Circuit Design 3	Semester 1	12.500
431-465 Wireless Communication	Semester 2	12.500
431-464 Control 2 (Advanced Control)	Semester 2	12.500
431-466 RF, Microwave and Optoelectronic Systems	Semester 2	12.500
431-467 Digital Systems 4: High Speed Systems	Semester 2	12.500
431-470 Directed Study 4.2	Semester 2	12.500

#### Computer Science Electives

##### 300-level Electives

Note: These electives may not be offered every year

Subject	Study Period Commencement:	Credit Points:
433-303 Artificial Intelligence	Semester 2	12.500
433-313 Computer Design	Semester 2	12.500
433-330 Theory of Computation	Semester 1	12.500

433-332 Operating Systems	Semester 1	12.500
433-341 Software Engineering Process & Practice	Semester 1	12.500
433-342 Software Engineering Methods	Semester 2	12.500
433-351 Database Systems	Semester 1	12.500
433-352 Data on the Web	Semester 2	12.500
433-361 Programming Language Implementation	Not offered 2009	12.500
433-371 Interactive System Design	Semester 2	12.500
433-380 Graphics and Computation	Semester 1	12.500
433-393 Directed Study 3A	Summer, Semester 1, Semester 2	12.500
433-394 Directed Study 3B	Summer, Semester 1, Semester 2	12.500

## 400-level Electives

Note: These electives may not be offered every year

Subject	Study Period Commencement:	Credit Points:
433-421 Web Technologies and Applications	Semester 1	12.500
433-430 Principles of Programming Languages	Semester 1	12.500
433-431 Functional Programming	Not offered 2009	12.500
433-432 Logic Programming	Semester 2	12.500
433-433 Constraint Programming	Not offered 2009	12.500
433-446 System Requirements Engineering	Not offered 2009	12.500
433-448 Applied Cryptography and Coding	Not offered 2009	12.500
433-460 Human Language Technology	Not offered 2009	12.500
433-461 High Performance Database Systems	Semester 2	12.500
433-467 Text and Document Management	Semester 1	12.500
433-483 Computer Vision and Image Processing	Not offered 2009	12.500
433-484 Machine Learning	Not offered 2009	12.500
433-493 Directed Study 4A	Summer, Semester 1, Semester 2	12.500
433-494 Directed Study 4B	Summer, Semester 1, Semester 2	12.500
433-441 System Modelling and Analysis	Semester 1	12.500

**Entry Requirements:**

There will be no further entry into this course.

**Core Participation Requirements:**

<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>