

355-SE Bachelor of Engineering (Software Engineering)

| Year and Campus: | 2009 | | | | | | |
|---|---|----------------|----------------------------|----------------|--------------------------------------|-----------|--------|
| Fees Information: | Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees | | | | | | |
| Level: | Undergraduate | | | | | | |
| Duration & Credit Points: | | | | | | | |
| Contact: | <p>Engineering Student Centre Ground Floor, Old Engineering Building The University of Melbourne Victoria 3010 AUSTRALIA Tel: +61 3 8344 6703 Fax: +61 3 9349 2182 Email http://eng-unimelb.custhelp.com (Engineering%20Student%20Centre%20%20Ground%20Floor,%20Old%20Engineering%20Building%20The%20University%20of%20Melbourne%20Victoria%203010%20AUSTRALIA%20%20Tel:%20+61%203%208344%206703%20Fax:%20+61%203%209349%202182%20%20Email%20http://eng-unimelb.custhelp.com)</p> | | | | | | |
| Course Overview: | <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> <p>The single degree, Bachelor of Engineering (Software) requires the completion of 400 points over four years.</p> | | | | | | |
| Objectives: | - | | | | | | |
| Course Structure & Available Subjects: | <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>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 (355-AA) course description here (/view/2009/355) .</p> <p>Third Year</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>433-340 Software Engineering Project</td> <td>Year Long</td> <td>25.000</td> </tr> </tbody> </table> | Subject | Study Period Commencement: | Credit Points: | 433-340 Software Engineering Project | Year Long | 25.000 |
| Subject | Study Period Commencement: | Credit Points: | | | | | |
| 433-340 Software Engineering Project | Year Long | 25.000 | | | | | |

| | | |
|---|------------|--------|
| 433-341 Software Engineering Process & Practice | Semester 1 | 12.500 |
| 433-342 Software Engineering Methods | Semester 2 | 12.500 |
| 433-343 Professional Issues in Computing | Semester 2 | 12.500 |

CSSE 300-level elective (12.5 points)

Elective(s) (25 points in total)

Students who commenced before 2004 may replace 433-342 with one of 433-332, 433-351, 433-353, 433-371, or 433-441.

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 when choosing their subjects.

Fourth Year

| Subject | Study Period Commencement: | Credit Points: |
|---|----------------------------|----------------|
| 433-440 Advanced Software Engineering Project | Year Long | 25.000 |

CSSE 300-level or 400-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, 433-351 Database Systems, 433-353 Networks and Communications, 433-371 Interactive System Design and 433-441 System Modelling and Analysis. 433-643 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

| Subject | Study Period Commencement: | Credit Points: |
|--|----------------------------|----------------|
| 431-451 Project Mgt & Product Commercialisation | Not offered 2009 | 12.50 |
| 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 |
| 431-464 Control 2 (Advanced Control) | Semester 2 | 12.500 |
| 431-465 Wireless Communication | 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 |
| 431-481 Electronic Circuit Design 3 | Semester 1 | 12.500 |

Computer Science Electives**300-level Electives**

| 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 |
| 433-351 Database Systems | Semester 1 | 12.500 |
| 433-352 Data on the Web | Semester 2 | 12.500 |
| 433-353 Networks and Communications | 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 |
| 433-395 Advanced Topic in Computer Science | Not offered 2009 | 12.50 |

400-level Electives

| 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 |
| 433-441 System Modelling and Analysis | Semester 1 | 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 |
| 433-482 Software Agents | 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 |

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|---|---|-----------------------------------|--------|
| | 433-494 Directed Study 4B | Summer, Semester 1, Semester 2 | 12.500 |
| | 433-495 Advanced Topic in Computer Science | Not offered 2009 | 12.500 |
| Core Participation Requirements: | <p><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</p></p> | | |