

355CE Bachelor of Engineering (Computer Engineering)

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| Year and Campus: | 2012 |
| 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 |
| Coordinator: | Prof. Ampalavanapillai Nirmalathas |
| Contact: | <p>Melbourne School of Engineering Ground Floor, Old Engineering (Building 173)</p> <p>Current Students: Email: 13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au) Phone: 13 MELB (13 6352) +61 3 9035 5511</p> <p>Prospective Students: Email: eng-info@unimelb.edu.au (mailto:eng-info@unimelb.edu.au) Phone: + 61 3 8344 6944</p> |
| Course Overview: | <p>THE COURSE STRUCTURE BELOW ONLY APPLIES TO RE-ENROLLING STUDENTS WHO COMMENCED THEIR STUDIES PRIOR TO 2008</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 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.</p> |
| Objectives: | <p>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.</p> |
| 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: | There is no further entry into this course. |

NOTE:The single degree, Bachelor of Engineering (Computer Engineering), requires the completion of 400 points usually over four years. Student who have not yet completed the requirements of the Bachelor of Engineering degree should see a course adviser.

Final Year Subjects

| Subject | Study Period Commencement: | Credit Points: |
|---|----------------------------|----------------|
| ELEN90067 Electrical Engineering Capstone Project | Year Long, Semester 1 | 25 |
| COMP30017 Operating Systems and Network Services | Semester 1 | 12.50 |
| ELEN90062 High Speed Electronics | Semester 2 | 12.50 |

Approved CSSE 3 level and above 25points

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

In selecting electives, students are reminded that the Computer Engineering degree completion requirements include a minimum of 25 points management or non-technical electives.

The selection of elective subjects may be restricted by timetable and pre-requisite requirements.

Final Year Electrical Engineering Electives

| Subject | Study Period Commencement: | Credit Points: |
|--|----------------------------|----------------|
| ELEN90051 Advanced Communication Systems | Semester 1 | 12.50 |
| ELEN90052 Advanced Signal Processing | Semester 1 | 12.50 |
| ELEN90053 Electronic System Design | Semester 2 | 12.50 |
| ELEN90059 Lightwave Systems | Semester 1 | 12.50 |
| ELEN90060 Power System Analysis | Semester 1 | 12.50 |
| ELEN90061 Communication Networks | Semester 2 | 12.50 |
| ELEN90062 High Speed Electronics | Semester 2 | 12.50 |
| ELEN90064 Advanced Control Systems | Semester 2 | 12.50 |
| ELEN90007 Wireless Communication Systems | Semester 2 | 12.50 |

Computer Science Electives including but not limited to:

| Subject | Study Period Commencement: | Credit Points: |
|--|-------------------------------------|----------------|
| 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 |
| SWEN30006 Software Modelling and Design | Semester 1 | 12.50 |
| SWEN30007 Software Systems Project | Semester 2 | 12.50 |

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| | COMP40020 Directed Study 4A | Summer Term, Semester 1, Semester 2 | 12.50 |
| | COMP40021 Directed Study 4B | Summer Term, Semester 1, Semester 2 | 12.50 |
| | SWEN90006 Software Engineering Methods | Semester 2 | 12.50 |
| | Note: These electives may not be offered every year | | |
| 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 attribute http://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". | | |
| Notes: | Pre-requisite requirements and not allowed subject/s should be checked before selecting any subject. | | |