

## 385-AA Bachelor of Computer Science

<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>The course aims to develop skilled computer scientists with the technical knowledge to develop well-designed and robust computer-based solutions to a range of problems in business and industry. Core studies include computer science (introduction to computer programming, algorithms and problem solving, software development) and mathematics. Electives may be chosen from a wide variety of other disciplines including digital electronics and information systems. Subjects in later years include artificial intelligence, software engineering, computer networks, operating systems, graphics and computer design.</p> <p>Computer science graduates work in government, the manufacturing industry, the information industry, commerce and education. Some graduates spend their time on software development and systems support and remain in a mostly technical environment. Others move to a consulting role which places more emphasis on talking to clients about the use of the technology. In all types of work environment, whether with small companies or large, success in employment involves a mixture of technical expertise and strong communication skills. The knowledge and qualifications gained will enable you to work in many countries.</p> <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> <p>The Bachelor of Computer Science is recognized by the Australian Computer Society (ACS), an internationally recognized professional association for Information Communications Technology (ICT) professionals. Accreditation endorses the quality of curriculum of the BCS at Melbourne, and affirms that the course is highly relevant to Australia's current and future computing industry.</p>									
<b>Objectives:</b>	-									
<b>Subject Options:</b>	<p>NOTE: THERE WILL BE NO FIRST YEAR ENTRY INTO THIS PROGRAM FROM 2009.</p> <p><b>Second Year</b> Subjects listed below <b>MUST</b> be taken in this approved order, regardless of semester availability.</p> <p><b>Semester 1</b></p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>433-297 Programming the Machine</td> <td>Semester 1, Semester 2</td> <td>12.500</td> </tr> <tr> <td>433-253 Algorithms and Data Structures</td> <td>Semester 1</td> <td>12.500</td> </tr> </tbody> </table> <p>Elective(s) (25 points in total)</p> <p><b>Semester 2</b></p>	Subject	Study Period Commencement:	Credit Points:	433-297 Programming the Machine	Semester 1, Semester 2	12.500	433-253 Algorithms and Data Structures	Semester 1	12.500
Subject	Study Period Commencement:	Credit Points:								
433-297 Programming the Machine	Semester 1, Semester 2	12.500								
433-253 Algorithms and Data Structures	Semester 1	12.500								

Subject	Study Period Commencement:	Credit Points:
433-294 Object Oriented Software Development	Semester 2	12.500
433-295 Discrete Structures	Semester 2	12.500

Elective(s) (25 points in total)

Students considering extending their study by enrolling in the BCS (Honours) degree should note that study of mathematics or statistics at the second year level is strongly recommended.

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 School of Engineering LMS community for current students when choosing their subjects.

### Third Year

Subjects listed below **MUST** be taken in this approved order, regardless of semester availability.

#### Semester 1

Subject	Study Period Commencement:	Credit Points:
433-341 Software Engineering Process & Practice	Semester 1	12.500

300-level computer science subjects (37.5 points in total)

#### Semester 2

Subject	Study Period Commencement:	Credit Points:
433-343 Professional Issues in Computing	Semester 2	12.500

300-level computer science subjects (25 points in total)

Elective (12.5 points)

The 62.5 points listed as computer science subjects may be any 300-level subjects taught by the Department except for 433-340 Software Engineering Project.

Students in the BCS are required to complete at least 12.5 points of non-technical studies from outside the Department of Computer Science and Software Engineering. To satisfy non-technical study requirements, students may take suitable subjects from any department in the University prepared to accept their enrolment, subject to prerequisite and timetabling constraints. Subjects that meet the requirements include the management subjects offered in the Faculty of Engineering and in the Faculty of Economics and Commerce, and subjects from the Faculty of Arts. Students are especially encouraged to consider subjects where the study and assessment requirements include written and oral presentation components.

Within the BCS, students are entitled to complete 25 points from departments which are not budget departments of the Faculty of Science or the Faculty of Engineering. Students who wish to include other subjects can do so within the BCS with approval from the Department of Computer Science and Software Engineering, up to a total of 62.5 points. Normally, approval would not be given for students to undertake more than 25 of the 62.5 points at 100-level. At most 125 points of the 300 points in a BCS degree may be at 100 level. Students in the BCS may not take more than 62.5 points of studies from outside the Faculties of Science and Engineering.

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 School of Engineering LMS community for current students when choosing their subjects.

#### 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>