

# 385-AA Bachelor of Computer Science

<b>Year and Campus:</b>	2008																
<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>	-																
<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>																
<b>Objectives:</b>	-																
<b>Subject Options:</b>	<p><b>First Year</b></p> <p>Subjects listed below MUST 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>431-102 Digital Systems 1: Fundamentals</td> <td>Not offered 2008</td> <td>12.50</td> </tr> <tr> <td>600-151 Informatics 1: Practical Computing</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>First year Mathematics subject (12.5 points) Elective (12.5 points)</p> <p><b>Semester 2</b></p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>600-152 Informatics 2: People, Data and the Web</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>First year Mathematics subject (12.5 points) Electives (25 points)</p> <p>Note: The subject 431-102 Digital Systems 1: Fundamentals may be taken in second year, swapping an additional elective into first year.</p>		Subject	Study Period Commencement:	Credit Points:	431-102 Digital Systems 1: Fundamentals	Not offered 2008	12.50	600-151 Informatics 1: Practical Computing	Semester 1, Semester 2	12.50	Subject	Study Period Commencement:	Credit Points:	600-152 Informatics 2: People, Data and the Web	Semester 1, Semester 2	12.50
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\* BCS students who wish to retain the option of transferring to the BE(Software) at the end of their first year of study should seek course advice regarding the first year mathematics subjects. For further information, see the Department of Mathematics and Statistics section of the Undergraduate Studies Handbook.

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 <http://www.csse.unimelb.edu.au/courseadvice/ugrad/planning/electives/computing/> when choosing their subjects.

### Second Year

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

#### Semester 1

Subject	Study Period Commencement:	Credit Points:
433-252 Software Engineering Principles & Tools	Semester 1	12.50
433-253 Algorithms and Data Structures	Semester 1	12.50

Elective(s) (25 points in total)

#### Semester 2

Subject	Study Period Commencement:	Credit Points:
433-254 Software Design	Not offered 2008	12.50
433-255 Logic and Computation	Not offered 2008	12.50

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 <http://www.csse.unimelb.edu.au/courseadvice/ugrad/planning/electives/computing/> 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	12.50

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	12.50

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

	<p>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.</p> <p>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.</p> <p>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 <a href="http://www.csse.unimelb.edu.au/courseadvice/ugrad/planning/electives/computing/">http://www.csse.unimelb.edu.au/courseadvice/ugrad/planning/electives/computing/</a> when choosing their subjects.</p>
<p><b>Core Participation Requirements:</b></p>	<p>&lt;p&gt;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.&lt;/p&gt; &lt;p&gt;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: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>