

385-BI Bachelor of Computer Science (Bioinformatics)

Year and Campus:	2008																											
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees																											
Level:	Undergraduate																											
Duration & Credit Points:																												
Contact:	-																											
Course Overview:	<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>																											
Objectives:	-																											
Subject Options:	<p>THERE IS NO FIRST YEAR ENTRY INTO THIS COURSE FROM 2008.</p> <p>Second Year</p> <p>Subjects listed below MUST be taken in this approved order, regardless of semester availability.</p> <p>Semester 1</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>433-252 Software Engineering Principles & Tools</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>433-253 Algorithms and Data Structures</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>521-211 Biochemistry and Molecular Biology</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> <p>Semester 2</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>433-255 Logic and Computation</td> <td>Not offered 2008</td> <td>12.50</td> </tr> <tr> <td>521-212 Biochemical Regulation of Cell Function</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>433-254 Software Design</td> <td>Not offered 2008</td> <td>12.50</td> </tr> </tbody> </table> <p>521-3xx Biochemistry and Molecular Biology Elective 200-level (12.5 points)</p>	Subject	Study Period Commencement:	Credit Points:	431-102 Digital Systems 1: Fundamentals	Not offered 2008	12.50	433-252 Software Engineering Principles & Tools	Semester 1	12.50	433-253 Algorithms and Data Structures	Semester 1	12.50	521-211 Biochemistry and Molecular Biology	Semester 1	12.50	Subject	Study Period Commencement:	Credit Points:	433-255 Logic and Computation	Not offered 2008	12.50	521-212 Biochemical Regulation of Cell Function	Semester 2	12.50	433-254 Software Design	Not offered 2008	12.50
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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
433-351 Database Systems	Semester 1	12.50
521-301 Protein Structure and Function	Semester 2	12.50

Elective (12.5 points) - CSSE 300-level elective

Semester 2

Subject	Study Period Commencement:	Credit Points:
433-303 Artificial Intelligence	Semester 2	12.50
433-343 Professional Issues in Computing	Semester 2	12.50

Elective (12.5 points) - CSSE 300-level elective

521-3xx (12.5 points) - Biochemistry subject approved each year

Recommended 300-level computer science electives include 433-371 Interactive System Design, 433-353 Networks and Communications, 433-380 Graphics and Computation and 433-385 Modelling Analysis and Visualisation.

Students who fulfil the Faculty requirements for overloading may be interested in the subjects 521-303 Molecular and Cell Biology and 521-307 Biomolecular Structure and Bioinformatics.

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.

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</p>