

985-BC Bachelor of Engineering(Biochemical Engineering)and Bachelor of Science

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 following programs are samples only. The first-year program should fulfil the prerequisites for both BE and BSc studies. For example, those students intending to pursue a major in life sciences should complete the 100-level subjects specified in the life sciences package First-year packages.</p> <p>Usually the 200-level BE requirements are taken over two years, in the second and third year of the combined program. The order in which the units are taken may be altered to accommodate timetable arrangements.</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>Students taking combined degree courses and who intend to overlap second- and later-year subjects, should consult with a course adviser to ensure all core engineering requirements are met.</p>
Objectives:	-
Course Structure & Available Subjects:	<p>The standard BE/BSc combined degrees require a total of 500 points, within which students must take a minimum of 300 engineering points and 237.5 science points. The total points of a standard course can be kept to 500 as at least 50 points of core material within the various streams of engineering also earn science points.</p> <p>BE/BSc course structure</p> <p>To satisfy course requirements students must:</p> <p>take the set of core engineering subjects prescribed for the branch of engineering being studied. This will include the professional study requirements in one of chemical engineering, civil engineering, environmental engineering, mechanical engineering; and either electrical, computer or software engineering;</p> <p>accumulate a minimum of 237.5 science points, which must include:</p> <p>between 75 and 125 points at 100-level;</p> <p>completion of 50 points of a prescribed science major at the 300-level. Detailed information on the science majors available is contained within the course entry for the Bachelor of Science (course code 755-BB (/view/2008/755-BB))</p> <p>With regard to the science component note that:</p> <p>There are no specific requirements at the 200-level.</p> <p>Science points are awarded for the completion of science subjects listed in the Faculty of Science section of this Handbook. The majority of subjects listed in this section earn science credit, although there are exceptions. Some subjects offered by the Department of Information Systems, Department of Mathematics and Statistics, and School of Earth Sciences do not earn science credit. If a subject does not earn science credit it is labelled as non-science in the subject description. Any subject that does not appear in the science section of this Handbook is a non-science subject.</p>

The engineering component may require the completion of specific (generally 100-level) science subjects. These subjects are detailed in the requirements of the various engineering courses that follow in the departmental entries.

A science major in computer science is not available to students undertaking the Software Engineering stream in the BE. These students will be required to undertake a major in an alternative science discipline (e.g. mathematics and statistics).

Students will not normally be permitted to complete more than 237.5 science points.

Selection of science subjects

Students are normally able to enrol in any subjects earning science credit where they have satisfied the prerequisite and corequisite requirements. These requirements are included in individual subject descriptions. Note that some science subjects are quota-restricted as the demand for the subject exceeds the number of places available. Selection into quota subjects is based on academic merit. Refer to the Faculty of Science section Quota subjects

Students who commenced prior to 1999

Students who first enrolled in the combined engineering/science course before 1999 must complete the requirements set out above with the exception that they do not need to complete a prescribed science major, but rather 50 points at 300-level made up of science subjects of their choice.

Subject Options:

THERE WILL BE NO FIRST YEAR ENTRY INTO THIS COURSE FROM 2008

Second Year

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

Semester 1

Subject	Study Period Commencement:	Credit Points:
411-201 Introduction to Transport Processes	Semester 1	12.50
620-142 Mathematics B	1	12.500
521-211 Biochemistry and Molecular Biology	Semester 1	12.50
526-201 Principles of Microbiology & Immunology	Semester 1	12.50

Semester 2

Subject	Study Period Commencement:	Credit Points:
610-211 Light, Matter & Chemical Change B	Not offered 2008	12.50
620-232 Mathematical Methods	Semester 2	12.50
521-212 Biochemical Regulation of Cell Function	Semester 2	12.50
526-221 Experimental Microbiology	Semester 1, Semester 2	12.50

Third Year

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

Semester 1

Subject	Study Period Commencement:	Credit Points:
610-221 Organic & Bio-organic Chemistry	Not offered 2008	12.50
620-231 Vector Calculus	Semester 1, Semester 2	12.50
526-301 Microbial Cells and Genomes	Semester 2	12.50
526-321 Molecular Microbiology Techniques	Semester 1	12.50

Semester 2

Subject	Study Period Commencement:	Credit Points:
411-203 Fluid Mechanics	Not offered 2008	12.50
411-204 Chemical Engineering Thermodynamics	Semester 2	12.50
526-327 Projects: Microbiology	Semester 2	12.50

Fourth Year

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

Semester 1

Subject	Study Period Commencement:	Credit Points:
411-303 Reactor Engineering	Semester 1	12.50
411-330 Biochemical Engineering Mini-Project	Semester 1, Semester 2	6.25
411-331 Heat and Mass Transport Processes 1	Semester 1	12.50
411-335 Biochemical/Environmental Engineering 1B	Semester 1	6.25
411-343 Chemical Engineering Management	Semester 1	12.50

Semester 2

Subject	Study Period Commencement:	Credit Points:
411-336 Process Dynamics and Control	Semester 2	12.50
411-337 Practical and Computer Laboratory	Semester 2	12.50
411-339 Process Engineering 2	Semester 2	12.50
411-391 Bionanoengineering	Semester 2	12.50

Fifth Year

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

Semester 1

Subject	Study Period Commencement:	Credit Points:
411-432 Particle Mechanics and Processing	Semester 1	12.50
411-441 Heat and Mass Transport Processes 2	Semester 1	12.50
411-442 Process Equipment Design	Semester 1	12.50
411-445 Process Engineering 3	Semester 1	12.50

Semester 2

Subject	Study Period Commencement:	Credit Points:
411-447 Design Project	Semester 2	18.75
411-448 Biochemical/Environmental Engineering 2	Semester 2	12.50
411-450 Biochemical Engineering Research Project	Semester 1, Semester 2	18.75

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>
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