

985AV Bachelor of Engineering (Civil) and Bachelor of Science

Year and Campus:	2010 - Parkville
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Level:	Undergraduate
Duration & Credit Points:	500 credit points taken over 60 months full time. This course is available as full or part time.
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Course Overview:	<p>Students studying the BE/BSc degree should consult the BE single degree course structure for a current list of core engineering subjects. For further information and up-to-date course advice students should regularly check the Melbourne School of Engineering webpage</p> <p>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 departmental guidelines on electives are satisfied (see www.civenv.unimelb.edu.au/undergraduate). Students should also avoid timetable clashes in choosing their electives. 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:	<p>The course objectives are that graduates should have acquired:</p> <ul style="list-style-type: none"> # A broad knowledge of science and engineering in several disciplines including a sound fundamental understanding of scientific and engineering principles and methods; # An in-depth knowledge and skills within specified areas of engineering and science; # The appropriate analytical, problem-solving and design skills; # Capacity to apply practical skills towards the development of mathematical and computer-based solutions of problems; # Learning skills and a knowledge base to enable them to readily accommodate future changes in technology; # Verbal and written communication skills that enable them to communicate effectively in the context of defining and solving problems; # An understanding of the basic principles underlying the management of physical, human and financial resources; # Skills, personal attributes and depth of knowledge which equip them for positions of leadership in basic and applied research, engineering and management of technology-intensive enterprises; # An appreciation of the roles and responsibilities of engineers and scientists in society; and # The educational and professional standards of the professional institutions with which the faculties' courses are accredited.
Course Structure & Available Subjects:	To satisfy course requirements students must:

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;

accumulate a minimum of 237.5 science points, which must include:

- # between 75 and 125 points at 100-level;
- # 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)**)

With regard to the science component note that:

- # There are no specific requirements at the 200-level.
- # 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.
- # 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 of the Handbook
- # 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.
- # Honours in science: The Faculty of Science offers a Bachelor of Science (Degree with Honours) program. It involves advanced research and coursework and results in the award of an honours qualification. This will add an extra year to the combined degree. Refer to the Faculty of Science section Bachelor of Science (Degree with Honours) and Bachelor of Information Systems (Degree with Honours)

Subject Options:

THERE WILL BE NO FIRST, SECOND OR THIRD YEAR ENTRY INTO THIS COURSE FROM 2008

THE COURSE STRUCTURE BELOW ONLY APPLIES TO RE-ENROLLING STUDENTS WHO COMMENCED THEIR STUDIES PRIOR TO 2008. STUDENTS WHO HAVE FAILED A SUBJECT, MUST SEE A COURSE ADVISER FOR SUBJECT PLANNING

4th Year - Semester 1

Subject	Study Period Commencement:	Credit Points:
ENGR30001 Fluid Mechanics	Semester 1, Semester 2	12.50
CVEN90044 Engineering Site Characterisation	Semester 1	12.50
CVEN90043 Sustainable Infrastructure Systems	Semester 1	12.50

plus Science subject as required (12.5 points)

4th Year - Semester 2

Subject	Study Period Commencement:	Credit Points:
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CVEN30010 Systems Modelling and Design	Semester 2	12.50
CVEN30009 Structural Theory and Design	Semester 2	12.50
CVEN90045 Engineering Project Implementation	Semester 2	12.50

plus Science subject as required (12.5 points)

FifthYear

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

5th Year - Semester 1

Subject	Study Period Commencement:	Credit Points:
CVEN40008 Infrastructure Design	Semester 1	12.50
ENGM40001 Management for Engineers 3	Semester 1	12.50

plus Science subjects as required (25 points)

5th Year - Semester 2

Subject	Study Period Commencement:	Credit Points:
CVEN40007 Steel & Concrete Design	Semester 2	12.50
CVEN40009 Integrated Design	Semester 2	12.50

plus Science subjects as required (25 points)

Entry Requirements:	There is no further entry into this combined 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 http://www.services.unimelb.edu.au/disability
Further Study:	On completion of a Bachelor of Engineering, students may choose to apply for candidature in a Masters by Research or PhD. They may also apply to undertake a one year Advanced Masters by Coursework degree.
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
Professional Accreditation:	This course is accredited with Engineers Australia
Generic Skills:	Upon completion of this course the student should have developed their: <ul style="list-style-type: none"> # Ability to apply knowledge of science and engineering fundamentals # Ability to undertake problem identification, formulation and solution # Ability to utilise a systems approach to complex problems and to design and operational performance # Proficiency in engineering design # Ability to communicate effectively, with the engineering team and with the community at large # Capacity for creativity and innovation # Ability to function effectively as an individual and in a multidisciplinary and multicultural teams, as a team leader or manager as well as an effective team member # Capacity for lifelong learning and professional development.