

355AB Bachelor of Engineering (Chemical and Biomolecular Engineering)

Year and Campus:	2012
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Level:	Undergraduate
Duration & Credit Points:	400 credit points taken over 48 months
Coordinator:	Professor Sandra Kentish
Contact:	<p>Melbourne School of Engineering Ground Floor, Old Engineering (Building 173)</p> <p>Current students: Email: 13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au) Phone: 13MELB (13 6352) +61 3 9035 5511</p> <p>Prospective students: Email: eng-info@unimelb.edu.au (mailto:eng-info@unimelb.edu.au) Phone +61 3 8344 6944</p>
Course Overview:	<p>THE COURSE STRUCTURE BELOW ONLY APPLIES TO RE-ENROLLING STUDENTS WHO COMMENCED THEIR STUDIES PRIOR TO 2008</p> <p>Chemical and Biomolecular Engineering is concerned with developing and analysing process systems, which are strongly dependant upon chemistry and involve physical changes. Our graduates find employment in the biochemical industry, the food industry, as well as in the traditional chemical industry. Chemical and Biomolecular Engineers are well suited for environmental-related engineering positions given their strong background in process systems and in chemical biological processes in particular.</p>
Objectives:	<p>The course objectives are that graduates will 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 # The educational and professional standards of the professional institutions with which the faculties' courses are accredited
Course Structure & Available Subjects:	Students are required to complete 400 points of core material and electives.
Majors/Minors/Specialisations	None
Subject Options:	THERE IS NO FURTHER ENTRY INTO THIS COURSE

Note: Student who have not yet completed the requirements of the Bachelor of Engineering (Chemical and Biomolecular Engineering) degree should see a course advisor. The following final year subjects are available in 2012:

Final Year Subjects

Subject	Study Period Commencement:	Credit Points:
CHEN90019 Advanced Heat & Mass Transport Processes	Semester 1	12.50
CHEN90012 Process Equipment Design	Semester 1	12.50
CHEN90018 Particle Mechanics and Processing	Semester 1	12.50
CHEN90013 Process Engineering	Semester 1	12.50
CHEN90011 Bioenvironmental Engineering	Semester 2	12.50
BIEN90002 Biomolecular Engineering Design Project	Semester 2	25
BIEN90001 Biomolecular Engineering Research Project	Summer Term, Semester 1, Semester 2	25

Entry Requirements:

There will be no further entry into this 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 Website: <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 degree. They may also apply to undertake a one year Advanced Masters by Coursework degree.

Graduate Attributes:

The Bachelor of Engineering is a professional degree. Graduate can obtain professional recognition by joining Engineers Australia who have accredited these programs. The Bachelor of Engineering also delivers on the University graduate attributes - <http://www.unimelb.edu.au/about/attributes.html>

Professional Accreditation:

The Bachelor of Engineering is accredited with Engineers Australia

Generic Skills:

Upon completion of this course the student should have developed their:

- # Ability to apply knowledge of basic science and engineering fundamentals
- # Ability to communicate effectively, not only with engineers but also with the community at large
- # In-depth technical competence in at least one engineering discipline
- # Ability to undertake problem identification, formulation and solution
- # Ability to utilise a systems approach to design and operational performance
- # Ability to function effectively as an individual and in multi-disciplinary and multicultural teams, with the capacity to be a leader or manager as well as an effective team member
- # Understanding of the social, cultural, global and environmental responsibilities of the professional engineer, and the need for sustainable development
- # Understanding of the principles of sustainable design and development
- # Understanding of and commitment to professional and ethical responsibilities
- # Expectation and capacity to undertake life-long learning