

B-ENG Chemical and Biomolecular Engineering stream

Year and Campus:	2013																																									
Coordinator:	Professor George Franks																																									
Contact:	Email: gvfranks@unimelb.edu.au (mailto:gvfranks@unimelb.edu.au)																																									
Overview:	<p>THERE IS NO FURTHER ENTRY INTO THIS COURSE. THE COURSE STRUCTURE BELOW ONLY APPLIES TO RE-ENROLLING STUDENTS WHO COMMENCED THEIR STUDIES PRIOR TO 2010</p> <p>The Chemical and Biomolecular Engineering stream of the Bachelor of Engineering (for students commencing in 2008 and later years).</p>																																									
Objectives:	See Bachelor of Engineering (B-ENG)																																									
Structure & Available Subjects:	The structure of the Bachelor of Engineering degree requires completion of specific subjects as part of this stream. The majority of subjects have one or more prerequisites and therefore the sequence in which subjects are taken is very important. It is unlikely that prerequisite waivers will be granted for these engineering subjects and therefore students should take care to select subjects in one study period that satisfy prerequisites for subjects in later study periods.																																									
Subject Options:	<p>First Year (normally 100 points taken in Year 1)</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>ENGR10003 Engineering Systems Design 2</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>ENGR10004 Engineering Systems Design 1</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>CHEM10003 Chemistry 1</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>CHEM10004 Chemistry 2</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>MAST10005 Calculus 1</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>MAST10006 Calculus 2</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table> <p>Plus</p> <ul style="list-style-type: none"> # Two breadth subjects (i.e. 25.00 credit points total) <p>N.B.</p> <ul style="list-style-type: none"> # Students who have completed VCE Specialist Mathematics (or equivalent) are exempt from MAST10005 Calculus 1 and should therefore enrol in MAST10006 Calculus 2 and MAST10007 Linear Algebra. # Students with a high level of achievement in mathematics may enrol in both MAST10008 Accelerated Mathematics 1 and MAST10009 Accelerated Mathematics 2 instead of both MAST10006 Calculus 2 and MAST10007 Linear Algebra. <p>Second Year (normally 100 points taken in Year 2)</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>CHEN20007 Chemical Process Analysis 1</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>CHEN20008 Chemical Process Analysis 2</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>CHEN20009 Transport Processes</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>CHEM20018 Chemistry: Reactions and Synthesis</td> <td>Not offered 2013</td> <td>12.50</td> </tr> <tr> <td>MAST10007 Linear Algebra</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	ENGR10003 Engineering Systems Design 2	Not offered 2013	12.50	ENGR10004 Engineering Systems Design 1	Not offered 2013	12.50	CHEM10003 Chemistry 1	Not offered 2013	12.50	CHEM10004 Chemistry 2	Not offered 2013	12.50	MAST10005 Calculus 1	Not offered 2013	12.50	MAST10006 Calculus 2	Not offered 2013	12.50	Subject	Study Period Commencement:	Credit Points:	CHEN20007 Chemical Process Analysis 1	Semester 1	12.50	CHEN20008 Chemical Process Analysis 2	Semester 2	12.50	CHEN20009 Transport Processes	Not offered 2013	12.50	CHEM20018 Chemistry: Reactions and Synthesis	Not offered 2013	12.50	MAST10007 Linear Algebra	Not offered 2013	12.50
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MAST20029 Engineering Mathematics	Not offered 2013	12.50
ENGR30002 Fluid Mechanics	Not offered 2013	12.50

Plus

- # One breadth subject (i.e. 12.50 credit points total)

N.B.

- # Students who have completed VCE Specialist Mathematics (or equivalent) and completed either both MAST10006 Calculus 2 and MAST10007 Linear Algebra or both MAST10008 Accelerated Mathematics 1 and MAST10009 Accelerated Mathematics 2 in Year 1 can replace MAST10007 Linear Algebra in the table above with a science elective.
- # A science elective is any subject available as science credit in the Bachelor of Science course (B-SCI). Refer to **Science-credited subjects - new generation B-SCI and B-ENG** ([./../view/current/21B-SCI-SPC2B1021](http://handbook.unimelb.edu.au/view/current/21B-SCI-SPC2B1021)) for a full list of subjects. Science electives may have prerequisites.

Third Year (normally 100 points taken in Year 3)

Subject	Study Period Commencement:	Credit Points:
CHEN30001 Reactor Engineering	Not offered 2013	12.50
CHEN30005 Heat and Mass Transport Processes	Not offered 2013	12.50
CHEN30015 Process Engineering Case Studies	Not offered 2013	12.50
CHEN90016 Metabolic Engineering	Not offered 2013	12.50
CHEN90020 Chemical Engineering Management	Not offered 2013	12.50
CHEN90032 Process Dynamics And Control	Not offered 2013	12.50
CHEN90031 Bioprocess Engineering	Not offered 2013	12.50

Plus one Chemical Engineering elective selected from:

Subject	Study Period Commencement:	Credit Points:
BMEN90011 Tissue Engineering & Stem Cells	Not offered 2013	12.50
CHEN90007 Advanced Thermo & Reactor Engineering	Not offered 2013	12.50
CHEN90011 Bioenvironmental Engineering	Not offered 2013	12.50
CHEN90010 Minerals, Materials and Recycling	Not offered 2013	12.50
BMEN90012 Soft Matter Engineering	Not offered 2013	12.50

Fourth Year (normally 100 points taken in Year 4)

Subject	Study Period Commencement:	Credit Points:
CHEN90009 Fermentation Processes	Not offered 2013	12.50
CHEN90012 Process Equipment Design	Not offered 2013	12.50
CHEN90013 Process Engineering	Not offered 2013	12.50
CHEN90018 Particle Mechanics and Processing	Not offered 2013	12.50
BIEN90002 Biomolecular Engineering Design Project	Not offered 2013	25
BIEN90001 Biomolecular Engineering Research Project	Not offered 2013	25

Notes:	<ul style="list-style-type: none"># Students who completed third year in 2010 will have taken BIEN30001 Bionanoengineering as a core subject instead of CHEN30015 Process Engineering Case Studies. These students may choose to take CHEN30015 as an elective.# Students who completed third year prior to 2013 will have taken CHEN90008 Biology for Engineers instead of CHEN90031 Bioprocess Engineering. Credit cannot be obtained for both subjects.# Students who completed third year prior to 2013 will have taken ENGR30001 Fluid Mechanics and Thermodynamics instead of ENGR30002 Fluid Mechanics. Credit cannot be obtained for both subjects.# Credit cannot be obtained for both BIEN30001 Bionanoengineering and BMEN90012 Soft Matter Engineering
Related Course(s):	Bachelor of Engineering