

BIEN90001 Biomolecular Engineering Research Project

Credit Points:	25																		
Level:	9 (Graduate/Postgraduate)																		
Dates & Locations:	<p>2011, Parkville</p> <p>This subject commences in the following study period/s: Summer Term, Parkville - Taught on campus. Semester 1, Parkville - Taught on campus. Semester 2, Parkville - Taught on campus. Laboratory, computer or literature-based research project (independent or team-based). Research Project is usually completed in Semester 2. However, as a special arrangement, Research Project may be undertaken in Summer Semester and/or Semester 1 with the approval of the Head of Department.</p>																		
Time Commitment:	Contact Hours: 1 x 2 hour lecture per week (initial weeks of semester only) Total Time Commitment: Estimated 240 hours																		
Prerequisites:	<p>Students must have taken the following subjects prior to enrolling in this subject:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>CHEN30001 Reactor Engineering</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>CHEN30009 Process Dynamics and Control</td> <td>Semester 2</td> <td>12.50</td> </tr> <tr> <td>CHEN30005 Heat and Mass Transport Processes</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>CHEN90008 Biology for Engineers</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>CHEN90018 Particle Mechanics and Processing</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	CHEN30001 Reactor Engineering	Semester 1	12.50	CHEN30009 Process Dynamics and Control	Semester 2	12.50	CHEN30005 Heat and Mass Transport Processes	Semester 1	12.50	CHEN90008 Biology for Engineers	Semester 1	12.50	CHEN90018 Particle Mechanics and Processing	Semester 1	12.50
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Corequisites:	None																		
Recommended Background Knowledge:	None																		
Non Allowed Subjects:	<p>Credit will not be given for this subject and the following subject:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>CHEN90023 Chemical Engineering Research Project</td> <td>Summer Term, Semester 1, Semester 2</td> <td>25</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	CHEN90023 Chemical Engineering Research Project	Summer Term, Semester 1, Semester 2	25												
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Core Participation Requirements:	<p>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/</p>																		
Coordinator:	Assoc Prof Malcolm Davidson																		
Contact:	Email: m.davidson@unimelb.edu.au (mailto:m.davidson@unimelb.edu.au)																		
Subject Overview:	<p>Candidates will undertake as individuals or as a member of a team a designated investigative project which could involve a critical literature review, experimental research and/or development, theoretical modeling, process simulation and/or the solution of an industrial problem. Rigorous planning and scheduling of the project, time management, written and verbal technical communication, interpretation of results and team work will be required. Lectures will</p>																		

	be presented on laboratory safety, and the use of statistical methods for experimental data analysis.
Objectives:	On completion of this subject students should be able to: <ul style="list-style-type: none"> # Plan and conduct an independent research project in the biomolecular engineering field # Communicate their research results orally to an audience of their peers # Analyse experimental data using appropriate statistical methods # Present a detailed written report
Assessment:	A written report of up to 4000 words, not including appendices, diagrams, tables, computations and computer output, due towards the end of semester (50%); A 30 minute oral presentation held in the end of semester exam period (25%) and an assessment of the quality of the student's research work (25%).
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	<ul style="list-style-type: none"> # 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 function effectively as an individual and in multi-disciplinary and multi-cultural teams, with the capacity to be a leader or manager as well as an effective team member # Capacity for independent critical thought, rational inquiry and self-directed learning # Intellectual curiosity and creativity, including understanding of the philosophical and methodological bases of research activity # Profound respect for truth and intellectual integrity, and for the ethics of scholarship
Related Course(s):	Bachelor of Engineering (Chemical and Biomolecular Engineering)
Related Majors/Minors/Specialisations:	B-ENG Chemical and Biomolecular Engineering stream Master of Engineering (Biomolecular)