CHEN90008 Biology for Engineers

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 52 Total Time Commitment: Estimated 120 Hours
Prerequisites:	620-156 Linear Algebra 610-102 Chemistry 2
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
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/
Coordinator:	Dr Sally Louise Gras
Contact:	Melbourne School of Engineering Office Building 173, Grattan Street The University of Melbourne VIC 3010 Australia General telephone enquiries: + 61 3 8344 6703 + 61 3 8344 6507 Facsimiles: + 61 3 9349 2182 + 61 3 8344 7707 Email: **eng-info@unimelb.edu.au (/)**
Subject Overview:	Knowledge of the basic processes of life; structure and function of both prokaryotic and eukaryotic cells; structure of DNA, its replication and the molecular basis of gene action; basic mechanisms of inheritance, recombination and mutation; biomolecular and bioprocess engineering; how prokaryotic and eukaryotic cells are used in bioengineering, including how they may be integrated into unit operations; knowledge of traditional bioprocess engineering operations such as brewing; how generic methods are improving traditional bioprocess engineering and enabling new technologies.
Objectives:	Develop understanding of key aspects of biology relevant to Engineering. Develop fundamental understanding of microbiology, bioprocesses and principles of product recovery.
Assessment:	A multiple choice test taking approximately 35 minutes held mid-semester (10%); work in practical classes during the semester, made up of written work not exceeding 1500 words, assessment of practical skills within the practical class, and no more than 4 short multiple choice tests (total 25%); independent learning tasks (5%) and a 3 hour written examination on theory and practical work (60%). A pass in the practical work is necessary to pass the subject.
Prescribed Texts:	None
Recommended 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:	On completion of the subject, students should be able to demonstrate: • 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; • Ability to undertake problem identification, formulation and solution; • Ability to record observations and analyse and interpret data.
Related Course(s):	Bachelor of Engineering