208-247 Biotechnology for Land and Food

Credit Points:	12.500
Level:	Undergraduate
Dates & Locations:	2008, This subject commences in the following study period/s: Semester 1, - Taught on campus.
Time Commitment:	Contact Hours: Twenty-four lectures and 36 hours of other activities (group discussions; computer-based activities for searching biotechnology-related databases, preparing social and environmental impact reports) Total Time Commitment: Not available
Prerequisites:	202-103 Biology for Land and Food Resources or 650-141 Biology of Cells and Organisms.
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 Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability
Coordinator:	Prof Mohan Singh
Subject Overview:	By the end of the subject students should have: # acquired knowledge of the basic principles of genetics, molecular biology and genome science that underpin the new developments in biotechnology; # developed an understanding of local and global issues in biotechnology in relation to environmental health and sustainable crop and animal production; # developed an understanding of processes involved in commercialisation of biotechnology-related products and services; and # gained ability to synthesise, interpret and discuss current scientific literature. This subject will introduce students to scientific concepts and knowledge underpinning biotechnology and will enable acquisition of knowledge and skills relevant to practice of biotechnology in food, cropping, dairy and horticulture industries. The subject will also include discussion of contemporary social and economic issues arising due to adoption of biotechnology. Topics to be covered include introduction to biotechnology and underpinning methodologies; applications of biotechnology in diagnostics, transgenic microbes, plants and animals; crop protection; nutritional value enhancement of food products; diagnostic technologies; microbial biotechnology; environmental impact analyses; animal biotechnology; stem cells and reproductive technologies; intellectual property protection and management; social issues and public perceptions of biotechnology; commercialisation of research; regulatory issues; international trade and related economic issues.
Assessment:	Two-hour end-of-semester written examination (50%); 1-hour mid-semester test (25%); exercises and practical work submitted during the term equivalent to 3000 words (25%).
Prescribed Texts:	None

Recommended Texts:	Information Not Available
Breadth Options:	This subject is a level 2 or level 3 subject and is not available to new generation degree students as a breadth option in 2008. This subject or an equivalent will be available as breadth in the future. Breadth subjects are currently being developed and these existing subject details can be used as guide to the type of options that might be available. 2009 subjects to be offered as breadth will be finalised before re-enrolment for 2009 starts in early October.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	Information Not Available
Related Course(s):	Bachelor of Agricultural Science Bachelor of Agricultural Science Bachelor of Animal Science and Management Bachelor of Food Science