Biotechnology

Year and Campus:	2010
Coordinator:	Associate Professor Ed NewbiginSchool of Botany
Contact:	edwardjn@unimelb.edu.au
Overview:	Major study in **Biotechnology**. Students may only complete this major in conjunction with another life sciences major selected from anatomy, biochemistry and molecular biology, botany, cell biology, chemistry, genetics, immunology, microbiology, neuroscience, pathology, pharmacology, physiology, reproduction and development or zoology. In 2010 a number of new third year level subjects have been introduced, replacing or adding to subjects previously available within the major. Some previously offered subjects have been cancelled. The University is committed to ensuring that students are not disadvantaged by these changes and students may complete a major as defined by the current structure or a structure detailed in a previous year's handbook applicable to any year the student was enrolled in the course. Students completing third year level subjects across multiple years (e.g. in 2009 and 2010) should refer to advice within each subject entry on non-allowed subject combinations. Students unsure about the structure of their intended major should seek advice from the Science Student Centre.
Objectives:	Biotechnology is the use of biological knowledge to develop new processes and products for use in industry, health, agribusiness and other areas of human technology.
Structure & Available Subjects:	In 2010 a number of new third year level subjects have been introduced, replacing or adding to subjects previously available within the major. Some previously offered subjects have been cancelled. The University is committed to ensuring that students are not disadvantaged by these changes and students may complete a major as defined by the current structure or a structure detailed in a previous year's handbook applicable to any year the student was enrolled in the course. Students completing third year level subjects across multiple years (e.g. in 2009 and 2010) should refer to advice within each subject entry on non-allowed subject combinations. Students unsure about the structure of their intended major should seek advice from the Science Student Centre.
Subject Options:	**Biotechnology major** Completion of 50 points of study: # At least 25 points at third year level in the biotechnology major must be taken from a department different from that responsible for teaching the student's other major. # At least 25 points of the combined points at third year level for the biotechnology major and the student's other major must be practical laboratory subjects. Core subject at either second or third year level: One of

Subject	Study Period Commencement:	Credit Points:
BTCH30003 Biotechnology in Practice	Semester 1	12.50

600-205 Biotechnology in Practice (prior to 2009)

Note that credit exclusions exist between core biotechnology subjects. Please see subject descriptions for more details.

Plus three third year level subjects selected from the following biotechnology subjects:

Subject	Study Period Commencement:	Credit Points:
BCMB30001 Protein Structure and Function	Semester 2	12.50

BCMB30002 Functional Genomics and Bioinformatics	Semester 1	12.50
BCMB30003 Molecular Aspects of Cell Biology	March	12.50
BOTA30005 Plant Molecular Biology & Biotechnology	Semester 2	12.50
GENE30001 Evolutionary Genetics and Genomics	Semester 1	12.50
GENE30002 Genes: Organisation and Function	Semester 1	12.50
GENE30005 Human and Medical Genetics	Semester 2	12.50
MIIM30002 Principles of Immunology	Semester 1	12.50
PATH30003 Consequences of Human Disease	Semester 2	12.50
CEDB30002 Concepts in Cell & Developmental Biology	Semester 1	12.50
PHRM30008 Drugs: From Discovery to Market	Semester 1	12.50
CHEM30012 Analytical & Environmental Chemistry	Semester 1	12.50

606-309 Frontiers of Cell Biology (prior to 2010)
610-332 Bio-Organic Chemistry (prior to 2010)
610-333 Molecular Technology (prior to 2010)
652-303 Developmental and Cellular Genetics (prior to 2010)
526-301 Microbial Cells and Genomes (prior to 2010)

And the following **practical laboratory** biotechnology subjects:

Subject	Study Period Commencement:	Credit Points:
BCMB30010 Advanced Techniques in Molecular Science	Semester 1, Semester 2	12.50
CHEM30013 Chemical Research Project	February, September	12.50
GENE30004 Genetic Analysis	Semester 2	12.50
526-324 Immunological Techniques	Not offered 2010	
CEDB30003 Developmental Biology	Semester 2	12.50
BIOL30001 Reproduction	Semester 2	12.50
MIIM30013 Techniques in Microbiology & Immunology	Semester 1, Semester 2	12.50
SCIE30001 Science Research Project	Summer Term, Semester 1, Semester 2	12.50

526-321 Molecular Microbiology Techniques (prior to 2010)
526-326 Projects: Immunology (prior to 2010)
526-327 Projects: Microbiology (prior to 2010)
534-306 Drug Discovery (prior to 2010)

Notes:

To be awarded two science majors (i.e. the biotechnology major and a second life sciences major), students must complete a minimum of 87.5 points of science study at third year level.

Related Course(s):

Bachelor of Arts and Bachelor of Science
Bachelor of Arts and Sciences
Bachelor of Commerce and Bachelor of Science
Bachelor of Science
Bachelor of Science and Bachelor of Information Systems