BOTA30005 Plant Molecular Biology & Biotechnology

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	This subject is not offered in 2014. Lectures and practical work
Time Commitment:	Contact Hours: 24 lectures and 24 hours of practical work during the semester Total Time Commitment: Estimated total time commitment of 120 hours
Prerequisites:	One of

Subject	Study Period Commencement:	Credit Points:
CEDB20003 Fundamentals of Cell Biology	Semester 1	12.50
BCMB20002 Biochemistry and Molecular Biology	Semester 1, Semester 2	12.50
BOTA20001 Green Planet: Plants and the Environment	Semester 1	12.50
BIOM20001 Molecular and Cellular Biomedicine	Semester 1	25

Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering applications for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005) and Students Experiencing Academic Disadvantage Policy, this subject requires all students to actively and safely participate in practical class activities. Students who feel their disability may impact upon their participation are encouraged to discuss this with the Subject Coordinator and the Disability Liaison Unit. http://www.services.unimelb.edu.au/disability/
Contact:	School of Botany **botany-enquiries@unimelb.edu.au (mailto:botany-enquiries@unimelb.edu.au)**
Subject Overview:	This subject will focus on processes that are unique to plants as well as current techniques for their investigation and manipulation in biotechnology, including genetic engineering and plant transformation. The subject includes study of the responses of plants to biotic and abiotic stress; cell wall biosynthesis, carbon dioxide fixation and concentrating mechanisms; cell-cell recognition; nutrient uptake and processing; and the organisation of the genome in plants and its modification by biotechnology.
Learning Outcomes:	By the end of the subject, the student should have acquired an overall appreciation of the functional biology of plants and the application of biotechnology to agriculture, horticulture, forestry and the food industry.
Assessment:	A 1-hour laboratory test held mid-semester (10%); two practical reports totalling no more than 20 pages due during the semester, one before and one after the midsemester break (30%); a 2-hour written examination in the examination period (60%).
Prescribed Texts:	None
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses: # **Bachelor of Arts (https://handbook.unimelb.edu.au/view/2014/B-ARTS)**

	# **Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2014/B-COM)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2014/B-ENVS)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2014/B-MUS)** You should visit **learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html)** and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Notes:	This subject is available for science credit to students enrolled in the BSc (both pre-2008 and new degrees), BASc or a combined BSc course.
Related Majors/Minors/ Specialisations:	Biotechnology (pre-2008 Bachelor of Science) Botany Botany Botany (pre-2008 Bachelor of Science) Cell Biology (pre-2008 Bachelor of Science) Molecular Biotechnology (specialisation of Biotechnology major) Plant Cell Biology and Development (specialisation of Cell and Developmental Biology major) Plant Science Science credit subjects* for pre-2008 BSc, BASc and combined degree science courses Science-credited subjects - new generation B-SCI and B-ENG. Selective subjects for B-BMED