

## BOTA30005 Plant Molecular Biology & Biotechnology

<b>Credit Points:</b>	12.50
<b>Level:</b>	3 (Undergraduate)
<b>Dates &amp; Locations:</b>	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus. Lectures and practical work
<b>Time Commitment:</b>	Contact Hours: 24 lectures and 24 hours of practical work during the semester Total Time Commitment: Estimated total time commitment of 120 hours
<b>Prerequisites:</b>	One of # <b>516-212 Fundamentals of Cell Biology</b> ( <a href="/view/2010/516-212">/view/2010/516-212</a> ) # <b>521-211 Biochemistry and Molecular Biology</b> ( <a href="/view/2010/521-211">/view/2010/521-211</a> ) # 606-205 Cell Biology: Concepts and Diversity (prior to 2009)
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	It is University policy to take all reasonable steps to minimise the impact of disability upon academic study and reasonable steps will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact upon their active and safe participation in a subject are encouraged to discuss this with the relevant subject coordinator and the Disability Liaison Unit.
<b>Coordinator:</b>	Assoc Prof Ed Newbiggin
<b>Contact:</b>	School of Botany
<b>Subject Overview:</b>	This subject will examine the aspects of molecular and cellular biology and biochemistry that contribute unique properties to plants, and current techniques for their investigation and manipulation in biotechnology including genetic engineering and plant transformation. The subject includes cellular and molecular processes underlying the regulation of basic plant functions, including the responses of plants to biotic and abiotic stress; a detailed knowledge of structure and functions of plant lipids and of cell wall carbohydrates; an insight into cell-cell recognition during the response to pathogens and symbionts; and an understanding of the organisation of the genome in plants and its modification by biotechnology.
<b>Objectives:</b>	By the end of the subject, the student should have acquired an overall appreciation of the application of biotechnology to agriculture, horticulture, forestry and the food industry.
<b>Assessment:</b>	A written assignment of no more than 2000 words due after the midsemester break (15%); a 20-minute oral presentation and 2-page written report at the end of the semester (5%); practical reports totalling no more than 30 pages due during the semester, one before and one after the midsemester break (30%); a 2-hour written examination in the examination period (50%).
<b>Prescribed Texts:</b>	None
<b>Breadth Options:</b>	This subject potentially can be taken as a breadth subject component for the following courses: # <b>Bachelor of Arts</b> ( <a href="https://handbook.unimelb.edu.au/view/2010/B-ARTS">https://handbook.unimelb.edu.au/view/2010/B-ARTS</a> ) # <b>Bachelor of Commerce</b> ( <a href="https://handbook.unimelb.edu.au/view/2010/B-COM">https://handbook.unimelb.edu.au/view/2010/B-COM</a> ) # <b>Bachelor of Environments</b> ( <a href="https://handbook.unimelb.edu.au/view/2010/B-ENVS">https://handbook.unimelb.edu.au/view/2010/B-ENVS</a> ) # <b>Bachelor of Music</b> ( <a href="https://handbook.unimelb.edu.au/view/2010/B-MUS">https://handbook.unimelb.edu.au/view/2010/B-MUS</a> )

	You should visit <b>learn more about breadth subjects</b> ( <a href="http://breadth.unimelb.edu.au/breadth/info/index.html">http://breadth.unimelb.edu.au/breadth/info/index.html</a> ) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Notes:</b>	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.
<b>Related Course(s):</b>	Bachelor of Science
<b>Related Majors/Minors/ Specialisations:</b>	Biotechnology Biotechnology Botany Cell Biology Plant Cell Biology and Development Plant Science