

BOTA30003 Functional Plant Biology

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 2 x one hour lectures per week, 24 hours practical work (3 hours per week during the first part of semester) Total Time Commitment: Estimated total time commitment of 120 hours
Prerequisites:	One of # 606-201 Plants and the Environment (/view/2010/606-201) # 208-293 Plant Growth Processes (/view/2010/208-293) # 516-212 Fundamentals of Cell Biology (/view/2010/516-212)
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	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.
Coordinator:	Prof Ian Woodrow
Contact:	School of Botany
Subject Overview:	<p>This subject deals with plant function in relation to the changing physical environment - essential study for students of basic molecular sciences with an interest in plant performance in the natural environment, and for students of ecology, forestry and environmental science with an interest in the function of plants and the detection of the physical environment. The practical component of the subject will introduce students to state-of-the-art methods for environmental monitoring using data acquisition systems and a range of environmental sensors. Emphasis will be placed on sampling strategies and data processing. Topics to be covered will be selected from the following:</p> <ul style="list-style-type: none"> # the physical environment; # plant-animal interactions; # metabolism of defensive compounds; # energy exchange with the environment; # transpiration and stomata; # photosynthetic carbon assimilation and growth; # coping with environmental extremes; and # genetic engineering and plant performance.
Objectives:	Upon completion of this subject, students should gain:

	<ul style="list-style-type: none"> # a knowledge of plant function and performance in relation to the environment; # an understanding of the relationship between plant growth and performance and various molecular, biochemical and physiological attributes; and # skills in field sampling and using electronic data gathering and processing systems.
Assessment:	Laboratory test during the semester (10%); practical reports totalling up to 2000 words due during the semester (20%); a 2-hour written examination in the examination period (70%).
Prescribed Texts:	None
Breadth Options:	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> # Bachelor of Arts (https://handbook.unimelb.edu.au/view/2010/B-ARTS) # Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2010/B-COM) # Bachelor of Environments (https://handbook.unimelb.edu.au/view/2010/B-ENVS) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2010/B-MUS) <p>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.</p>
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Notes:	<p>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.</p> <p>Previously known as 606-304 Environmental Plant Physiology (prior to 2010)</p>
Related Course(s):	Bachelor of Science
Related Majors/Minors/Specialisations:	<p>Biotechnology Botany Cell Biology Ecology Ecology and Evolutionary Biology Genetics Molecular Biotechnology Plant Cell Biology and Development Plant Science</p>