

## BOTA20001 Plants and the Environment

<b>Credit Points:</b>	12.50									
<b>Level:</b>	2 (Undergraduate)									
<b>Dates &amp; Locations:</b>	2012, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.									
<b>Time Commitment:</b>	Contact Hours: 2 x one hour lectures per week, 1 x three hour practical class per week Total Time Commitment: Estimated total time commitment of 120 hours									
<b>Prerequisites:</b>	One of <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>BIOL10004 Biology of Cells and Organisms</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>BIOL10002 Biomolecules and Cells</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	BIOL10004 Biology of Cells and Organisms	Semester 1	12.50	BIOL10002 Biomolecules and Cells	Semester 1	12.50
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BIOL10002 Biomolecules and Cells	Semester 1	12.50								
<b>Corequisites:</b>	None									
<b>Recommended Background Knowledge:</b>	None									
<b>Non Allowed Subjects:</b>	Students may not gain credit for this subject and <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>AGRI20026 Plant Growth Processes</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	AGRI20026 Plant Growth Processes	Semester 1	12.50			
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<b>Core Participation Requirements:</b>	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. <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a>									
<b>Coordinator:</b>	Dr Alex Johnson									
<b>Contact:</b>	School of Botany <b><a href="mailto:botany-enquiries@unimelb.edu.au">botany-enquiries@unimelb.edu.au</a></b> (mailto: <a href="mailto:botany-enquiries@unimelb.edu.au">botany-enquiries@unimelb.edu.au</a> )									
<b>Subject Overview:</b>	This subject examines the interaction between plants and the changing physical environment. More specifically, it explores how the environment affects plant function and structural development, and how plants themselves can alter the environment. Emphasis is given to environmental issues of importance in Australia. Topics will be selected from the following: <ul style="list-style-type: none"> <li># Water - uptake, loss and stress responses;</li> <li># Abiotic stress - salinity tolerance and other stress responses;</li> <li># Carbon - productivity, carbon crediting, climate change;</li> <li># Nutrients - essential elements and metabolic requirements;</li> <li># Hormones - chemical messenger systems in plants;</li> <li># Fuels – biofuels; and biohydrogen production;</li> <li># Light - photomorphogenic responses of plants;</li> <li># Air - gas exchange in plants, artificial environments</li> </ul>									
<b>Objectives:</b>	At the completion of the subject students should have: <ul style="list-style-type: none"> <li># A knowledge of plant structure and function in relation to the physical environment;</li> </ul>									

	<ul style="list-style-type: none"> <li># A knowledge of how plants can be used to solve environmental problems;</li> <li># A knowledge of environmental issues that affect plant function in Australia; and</li> <li># Skills in laboratory-based experimental plant science.</li> </ul>
<b>Assessment:</b>	Four practical assignments (up to 3000 words in total) evenly spaced through the semester (35%); a 2-hour written examination in the examination period (65%).
<b>Prescribed Texts:</b>	None
<b>Breadth Options:</b>	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> <li># <b><u>Bachelor of Arts</u></b> (<a href="https://handbook.unimelb.edu.au/view/2012/B-ARTS">https://handbook.unimelb.edu.au/view/2012/B-ARTS</a>)</li> <li># <b><u>Bachelor of Commerce</u></b> (<a href="https://handbook.unimelb.edu.au/view/2012/B-COM">https://handbook.unimelb.edu.au/view/2012/B-COM</a>)</li> <li># <b><u>Bachelor of Environments</u></b> (<a href="https://handbook.unimelb.edu.au/view/2012/B-ENVS">https://handbook.unimelb.edu.au/view/2012/B-ENVS</a>)</li> <li># <b><u>Bachelor of Music</u></b> (<a href="https://handbook.unimelb.edu.au/view/2012/B-MUS">https://handbook.unimelb.edu.au/view/2012/B-MUS</a>)</li> </ul> <p>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.</p>
<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 Majors/Minors/Specialisations:</b>	Science credit subjects* for pre-2008 BSc, BAsC and combined degree science courses Science-credited subjects - new generation B-SCI and B-ENG. Core selective subjects for B-BMED.