

HORT90041 Urban Tree Growth and Function

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2016, Burnley This subject commences in the following study period/s: February, Burnley - Taught on campus.
Time Commitment:	Contact Hours: 42 hours of lectures/seminars/workshops Total Time Commitment: In addition to face-to-face teaching time of 42 hours, students should expect to undertake a minimum of 170 hours research, reading, writing and general study to complete this subject successfully.
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering requests for Reasonable Adjustments under the Disability Standards for Education (Commonwealth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Overview, Objectives, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this course are encouraged to discuss this matter with the Student Equity and Disability Support Team: http://www.services.unimelb.edu.au/disability/
Coordinator:	Dr Gregory Moore
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Subject Overview:	Environmental stresses such as drought, extreme heat and severe wind events are increasing in their severity in urban environments. This subject aims to help students understand how and why urban trees are vulnerable to such stresses. Urban tree biology and function is constantly compromised through human intervention. This subject aims to help student to understand the structure and function that underpins tree biology and its importance for urban tree managers. Tree stress adaption mechanisms will be investigated from a cellular to a whole tree level. The subject will be delivered through attendance at a six day intensive workshop.
Learning Outcomes:	By the end of the subject students should be able to: <ul style="list-style-type: none"> • discuss the fundamental processes of photosynthesis, respiration, water relations • analyse the principles of tree-environment interactions • discuss the effect stresses such as temperature or drought have on tree functional biology • discuss the fundamental molecular and physiological mechanisms that trees use to respond and adapt to environmental stresses • analyse the strategies used by trees to withstand adverse environmental conditions • discuss the methods used to measure the life functions of trees; for example photosynthesis, water relations, metabolites • demonstrate a high level of understanding of the physiology of all tree parts including roots, leaves, branches, bark and wood.
Assessment:	Online discussion (1500 words in length) - 20% Short tests/examinations (3 x 30 minutes duration) - 30% Assignment (3000 words in length) - 50%
Prescribed Texts:	Nil

Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	<p>Though participation in all class activities and completion of assessment students should acquire skills in:</p> <ul style="list-style-type: none"> • Technical and discipline areas, skills and values; for example by understanding the principles of tree-environment interactions • Investigation and analysis; for example by measuring photosynthesis, water relations and metabolites and reporting on those. • Critical thinking and problem solving; for example through recognising the effects of environmental stresses on trees • Time and organisational management with the successful scheduling of assessment
Links to further information:	http://graduate.science.unimelb.edu.au/graduate-programs
Related Course(s):	Graduate Certificate in Arboriculture Master of Forest Ecosystem Science