

HORT90039 Green Infrastructure for Liveable Cities

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2016.
Time Commitment:	Contact Hours: 36 hours Total Time Commitment: 170 hours
Prerequisites:	None
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 adjustments will be made to enhance a student's participation in the University's programs. This course requires all students to enrol in subjects where they must actively and safely contribute to field excursions and laboratory activities. Students who feel their disability will impact on meeting this requirement are encouraged to discuss this matter with the Subject Coordinator and Disability Liaison http://services.unimelb.edu.au/disability/ students email: disability-liaison@unimelb.edu.au
Contact:	<p>Graduate School of Science</p> <p><i>Enquiries</i></p> <p>Phone: 13 MELB (13 6352)</p> <p>Email: 13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au)</p> <p>Subject Coordinator: sjlive@unimelb.edu.au (mailto:sjlive@unimelb.edu.au)</p>
Subject Overview:	<p>Green infrastructure is the network of natural and designed vegetation elements within our cities and towns, in both public and private domains. Green infrastructure includes traditional green elements such as urban parks, gardens and trees, as well as newer green roofs, green walls and rain garden technologies. Green infrastructure provides a number of significant economic, social and environmental benefits and is an effective means of helping to adapt our buildings, communities and cities to future climate change conditions. In this subject students will gain insights into aspects of planning, design and management of green infrastructure including green roofs, green walls, urban forests and water sensitive urban design strategies. The use of green infrastructure as 'living architecture' and the design considerations involved will be discussed. At the building scale, this will include an understanding of the improved energy efficiencies provided by green infrastructure and their role in building star energy rating systems. At the neighbourhood and landscape scale, the role and function of different green infrastructure technologies and systems will be discussed, including roles in ameliorating urban climates, improving urban water retention, use and quality and providing more liveable urban communities.</p>
Learning Outcomes:	<p>Upon completion of this subject students will be able to:</p> <ul style="list-style-type: none"> # Recognise different green infrastructure types and their use to mitigate and adapt to climate change # Describe the different roles, functions and application of green infrastructure and related technologies # Analyse the design, planning, implementation and management issues relevant to green infrastructure # Describe the principles of water sensitive urban design and filtration media and the potential to reduce peak flows and improve water quality # Calculate basic building energy balances and star rating systems # Discuss factors that influence the 'urban heat island' and determine the costs and benefits of different green infrastructure systems for energy saving and climate amelioration.

Assessment:	1) Pre-intensive essay (max. 1,500 words), submitted Friday before intensive (20%), 2) Online short answer questions, submitted Day 2 and Day 4 of intensive (20%), 3) Report (max. 4,000 words), submitted 3 weeks after intensive (60%)
Prescribed Texts:	None
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>Generic skills obtained during this course will be:</p> <ul style="list-style-type: none"> # Climate change adaption issues from the local (building) to macro (city-wide) scale # Perspectives of private industry, policy-governance and public for green infrastructure # Design considerations for 'living architecture' in retro-fitted and new developments # Systems understanding of urban landscapes (water, substrate, vegetation, society, energy) # Cost-benefit analysis of sustainability initiatives # Building star rating systems
Related Course(s):	Graduate Diploma in Urban Horticulture Master of Urban Horticulture
Related Majors/Minors/ Specialisations:	Climate Change Climate Change Master of Science (Ecosystem Science) - Discipline Elective subjects Sustainable Cities, Sustainable Regions Sustainable Cities, Sustainable Regions Tailored Specialisation Tailored Specialisation