

Bachelor of Horticulture

First-year subjects

202-103 Biology for Land and Food Resources

See full subject details on page 1.

650-141 Biology of Cells and Organisms

See full subject details on page 1.

202-104 Information Technology and Communication

See full subject details on page 1.

202-251 Quantitative Skills for Land and Food

Credit points: 12.5

Coordinator: Ms Robyn Price

Contact: As for 202-250 Quantitative Skills for Land and Food (*Semester 1, repeat 2, Summer*).

Description: As for 202-250 Quantitative Skills for Land and Food.

Assessment: As for 202-250 Quantitative Skills for Land and Food.

207-103 Ecology

See full subject details on page 1.

207-108 Horticultural Flora

Availability: Burnley

Credit points: 12.5

Coordinator: Mr James Will

Prerequisites: Nil

Corequisites: 202-103 Biology for Land and Food or 207-109 Landscape Design and Plant Establishment.

Contact: Forty-eight hours lectures, tutorials, practical sessions, 24 hours CAL exercises (*Semester 1*).

Description: The recognition, landscape use and systematic analysis of landscape plants used in south-eastern Australia. The objective of this subject is to extend the participants ability to:

- recognise landscape plants used in south-eastern Australia for restricted sites;
- demonstrate an understanding of plant selection for functional and site restrictions;
- develop an understanding of plant management within designed landscapes;
- understand basic plant taxonomy and systematic theory;
- understand characters for taxonomic variation; and
- demonstrate capabilities for the use of keys with selected plant genera.

The content includes:

- recognition of 150 landscape plants used in south-eastern Australia;
- use of the International Code of Botanical Nomenclature;
- the use of plants in designed landscapes;
- the selection of plants for severe/restricted edaphic and climatic conditions;
- plant systematic theory; and
- plant morphology and keys for identification in the context of four to six representative genera.

Assessment: Two 45-minute practical tests (each 15%), one 1000-word assignment (10%), continuously assessed computer-aided learning (20%), plant recognition tests and short-answer submissions totalling 1000 words (10%), and one 90-minute examination (30%).

Prescribed texts: W S Judd, C S Campbell, E A Kellogg, and P F Stevens, 1999, *Plant Systematics: A phylogenetic approach*, Sinauer Associates, Inc Sunderland, Massachusetts, USA. • Burnley Staff, *The Burnley Plant Directory 2002*, Melbourne University Press, Melbourne, Australia.

207-109 Landscape Design and Plant Establishment

Availability: Burnley

Credit points: 12.5

Prerequisites: Nil

Contact: Twenty-four hours lectures, 24 hours practicals and field trips, 12 hours tutorials and seminars (*Semester 1*).

Description: This subject introduces students to the principles of landscape design, the roles and functions of different professionals within the design

sector, and horticultural principles and practices essential to successful landscape plantings. Upon completion of the subject students should be able to:

- recognise the role of landscape design in public and private landscapes;
- describe the fundamental principles of design which inform landscape designers;
- describe the aesthetic value and design potential of plants used in urban landscapes;
- undertake a site analysis and propose a planting design scheme for a public and a private landscape;
- analyse planting sites and outline the requirements for successful plant establishment;
- identify and describe a selection of urban landscape plants used in commercial, institutional and private landscapes in Melbourne; and
- demonstrate suitable practices of planting and establishing woody and herbaceous plants.

Topics include:

- the influence of historical factors on contemporary private and public landscapes;
- the role of design professionals in the landscape industry;
- site analysis to identify the factors relevant to the design of a planting scheme;
- species selection for a planting design;
- planting practice for a range of plant types; and
- plant establishment techniques.

Assessment: A two-hour written examination (40%), a 2000-word assignment (20%), practical reports equivalent to a total of 2000 words (20%), two 50-minute plant identification tests (each 10%).

207-110 The Horticultural Environment

Availability: Burnley

Credit points: 12.5

Coordinator: Mr Geoff Connellan

Prerequisites: Nil

Contact: Twenty-four hours lectures, 12 hours tutorials and 12 hours laboratory and field-based exercises (*Semester 2*).

Description: Upon completion of this subject, students should be able to demonstrate an understanding of:

- climate and the nature of the urban environment including atmospheric processes;
- the role of urban landscapes in urban water management;
- the interaction between vegetation and the environment;
- the use and management of vegetation in modifying urban environments; and
- the principles and techniques available for the modification of plant microclimates.

Topics include:

- defining the environment, physical processes governing weather;
- effects of solar radiation, temperature, relative humidity on plant growth and development;
- principles of energy balance in urban context;
- role of landscape planning and vegetation in urban energy balance;
- measurement and modification of plant environments;
- utilisation of weather and climate data;
- environmental horticulture - urban heat islands, green-roof technology, enviroscaping;
- modification of plant environments; and
- urban water management, urban catchments and stormwater management.

Assessment: A two-hour written examination (50%), a 2000-word assignment (20%), practical reports equivalent to a total of 3000 words (30%).

207-111 Plant Propagation

Availability: Burnley

Credit points: 12.5

Coordinator: Mr John Delpratt

Prerequisites: 202-103 Biology for Land and Food

Contact: Twenty-four hours of lectures, 12 hours of tutorials, 24 hours of practicals and field trips (*Semester 2*).

Description: On completion of this subject students should be able to:

- explain the theory underlying the sexual and asexual propagation of plants;
- describe and demonstrate the propagation of plants using sexual and asexual techniques;

- describe critical characteristics of the propagation environment in field, greenhouse and *in vitro* propagation systems;
- identify, describe and propagate a selection of plants used in commercial, public and domestic landscapes in Australia.

Topics include:

- sexual propagation from spore and seed and asexual propagation from cuttings, grafting, layering and division;
- the propagation environment - including field, greenhouse and *in vitro* (micropropagation) systems;
- identifying plants used in commercial, public and domestic landscapes in Australia.

Assessment: Report on group project (1500 words, 30%), plant recognition tests (30%), 2-hour examination (40%).

Prescribed texts: K Handreck, and N Black, *Growing Media for ornamental plants and turf*, 3rd ed, NSW University Press, Kensington, NSW, 2002. • H T Hartmann, D E Kester, F T Davies, and R L Geneve, *Plant propagation: principles and practices*, 7th ed. Prentice Hall, Upper Saddle River, 2002.

207-112 Plant Growth, Nutrition and Chemistry

Availability: Burnley

Credit points: 12.5

Coordinator: Dr Cassandra McLean

Prerequisites: 202-103 Biology for Land and Food

Corequisites: 207-110 The Horticultural Environment

Contact: Twenty-four hours of lectures, 12 hours of tutorials, 24 hours of laboratory work (*Semester 2*).

Description: This subject is designed to familiarise students with modern concepts of plant growth, plant/soil interactions and plant nutrition, in the context of horticultural practice. Students will, as part of this study, develop their chemistry skills and knowledge.

On completion of this subject students should be able to:

- identify the fundamentals of chemistry essential to the science of horticulture;
- recognise that biophysical processes depend upon chemical processes;
- discuss the elementary structure and function of the 'building blocks' of biophysical systems; and
- acknowledge the relationship between chemical processes in the soil and environment and plant growth.

Topics will include:

- introduction to chemistry: elements, atoms, ions and molecules; the periodic table, valency and bond formation; the mole concept, concentrations and stoichiometry; solubility, the solution state ions and hydration; acids, bases, neutralisation and salt formation; and
- chemical interactions between plants, soil and the environment: measurement and nature of plant growth; plant nutrients and pH, adaptations of native and exotic plants to drought and depauperate soils; redox reactions and redox potentials of plants in waterlogged soils; impact of pollutants on plant structure and physiology; chemical structure and effect of herbicides and pesticides on plants.

Assessment: End-of-semester examination (two hours, 35%), one mid-semester examination (two hours, 25%), one 2000 word assignment (20%), laboratory reports equivalent to 2000 words (20%).

Second-year subjects

202-206 Plant Function

Credit points: 12.5

Coordinator: Dr Marc Nicolas

Prerequisites: 202-101 Chemistry for Land and Food Resources or 610-141 Chemistry; 202-103 Biology for Land and Food Resources or 650-141 Biology of Cells and Organisms; or 207-112 Plant Growth, Nutrition and Chemistry.

Contact: As for 202-201 Plant Function (*Semester 1*).

Description: As for 202-201 Plant Function.

Assessment: As for 202-201 Plant Function.

202-207 Soil and Water Resources

Credit points: 12.5

Coordinator: Dr Robert Edis

Prerequisites: 202-101 Chemistry for Land and Food Resources or 207-112 Plant Growth, Nutrition and Chemistry

Contact: As for 202-203 Soil and Water Resources (*Semester 2*).

Description: As for 202-203 Soil and Water Resources.

Assessment: As for 202-203 Soil and Water Resources.

202-208 Experimental Design/Statistical Methods

Credit points: 12.5

Coordinator: Dr Meei Ng

Prerequisites: 202-107 Mathematics for Land and Food Resources, or VCE Mathematics Methods or equivalent, or 202-251 Quantitative Skills for Land and Food.

Contact: As for 202-202 Experimental Design/Statistical Methods (*Semester 1*).

Description: As for 202-202 Experimental Design/Statistical Methods.

Assessment: As for 202-202 Experimental Design/Statistical Methods.

207-101 Land, Food and Resource Economics

See full subject details on page 2.

207-204 Engineering and Irrigation

Availability: Burnley

Credit points: 12.5

Coordinator: Mr Ken James

Prerequisites: 207-110 The Horticultural Environment

Contact: Twelve hours lectures, 12 hours laboratory exercises and field trips, 12 hours tutorials and seminars (*Semester 1*).

Description: Upon completion of this subject, students should be able to:

- demonstrate an understanding of the use of machinery in the management of horticultural resources;
- demonstrate an understanding of site surveying and levelling techniques; and
- identify and discuss the different types of irrigation systems used in horticulture, their operating principles and the evaluation of the performance of irrigation systems.

Topics include:

- types of machinery and principles of operation of machinery used in the management of horticultural resources including parklands, sports turf, nurseries and urban landscapes;
- selection and evaluation of horticultural equipment including tractors, sprayers, earthwork equipment and maintenance machinery, power unit performance, occupational health and safety;
- site surveying for horticultural applications including plane surveying, levelling, field work, drawing of plans and levels for irrigation, landscape and drainage works;
- types of irrigation systems used in horticulture, irrigation components and equipment - characteristics and performance of pressurised irrigation systems, hydraulic performance, selection of appropriate irrigation techniques and methods to evaluate the performance of irrigation systems;
- management of irrigation systems to match plant and crop and site needs; and
- control and automation of irrigation technology.

Assessment: One 2000-word assignment (20%), two written 2-hour examinations (40% each).

207-206 Management of Urban Vegetation

Availability: Burnley

Credit points: 12.5

Coordinator: Mr Clive Sorrell

Contact: Twenty-four hours lectures, 24 hours practicals and field trips, 12 hours tutorials and seminars (*Semester 1*).

Description: Upon completion of this subject, students should be able to:

- recognise the need to utilise both ecological and technological principles in the development of sustainable urban horticulture systems;
- demonstrate understanding of the principles and practices involved in establishing and managing vegetation in a variety of naturally-occurring and 'built' environments;
- demonstrate an understanding of the relationship between design, implementation and after-use of selected landscape elements; and
- identify and discuss the management of a range of plants used in urban landscapes.

Topics include:

- the development of sustainable urban horticulture systems;
- water and weed control as case studies of sustainability;
- the use of plant selection as a tool in landscape design and management;

- the specific management of a range of urban landscape elements such as trees, ground cover and shrub mass, turf, seasonal colour plantings, natural and nature-like plantings;
- specialist applications of horticultural techniques such as roof gardens, indoor landscapes, wetlands and the development of contaminated sites; and
- plant material for urban landscapes.

Assessment: A 90-minute examination 35% (due end of the semester), four practical reports 40% and a group based seminar of 20 minutes during the semester (25%). Each student works in a small group of approximately three or four people. Each group is assigned a topic. Each group will present the topic to the class as if presenting a lecture. Each member of the group will address the class outlining an aspect of the topic and demonstrating that all of the members have participated in the work. Each group must demonstrate comprehension of the topic. There are three components of assessment and the seminar is marked by two academics according to the following criteria: presentation (5%), knowledge of the topic (15%), and preparation, planning and participation (5%).

207-207 Plant Health

Availability: Burnley

Credit points: 12.5

Coordinator: Dr Sally Stewart-Wade

Prerequisites: 202-103 Biology for Land and Food Resources

Contact: Thirty-six hours lectures and 24 hours practicals (*Semester 2*).

Description: The content includes:

- factors affecting the health of plants and methods of diagnosis;
- the concept of plant disease - nature and cause;
- understanding of the disease cycle and environmental factors influencing disease;
- the classification and recognition of plant disease causing organisms and plant affecting insects and related pests;
- identification of selected symptoms and signs of disease/pests affecting horticultural crops and plants in the urban environment;
- the use of beneficial organisms and practices to improve the health of desirable plants; and
- selection of control measures for a range of pest and disease problems, and integrated pest and disease management.

Assessment: One 2-hour examination (35%), one 2-hour mid-semester examination (25%), one practical examination (20%), one 2500-word assignment (20%).

Prescribed texts: J Brown and J H Ogle (eds), *Plant Pathogens and Plant Diseases*, Rockvale Publications, Armidale NSW, 1997. • S Goodwin and M Steiner, *Pests, Diseases, Disorders and Beneficials in Ornamentals: Field Identification Guide*, NSW Agriculture, 2002.

207-208 Production of Cultivated Plants

Availability: Burnley campus

Credit points: 12.5

Prerequisites: 207-211 Plant Propagation

Contact: Five hours per week. Twenty-four hours of lectures, 36 hours of practical sessions and field work (*Semester 2*).

Description: The objective of this subject is to extend the participant's knowledge of a range of nursery production systems for cultivated crops through a combination of lecture material, nursery-based practical activities and site visits. Students will participate in the development of production schedules and the manipulation of crop growth using physical and chemical means.

Alternative nursery irrigation systems will be demonstrated along with methods of collecting and treating leachate run-off for reuse. Nutritional requirements of nursery crops will be described and the use of nutrition as a crop management tool will be investigated. Students will examine current technologies for the manipulation of the physical growing environment and understand the effect of this on crop scheduling and plant growth. The development and introduction of novel nursery crops are also described. Students will gain an appreciation that maintaining plant quality throughout the production cycle is intimately linked to establishment and performance of those crops in the landscape.

Assessment: All articles of assessment are compulsory. Assignment and practical reports submitted during the semester - equivalent to 4000 words (60%). A 2-hour end of semester examination (40%).

Third-year subjects

202-302 Human Resource Management

See full subject details on page 3.

207-336 Project Planning

Availability: Burnley

Credit points: 12.5

Coordinator: Dr Cassandra McLean

Prerequisites: 202-202 Experimental Design and Statistics, and completion of second-year core subjects.

Contact: Eight hours lectures, 52 hours project work and seminars (*Semester 1*).

Description: Upon completion of this subject, students should be able to:

- understand the importance of ethics in research;
- identify sources of knowledge;
- identify the important components of a horticultural problem;
- work as part of a group to investigate a problem;
- collect information relevant to the problem and write a literature review related to the problem;
- plan an investigation to test hypotheses related to the problem; and
- initiate a program of investigation into the problem.

Groups of students will select a problem to be studied during the course of this subject. Appropriate literature and other resources will be consulted to provide a background to the problem and a plan of action will be formulated to begin investigating the problem.

Assessment: Literature review of 2000 words (50%); seminar (15%); assessed input to project management (35%).

202-311 Industry Project

Credit points: 25

Coordinator: Mr Rowan Reid

Contact: As for 202-303 Industry Project (*Semester 2*).

Description: As for 202-303 Industry Project.

Assessment: As for 202-303 Industry Project.

202-310 Industry Project

Credit points: 25

Coordinator: Mr Rowan Reid

Contact: As for 202-301 Industry Project (*Year long*).

Description: As for 202-301 Industry Project.

Assessment: As for 202-301 Industry Project.

202-003 Industry Placement#

Coordinator: Mr Rowan Reid

Contact: As for 202-001 Industry Placement# (*Year long*).

Description: As for 202-001 Industry Placement#

Assessment: As for 202-001 Industry Placement#

Fourth-year subjects (honours)

208-411 Research Philosophies and Statistics

See full subject details on page 3.

207-414 Social Research Methods

See full subject details on page 4.

220-404 Methods for Forest & Ecosystem Research

See full subject details on page 3.

202-408 Honours Research Project

Credit points: 62.5

Coordinator: Prof Roger Cousens

Contact: As for 202-401 Honours Research Project (*Year long*).

Description: As for 202-401 Honours Research Project.

Assessment: As for 202-401 Honours Research Project.

202-414 Honours Research Project (MYE)

Credit points: 62.5

Coordinator: Prof Roger Cousens

Contact: As for 202-403 Honours Research Project (MYE) (*Semester 1, repeat 2*).

Description: As for 202-403 Honours Research Project (MYE).

Assessment: As for 202-403 Honours Research Project (MYE).

Elective subjects

Note: Insufficient enrolments may lead to a subject being suspended.

207-201 Resource Management Economics

See full subject details on page 2.

207-205 Human Dimensions of Resource Management

See full subject details on page 2.

207-301 Global Environment and Sustainability

See full subject details on page 3.

207-305 Revegetation and Landscape Restoration

See full subject details on page 3.

207-310 Horticultural Reproduction Technology

Credit points: 12.5

Coordinator: Mr James Will

Prerequisites: 202-103 Biology for Land and Food Resources

Contact: 24 hours lectures and 24 hours practicals/tutorials (*Semester 2*).

Description: The objective of this subject is to extend the participant's ability to:

- understand and research the reproductive biology of horticultural plants;
- describe the major biological and environmental factors affecting a plants capacity to produce, dispose and regenerate from seed;
- understand floral morphology and cytogenetics as appropriate to plant breeding;
- apply Mendelian genetics to plant breeding;
- describe and demonstrate the theory of plant incompatibility systems;
- describe and demonstrate specified seed testing procedures; and
- recommend and describe effective techniques for germinating seed and establishing plants from seed under nursery, field and revegetation conditions.

The content includes:

- evolution of genes and plant genomes;
- breeding systems and strategies of angiosperms;
- Mendelian inheritance;
- incompatibility systems in plants;
- F1 and pedigree breeding systems;
- pollen: stigma interactions;
- cytogenetics and cytogenetic techniques important in plant breeding;
- seed development, dispersal germination and establishment and environmental influences on these processes;
- the technology applicable to commercial seed production;
- seed testing; and
- effective techniques for sowing, germinating and establishing seed.

Assessment: A two-hour examination (45%), a mid semester test (25%), and two practical reports equivalent to 2000 words (each worth 15%).

Prescribed texts: H T Hartmann, D E Kester, F T Davies and P L Geneve, *Plant Propagation: Principles and Practices*, 6th Edition, Prentice Hall International, Upper Saddle River 1997. • A J Richards, *Plant Breeding Systems*, 2nd Edition, Chapman and Hall, London, 1997.

207-312 Garden History and Contemporary Design

Availability: Burnley campus.

Credit points: 12.5

Contact: Thirty-six hours lectures (*Semester 1*).

Description: The objectives of this unit are intended to extend the participant's ability to:

- discuss historical garden and landscape styles and their relationships;
- discuss contemporary styles, issues and examples of garden design;
- describe design principles and their application to small scale landscapes;
- describe the garden design process.

The content includes:

- an overview of garden history and landscape styles from antiquity to the 20th century;
- contemporary garden design and designers;
- process and practices used in garden design;
- design principles;
- planting design and applications;
- visit to historical and contemporary gardens.

Assessment: A garden design portfolio, equivalent to 3000 words 50% (due mid-semester) and a written assignment based on garden history of 3000 words 50% (due end of the semester).

207-313 Graphic Studies

Availability: Burnley campus

Credit points: 12.5

Contact: Forty-eight hours tutorials (*Semester 2*).

Description: The objectives of this unit are intended to extend the participant's ability to:

- experience the range of graphic materials and methods used in producing landscape drawings and recommend their uses;
- demonstrate basic competency in the use of the more common drawing tools and graphic media;
- prepare a series of drawings for a small-scale landscape;
- demonstrate competency in basic elements of design work presentation; and
- produce drawings suitable for client presentation.

The topics covered in this unit include:

- all facets of the drawing and design process associated with a small-scale landscape project; and
- exercises teaching basic skills in reading the scale, lettering, concept drawing, site inventory and analysis, preliminary plans, section elevations, shade and shadowing, using colour media and basic perspective drawing.

Assessment: A major design study equivalent to 5000 words, worth 50% of final marks and five studio assignments equivalent to a total of 5000 words totalling 50% of final marks.

Prescribed texts: G W Reid, *Landscape Graphics*, Architectural Press, 1987.

207-315 Landscape Construction

Availability: Burnley campus

Credit points: 12.5

Contact: Forty hours of lectures and tutorials. Eight hours of field trips (*Semester 1*).

Description: This subject aims to provide students with a broad knowledge of a range of built elements, their application in the landscape, design, performance and method of construction.

The areas of study include:

- urban soils and their relevance to built structures;
- earthworks and earthmoving equipment;
- water infiltration, movement and retention in urban soils and soil drainage;
- concrete, masonry structures and pavements;
- walls, fences and retaining walls;
- field rock placement;
- formal and free form water features;
- plant selection, planting and establishment.

Site visits and case studies will be used to demonstrate the application of different elements and construction methods and the aesthetic contribution of the various elements will be discussed.

Assessment: A two-hour written examination 70% (due end of the semester) and one project report of 3000 words 30% (due end of the semester).

Prescribed texts: K A Handreck and N D Black, *Growing Media for Ornamental Plants and Turf*, New South Wales University Press, 2002. • K McIntyre and B Jakobsen, *Drainage for Sportsturf and Horticulture*, Horticultural Engineering Consultancy, 1998. • G S Thomas, *Landscape Construction Notes*, Royal Australian Institute of Architects, Melbourne, Australia, 1999.

207-340 Landscape Management

Credit points: 12.5

Coordinator: Dr. Kath Williams

Contact: Twenty-four hours of lectures and 24 hours of practical sessions, tutorials and excursions (*Semester 2*).

Description: On completion of this subject students should be able to:

- discuss issues of policy, planning and implementation in the management of urban and rural landscapes;
- analyse and interpret documentation used in landscape management;
- define and discuss values and objectives used in landscape management;
- describe structures, systems and contractual relationships used to manage public open space in Victoria;
- discuss different strategies used to manage landscape projects and activities; and

- discuss concepts and case studies of sustainability in landscape management.

The content of this subject includes:

- definitions, history and development of 'landscapes' (urban, regional, rural, urban fringe);
- values and objectives in managing landscapes;
- design and planning in landscape management;
- management structures, systems and resources;
- managing conflict and issues in landscape use;
- community consultation processes and activities; and
- sustainability concepts and case-studies in landscape management.

Assessment: A group-based assignment to a minimum of 2000 words worth 50% of the final marks (during semester), an oral presentation of 20 minutes duration worth 25% of final marks (end semester) and one written assignment equivalent to 1000 words worth 25% of final marks (end semester).

207-332 Arboriculture

Availability: Burnley campus

Credit points: 12.5

Coordinator: Denise Johnston

Contact: Thirty-six hours lectures, 24 hours practical, 12 hours web-based (*Semester 1*).

Description: The objectives of the subject are to extend the students' abilities to:

- describe the anatomy of trees, the nature of branch attachment and the structure of tree roots;
- identify the components of the compartmentalisation system that exists within the tree;
- implement proper tree management strategies;
- relate root development to the soils in which they grow and root management practices;
- relate tree growth to plant propagation and the method of tree planting;
- climb trees safely using various ropes and harness techniques and tie the necessary knots;
- use appropriate tools safely in tree maintenance, both on the ground and in the tree;
- develop tree management strategies and replacement procedures for trees growing in cities;
- evaluate the monetary value of amenity trees using accepted methods and the Burnley method;
- use the relevant laws that apply to trees growing in urban and amenity contexts;
- use the latest technology to assess the vigour, condition and soundness of trees;
- quote the costs of arboricultural procedures; and
- implement specialist arboricultural techniques.

The topics to be studied in the subject are:

- anatomy of trees, branch attachment and tree root systems;
- the components of the compartmentalisation systems within trees;
- root development, soils and methods of irrigation and fertilising and root management practices;
- tree growth, plant propagation and the method of tree planting;
- introduction to climbing trees safely using ropes and harness techniques and knots;
- development of tree management and replacement strategies for trees growing in cities;
- wound response, pruning techniques, tree selection criteria;
- tools - safety and use; tree climbing;
- safety in the tree;
- tree replacement strategies; tree evaluation;
- trees in cities, trees and the law;
- costing and contracts; tree surveys; tree pests and diseases;
- evaluating the monetary value of amenity trees using accepted valuation methods;
- the relevant laws that apply to trees growing in urban and amenity contexts; and
- using technology to assess the vigour, condition and soundness of trees.

Assessment: One 3-hour examination worth 50% of final marks, two assignments equivalent to 2500 words in total and worth 20% each of final marks, and a practical assignment worth 10% of final marks.

207-333 Amenity Tree Assessment and Management

Availability: Burnley campus.

Credit points: 12.5

Coordinator: Ms Denise Johnstone

Contact: Twenty-four hours of lectures, 20 hours of practicals/seminars and 4 hour field trip (*Semester 2*).

Description: The aim of the subject is to provide students with a thorough understanding of the assessment and management of individual and groups of trees in urban settings. Students will evaluate and compare methods of tree assessment. Students should gain an appreciation of the complexities of tree management for amenity sites.

Topics to be studied are:

- the evaluation and comparison of methods of tree assessment including the visual tree assessment (VTA) method;
- the evaluation and comparison of methods for the detection of decay and structural defects in trees;
- an appraisal of the management of amenity trees for different purposes, for example, street trees, historically significant trees, trees on private properties, trees in various other types of public open spaces;
- an appraisal of the management of amenity trees with different structural forms and anatomy, for example dicotyledonous trees versus monocotyledonous trees, decurrent versus excurrent trees;
- an appraisal of the management and protection of the roots of trees with different structural forms and tolerances;
- an evaluation of tree pathology and tree health problems in a wide range of amenity trees and sites;
- tree selection principles as applied to street trees, private properties and public open spaces;
- an appraisal of safe arboricultural work practices and advanced techniques for gaining access to the canopies of trees; and

Assessment: Major assignment 50% (maximum 5000 words), seminar presentation 20%, reports 30%.

Prescribed texts: R W Harris, J R Clark and N P Matheny, *Arboriculture: Integrated Management of Landscape Trees Shrubs and Vines*, Prentice Hall, 2004.

207-401 Soil Management and Conservation

See full subject details on page 10.

207-402 Management of Plant and Animal Invasions

See full subject details on page 3.

207-413 Community Natural Resource Management

See full subject details on page 4.

208-302 Molecular Biology and Breeding

See full subject details on page 7.

208-402 Advanced Plant Breeding and Improvement

See full subject details on page 10.

220-407 Parks and Recreation

See full subject details on page 4.

