

Bachelor of Forest Science

First-year subjects

202-101 Chemistry for Land and Food Resources

See full subject details on page 1.

202-103 Biology for Land and Food Resources

See full subject details on page 1.

202-104 Information Technology and Communication

See full subject details on page 1.

202-106 Land Resources

See full subject details on page 2.

202-107 Mathematics for Land and Food Resources

See full subject details on page 1.

207-101 Economics of Resource Use

See full subject details on page 2.

610-141 Chemistry A

See full subject details on page 2.

207-113 Australian Rural Landscapes

See full subject details on page 1.

610-142 Chemistry B

See full subject details on page 2.

625-101 Earth Sciences - The Global Environment

See full subject details on page 1.

Second-year subjects

202-201 Plant Function

See full subject details on page 2.

202-202 Experimental Design/Statistical Methods

See full subject details on page 2.

202-203 Soil and Water Resources

See full subject details on page 3.

207-270 Wood Science

Availability: Creswick campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Mr Philip Blackwell

Contact: Twenty-four hours of lectures and 36 hours of demonstrations and practical work, and 4-hour tour (*Semester 2*).

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

- describe the macroscopic and microscopic features of hardwood and soft-wood xylem and phloem;
- comprehend information regarding variability of wood;
- understand methods used to identify timbers;
- describe the processes of wood and bark formation including cell differentiation, cell wall layering and modifications;
- understand the effects of cell wall organisation on some wood properties;
- have a basic understanding of the chemical composition and properties of wood;
- understand anatomical, chemical and physical characteristics associated with heartwood formation, growth stresses, reaction wood and natural features in wood; and
- comprehend the meaning of a number of wood physical properties and basic wood-moisture relationships.

Subject content includes:

- wood and bark structure, anatomy and ultrastructure;
- macroscopic and microscopic features of wood;
- tree growth and wood quality, woody cell development, reaction wood, variability of wood;

- identification methods, growth rings and measurement of wood properties;
- wood chemistry, extractives, collapse;
- chemical utilisation of wood;
- engineering properties of wood; and
- natural characteristics and physical properties of wood.

Assessment: A three-hour end-of-semester examination (50%), a term project (20%), a practical exam (15%) and two worksheet assignments (7.5% each).

Prescribed texts: K Wilson and D J B White, *The Anatomy of Wood: Its Diversity and Variability*, Stobart & Son Ltd, 1986.

207-271 Forest Mensuration and Surveying

Availability: Creswick campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Mr Ian Wild

Corequisites: 202-202 Experimental Design and Statistical Methods

Contact: Twenty-four hours lectures and 36 hours practical work (*Semester 1*).

Description: On completion of this subject students should:

- possess basic skills in surveying;
- be able to prepare briefs and provide supervision for projects involving complex surveying or engineering; and
- be able to assess a forest and process inventory data successfully, estimate standing volume and yields, and understand how these are affected by site productivity and stand density.

Contents include:

- introduction to basic surveying instruments;
- closed traversing, distribution of errors;
- basic levelling procedure;
- measurement and computation of perimeter and area;
- pegging of simple curves;
- use of GPS systems;
- the use of standard equipment to measure tree and stand parameters such as diameter, basal area, height, volume, bark and crown;
- stem geometry, stem analysis and defects in trees and logs; and
- standard statistical techniques of sampling (random, stratified random, systematic and probability-proportional-to-size) for both resource inventory and experimental research.

Assessment: One three-hour written examination (50%) and two assignments equivalent to 3000 words (each worth 25%).

207-275 Processes in Forest Ecology

Availability: Creswick campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Dr Christopher Weston

Prerequisites: 202-103 Biology for Land and Food Resources, 650-142 Genetics and the Evolution of Life.

Corequisites: 207-276 Field Studies and Dendrology.

Contact: Twenty-four hours lectures and 36 hours practical work (*Year long*).

Description: On completion of this unit, students should be:

- competent in categorising Australian vegetation on both a structural and a floristic basis;
- identifying the major components of the Australian flora using keys; and
- familiar with basic ecological concepts from the organisational levels of the organism through to the biosphere, particularly in relation to forests.

Content includes:

- concepts and components of forest ecosystems;
- measurement of ecosystem function;
- approaches to analysis and synthesis of ecosystem function;
- taxonomy, systematics and nomenclature of floral and faunal elements
- theories of forest community structure, dynamics and diversity;
- field sampling, data acquisition and numerical analysis of ecosystem data; and
- biodiversity and ecosystem function.

Assessment: One three-hour examination (50%) and up to three practical assignments equivalent to 5000 words (totalling 50%).

Prescribed texts: Attiwill, P and Wilson, B, ed., *Ecology: An Australian Perspective*, Oxford University Press, 2003.

207-276 Field Studies and Dendrology**Availability:** Creswick campus.**Credit points:** 12.5**HECS-band:** 2**Coordinator:** Mr Ronald Hateley**Prerequisites:** 202-103 Biology for Land and Food Resources and 600-142 Genetics and the Evolution of Life.**Contact:** Twenty-four hours lectures and 36 hours practical work (*Year long*).**Description:** On completion of this subject, students should:

- have a better understanding of the integrated nature of forestry and land management in Australia;
- have basic skills including first aid, bush survival and dealing with emergencies; care, use and maintenance of hand-tools and chain-saws;
- have an appreciation of the setting in which field activities are conducted through exposure to forest work gangs, experienced field supervisors and Landcare groups;
- understand the use of computers in forestry;
- have an ability to use keen observation to interpret and analyse field observations; and have basic skills in fire survival and fire suppression methods;
- be competent in the identification, taxonomy and morphology of eucalypts, conifers, deciduous hardwoods and important elements of the Australian flora; and
- be aware of the distribution, characteristics and uses of many Australian forest species.

Assessment: One two-hour written examination (40%), and three assignments equivalent to 2500 words (each worth 20%). *Hurdle Requirement:* Attendance at a minimum of 80% of field days.**Prescribed texts:** L Costermans, *Native Trees and Shrubs of South-Eastern Australia*, Rigby, 1981.**207-277 Forest Inventory and GIS****Availability:** Creswick campus.**Credit points:** 12.5**HECS-band:** 2**Coordinator:** Mr Ian Wild**Prerequisites:** 207-271 Forest Mensuration and Surveying or 600-203 Environmental Measurement.**Contact:** Twenty-four hours lectures and 36 hours practical work (*Semester 2*).**Description:** On completion of this subject, students should:

- understand the role of inventories in forest planning;
- learn to design, implement and manage timber, vegetation and/or wildlife inventories (multi-stage, multi-phase and variable probability); and
- learn the basic terminology, principles and characteristics of remote sensing and geographic information systems (GIS) technology, the use of GIS for interpreting, measuring and mapping natural resources, and how to apply advanced sampling theories and project management tools in the design and conduct of inventories using either remote sensing and/or ground inventory methods.

The course covers:

- photographic and digital remote sensing;
- vector and raster GIS, thematic map overlay;
- modelling and its use in forest management and planning; and
- the technical and managerial requirements for introducing remote sensing and GIS technologies.

Methods and processes for generating, evaluating and selecting alternative plans for the management of the resources (timber and others) will be introduced.

Assessment: One three-hour written examination (50%) and two assignments equivalent to 3000 words (25% each).**Third-year subjects****207-307 Fire Ecology and Management****Availability:** Creswick campus.**Credit points:** 12.5**HECS-band:** 2**Coordinator:** Dr Kevin Tolhurst**Contact:** Twenty-four hours lectures and 36 hours of practical work (*Semester 1*).**Description:** On completing this subject, students should be competent in:

- basic fire-weather forecasting;
- understanding the principles of fire behaviour and the bases of fire danger ratings;

- understanding the principles of fire protection;
- having skills in planning and selecting appropriate fire-protection strategies;
- understanding the role and impact of fire in forest ecosystems; and
- having a knowledge of fire law.

The topics to be covered will include:

- fire history in Australia;
- combustion theory;
- forest fire behaviour prediction;
- fuel hazard assessment;
- fire weather observation and forecasting;
- fire danger rating systems;
- ecological effects of fire in forests;
- prescribed burning techniques;
- fire planning;
- fire suppression strategies and techniques; and
- fire law and fire management principles.

Assessment: A three-hour written examination (60%) and practical assignments equivalent to about 2000 words totalling 40%.**207-309 Forest Management and Access Systems****Availability:** Creswick campus.**Credit points:** 12.5**HECS-band:** 2**Coordinator:** Dr Leon Bren**Prerequisites:** 207-277 Forest Inventory and GIS.**Contact:** Twenty-four hours lectures and 36 hours practical work (*Semester 2*).**Description:** On completion of the subject, students should:

- understand concepts and methods for managing forests for sustainable production of goods and services, and be aware of forest use conflicts and methods to resolve them;
- obtain an introduction to the role of access in forest management;
- understand geometric alignment of forest access roads, balancing of earthworks, construction principles and practices, and the impact of such constructions on other forest values;
- obtain an introduction to basic business planning principles as applied to forestry endeavours, including cash flow planning and valuation procedures; and
- learn about the role of forest management information systems (including GIS) in decision making; wood production in even and uneven-aged forests; growth and yield predictions; yield regulation; computer modelling in decision-support systems; and different methods and criteria for evaluation alternative management strategies.

Assessment: One three-hour written examination (50% of total marks), and practical assignments (totalling 50% of final marks).**207-311 Forest Values****Availability:** Creswick campus.**Credit points:** 12.5**HECS-band:** 2**Coordinator:** Dr John Petheram**Prerequisites:** 207-106 Conservation of Australian Forests, 207-275 Processes in Forest Ecology.**Contact:** Twenty-four hours lectures and 36 hours practical work (*Year long*).**Description:** Forests around the world are valued for many uses, and these uses at times compete. This subject will present each of these, from timber products to recreation, and examine how these values are treated by different societies. On completion of the subject students should:

- know the various and competing uses for which forests are valued;
- understand how different forest attributes are valued by communities nationally and internationally;
- examine how historical use of forests has reflected community values at the time, and how the current forms of forests (age and size structure, species composition) are a consequence;
- appreciate how forest values can be assessed qualitatively and quantitatively;
- have learned how temporal and spatial patterns are managed and conserved within forest ecosystems, and how pattern components interact across the landscape;
- have an appreciation of how forest policy is formed and how it changes over time; and
- be aware of forest management tools including population viability analysis, sustainability indicators, and decision support systems.

Content will include:

- the use of forests for water, wood and non-wood tangible products, ecosystem services, aesthetic and spiritual values, and recreation;
- history of forest policy in various societies, and the resultant impact on forest ecosystems;
- assessment of community values and their incorporation in public and private forest management;
- principles of landscape ecology;
- status, monitoring, and trends in selected forest and landscape indicators in Australia; and
- introduction to management information and decision support systems.

Assessment: One three-hour written examination (50% of final marks) and two practical reports of 3000 words each (25% each of final marks).

207-317 Applied Native Forest Ecology

Availability: Creswick campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Mr Ronald Hateley

Prerequisites: 202-201 Plant Function, 207-275 Processes in Forest Ecology (or equivalent).

Contact: Twenty-four hours lectures and 36 hours practical work (*Semester 1*).

Description: The subject examines the need for managers of native forests on both public and private land to understand the environmental, social and economic issues that are involved in native forests being manipulated to achieve a range of outcomes. These outcomes include production of timber and other resources, rehabilitation of cleared or damaged areas and enhancement of habitat and biodiversity.

The content includes:

- environmental, social and economic inputs; relevant forest policies and legislation;
- an overview of Australian forests; Australian forests and environmental gradients; natural disturbance; pre-settlement forests and present condition; silvicultural systems;
- regeneration processes and sources of regeneration; phenology of important genera; seed collection, extraction, testing and storage; seedling establishment; seedbed preparation; seed treatment and application; monitoring of success;
- competition and stand thinning, shade tolerance and species competition, management of pests and diseases, treatment after fire and coppice management; and
- adaptations and management of selected native forest types.

Assessment: One three-hour examination (60% of final marks); and assignments and reports on practical work (totalling 40% of final marks).

207-323 Plantations and Farm Forests

Availability: Creswick campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Dr Christopher Weston

Prerequisites: 202-201 Plant Function, 207-275 Processes in Forest Ecology (or equivalent).

Contact: Twenty-four hours lectures and 36 hours practical work (*Semester 2*).

Description: Trees are planted for a range of uses, including wood production, water table control and salinity mitigation, carbon credits and shade and shelter for stock. On completion of this subject, students should have developed a sound understanding of:

- methods for the mass propagation of selected trees;
- species and site matching for purposes such as salinity mitigation and optimum growth;
- the eco-physiology of water and nutrient use in farmed forests;
- management of the interaction between light, water and nutrients to maximise carbon gain (growth) in planted trees;
- the processes of tree improvement through tree breeding programs; and
- the changing political and environmental base for farming trees in Australia.

Assessment: One three-hour examination (50%), and up to four assessment tasks throughout the semester (totalling 50%).

207-329 Field Studies II

Availability: Creswick campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Mr Ronald Hateley

Prerequisites: 207-276 Field Studies and Dendrology.

Contact: Field days and practical work (*Year long*).

Description: On completion of this subject, students should:

- have a detailed understanding of the integrated nature of forestry and land management in Australia;
- be able to contrast and compare issues and practices; and
- have skills in communication, conflict resolution, supervision, dealing with the media and personnel management.

The course includes 20 field days, most conducted in the field, including one week involving the harvesting of trees from a coupe and the processing of logs in a sawmill. Small projects involve students managing local areas of land for specified purposes. Participation in a generic skills program involving public speaking, interview techniques, and techniques of public participation, parts of which will be delivered in collaboration with other subjects. An excursion of up to 10 days will examine the forestry and land management issues of regions too remote to be serviced by the field days.

Assessment: *Hurdle Requirement:* Attendance at a minimum of 80% of field days and participation in the skills components of the course.

Submission of a workbook equivalent to a 4000-word essay (100% of final marks).

207-331 Forest Entomology and Pathology

Availability: Creswick campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Dr Leon Bren

Prerequisites: 202-103 Biology for Land and Food Resources, 202-201 Plant Function, 207-275 Processes in Forest Ecology, 207-317 Native Forest Silviculture.

Corequisites: 207-323 Plantations and Farm Forests.

Contact: Twenty-four hours of lectures and 36 hours practical work (*Semester 2*).

Description: On completion of this subject, students should have an understanding of:

- the role fungi and fauna play in sustaining biodiversity in our forests;
- the biology of forest pathogens and insect pests;
- the effects of these organisms on biodiversity and other values; and
- the extent to which forest management practices can increase or reduce problems; and
- what measures can be taken to avoid, reduce or overcome damage caused by pests and diseases.

The content includes:

- forest pathology: the significance of diseases in forestry, the principal groups of pathogens, host-parasite relationships, epidemiology and disease control; and
- forest entomology: classification, anatomy, morphology, biology, frequency of distribution, control and importance of insects in forestry.

Assessment: One three-hour examination (50%), and up to three assignments (totalling 50%), including a collection of insects.

207-334 Trees, Genes and Environment

Availability: Creswick campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Dr Gerd Bossinger

Prerequisites: 600-142 Genetics and Evolution of Life, 202-201 Plant Function, 207-270 Wood Science.

Contact: Twenty-four hours of lectures and 36 hours of practical work (*Semester 1*).

Description: On completion of this subject, students should:

- have a good understanding of tree development and wood formation;
- have a basic understanding of plant molecular biology;
- appreciate the molecular basis of tree morphology, development and anatomy;
- know about methods for and implications of biotechnological modification of tree characteristics;
- understand molecular aspects of biodiversity;
- comprehend the importance of environmental triggers in tree development; and
- understand the importance of the application of modern approaches in forest management and research.

Subject content includes:

- life cycles and tree development;
- basic tree molecular biology;
- molecular aspects of wood quality, flowering and tree responses to environmental stresses;

- forest biotechnology; and
- assessment of genetic diversity within and between populations.

Assessment: One 3-hour written examinations (50% of final marks), and two 3000-word assignments (one mid semester, one end-of-semester, each 25% of final marks).

Prescribed texts: P H Raven, R F Evert and S E Eichhorn, *Biology of Plants*, 6th edn, W H Freeman & Co/Worth Publishers, 1999.

Fourth-year subjects

202-001 Industry Placement#

See full subject details on page 3.

202-301 Industry Project

See full subject details on page 4.

202-302 Human Resource Management

See full subject details on page 3.

202-303 Industry Project

See full subject details on page 4.

202-401 Honours Research Project

See full subject details on page 5.

202-402 Honours Research Project

See full subject details on page 5.

202-403 Honours Research Project (MYE)

See full subject details on page 5.

207-406 Environmental Mngt Systems and Policy

Availability: Parkville campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Dr Steve Read

Contact: Twenty-four hours lectures and 36 hours practical work (*Semester 1*).

Description: On completion of this subject students should have an understanding of the principles and policies relating to environmental management systems for sustainable land use; including the legal and institutional processes, and the roles and relationships of land use planning, management plans and codes of practice.

Covered in the subject:

- principles of sustainable land use and environmental management systems;
- standards and certification systems, including ISO 14001 and FSC systems;
- hierarchy of planning and management processes;
- land use planning;
- management plans and planning techniques for multiple uses;
- codes of practice;
- implementation; and
- review.

The second-half of the subject on policy will comprise lectures by visiting experts and reading assignments on policy.

Assessment: A three-hour written examination (50%) and two practical reports each up to 1500 (25% each).

Elective subjects

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

207-301 Global Environment & Sustainable Systems

See full subject details on page 8.

207-405 Hydrology and Catchment Management

Availability: Parkville

Credit points: 12.5

HECS-band: 2

Coordinator: Dr Leon Bren

Contact: 24 hours lectures and 26 hours practical time (*Semester 1*).

Description: On completion of this subject students should have a detailed understanding of the hydrologic cycle and its impact on society, be familiar with the possible changes in water values that can be changed by land man-

agement, and the costs and benefits of such changes to society, be aware of the hydrologic, social, political, and economic factors involved in matters of catchment management, and have some feeling for the level of inaccuracy involved in hydrologic measurements.

Content includes:

- hydrologic cycle and "randomness" inherent in it;
- surface water flows and surface water modelling;
- groundwater flow and groundwater modelling;
- water quality and its measurement;
- impacts of land use on water quality and quantity;
- salinity and its impacts on native rivers and streams;
- principles of catchment management;
- questions of water rights and water trading;
- water use conflicts and their resolution;
- restoration hydroecology; and
- long term variations in stream flow.

The subject will draw heavily on Australian examples, and will involve an overnight excursion to the River Murray area.

Assessment: One 3 hour exam (60% of final mark) and two essays, each of 3000 words (each essay 20% of final mark). Participation in a number of non-assessable exercises.

207-407 Parks and Recreation

Availability: Parkville campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Dr Leon Bren

Contact: Twenty-four hours of lectures and 36 hours practical work (*Semester 2*).

Description: On completion of this subject, students should have:

- an appreciation of the complexities of issues involving park management; and
- some competence in preparing plans to meet the challenge of these issues.

The content includes:

- factors important to the management of parks;
- tangible and intangible aims;
- conflicts of values and the concept of 'balance';
- role of legislation in the management of such areas;
- difficulties in implementation of legislation in the field;
- methods for protection of natural values from visitor pressure;
- conflict between priced and non-priced goods and services; and
- management of visitor areas and facilities.

Assessment: One three-hour examination (50%), a practical test (10%), and two practical work assignments equivalent to 2500 words (20% each).

207-409 Commercial Forest Management

Availability: Parkville campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Ian Wild

Prerequisites: 207-309 Timber Management and Harvesting.

Contact: Twenty-four hours of lectures: 36 hours practical work (*Semester 2*).

Description: On completion of the subject, students should have:

- an understanding of the principles of commercial forestry;
- an ability to prepare budgets and undertake financial management; and
- an understanding and have skills in using forest planning techniques.

The content includes:

- commercial objectives;
- advanced budgeting, financial management and valuation, advanced silviculture;
- long and short-term planning systems;
- linear programming and simulation models for forest planning;
- cost-competitiveness and technological improvement;
- marketing; and
- product mix.

Assessment: A three-hour examination (50%) and two practical reports of 3000 words (each 25%).

207-410 Agroforestry

Availability: Parkville campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Mr Rowan Reid

Contact: Twenty-four hours lectures and 36 hours practical work (*Semester 1*).

Description: This course covers in detail the technical aspects of farm revegetation planning. Students will be expected to participate in field-based learning exercises and information gathering, and to contribute to discussion and debate. By the end of the subject students should:

- have a working knowledge of agroforestry diagnosis and design as an approach to the development of farm tree management opportunities on farms in Australia and overseas;
- have an understanding of the role of trees in providing for private landowner needs and aspirations;
- appreciate the importance of assessing landowners' needs, aspirations and performance criteria when designing agroforestry projects and development strategies;
- be able to develop technical design criteria for effective revegetation for resource conservation, agricultural production and direct commercial purposes;
- be able to undertake a multipurpose revegetation design project;
- be familiar with the opportunities for landowners to produce commercial forest products from private native forests; and
- be familiar with approaches to tree monitoring and evaluation.

Assessment: Two projects (total 50%) and three-hour examination (50%).

207-411 Processes in Forest Ecosystems

Availability: Creswick

Credit points: 12.5

HECS-band: 2

Coordinator: Dr Chris Weston

Prerequisites: Any one of 202-203 Forest Soils, 207-275 Forest Ecology, 606-204 Plant Ecology and 606-207 Flora of Victoria.

Contact: Twenty-four hours lectures, 36 hours practical work, including a 10-day excursion in February (*Summer semester*).

Description: This subject will cover the ecosystem processes that determine the distribution, diversity and productivity of forests and woodlands in south-eastern Australia, and their regeneration potential. The subject aims to provide a sound theoretical and practical basis for understanding processes and methods in forest ecology. The subject will include:

- vegetation and soils of forest ecosystems of south-eastern Australia, including assessment of floristic and faunal diversity, and animal-plant interactions;
- quantitative analysis of forest biomass, nutrient and bio-geochemical data at stand and catchment levels;
- forest productivity and nutrient cycling;
- the relevance of forests and forest soils in global carbon cycling and the emerging carbon economy; and
- the potential of reforestation for sequestration and storage of atmospheric carbon.

The subject involves the preparation, writing and oral presentation of a scientific report developed from the field practical.

Assessment: One major report (30% of final marks), an oral presentation (20% of final marks) and a 3-hour written examination (50% of final marks).

Prescribed texts: R H Groves, *Australian Vegetation*, 2nd edn, Cambridge University Press, 1994. • P M Attiwill and G W Leeper, *Forest Soils and Nutrient Cycles*, Melbourne University Press, 1987.

207-413 Community Mgt Of Land & Natural Resource

Availability: Parkville campus.

Credit points: 12.5

HECS-band: 2

Coordinator: Dr Peter Stephen & Dr John Petheram

Contact: Thirty-six hours of equivalent contact time and 24 hours independent study, plus assignment work (*Semester 2*).

Description: On completion, students should be able to demonstrate sound understanding of theories underpinning community participation in management, and will have practised techniques and processes in group facilitation and community assessment, planning and management of resources.

The content is presented under seven main headings:

- philosophy and evolution of participation and community management;
- models of community management of forests and other natural resources - overseas and in Australia;
- policy and institutional issues in community management;
- process and techniques in community enquiry, planning and research;
- issues in Koori community resource management;
- forms of evaluation in community management programs; and
- collaboration and conflict management.

Assessment: A 3000-word assignment in specialist interest area (40% of final marks); a practical exercise (30% of final marks); a two-hour final examination (30% of final marks).

Recommended texts: M Buchy and S Hoverman, *Understanding Public Participation in Forest Planning in Australia. How Can We Learn from Each Other?*, ANU Forestry Occasional Paper 99.2, 1999. • M Hobley, *Participatory Forestry: The Process of Change in India and Nepal*, Overseas Development Institute, 1996. • I Scoones and J Thompson (eds), *Beyond Farmer First: Rural People's Knowledge, Agricultural Research and Extension Practice*, International Technology Publications, 1994. • K Wilson and G E B Morren, *Systems Approaches for Improvement in Agriculture and Resource Management*, McMillan, 1990.

207-414 Social Research Methods

See full subject details on page 4.

208-411 Research Philosophies and Statistics

See full subject details on page 4.

