

# Advanced Diploma and Diploma of Applied Science

## 200 level subjects

### 793-208 Business Responsibilities and Leadership

**Credit points:** 10

**HECS-band:** 2

**Coordinator:** Mr Lindsay Ferguson

**Prerequisites:** 793-105 Information Management and 793-274 Investment and Finance.

**Contact:** 65 hours lectures/tutorials (*Semester 2, repeat Summer*).

**Description:** The objective of this subject is to provide the student with skills and knowledge relating to the legal and ethical responsibilities of management and leadership and to communicate effectively with others.

The content includes:

- introduction to business law covering law making, business structure, consumers, contracts, property transfer, disputes;
- primary producer issues covering land ownership and use, environment, animals, equipment, produce;
- employment, enterprise bargaining, awards, contracts, liability, termination, equal opportunity, affirmative action, anti-discrimination;
- taxation (both direct and indirect) covering primary producer definition, concessions, taxable income, tax and estate planning;
- personnel management, recruitment, training, development; communication with clients, in business organisations, producer groups, farming families;
- leadership and motivation in managing change, organisations, succession; and
- professional advisers and their effective use: accountants, solicitors, consultants, and technical specialists.

**Assessment:** Two assignments; interview; examination.

**Prescribed texts:** Australian Tax Office, *Tax Pack*, (current year). • Queensland Department of Primary Industry, *Farm Taxation*, 4th ed., Queensland Government, 1994.

### 793-209 Equine Marketing

**Credit points:** 5

**HECS-band:** 2

**Coordinator:** Mr Wayne Binney

**Contact:** 20 hours lectures and 12 hours tutorials (*Semester 2, repeat Summer*).

**Description:** The objective of this subject is to enable the student to:

- develop an understanding of the fundamental principles of marketing systems for bloodstock, products and services; and
- describe the marketing systems currently employed.

The content includes:

- the marketing fundamentals/concepts;
- marketing strategies (marketing mix);
- planning marketing programs;
- role of information (producers and consumers);
- direct supply marketing;
- international marketing;
- alternative marketing systems; and
- government involvement in the marketing process.

**Assessment:** Internal students: assignment of 2000 words (50%); 2 hour test (50%). External students: assignment of 3000 words (100%).

### 793-211 Land Use and Development

**Credit points:** 10

**HECS-band:** 2

**Coordinator:** Mr Jeff Lawes

**Contact:** 39 hours lectures and 26 hours practical classes (*Summer semester*).

**Description:** The objective of this subject is to enable students to develop knowledge and skills in relation to land use and development.

The content includes:

- an introduction to property planning;
- assessing farm resources;
- developing a farm plan and property subdivision;
- aerial photo interpretation;
- long-term plans for improving productivity by pasture improvement, control of erosion, salinity and tree decline;

- use of trees for control of land degradation, shade and shelter, marketable products, wildlife habitat and fire protection;
- use and construction of roads and lane ways;
- selection and installation of fencing;
- awareness of fire hazards and control of fires;
- location and installation of survey lines as an aid to internal subdivision;
- sitting and functional design of buildings;
- performance and control of buildings including heating, insulation, lighting, humidity;
- selection of materials and components of buildings such as foundations, flooring, columns, beams, cladding;
- safe use of power and tools in building construction;
- management of wastes from buildings;
- the law and buildings; and
- communication using drawings, specifications and costings.

**Assessment:** Internal students: two assignments of 2000 words each (60%), 3-hour test (40%). External students: two assignments of 2000 words (40% and 60%).

### 793-214 Farm Management III

**Credit points:** 10

**HECS-band:** 2

**Coordinator:** Mr Graeme Christie

**Prerequisites:** 209-253 Farm Management II and 793-122 Planning and Budgeting Techniques.

**Contact:** 20 hours lectures and 39 hours practicals (*Summer semester*).

**Description:** The objective of this subject is to further develop students conceptual and practical skills in farm management, building on the work achieved in Farm Management I and II.

The subject will cover a number of farm management systems, e.g. beef, irrigation, multi-enterprise, prime lambs.

Topics include:

- the input of different forms of ownership and tenure including the financing of these arrangements;
- comparative analysis of case farms against district industry averages is used to identify weaknesses in existing management; and
- concepts of strategic market management as applied to farming, e.g. SWOT analysis, analysis of external and internal business factors.

**Assessment:** Internal students: two assignments of 2000 words each (60%) and a 2-hour test (40%). External students: two assignments of 3000 words (100%).

### 793-216 Equine Management III

**Credit points:** 5

**HECS-band:** 2

**Coordinator:** Mr Lindsay Ferguson

**Contact:** 7 hours lectures, 26 hours practical classes (including tour) (*Semester 1, repeat Summer*).

**Description:** The objective of this subject is to enable students to analyse horse enterprise management systems in order to suggest improvements in the effective use of resources.

The content includes:

- organisation, resource management and decision-making for management of venues commonly used for major horse events;
- effects of improved combinations of resources on the technical and economic performance of studs, stables, riding establishments and agistment farms;
- the use, management and financial performance of alternative livestock enterprises operated in association with a horse enterprise;
- the effective use of technological breeding, training and managerial aids; and
- preparation of a written program outline planning the evaluation and analysis of the horse industry and the development and operation of a horse business.

**Assessment:** Internal students: assignments of 2000 words (60%) and a 2-hour test (40%). External students: assignment of 3000 words (100%)

### 793-217 Horse Health

**Credit points:** 5

**HECS-band:** 2

**Coordinator:** Dr Peter Cakebread

**Prerequisites:** 793-125 Horse Nutrition, 793-100 Horse Anatomy and Physiology and 793-126 Horse Reproductive Management.

**Contact:** 20 hours lectures and 12 hours practical classes (*Semester 2, repeat Summer*).

**Description:** The objective of this subject is to enable students to acquire skills and knowledge in relation to all aspects of horse health including prevention, diagnosis and treatment.

The content includes:

- the signs of ill-health and the clinical examination and their nature and variation;
- the causes of disease and the nature of each cause;
- laboratory tests and procedures;
- diagnostic tests and their uses and limitations;
- treatments and surgical procedures;
- basic principles of first aid;
- the responsibilities of horse managers in the area of veterinary treatment;
- relevant laws and regulations; the role of the various forms of health services;
- the major diseases of each organ system;
- signs that the manager would notice;
- how the disease affects the body systems and prevention;
- the diseases that various types of horses are predisposed to;
- guidelines and measures that management can introduce to minimise these diseases;
- disease prevention programs; and
- approaches to disease control at the level of the individual stud or stable and at a national level.

**Assessment:** Internal students: 3-hour exam (100%). External students: assignment of 3000 words (100%).

### 793-218 Horse Genetics and Breeding

**Credit points:** 5

**HECS-band:** 2

**Coordinator:** Dr Peter Cakebread

**Contact:** 20 hours lectures and 12 hours practical classes (*Semester 1, repeat Summer*).

**Description:** The objective of this subject is to enable students to develop skills and knowledge in relation to horse genetics and breeding.

The content includes:

- an introduction to genetics, genes and chromosomes;
- sex determination;
- dominance, recessiveness;
- homozygosity, heterozygosity and colouring;
- the inheritance of faults, lethal genes and the interaction of two pairs of genes;
- probability, variation, mutation and chromosomal abnormalities;
- selection, its goal, differential and pressure; prediction of response;
- aids to selection, performance testing, heart scores, chromosome tracing;
- performance measurement in warmbloods, quarterhorses and stockhorses;
- breeds, strains, development of new breeds, inbreeding, linebreeding, cross-breeding, outcrossing;
- breeding theories, Lowe, Varolla, Vuillier; and
- stamina index.

**Assessment:** Internal students: 3-hour exam (100%). External students: assignment of 3000 words (100%).

### 793-219 Horse Training Management

**Credit points:** 20

**HECS-band:** 2

**Coordinator:** Dr Peter Cakebread

**Prerequisites:** 793-125 Horse Nutrition and 793-122 Planning and Budgeting Techniques.

**Contact:** 140 hours practical classes (*Summer semester*).

**Description:** The objective of this subject is to enable students to develop the skills and knowledge in relation to advanced horse training.

The content includes:

- assessment of facilities and equipment;
- assessment of horses of various stages of training and the monitoring of their progress;
- the training of selected horses according to a pre-determined program, to achieve a specific objective;
- the stable routine, training program, budget and feed rations;
- the requirements and skills required for a range of training activities; and
- the use of new technology in training and the advances in exercise physiology.

**Assessment:** Internal students: workshop participation (50%), assignment of 1500 words (40%) and a 2-hour examination (10%). External students: resi-

dential school attendance (10%), documentation of training progress (40%) and a written report of 2000 words (50%).

### 793-221 Pasture Grazing and Management

**Credit points:** 10

**HECS-band:** 2

**Coordinator:** Ms Denise Burrell

**Prerequisites:** 794-868 Plant Production I, 793-131 Pasture Production and 792-186 Animal Production.

**Contact:** 39 hours lectures and 26 hours tutorials (*Semester 1, repeat Summer*).

**Description:** The objective of this subject is to provide students with skills and knowledge relating to pasture and grazing management.

The content includes:

- the assessment of seasonal pasture production;
- grazing management for maintenance of seasonal productivity;
- stocking rate considerations for different climate/soil and pasture situations;
- the management of lucerne stands for grazing and fodder conservation;
- identification of the common weeds in pastures and poisonous pasture plants;
- common pasture pests that cause economic damage;
- pasture management in relation to short-term and long-term feed planning;
- feed budgeting;
- the principles of fodder conservation, examining hay, silage and other fodder crops; and
- comparing the different fodder conservation options.

**Assessment:** Internal students: two assignments of 1800 words each (50%); 3-hour test (50%). External students: two assignments of 2000 words each (100%).

### 793-223 Farm Management IV

**Credit points:** 10

**HECS-band:** 2

**Coordinator:** Mr Graeme Christie

**Prerequisites:** 793-214 Farm Management III and 793-274 Investment and Finance.

**Contact:** 39 hours lectures and 26 hours practical work (*Summer semester*).

**Description:** The objective of this subject is for students to:

- prepare a major report on the development of farm or rural business including business plans to the steady state stage or project maturity;
- complete a comprehensive financial analysis of the project; and
- interpret and critically analyse the project's results, draw rational conclusions and identify key success factors.

The content includes farm businesses which highlight one or more of the following issues:

- vertical integration;
- marketing of new products/services;
- on-farm response to change in government legislation;
- change in district infrastructure caused by collective farm action (e.g. introduction of labour saving equipment); and
- intergeneration transfer of assets and management, and cooperation management of farms.

Students are also instructed in the preparation of a major farm business review/prospectus, including a proposal for finance.

**Assessment:** Internal students: two assignments of 2500 words each (80%), 20-minute interview (20%). External students: two assignments of 3000 words each (100%).

### 793-224 Stud and Stable Administration

**Credit points:** 5

**HECS-band:** 2

**Coordinator:** Mr Gavin Drew

**Prerequisites:** 793-274 Investment and Finance, 793-103 Equine Management I and 793-129 Equine Management II.

**Contact:** 20 hours lectures and 12 hours practical classes (*Semester 2, repeat Summer*).

**Description:** The objective of this subject is to enable students to develop skills and knowledge in relation to stud and stable administration.

The content includes:

- buying, leasing and syndication of horses;
- types, use and maintenance of stud/stable records;
- stud contracts and the law relating to horses;
- labour structure and management;

- insuring horses; and
- importation of horses.

**Assessment:** Internal students: assignment of 2000 words (50%) and a 2-hour test (50%). External students: assignments of 3000 words (100%).

### 793-225 Equine Management IV

**Credit points:** 5

**HECS-band:** 2

**Coordinator:** Mr Gavin Drew

**Prerequisites:** 793-276 Equine Management III.

**Contact:** 7 hours lectures and 26 hrs practical classes (*Semester 2, repeat Summer*).

**Description:** The objective of this subject is to enable students to recognise the potential for new and/or improved enterprise opportunities either within or outside existing business.

The content includes:

- market opportunities, business structure and management and strategies to accommodate risk of new/alternative business opportunities in the horse industry;
- development, effective operation and management of resources, methods of market and business expansion; and
- methods of accommodating risk of existing horse enterprises.

**Assessment:** Internal students: a business management project (100%). External students: assignment of 3000 words (100%).

### 793-226 Equine Management V

**Credit points:** 10

**HECS-band:** 2

**Coordinator:** Mr Lindsay Ferguson

**Prerequisites:** 793-276 Equine Management III and 793-274 Investment and Finance.

**Contact:** 65 hours of lectures and practical classes (*Summer semester*).

**Description:** The objective of this subject is to enable students to develop a managerial perspective in relation to equine enterprises, their initiation and development.

The content includes:

- development of a managerial perspective to the development of an enterprise;
- identification of correct professional conduct; and
- evaluation, synthesis and analysis of enterprises through the application of skills and knowledge developed in other subjects.

Report writing and oral presentation of information are also covered.

**Assessment:** Internal students: to complete a business management project (100%) External students: two assignments 2500 words each (80%); oral and poster presentation (20%).

### 793-227 Special Studies

**Credit points:** 10

**HECS-band:** 2

**Coordinator:** Ms Jane Williams

**Contact:** 65 hours equivalent of self-directed learning (*Summer semester*).

**Description:** The objective of this subject is to broaden students' perspective of equine management systems through independent study of other equine, agricultural and cultural issues.

Students undertake an approved course of study that enhances and broadens their skills perspectives. The studies should enhance students' ability to approach management decisions more laterally and innovatively. Topics of study may be subjects from within the institute with content not substantially covered by subjects within the horse management course; or subjects from other educational institutions where the student can justify that the subject meets the objectives; or other courses or activities, arranged by the student and approved by the coordinator. Content should equal the expectations of typical subjects within this course.

**Assessment:** Internal and external students: assessments as required by studies chosen, accompanied by an 800-word (approx.) report summarising the module chosen (Category 1 = 50%; Category 2 = 50%, Category 3 = 4 x 12.5%).

### 793-228 Agricultural Economics and Marketing

**Credit points:** 10

**HECS-band:** 2

**Coordinator:** Mr Wayne Binney

**Contact:** Equivalent to 65 hours (*Semester 2, repeat Summer*).

**Description:** The objective of this subject is to enable student to:

- understand and analyse issues relating to agricultural economics and policy;
- develop an understanding of the fundamental principles of marketing;
- develop effective marketing systems for new products; and

- describe the marketing systems currently employed for major agricultural products.

The content includes:

- the role of agriculture in the Australian economy;
- economic forces affecting farmers including effects of domestic government policy, effects of government policy in overseas countries, causes of income variability and farmer responses, causes of the cost prices squeeze and farmer responses;
- the operation of farmer organisations in establishing and influencing policy;
- marketing fundamentals/concepts;
- key marketing strategies (segmentation and marketing mix);
- planned marketing programs for agricultural products;
- role of information (producers and consumers);
- direct supply marketing; marketing agricultural products overseas;
- grower marketing (issues and options);
- alternative marketing systems such as video and catalogue sales; and
- government involvement in the marketing process.

**Assessment:** Two 2000 word assignments and a 2-hour test.

**Prescribed texts:** Campbell and Fisher, *Agricultural Marketing and Prices*, Longman Cheshire. • Mc Coll-Kennedy et al, *Marketing Concepts & Strategies*, Nelson.

### 793-274 Investment and Finance

**Credit points:** 10

**HECS-band:** 2

**Coordinator:** Mr Gavin Drew

**Prerequisites:** 793-122 Planning and Budgeting Techniques.

**Contact:** 39 hours lectures and 26 hrs practical classes (*Semester 1, repeat Summer*).

**Description:** The objective of this subject is to enable students to develop skills and knowledge in relation to investment and finance as they apply in the agriculture/farm business.

The content includes:

- investment concepts (growth, income, gearing - investment decisions under risk and uncertainty), contracts, marketing strategies, diversification, insurance, futures;
- ownership and acquisition;
- alternatives to land ownership;
- investment finance;
- rural valuation principles;
- rural land purchases; and
- outside enterprise investment.

**Assessment:** Internal students: two assignments of 2000 words (60%) and a 3-hour test (40%). External students: two assignments of 3000 words each (100%).

### 794-218 Computers II

**Credit points:** 5

**HECS-band:** 2

**Coordinator:** Mr Nick Bailey

**Contact:** 2 hours per week (*Semester 2*).

**Description:** The objective of this subject is to extend participants' ability to apply current computer software technology to the solving of horticultural problems.

The content includes:

- computer-aided design;
- advanced word processing;
- spreadsheet and database applications;
- computers in greenhouse control;
- artificial intelligence; and
- geographic information systems.

**Assessment:** Assignment of 1500 words (30%); software project (70%).

### 794-221 Industry Stream Engineering

**Credit points:** 5

**HECS-band:** 2

**Coordinator:** Mr Ken James and Mr Ed Smart

**Prerequisites:** Irrigation, Machinery and Construction.

**Semester:** Semester 1

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

- apply engineering principles to specific horticultural industry applications;

- understand the use of specialised horticultural equipment as applied to specific industry applications; and
- apply engineering principles to environmental management, of both the natural and artificial environments.

The topics will include a study of specialised engineering equipment and techniques used in specific industry applications such as arboriculture, landscape construction, parks and gardens, nurseries, and turf management. Case studies will be conducted of industry applications of engineering principles and equipment in the construction and maintenance of horticultural facilities according to the selected streams. This may include landscape and earthworks construction in golf courses and parks and gardens, environmental management and monitoring in greenhouses, structural principles for buildings, pruning and maintenance equipment for trees, and advanced irrigation and equipment control.

**Assessment:** Examination 1.5 hours (50%), case study assignment 1500 words.

### 794-222 Financial Management and Marketing

**Credit points:** 10

**HECS-band:** 2

**Coordinator:** Mr Peter McSweeney

**Contact:** 4 hours per week (*Semester 1*).

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

- explain the role of financial management within horticultural enterprises;
- describe forms of business ownership structure relevant to horticultural enterprises, and examine the taxation implications of business structures;
- process accounting data following prescribed accounting methods;
- prepare and analyse profit and loss statements, statements of assets and liabilities, cash flow statements and a range of management reports;
- develop a business plan, including marketing strategies, for a horticultural enterprise;
- identify business trends and opportunities in horticulture; and
- understand marketing concepts and methods relevant to horticultural enterprises.

The content includes:

- role of financial management;
- business structures and taxation;
- financial recording and reporting;
- analysis and interpretation of accounting reports;
- budgeting and business planning concepts and techniques;
- marketing concepts and methods; and
- trends and opportunities in horticulture.

**Assessment:** One practice set (25%); two exams of 1 hour and 1.5 hours (25% and 50%).

### 794-223 Plant Function

**Credit points:** 10

**HECS-band:** 2

**Coordinator:** Mr Kevin Blaze

**Prerequisites:** 794-109 Biological Studies.

**Contact:** 4 hours per week (*Semester 1*).

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

- describe various physiological processes, including photosynthesis;
- describe enzymes and their action;
- describe the modes of action of various plant hormones;
- describe the processes occurring during germination, growth, flowering and senescence;
- describe the processes of transport occurring in plants;
- describe the management of plant growth by horticultural chemicals;
- describe the influences of environment on plant growth;
- use simple chemical equations;
- devise an experiment to test a hypothesis; and
- set up a controlled experiment.

The content includes:

- macromolecular structure and function;
- photosynthesis and respiration;
- protein synthesis;
- xylem and phloem transport;
- growth, development, dormancy, flowering and senescence; hormone action;
- enzyme action;
- growth promoters and herbicides; and

- plants and environmental pollution.

**Assessment:** One theory examination of 45 minutes (25%), one theory examination of 1.5 hours (55%) and one assignment or practical examination (20%).

### 794-224 Specialist Industry Plant Protection

**Credit points:** 5

**HECS-band:** 2

**Coordinator:** Mr John Brereton

**Prerequisites:** 794-117 Plant Protection I.

**Contact:** 2 hours per week (*Semester 2*).

**Description:** The objective of this subject is to extend the participant's ability working within specific industry streams to:

- identify and give the common name, genus and species of common pests diseases and weeds which are recognised as being problematic;
- develop further diagnostic skills to deal with plant protection problems concerning pests diseases and weeds, peculiar to the nominated industry stream for study;
- explain and describe the major plant protection principles and practices which are applicable to the relevant industry;
- describe the common types of agricultural chemicals and application practices which are utilised in the nominated industry;
- prepare an integrated control program for pests, diseases and weeds, for a nominated industry stream, explaining the selection of strategies and the implications that follow where chemical control agents are employed; and
- explain the fate of agricultural chemicals in the environment and how to minimise any unwanted affects, particularly in the urban environment.

The content includes:

- and plants and environmental pollution;
- plant protection principles and practices which are specifically employed in different sectors of the horticultural industries nominated by the student; and
- detailed knowledge of pest disease and weed problems specific to nominated industry streams

Students will examine case studies of particular pest, disease and weed problems, damage thresholds and control strategies in the context of the urban environment and the economics of chemical use.

**Assessment:** One theory examination and submission of assignment work. Theory examination (50%), integrated pest management plans (30%), chemical application practices (20%).

### 794-225 Managing Staff & Business Operations

**Credit points:** 10

**HECS-band:** 2

**Coordinator:** Mr Peter McSweeney

**Prerequisites:** Financial Management and Marketing.

**Contact:** 4 hours per week (*Semester 2*).

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

- understand and describe organisational structures and relationships relevant to horticultural enterprises;
- understand and describe the role and functions of management, supervision and leadership;
- describe the factors that influence individual and group behaviour;
- understand and apply proper procedures for human resource management functions including hiring employees, performance appraisal, compensation management, training and development, and disciplinary and grievance procedures;
- define and explain the significance of the terms productivity and quality;
- identify factors that affect productivity and quality and how they can be managed;
- identify risks associated with the operation of a horticultural enterprise and outline risk prevention and management strategies; and
- explain in practical terms, the impact of laws and regulations on horticultural enterprises.

The content includes:

- the role and function of supervision;
- individual and group behaviour, human resource management functions including hiring, performance appraisal, compensation, training and development, disciplinary and grievance procedures;
- productivity and quality improvement;
- business risk identification and management; and
- business legal obligations in relation to the law of contract, consumer law, law of tort, business taxation administration.

**Assessment:** Three 1-hour tests (25% each) and one class paper (25%).

**794-226 Ecology****Credit points:** 5**HECS-band:** 2**Coordinator:** Dr Greg Moore**Prerequisites:** 794-109 Biological Studies.**Contact:** 2 hours per week (*Semester 2*).**Description:** The objective of this subject is to extend the participant's ability to:

- describe Australian plant communities;
- analyse the environmental and biotic factors that influence plant communities;
- define populations, communities and ecosystems;
- analyse trophic structure and nutrient cycling within plant communities;
- define ecological terms;
- use vegetation classification schemes;
- apply the concepts of range and limit to plant communities;
- use appropriate sampling and statistical techniques;
- analyse energy flow through plant communities; and
- apply the concept of homeostasis to the communities as a whole.

The content includes:

- introduction and definition of ecology;
- populations, communities;
- ecosystems, homeostasis;
- energy flow;
- food chains and trophic structures;
- limiting factors, nutrient cycles;
- Australian plant communities;
- habitat and niche;
- sampling technique;
- environmental factors;
- fire; and
- human impact on vegetation.

**Assessment:** Two examinations of 50 and 100 minutes (40% and 60%).**Elective subjects**

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

**793-231 Dairy Management I****Credit points:** 10**HECS-band:** 2**Coordinator:** Mr John Nunn**Prerequisites:** 791-309 Animal Health and Nutrition; 791-002 Animal Breeding.**Contact:** 39 hours lectures and 26 hours tutorials (*Summer semester*).**Description:** The objective of this subject is to provide students with skills and knowledge relating to dairy production and management.

The content includes:

- feeding and nutrition of different classes of stock, condition scoring and production estimation, feed budgeting grazing strategies and disease management;
- calf rearing and replacement heifer rearing, conformation and structural soundness, visual assessment and its importance to a breeding program, the practical application of breeding programs in the dairy industry;
- maintaining and comparing milk harvesting and storage equipment; and
- analysis of dairy shed designs; and dairy farming beyond 2000.

**Assessment:** Internal students: two assignments and a 3-hour examination. External students: two assignments.**793-234 Crop Production and Management****Credit points:** 10**HECS-band:** 2**Coordinator:** Mr Jeff Lawes**Prerequisites:** 792-182 Plant Production.**Contact:** 39 hours lectures and 26 hours practical classes (*Semester 2, repeat Summer*).**Description:** The objective of this subject is to provide students with skills and knowledge relating to crop production and management.

The content includes:

- an introduction to the cropping industry and Australia's position in the international market place;
- domestic marketing of cereal grains and analysis of the economics of growing cereals in suitable climatic zones of Australia;

- crop selection and the influence of climate and soils;
- the resources needed for successful cropping;
- the principles of crop growth and development;
- developing a crop rotation and principles of establishment;
- yield potential and limitations to yield;
- managing the harvest process;
- crop management systems involving irrigation and combining livestock with cropping;
- grain legumes and vegetable oilseed crops, their production potential, establishment, management and benefits in a cereal crop rotation;
- assessing the merits of alternative crops particularly summer-grown cereals and pasture seed production; and
- possibilities to expand enterprises to include agroforestry, fruit, vegetable or floriculture crops.

**Assessment:** Internal students: two assignments of 2000 words each (25%), 3-hour test (50%). External students: two assignments of 2000 words (100%).**793-235 Dairy Management II****Credit points:** 10**HECS-band:** 2**Coordinator:** Mr John Nunn**Prerequisites:** Dairy Management I.**Contact:** 39 hours lectures and 26 hours tutorials (*Semester 2, repeat Summer*).**Description:** The objective of this subject is to enable students to develop their knowledge of the factors affecting the management of a modern dairy farm.

The content includes:

- analysis of the logistics of expanding/intensifying a dairying enterprise;
- new technology as related to nutrition, health and reproduction;
- labour and lifestyle issues related to dairy farming;
- major legal and contractual arrangements of dairy farming;
- dairy farm design for improved production;
- pricing mechanisms and the impact of government policy; and
- industry structures in Australia and the marketing of dairy products.

**Assessment:** Internal students - assignment; 3-hour examination. External students - two assignments.**793-239 Management and Production of Beef****Credit points:** 10**HECS-band:** 2**Coordinator:** Mr Bill Poynton**Prerequisites:** 792-186 Animal Production and 793-132 Animal Nutrition and Breeding.**Contact:** 65 hours of lectures, workshops and tutorials/tours (*Semester 1, repeat Summer*).**Description:** The objective of this subject is to provide students with skills and knowledge relating to beef production and management.

The content includes:

- feedlots and their development and the role in the production cycle;
- pure and cross-breeding in the beef industry;
- chemical pesticides and testing and maintaining a 'chemical-free' status;
- industry bodies and their role; and
- quality assurance, beef nutrition and cattle handling facilities.

**Assessment:** Internal students: two 2000-word assignments and a 3-hour examination. External students: two 3000-word assignments.**Prescribed texts:** T McKenzie (ed.), *Beef Production Guide*. • NSW Agriculture, *Home Study Program*.**793-240 Sheep and Wool Production and Management****Credit points:** 10**HECS-band:** 2**Coordinator:** Mr Bill Poynton**Prerequisites:** Animal Production; Animal Nutrition and Breeding.**Contact:** Lectures 39 hours; tutorials/tours 26 hours (*Semester 2, repeat Summer*).**Description:** The objective of this subject is to provide students with knowledge and skills relating to all aspects of wool production and management.

The content includes:

- the breeds of sheep and their uses;
- ram and ewe selection;
- flock structure for successful production;
- meat quality, classification and grading;
- AusMeat workshop, marketing for meat and wool;

- aspects of flock health, study of wool fibre;
- technologies in wool production and alternative fibres;
- all aspects of sheep dairying;
- study industries; and
- shed operation, equipment and facilities.

**Assessment:** Internal students: two 2000-word assignments, 3-hour examination. External students: two 3000-word assignments.

**Prescribed texts:** D J Cottle, *Australian Sheep and Wool Handbook*, Inkata, 1991.