

# Advanced Diploma of Equine Management

## First year subjects

### 202-151 Information Technology and Communication

See full subject details on page 657.

### 202-154 Introductory Biology for Land and Food

**Note:** The subject does not assume prior secondary study of biology at Year 11 or 12, although this would be an advantage.

**Availability:** Glenormiston campus.

**Credit points:** 12.5

**HECS-band:** 2

**Coordinator:** Ms Jane Williams

**Contact:** 36 hours of lectures and 36 hours of practicals/tutorials (*Semester 1*).

**Description:** The subject introduces students to biological concepts and skills which will form the foundation of other 'biology-based subjects'.

The subject covers areas including:

- cell biology and metabolism: molecules of life, water, organic compounds, ions, polymers (proteins, nucleic acids, polysaccharides), organelles, membranes and walls; unicellular and multicellular organisms, cell division, mitosis;
- cell differentiation and specialisation;
- diversity and unity of cell structure, prokaryotes and eukaryotes; tissues and organs;
- major metabolic pathways, metabolism;
- enzymes; photosynthesis and photorespiration, respiration, glycolysis, fermentation;
- inheritance: protein synthesis and gene expression; brief description of DNA, RNA, the double helix, recombination and mutation;
- Mendelian genetics;
- plant structure and function: roots, stems, leaves, meristems, flowers and seeds;
- plant cells and tissues, anatomical diversity; transpiration and translocation;
- animal structure and function: tissues, organs and organ systems;
- comparative anatomy;
- homeostasis; nutrient uptake, circulation, gas and fluid exchange; differences between animal and plant anatomy;
- structure of selected invertebrate groups, especially insects;
- mammalian structures;
- nutrient uptake; primary and secondary growth;
- reproduction and nutrition: heterotrophy and autotrophy;
- nutrients and nutrient cycling;
- productivity;
- gametogenesis, process and structures in plants and animals;
- fertilization, seed development, germination, emergence;
- gestation, embryo development, parturition, hatching;
- life cycles;
- animal growth (briefly);
- introduction to biodiversity and evolution: populations, communities and ecosystems, adaptation, phylogeny and evolution (brief introduction only).

Practicals will emphasize the handling and identification of biological material and the use of microscopes and other instruments.

**Assessment:** 3-hour examination (40%), two assignments equivalent to 2000 words (each worth 20%) and practical reports (20%)

**Recommended texts:** R B Knox, P Y Ladiges and B K Evans, *Biology*, McGraw Hill, 1994.

### 204-151 Horse Reproduction

**Availability:** Glenormiston campus.

**Credit points:** 12.5

**HECS-band:** 2

**Coordinator:** Ms Jane Williams

**Prerequisites:** 204-154 Horse Industry Practices and Biology.

**Contact:** 24 lectures and 36 hours practical classes, tutorials and tours (*Semester 2*).

**Description:** This subject covers horse reproductive anatomy and physiology.

Topics include:

- identification of organs and dissections;
- endocrinology and application to horse studs;
- animal management including pre-season, breeding season and post season, management of cycling of the mare;
- management of the stallion;
- reproductive disease; foaling;
- neonatal foal management;
- stallion handling;
- mare preparation;
- foal handling;
- reproductive performance recording and record analysis;
- artificial insemination theory, practice and management;
- and embryo transfer, sperm injection new technologies.

**Assessment:** One 3-hour written examination (50%), 3000 word assignment (50%). Adequate personal performance (to industry standards) in the management of a horse enterprise is incorporated as a hurdle.

### 204-152 Horse Form and Function

**Availability:** Glenormiston campus

**Credit points:** 12.5

**HECS-band:** 2

**Coordinator:** Ms Donelda Conroy

**Prerequisites:** 202-154 Biology

**Contact:** 24 lectures and 24 hours practical classes, tutorials and tours (*Semester 2*).

**Description:** Topics include:

- musculo-skeletal system: osteology, myology, arthrology, desmology;
- respiratory, circulatory, nervous, urinary, digestive system;
- anatomy and physiology (cellular, tissue, organ) system failure, management issues; functional analysis of the horse;
- functional units: limb and foot action, back, heart and lung capacity;
- physical characteristics of the horse;
- terminology associated with physical characteristics of horses;
- conformation for a particular purpose;
- identify correct and incorrect conformation of a horse selected for a particular purpose and its effect on performance;
- gaits and gait interferences;
- various gaits of a horse and gait interferences arising from conformation;
- locomotion patterns of the horse in motion with respect to the biomechanics of movement;
- and understanding behaviour, behavioural theories and the evolution of equine behaviour, mechanisms of behaviour, physiological aspects of behaviour, communication and social organisation, management of behaviour, welfare, learning and training.

**Assessment:** One 3-hour written examination worth 40% of final marks, three assignments equivalent to 1500 words and worth 20% of final marks each.

### 204-153 Equine Resources

**Availability:** Glenormiston campus

**Credit points:** 12.5

**HECS-band:** 2

**Coordinator:** Ms Louise Nunn

**Contact:** 24 lectures and 36 hours workshops and tours (*Semester 1*).

**Description:** This subject includes case studies, tours, project work on resources, facilities, equipment, routines, record-keeping. Topics include recognition of wide range of horse enterprises and where they fit into the industry, how they operate; basic climate and water resources required on horse enterprise, water reticulation; effective use and management of existing horse, stud and stable resources; saddlery and equipment; making use of reconciled inventories and operations over time, of physical horse, stud and stable resources and activities for managerial requirements and to enable statutory returns to be completed; occupational health and safety management; keeping employee records to conform with requirements of the taxation office, other statutory authorities; awareness of provisions of Occupational Health and Safety Act, including the need to employ occupational health and safety professional to put the system in place; farm layout, buildings; and identifying horse stud and stable resources (land and improvements, machinery, livestock and labour).

**Assessment:** One 3-hour written examination (50%) and two assignments (2,500 words) (25% each).

### 204-154 Industry Practices (Horse)

**Note:** This subject involves the use of animals. Students should be aware that this is an essential part of these subjects and exemption from this component is not possible

**Availability:** Glenormiston campus.

**Credit points:** 12.5

**HECS-band:** 2

**Coordinator:** Ms Jane Williams

**Contact:** 24 hours lectures and 48 hours workshops and practical classes (*Semester 1*).

**Description:** Topics include:

- occupational health and safety;
- purpose of horses, uses of breeds;
- pre-subject skills audit e.g. riding, horse identification;
- welfare of horses, code of practice; horse handling;
- hatching, moving and restraining a range of horses;
- applying common gear and equipment;
- management systems;
- stable routines; feeding practices;
- performing common treatments (drench, vaccination);
- hoof care and maintenance;
- transporting horses;
- knowledge of dental procedures, branding;
- weaning;
- accustoming to handling, teaching to lead, e.g. handling, weaning from dam;
- horse education;
- and teaching a horse to be ridden/driven and given basic education (walk, trot and canter on command) in preparation for future use e.g. racehorse; and different methods for basic training.

**Assessment:** Two 3000 word assignments (50% each). Adequate personal performance (to industry standards) in the operation of a horse enterprise (Glenormiston Stud or equivalent) is incorporated as a hurdle.

### 204-155 Horse Nutrition and Feed Production

**Availability:** Glenormiston campus.

**Credit points:** 12.5

**HECS-band:** 2

**Coordinator:** Ms Jane Myers

**Prerequisites:** 202-154 Biology.

**Contact:** 24 lectures and 36 hours practical classes, tutorials and tours (*Semester 2*).

**Description:** Topics include:

- climatology;
- the influence of climate on plant growth;
- soils and their influence on plant growth;
- fertilizers; plant identification;
- common grasses, weeds and crops; weed control;
- management of common weed species;
- pasture renovation, factors required for efficient pasture establishment, growth and maintenance;
- fodder crops and fodder conservation;
- recognise common procedures relevant to pasture and cropping enterprises;
- recognising horse feedstuffs and assessing their quality;
- nutritional requirements;
- anatomical and physiological aspects that determine nutritional needs;
- weight estimation;
- feedstuffs and ration formulation;
- analysis of feeds and assessing quality;
- calculating the components of rations;
- changing physiological requirements and ration formulation calculation of requirements for growth, activity, pregnancy and lactation;
- limitations of NRC recommendations;
- ration calculations;
- dynamic changes in feed requirements; nutritional deficiencies and disease, recognising nutritional deficiencies;
- malnutrition;
- diseases of excess nutrition;
- vitamin and mineral deficiencies;
- grazing and feeding strategies;

- and identifying effective strategies for managing the nutritional needs of the horse.

**Assessment:** One 3-hour written examination (50%); 2000 word assignments (25%); Computer assessed learning package (25%)

### 209-151 Financial Management for Resource Ind I

See full subject details on page 657.

## Second year subjects

Complete descriptions of second year subjects will be available in the 2002 Handbook or from the course coordinator.

### 204-251 Horse Health and Genetics

**Availability:** Glenormiston campus

**Credit points:** 12.5

**HECS-band:** 2

**Coordinator:** Dr Peter Cakebread

**Prerequisites:** 204-152 Horse Form and Function & 204-155 Horse Nutrition and Feed Production

**Contact:** 24 hrs lectures and 24 hrs practical classes, tutorials and tours (*Semester 1*).

**Description:** Upon completion students should be able to:

- apply Mendelian genetic principles to the control of inherited faults and the selection of coat colour;
- apply quantitative genetic techniques to breeding programs;
- list and give the causes, describe the nature and progression and suggest treatment of common diseases;
- describe common diagnostic procedures;
- outline appropriate preventative measures for common diseases;
- and outline the obligations and responsibilities of the horse manager within the laws and regulations.

The content includes:

- applying Mendelian genetic principles to genetic faults and selection of coat colour;
- gene interactions;
- application of quantitative genetic principles to performance selection;
- progeny testing;
- breeding plans;
- signs of ill-health and the clinical examination of their nature and variation;
- cause and nature of diseases;
- laboratory tests and procedures;
- diagnostic tests, their uses and limitations;
- treatments and surgical procedures; principles of first aid;
- laws and regulations relating to horse health;
- role of the various forms of health services;
- exotic diseases;
- and disease prevention programs.

**Assessment:** One three-hour written examination worth 50% of final marks, two assignments equivalent to 2500 words and worth 25% of final marks each.

### 204-252 Equine Training

**Availability:** Glenormiston campus.

**Credit points:** 12.5

**HECS-band:** 2

**Coordinator:** Ms Jane Williams

**Prerequisites:** 204-152 Horse Form and Function.

**Contact:** 24 hrs lectures and 24 hrs practical classes, tutorials and tours (*Semester 1*).

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

- describe and demonstrate the theory and practice of horse training;
- identify the factors and influences effecting the training of horses for a given discipline;
- develop an understanding of exercise physiology in relation to training horses;
- given a training program, to critically assess it with comparison to other methods;
- and given the common fields of training, discuss the specific requirements and demonstrate the basic skills required to carry out a training exercise.

The content includes:

- theory and practice of horse training (racing, equestrian, harness, stock-horse);

- assessment of stable facilities and equipment for training purposes;
- assessment of horses at various stages of training and the monitoring of their progress;
- stable routines;
- training programs (budgets, feed rations), use of new technology in training;
- and exercise physiology.

**Assessment:** One two-and-a-half-hour written examination worth 40% of final marks, two assignments equivalent to 3000 words and worth 30% of final marks each.

### 204-253 Equine Systems

**Availability:** Glenormiston campus.

**Credit points:** 12.5

**HECS-band:** 2

**Coordinator:** Dr Peter Cakebread

**Prerequisites:** 204-153 Equine Resources and 204-155 Horse Nutrition and Feed Production.

**Contact:** 24 hrs lectures and 24 hours practical classes, tutorials and tours (*Semester 2*).

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

- identify the factors and influences effecting the maintenance of a sustainable systems;
- describe the interactions between the management components of a stud and stable;
- recognize the influence on industry organizations and service providers to the stud and stable system;
- apply an understanding of systems to stud and stable management problems;
- and develop integrated strategies for specific system based problems.

The content includes:

- systems approaches;
- ecological aspects of pastures for horses;
- establishment and maintenance of pastures;
- fodder conservation;
- assessment of reproductive performance;
- worm resistance control;
- integration of management;
- integration of management;
- the horse industry;
- and service providers.

**Assessment:** One three-hour written examination worth 50% of final marks, two assignments equivalent to 2500 words and worth 25% of final marks each.

### 204-254 Industry Experience (Horse)

**Availability:** Glenormiston campus.

**HECS-band:** 2

**Coordinator:** Ms Donelda Conroy

**Prerequisites:** Equivalent 10 months full time industry work experience.

**Semester:** Year long

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

- identify and assess management plans and strategies for a horse enterprise;
- work effectively within enterprise organizational structure;
- demonstrate responsibility undertaking common tasks in a working environment;
- and identify the social, environmental and industrial issues involved in management strategies involved in horse enterprises.

At the end of this subject the student should have experienced the real issues of horse enterprises and have been comprehensively involved in the day to day operation of horse enterprise/s, and gained appropriate skills.

The content includes:

- Practical horse industry work experience.

This experience may be completed before course entry, between first and second year or after completion of 2 full time years.

**Assessment:** One 5000 word report (100%).

### 204-263 Equine Project

**Availability:** Glenormiston campus

**Credit points:** 12.5

**HECS-band:** 2

**Coordinator:** Ms Jane Williams

**Prerequisites:** 204-153 Equine Resources and 204-252 Equine Training.

**Contact:** 24 lectures and tutorials and 36 hours practical classes (*Semester 2*).

**Description:** Students will complete a project involving the management of horses. Students will be expected to produce aims, plan, carry out and report on their project. A project example may be: "Objectives: Given a horse, to be trained for a specific objective, and associated facilities and equipment to:

- assess the horse's suitability for reaching the specific objective (e.g. a barrier trial, a pacing trial, a One Day Event or an endurance ride);
- assess the suitability of the facilities and equipment;
- plan a suitable training program;
- prepare a cash flow budget;
- prepare feed rations suitable for each stage of the program;
- assess the fitness and progress of the horse at frequent intervals;
- design an efficient stable routine;
- and document the program and its effectiveness at achieving the objective.

Other examples may include:

- grazing trials;
- industry surveys;
- or enterprise proposal.

Other subjects in the Advanced Diploma may be substituted if considered suitable.

**Assessment:** One 20 minute oral presentation (30%), practical work completion (20%) and one 4000 word report (50%)

### 206-272 Water and Land Management

See full subject details on page 659.

### 209-252 Financial Management for Resource Ind II

See full subject details on page 660.

### 209-254 Managing Staff

See full subject details on page 659.

### 209-255 Equine Management

**Availability:** Glenormiston campus.

**Credit points:** 12.5

**HECS-band:** 2

**Coordinator:** Mr Gavin Drew

**Prerequisites:** 209-202 Financial Management for Resource Industries I.

**Contact:** 24 hrs lectures and 36 hrs tutorials. A week-long tour may also be included (*Semester 1*).

**Description:** After completing this subject, the student should:

- be able to analyze an equine enterprise to assess the use of resources both physical and financial;
- be able to analyze an equine enterprise to assess the use of resources both physical and financial;
- understand contracts as they apply to selling horses and studs;
- be able to formulate marketing strategies for an equine enterprise;
- and be able to identify a new equine enterprise and plan its implementation.

The content includes:

- Buying, leasing and syndication of horses, stud contracts;
- the law relating to horses;
- insurance for horses;
- labour structure and management;
- marketing fundamentals and concepts;
- key marketing strategies for horses;
- planning marketing programs for equine enterprises;
- the role of equine service industries;
- finance options for equine enterprises;
- financial management systems for equine enterprises;
- case studies of various equine enterprises to identify resource management issues and analyze the potential for improvement;
- and developing new or improved enterprises either within or outside an existing business.

**Assessment:** One two-and-a-half-hour written examination worth 40% of final marks, two assignments equivalent to 3000 words and worth 30% of final marks each.

