Veterinary science subjects

First year

First-year coordinator: Prof E J Mackie

250-105 Veterinary Professional Studies

Credit points: 6.25

Coordinator: To be advised

Contact: 24 hours of lectures, computer laboratory exercises, library and workshop exercises. Estimated total time commitment 72 hours (minimum) *(Semester 1).*

Description: At the completion of this course the student should: have an overview of the organisation of the veterinary profession and the responsibilities of veterinarians in the management of animals in society; be able to use computers for communication, presentations, email and access to electronic databases; be familiar with the use of library and information resources; be able to work in groups to achieve outcomes within a time limit and provide oral presentations and written reports; be familiar with the ethical, moral and legal conventions associated with veterinary practice; develop computer skills, skills in analysing clinical cases, in presentation of case reports and public presentations (posters); and be aware of the generic skills, attributes and competencies expected of a graduate in veterinary science.

This subject examines the structure and organisation of the veterinary profession and its interaction with other professions and the community; the process and technology of information analysis and communication that relates to veterinarians in their professional work and development; the requirement to work in teams involved in the management of animals in society; and provides an introduction to veterinary ethics and laws regulating professional activities and the acquisition of attributes required of veterinarians as students progress through the BVSc (Melb) course.

Assessment: A 2-hour end-of-semester written examination (50%) and a syndicate project presented orally (30 minutes, 25%) and in writing (up to 2,000 words 25%).

250-106 Animal Health, Management & Welfare 1A

Credit points: 12.5

Coordinator: Dr. S. Barber

Contact: 71 hours of lectures, practical classes, seminars and computer laboratory. Estimated total time commitment 99 hours (minimum) *(Semester 1).*

Description: At the end of the sequence Animal Health, Management & Welfare 1A and Animal Health, Management & Welfare 1B students completing these subjects should: be familiar with the principles of nutrition and the nutritive value of feeds, and be able to provide practical advice on the feeding of individual; be familiar with the management of individual animals commonly treated by veterinarians in Australia - cattle, sheep, goats, camelids, pigs, caged birds, dogs, cats, pocket pets, and wildlife; be able to catch and restrain individual animals in a safe and humane manner, and apply basic animal care (husbandry techniques); understand the principles of animal behaviour as they relate to management and handling of each of the domestic animal species (and some wildlife species); be familiar with animal welfare issues, and the appropriate codes of practice for the welfare of animals during their production, use, transport, and processing; understand the hygiene and disease prevention principles followed by veterinarians when handling individual animals.

Topics include animal production systems including aquatic animals; principles and practices of feeding domestic animals and fish; animal behaviour in relation to management, housing, handling and restraint of individual animals; and codes of practice for the management, housing, transport, health, welfare and care of dogs, cats, cattle and horses. Introduction to public health, food safety, biosecurity, risk management and prevention of bioterrorism associated with animals and animal products.

Assessment: A 2-hour written examination at the end of semester (70%) and one 30-minute computer based or written assessment (10%) during the semester, computer based quizzes associated with equine practical classes during semester (10%) and indicated in the teaching timetable available at the commencement of the semester. Written assignments in Veterinary Public Health to be prepared as electronic portfolios and submitted online (10%) and indicated in the teaching timetable available at the commencement of the semester. Participation in practical exercises is compulsory. Completion of no less than eight weeks of experience in animal handling, care and management during the vacations of the first and second years is required before the end-of-year examination in second year. Six weeks of the work must be carried out on approved farms or animal enterprises, two weeks at urban animal or wildlife shelters and a report of no more than four pages must be completed for each period of practical work

250-107 Animal Health, Management & Welfare 1B

Credit points: 12.5

Coordinator: Dr. S. Barber

Contact: 71 hours of lectures, practical classes, seminars and computer laboratory. Estimated total time commitment 100 hours (minimum) *(Semester 2).*

Description: At the end of the sequence Animal Health, Management & Welfare 1A and Animal Health, Management & Welfare 1B students completing these subjects should: be familiar with the principles of nutrition and the nutritive value of feeds, and be able to provide practical advice on the feeding of individual; be familiar with the management of individual animals commonly treated by veterinarians in Australia - cattle, sheep, goats, camelids, pigs, caged birds, dogs, cats, pocket pets, and wildlife; be able to catch and restrain individual animals in a safe and humane manner, and apply basic animal care (husbandry techniques); understand the principles of animal behaviour as they relate to management and handling of each of the domestic animal species (and some wildlife species); be familiar with animal welfare issues, and the appropriate codes of practice for the welfare of animals during their production, use, transport, and processing; understand the hygiene and disease prevention principles followed by veterinarians when handling individual animals.

Topics include animal production systems; principles and practices of feeding domestic animals; animal behaviour in relation to management of dogs and cats, housing, handling and restraint of individual animals, including native species and laboratory animals; and codes of practice for the management, nutrition, housing, transport, health, welfare and care of dogs and cats, pigs, horses, sheep. alpacas. Introduction to public health, food safety, biosecurity, risk management and prevention of bioterrorism associated with animals and animal products.

Assessment: A 2-hour written examination at the end of semester (60%) and a 4,000-word assignment (30%) due mid-semester and indicated in the teaching timetable available at the commencement of the semester. Written assignments in Veterinary Public Health to be prepared as electronic portfolios and submitted online (10%) and indicated in the teaching timetable available at the commencement of the semester. Participation in practical exercises is compulsory. Completion of no less than eight weeks of experience in animal handling, care and management during the vacations of the first and second years is required before the end-of-year examination in second year. Six weeks of the work must be carried out on approved farms or animal enterprises, two weeks at urban animal or wildlife shelters and a report of no more than four pages must be completed for each period of practical work.

250-108 Veterinary Anatomy 1A

Credit points: 12.5

Coordinator: Mr C J Philip

Contact: 37 hours of lectures and 55 hours of practical classes. Estimated total time commitment 137 hours (minimum) *(Semester 1).*

Description: At the end of the sequence Veterinary Anatomy 1A and Veterinary Anatomy 1B students completing these subjects should:

comprehend:the terminology of gross anatomy, histology and embryology; the relationships between structure and function of each of the following types of anatomical structures: skin, fascia and skeletal muscles; bones and joints; viscera; vessels and nerves; the structural/functional differences of organs/tissues between the major domestic animals; the appearance, consistency and colour of normal structures; the identification of organs from different domestic animals; the appearance of normal structures in radiographs; the principles and essential information on the light and electron-microscopic structure of normal cells and tissues; the organisation of cells and tissues into specific organs and systems; the fundamental process of development, formation of the embryo, the placenta and development of organs; and the embryological basis of certain malformations;

develop: practical skills in dissection and proper use of microscopes;

*appreciate:*the range of variation in normal organs/tissues due to age, sex and physiological status; species variation of organ structure and function among the domestic animals; common occurrence of variations from text-book descriptions of anatomical structures; and the existence of microscopic structural variation in normal tissue.

Topics include: introduction to anatomy; general histology; general embryology; introduction to neuroanatomy; musculoskeletal system; cardiovascular system; haemopoietic tissues; radiographic anatomy; regional anatomy of the dog and embryological malformations.

Assessment: A 2-hour written examination (60%) and an 80-minute practical examination (40%) both at the end of semester.

250-109 Veterinary Anatomy 1B

Credit points: 18.75

Coordinator: Mr C J Philip

Contact: 38 hours of lectures and 63 hours of practical classes. Estimated total time commitment 148 hours (minimum) *(Semester 2).*

Description: At the end of the sequence Veterinary Anatomy 1A and Veterinary Anatomy 1B students completing these subjects should:

*comprehend:*the terminology of gross anatomy, histology and embryology; the relationships between structure and function of each of the following types of anatomical structures: skin, fascia and skeletal muscles; bones and joints; viscera; vessels and nerves; the structural/functional differences of organs/tissues between the major domestic animals; the appearance, consistency and colour of normal structures; the identification of organs from different domestic animals; the appearance of normal structures in radiographs; the principles and essential information on the light and electron-microscopic structure of normal cells and tissues; the organisation of cells and tissues into specific organs and systems; the fundamental process of development, formation of the embryo, the placenta and development of organs; and the embryological basis of certain malformations;

develop: practical skills in dissection and proper use of microscopes;

*appreciate:*the range of variation in normal organs/tissues due to age, sex and physiological status; species variation of organ structure and function among the domestic animals; common occurrence of variations from text-book descriptions of anatomical structures; and the existence of microscopic structural variation in normal tissue.

Topics include: urinary system; integument; respiratory system; digestive system; endocrine system; domestic fowl; radiographic anatomy and regional anatomy of the dog.

Assessment: A 2-hour written examination (60%) at the end of semester. One 80-minute practical examination (34%) also at the end of semester and a project report, either aural or written or both of not more than 1,000 words (6%).

250-110 Veterinary Biochemistry A

Credit points: 6.25

Coordinator: Dr I D Walker

Contact: 27 hours of lectures and 3 hours of tutorials. Estimated total time commitment 42 hours (minimum) *(Semester 1).*

Description: At the end of the sequence Veterinary Biochemistry A and Veterinary Biochemistry B, students completing these subjects should: be familiar with the terminology of biochemistry; comprehend the principles and essential information regarding chemical structures and properties of cellular constituents and the correlation of structure with function; comprehend the inter-relationships of metabolic pathways and biochemical reactions between tissue systems; have developed skills in organising, analysing and evaluating biochemical data.

Topics include: amino acid, peptide and protein chemistry; enzymology, allostery and oxygen transport; biochemistry of nucleic acids, protein synthesis and post-synthetic modification.

Assessment: A 2-hour written examination at the end of semester (80%). One 1-hour test will be held during the semester (20%) and indicated in the teaching timetable available at the commencement of the semester.

250-115 Veterinary Biochemistry B

Credit points: 6.25

Coordinator: Dr I D Walker

Contact: 27 hours of lectures and 3 hours of tutorials. Estimated total time commitment 42 hours (minimum) *(Semester 2).*

Description: Topics include: molecular biology; carbohydrate and lipid structure; water soluble vitamins; metabolic chemistry and lipid soluble vitamins and blood coagulation.

Assessment: A 2-hour written examination at the end of semester (80%). One 1-hour test will be held during the semester (20%) and indicated in the teaching timetable available at the commencement of the semester.

250-116 Veterinary Physiology 1A

Credit points: 12.5

Coordinator: Associate Professor W G Kimpton

Contact: 44 hours of lectures and 26 hours of practicals/workshops. Estimated total time commitment 96 hours (minimum) *(Semester 1).*

Description: At the end of the sequence Veterinary Physiology 1A and Veterinary Physiology 1B students completing these subjects should:

develop: an understanding of normal body functions and homeostasis; an understanding of the cellular and molecular processes that underlie animal health and disease; skills in organising, conducting and documenting experiments on physiological systems; the ability to critically analyse and discuss experimental physiological data.

Topics include: cell and general physiology; nerve and muscle physiology, haematology; cell communication; cardiovascular system and immunology.

Assessment: A 2-hour end of semester written examination (80%). One 1-hour test will be held during the semester (20%) and indicated in the teaching timetable available at the commencement of the semester.

250-117 Veterinary Physiology 1B

Credit points: 12.5

Coordinator: Associate Professor W G Kimpton

Contact: 46 hours of lectures and 31 hours of practicals/workshops. Estimated total time commitment 117 hours (minimum) *(Semester 2).*

Description: At the end of the sequence Veterinary Physiology 1A and Veterinary Physiology 1B students completing these subjects should:

develop: an understanding of normal body functions and homeostasis; an understanding of the cellular and molecular processes that underlie animal health and disease; skills in organising, conducting and documenting experiments on physiological systems; the ability to critically analyse and discuss experimental physiological data.

Topics include: body fluids and kidneys; respiration; gastrointestinal system; ruminant physiology, endocrinology and immunology.

Assessment: A 2-hour end of semester written examination (70%). One 1-hour test will be held during the semester (20%) and a written essay of not more than 1,000 words to be submitted during semester (10%) and indicated in the teaching timetable available at the commencement of the semester.

Second year

Second-year coordinator: Prof G F Browning

250-204 Veterinary Physiology 2

Credit points: 6.25

Coordinator: Dr K Snibson

Contact: 30 hours of lectures and 12 hours of practical classes or a research project. Estimated total time commitment 62 hours (minimum) *(Semester 1).*

Description: Students completing the program in Veterinary Physiology 1 and 2 should know and understand: the terminology of physiology; the principles and possess the essential information regarding the functions of different cell types and their interactions in organs and tissues; the mechanisms by which the organ systems are controlled and coordinated in the normal animal body; how to analyse data from experiments; and to further develop computer and report writing skills.

Topics include reproduction, comparative physiology, and the physiology of the nervous system.

Assessment: A 3-hour end-of-semester written examination (80%). Practical work will be assessed throughout the semester (20%).

250-206 Veterinary Anatomy 2

Credit points: 12.5

Coordinator: Mr C J Philip

Contact: 33 hours of lectures and 36 hours of practical work. Estimated total time commitment 93 hours (minimum) *(Semester 1).*

Description: Students completing this subject should:

Comprehend: the terminology of gross anatomy, histology and embryology; the relationships between structure and function of each of the following types of anatomical structures: skin, fascia and skeletal muscles; bones and joints, viscera; vessels and nerves; the structural/functional differences of organs/tissues between the major domestic animals; the appearance, consistency and colour of normal structures; the identification of organs from different domestic animals; the appearance of normal structures in radiographs; the principles and essential information on the light and electromicroscopic structure of normal cells and tissues; the organisation of cells and tissue into specific organs and systems; the fundamental process of development, formation of the embryo, the placenta and development of organs; and the embryological basis of certain malformations.

Develop: practical skills in dissection and proper use of microscopes; skills in observation and recording, in interpretation of observation and in critical assessment of data; and familiarity with works of reference and methods of sourcing information.

Appreciate: the range of variation in normal organs/tissues due to age, sex and physiological status; species variation of organ structure and function among the domestic animals; common occurrence of variations from text-book descriptions of anatomical structures; and the existence of microscopic structural variation in normal tissue.

Topics include: Reproductive system; neuroanatomy; special senses and regional anatomy of the dog.

Assessment: One 2-hour end-of-semester written examination (60%). One 80-minute end-of-semester practical examination (40%).

250-208 Introd.Vet.Clinical Sciences (Med & Sur)

Credit points: 6.25

Coordinator: Mr G A Edwards

Contact: 34 hours of lectures and 21 hours of practical classes. Estimated total time commitment 75 hours (minimum) *(Semester 2).*

Description: A student completing this subject should: be able to obtain from an animal owner and record, a comprehensive patient history; be able to undertake a physical examination of a patient and provide a preliminary evaluation of signs in terms of anatomy and physiology; understand and be able to apply principles of surgery; understand the principles of anaesthesiology and possess the essential information on anaesthetic agents and routes of administration, principally in the dog; understand the modes of action and the principles underlying use of the major classes of therapeutic drugs; and develop skills in integrating previously taught subjects with the clinical material.

Topics include principles of physical examination of animals, principles of surgery and anaesthesia, and introductions to clinical pharmacology and therapeutics.

Assessment: A 2-hour written examination (75%) and a 15-minute oral and/or practical examination (25%) both at the end of semester.

250-210 Veterinary Microbiology & Virology

Credit points: 12.5

Coordinator: Dr J Gilkerson

Contact: 29 hours of lectures and 20.5 hours of practical classes and tutorials. Estimated total time commitment 73.5 hours (minimum) *(Semester 1).*

Description: At the end of the sequence Veterinary Microbiology & Virology and Veterinary Bacteriology & Mycology, students completing these subjects should: possess the essential information on the important characteristics of bacteria, fungi and viruses and the way they exert their pathogenic effects and produce clinical signs of disease; understand the distribution of microbes in nature and the manner by which those of veterinary importance are spread; be familiar with the methods of disinfection and sterilisation and their use in practice; understand the principles of anti-microbial therapy; understand the need for rational judgments in the use of antimicrobial therapy; understand the immune response infection and possible abnormalities of the responses; understand the principles and use of vaccines in the control of infectious diseases; be familiar with the methods of diagnosis of infectious diseases; understand the principles of non-therapeutic control measures; understand approaches to the diagnosis of infectious disease(including the isolation and identification of pathogens and their detection using immunoassays).

Topics include: general microbiology; immunity to microbial pathogens, virology and practical exercises in immunodiagnostics and veterinary virology.

Assessment: One 2-hour written exam (55%) and a 1-hour practical exam (20%) both at the end of semester. Three short tests (each of 15 minutes) during the semester (15%) and indicated in the teaching timetable available at the commencement of the semester. A vaccination assignment and presentation (10%).

250-211 Veterinary Bacteriology & Mycology

Credit points: 12.5

Coordinator: Dr J Gilkerson

Contact: 27 hours of lectures, 12 hours of practical classes and 51 hours of computer assisted learning. Estimated total time commitment 120 hours (minimum) *(Semester 2).*

Description: At the end of the sequence Veterinary Microbiology & Virology and Veterinary Bacteriology & Mycology, students completing these subjects should: possess the essential information on the important characteristics of bacteria, fungi and viruses and the way they exert their pathogenic effects and produce clinical signs of disease; understand the distribution of microbes in nature and the manner by which those of veterinary importance are spread; be familiar with the methods of disinfection and sterilisation and their use in practice; understand the principles of anti-microbial therapy; understand the need for rational judgments in the use of antimicrobial therapy; understand the immune response infection and possible abnormalities of the responses; understand the principles and use of vaccines in the control of infectious diseases; be familiar with the methods of diagnosis of infectious diseases; understand the principles of non-therapeutic control measures; understand approaches to the diagnosis of infectious disease(including the isolation and identification of pathogens and their detection using immunoassays).

Topics include: systematic bacteriology and mycology and practical exercises in veterinary microbiology.

Assessment: A series of true/false questions on each of 21 case studies completed during the instruction period (10%), a literature search and review (20%), short written answers (1,000 words maximum) to questions on a selected number of case studies (20%) and indicated in the teaching timetable available at the commencement of the semester and a computer-based open-book examination of two hours duration at the end of the semester (50%).

250-212 Veterinary Parasitology A

Credit points: 6.25

Coordinator: Professor I Beveridge

Contact: 24 hours of lectures or seminars, 33 hours of practical work and tutorials. Estimated total time commitment 75 hours (minimum) *(Semester 1).*

Description: At the end of the sequence Veterinary Parasitology A and Veterinary Parasitology B students completing these subjects should: Possess a detailed understanding of the biology of various groups of parasites of domestic animals; Possess the essential information on life-cycle of parasites of domestic animals, methods of transmission, epidemiology, mechanisms by which they cause disease, and the immunological response of the host; Possess skills in the techniques by which parasites are recovered from infected hosts; Be able to identify the principal parasites of animals on the basis of morphology and location in the host and assign them to genera or species; Be familiar with the concepts of symbiosis and parasitism and principles of pathogenicity of parasitic infections; Be familiar with the mode of action of antiparasitic drugs, their spectrum of activity and their use in control of parasitic infections; Be aware of the public health significance of parasitic zoonoses; and understand how detailed knowledge of biology of parasites identifies options for programs of prevention and control of parasitic infections; and develop further skills in microscopy.

Topics include: Arthropods and strongylid nematodes.

Assessment: One 2-hour practical examination at the end of semester (85%) and one half-hour mid-semester quiz (15%) and indicated in the teaching timetable available at the commencement of the semester.

250-213 Veterinary Parasitology B

Credit points: 6.25

Coordinator: Professor R B Gasser

Contact: 25 hours of lectures or seminars and 33 hours of practical work and tutorials. Estimated total time commitment 76 hours (minimum) *(Semester 2).*

Description: At the end of the sequence Veterinary Parasitology A and Veterinary Parasitology B students completing these subjects should: Possess a detailed understanding of the biology of various groups of parasites of domestic animals; Possess the essential information on life-cycle of parasites of domestic animals, methods of transmission, epidemiology, mechanisms by which they cause disease, and the immunological response of the host; Possess skills in the techniques by which parasites are recovered from infected hosts; Be able to identify the principal parasites of animals on the basis of morphology and location in the host and assign them to genera or species; Be familiar with the concepts of symbiosis and parasitism and principles of pathogenicity of parasitic infections; Be familiar with the mode of action of antiparasitic drugs, their spectrum of activity and their use in control of parasitic infections; Be aware of the public health significance of parasitic zoonoses; and understand how detailed knowledge of biology of parasites identifies options for programs of prevention and control of parasitic infections; and develop further skills in microscopy.

Topics include: Other nematodes, trematodes, cestodes and protozoa.

Assessment: Mid-semester Quiz #1 (10%), mid-semester Quiz #2 (20%), mid-semester Quiz #3 (20%) and indicated in the teaching timetable available at the commencement of the semester and one 2-hour practical examination at the end of semester (50%).

250-214 Veterinary Pathology A

Credit points: 6.25

Coordinator: Professor R F Slocombe

Contact: 26 hours of lectures and 36 hours of practical classes. Estimated total time commitment 86 hours (minimum) *(Semester 1).*

Description: At the end of the sequence, Veterinary Pathology A and Veterinary Pathology B students completing these subjects should: be familiar with and able to accurately apply the terminology of pathology; understand the principles and possess the essential information regarding the major causes of disease and the responses of cells and tissues to injury; understand the cellular, biochemical and molecular basis of pathological processes; be able to observe precisely and identify, describe and interpret the macroscopic and microscopic appearances of tissues and cells altered by disease processes; be familiar with the sources of contemporary literature relating to the principles and practice of pathology and capable of using this information, and be competent in microscopy, in observation of tissue and cellular abnormalities and in the critical analysis of data.

Topics include tissue fixation and histological processing, diagnosis of disease, post-mortem changes, alterations of tissue mass, cellular degeneration and necrosis, leukocyte biology, inflammation, wound healing, mineralisation

and pigmentation of tissues, nutritional disorders, congenital and inherited disorders and circulatory disorders.

Assessment: One 3-hour written examination (60%) and one 1-hour computer-based practical examination (25%) at the end of semester. Three computer-based assessments during semester, each of 30 minutes' duration and each contributing 5% to the total subject mark and indicated in the teaching timetable available at the commencement of the semester.

250-215 Veterinary Pathology B

Credit points: 6.25

Coordinator: Professor R F Slocombe

Contact: 27 hours of lectures and 36 hours of practical classes. Estimated total time commitment 92 hours (minimum) *(Semester 2)*.

Description: At the end of the sequence, Veterinary Pathology A and Veterinary Pathology B students completing these subjects should: be familiar with and able to accurately apply the terminology of pathology; understand the principles and possess the essential information regarding the major causes of disease and the responses of cells and tissues to injury; understand the cellular, biochemical and molecular basis of pathological processes; be able to observe precisely and identify, describe and interpret the macroscopic and microscopic appearances of tissues and cells altered by disease processes; be familiar with the sources of contemporary literature relating to the principles and practice of pathology and capable of using this information, and be competent in microscopy, in observation of tissue and cellular abnormalities and in the critical analysis of data.

Topics include neoplasia, circulatory disturbances and pathology of the cardiovascular, lymphoreticular, endocrine and musculoskeletal systems.

Assessment: One 3-hour written examination (60%) and one 1.5-hour computer-based practical examination (30%) at the end of semester. Two computer-based assessments during semester, each of 30 minutes' duration and each contributing 5% to the total subject mark.

250-216 Animal Health, Management & Welfare 2A

Credit points: 6.25

Coordinator: Dr. S. Barber

Contact: 26 hours of lectures, seminars and computer laboratory. Estimated total time commitment 38 hours (minimum) *(Semester 1)*.

Description: At the end of the sequence Animal Health, Management & Welfare 2A and Animal Health, Management & Welfare 2B students completing these subjects should: understand the nutrition of grazing herds of flocks, supplementary feeding for performance and survival, and live stock in the feedlot, and be able to give practical advice on pasture-based systems; understand the principles of animal health management for the beef, dairy, wool, prime lamb, horse and aquaculture industries and for establishments breeding laboratory animals; be able to design an appropriate production system for the beef, dairy, wool, prime lamb and horse industries and for the production of laboratory animals; understand the principles of quality assurance as they apply to animal production systems and the processing of animal derived products; understand the structure of the beef, dairy, wool, prime lamb, horse and aquaculture industries; understand the hygiene and disease prevention principles followed by veterinarians when handling individual animals or visiting livestock properties or premises ('closed herds/flocks').

Topics include principles and biometric procedures for assessing the management and health of animal populations; epidemiological principles of health and disease in animal populations; principles of animal health, biosecurity, risk management and management for the beef, dairy, fish, and poultry; the influence of management on the products of animal-based industries, quality assurance systems and food safety 'from paddock to plate'.

Assessment: A 2-hour written examination at the end of semester (80%). Written assignments in Veterinary Public Health to be prepared as electronic portfolios (20%). Students must complete no less than eight weeks of experience in animal handling, care and management during the vacations of the first and second years before the end-of-year examination in second year. The work must be carried out on approved farms or animal enterprises, and a report of no more than four pages must be completed for each period of practical work.

250-217 Animal Health, Management & Welfare 2B

Credit points: 6.25

Coordinator: Dr. S. Barber

Contact: 27 hours of lectures, seminars and computer laboratory. Estimated total time commitment 39 hours (minimum) *(Semester 2)*.

Description: At the end of the sequence Animal Health, Management & Welfare 2A and Animal Health, Management & Welfare 2B students completing these subjects should: understand the nutrition of grazing herds of flocks, supplementary feeding for performance and survival, and live stock in the feedlot, and be able to give practical advice on pasture-based systems; understand the principles of animal health management for the beef, dairy, wool, prime lamb, horse and aquaculture industries and for establishments breeding laboratory animals; be able to design an appropriate production system for the beef, dairy, wool, prime lamb and horse industries and for the production of laboratory animals; understand the principles of quality assurance as they apply to animal production systems and the processing of animal derived products; understand the structure of the beef, dairy, wool, prime lamb, horse and aquaculture industries; understand the hygiene and disease prevention principles followed by veterinarians when handling individual animals or visiting livestock properties or premises ('closed herds/flocks').

Topics include principles and biometric procedures for assessing the management and health of animal populations; epidemiological principles of health and disease in animal populations; principles of animal health, biosecurity and management for the sheep, deer and horse industries; farm and enterprise budgets, and a partial budget for any proposed change to farm business management.

Assessment: A 2-hour written examination at the end of semester (50%). Written assignments in Veterinary Public Health to be prepared as electronic portfolios (10%). Students must complete no less than eight weeks of experience in animal handling, care and management during the vacations of the first and second years before the end-of-year examination in second year. The work must be carried out on approved farms or animal enterprises, and a report of no more than four pages must be completed for each period of practical work (40%).

250-218 Veterinary Pharmacology & Toxicology A

Credit points: 6.25

Coordinator: Dr E Tudor

Contact: 21 hours of lectures and 12 hours of laboratory work. Estimated total time commitment 53 hours (minimum) *(Semester 1)*.

Description: At the end of the sequence Veterinary Pharmacology & Toxicology A and Veterinary Pharmacology & Toxicology B students completing these subjects should understand: the language of pharmacology and toxicology; the concept of drug receptors and molecular responses; the principles of pharmacodynamics and pharmacokinetics; the mechanisms of action of classes of drugs affecting different organ systems, in particular drugs affecting the autonomic, cardiovascular, renal, respiratory, gastrointestinal, and central nervous systems, as well as anti-inflammatory, immunomodulatory and endocrine drugs, anti neoplastic antimicrobial agents, anti parasitic agents; and the toxicology of plant, animal, agricultural, industrial and household chemicals.

Topics include: Drugs affecting the autonomic nervous system; drugs affecting the cardiovascular system; pharmacokinetics; systems pharmacology and pharmacodynamics.

Assessment: A 2-hour written examination at the end of semester (80%) and ongoing assessment during the practical course comprising four 15-minute written tests (20%) and indicated in the teaching timetable available at the commencement of the semester.

250-219 Veterinary Pharmacology & Toxicology B

Credit points: 6.25

Coordinator: Dr E Tudor

Contact: 30 hours of lectures and 12 hours of laboratory work including excursions to associate institutions to review applied aspects of toxicology. Estimated total time commitment 62 hours (minimum) *(Semester 2)*.

Description: At the end of the sequence Veterinary Pharmacology & Toxicology A and Veterinary Pharmacology & Toxicology B students completing these subjects should understand: the language of pharmacology and toxicology; the concept of drug receptors and molecular responses; the principles of pharmacodynamics and pharmacokinetics; the mechanisms of action of classes of drugs affecting different organ systems, in particular drugs affecting the autonomic, cardiovascular, renal, respiratory, gastrointestinal, and central nervous systems, as well as anti-inflammatory, immunomodulatory and endocrine drugs, anti neoplastic antimicrobial agents, anti parasitic agents; and the toxicology of plant, animal, agricultural, industrial and household chemicals.

Topics include: Drugs affecting the central nervous system; anti-inflammatory drugs; systems pharmacology; toxicology and antimicrobial agents.

Assessment: A 2-hour end of semester written examination including questions drawn from both theory and practical components (80%), a toxicology group assignment based on field work, and comprising oral presentation and written reports of not more than 30 power point slides (15%), and five online formative assessment exercises conducted during the semester (1% for each test completed during semester).

Third year

Third-year coordinator: Assoc Prof B W Parry

250-307 Animal Health, Management & Welfare 3

Credit points: 6.25

Coordinator: Associate Professor A L Vizard

Contact: 42 hours of lectures and 24 hours of practical work. Estimated total time commitment 94 hours (minimum) *(Semester 1)*.

Description: Students completing this subject should: understand the concepts of epidemiology; be aware of factors which influence patterns of disease; be familiar with the techniques of data acquisition and analysis and the uses and limitations of statistical information; be able to undertake epidemiological investigations of animal disease outbreaks; be able to provide economic reasoning in decision making when dealing with animal production systems; be able to prepare a budget, for a proposed change to a business; understand various financial analytical methods that aid business financial decision-making including gross margins, cash flow budgets, partial budgets and comparative analysis (bench-marking); be able to design a simple breeding program for animals; understand the principles of selection for genetic improvement in various animal production systems; be able to advise on the use of reproductive technologies to improve the rate of genetic gain; understand the importance of pastures in profitable grazing systems; be aware of strategies to upgrade pasture production and pasture quality; be competent at planning and implementing grazing management strategies; understand the basics of intensive fish farming; further develop computer skills and skills in integrating material from previous subjects.

Topics include epidemiology, economics, genetics, pasture management and fish farming. Epidemiology includes factors that influence patterns of disease; techniques of data acquisition and analysis, and the uses and limitations of statistical information; and epidemiological investigations of animal disease outbreaks. Economics includes economic reasoning in decision-making with animal production systems; preparing a farm budget, financial analytical methods that aid business financial decision-making including gross margins, enterprise analysis, cash flow budgets, partial budgets and comparative analysis (benchmarking). Genetics includes understanding the principles of selection for genetic improvement in various animal productions systems; and the use of reproductive technologies to improve the rate of genetic gain. Pasture management includes understanding the importance of pastures in profitable grazing systems; strategies to upgrade pasture production and pasture quality; and planning and implementing grazing management strategies. Fish farming includes the basics of intensive fish farming.

Assessment: A 2-hour written examination at the end of semester (90%) and assessment of practical exercises (10%).

250-308 Clinical Medicine and Surgery

Credit points: 12.5

Coordinator: Mr R B Lavelle

Contact: 50 lecture hours and 96 practical hours. Estimated total time commitment 174 hours (minimum) *(Semester 1)*.

Description: Students completing this subject should: understand and be able to select appropriate diagnostic methods including clinical pathological, endoscopic and surgical techniques; understand the principles of tumour diagnosis and management; understand and be able to apply principles of surgery to the management of wounds and wound closure; understand the principles of applied anaesthesiology and possess the essential information on anaesthetic agents and routes of administration in the various animal species; understand the principles of fluid and electrolyte therapy; understand the principles of radiography, radiation safety and radiation therapy; understand the principles and application of microchip identification of animals.

This subject builds on the student's basic knowledge and understanding, from Introduction to Veterinary Clinical Sciences (Medicine and Surgery) 250-208 of the skills and methods which can be used in the diagnosis and management of clinical cases. The subject also includes more advanced principles of therapeutics, surgery and anaesthesiology, and principles of radiology and ultrasonography.

Assessment: One 3-hour written paper at the end of semester (70%), equine practical assessment (7.5%), bovine practical assessment (7.5%) and up to three 15-minute oral examinations (15%). All four components of assessment must be passed.

250-309 Diseases of Body Systems 1

Credit points: 12.5

Coordinator: Ms Jenny Charles

Contact: 49 lecture hours and 47 practical hours. Estimated total time commitment 124 hours (minimum) *(Semester 1)*.

Description: Students completing this subject should: be able to recognise clinical signs that may indicate a disturbance of structure and function of the body systems or their component organs; be able to recognise, describe and interpret morphological abnormalities of these systems at both the macroscopic and microscopic level; possess essential information on the causes, pathogenesis and manifestations of disease of these systems, and be able to recognise if the disease is expressed locally or as disturbances of whole body function or other organ function; understand the principles of patient management for disorders of these systems in terms of prognosis and indications for therapy, and; be aware of the uses and limitations of ancillary investigations such as ultrasonography, radiography, clinical pathology, bacteriology, virology, parasitology, serology and pathology of biopsy specimens in diagnosis and management.

Diseases of the alimentary, respiratory, cardiovascular, musculoskeletal and nervous systems and of the peritoneum and liver.

Diseases are considered from a variety of aspects, including causes, general clinical manifestations, pathology and pathophysiology (at the macroscopic and microscopic level). Broad principles of patient management in terms of prognosis and indications for medical and/or surgical therapy are provided. Appropriate ancillary investigations and techniques, such as electrocardiography, radiography, ultrasonography, bacteriology, biopsy, clinical pathology, parasitology, serology and virology are also discussed.

Assessment: One 3-hour written paper (70%) and a 90-minute practical examination in pathology (20%) at the end of semester. Two computer-based assessments convened during scheduled pathology practical classes in semester, each of 30-minute duration and each contributing (5%) to the total subject mark and indicated in the teaching timetable available at the commencement of the semester.

250-310 Diseases of Body Systems 2

Credit points: 12.5

Coordinator: Associate Professor Bruce Parry

Contact: 45 lecture hours and 63 practical hours. Estimated total time commitment 136 hours (minimum) *(Semester 1)*.

Description: Students completing this subject should: understand the normal birth process and ways in which it may be manipulated; be aware of the types of obstetrical problems which can occur and the details of the methods for their resolution; be aware of the importance of clinical signs which indicate a disturbance of structure and function of the reproductive and urinary systems; be aware of the current developments in embryology, in-vitro fertilisation, embryo transfer, embryo sexing, splitting, microinjection of genetic material, and laparoscopic insemination; be able to recognise, describe and interpret morphological changes in the reproductive and urinary systems at both the macroscopic and microscopic level; have a knowledge of causes of disease in the reproductive and urinary systems, and be able to recognise if the disease is expressed locally or as disturbances of whole body function or other organ function; understand the principles of patient management for disorders reproductive and urinary systems in terms of indications for particular types of therapy, and the principles of providing a prognosis; and be aware of the uses and limitations of ancillary investigations such as ultrasonography, radiography, clinical pathology, bacteriology, virology, serology and pathology of biopsy specimens in diagnosis and management.

Diseases of the reproductive and urinary systems and mammary gland are studied.

Study of female and male reproduction; normal and abnormal pregnancy and parturition; post-parturient disorders; infertility; and artificial control of reproduction, including embryo transfer and artificial insemination.

Diseases of the reproductive and urinary systems and the mammary gland are considered from a variety of aspects, including causes, general clinical manifestations, pathology and pathophysiology (at the macroscopic and microscopic level), and broad principles of patient management in terms of prognosis and indications for medical and/or surgical therapy. Appropriate ancillary investigations and techniques, such as radiography, ultrasonography, bacteriology, biopsy, clinical pathology, parasitology, serology and virology are also discussed.

Assessment: One 3-hour written paper (80%), one 15-minute oral examination (10%) and a 30-minute practical examination in pathology (5%) at the end of semester. One computer-based assessment convened during a scheduled pathology practical class, of 30 minutes duration and contributing (5%) to the total subject mark and indicated in the teaching timetable available at the commencement of the semester.

250-312 Dogs, Cats & Miscellaneous Pets 1

Credit points: 6.25

Coordinator: Dr Linda Abraham

Contact: 58 lecture hours. Estimated total time commitment 110 hours (minimum) *(Semester 2)*.

Description: Students completing Dogs, Cats and Miscellaneous Pets 1 (and 2) should: be familiar with breed and behavioural characteristics of small companion animals; possess the essential information on diseases of small animals on which to approach a diagnosis based on epidemiology and clinical signs in an individual animal or group of animals; be able to interpret and utilise the results of laboratory tests in making a diagnosis; be able to devise appropriate forms of therapy or management; be able to devise strategies for

prevention and control of disease in small animals; be aware of the public health implications of zoonoses of pet animals; and be aware of disease prevention for laboratory animals and animal welfare issues in research and the community.

Diseases and preventive medicine of small animals and miscellaneous pets: infectious diseases; clinical signs, treatment, management and immunisation strategies, public health aspects, critical care of the medical case. Diagnosis and medical and surgical management of diseases of the nervous system, eye and ear, endocrine system, musculoskeletal system and behavioural conditions.

Assessment: One 3-hour written paper at the end of semester (100%).

250-315 Pigs

Credit points: 6.25

Coordinator: To be advised

Contact: 22 hours of lectures and up to five practical/tutorial hours. Estimated total time commitment 55 hours (minimum) *(Semester 2)*.

Description: At the end of this subject students should: be aware of the management and welfare issues associated with the keeping of pigs; be aware of the variety of diseases affecting pigs; understand the factors influencing outbreaks of disease in herds and/or individual animals; be able to suggest a probable diagnosis/differential diagnosis from the history, epidemiology, clinical signs and gross post-mortem lesions; be able to recommend appropriate ancillary tests to facilitate a definitive diagnosis and prognosis; be able to specify appropriate therapy or other course of action for affected herds and/or individual animals; be able to recommend appropriate measures for disease control and/or prevention; know the statutory regulations applicable to the husbandry, welfare, disease control and use of therapeutic substances/vaccines in these animals; be aware of the major factors affecting the productivity and profitability of pig farms; be aware of new issues facing the pig industry locally, nationally and internationally that are likely to affect the way pigs are produced in Australia.

Topics include clinical signs, diagnosis, pathogenesis, and epizootiology of diseases in individual pigs as well as affected swine herds; and swine management, nutrition and preventive medicine.

Assessment: One 2-hour written paper (80%) and one 15-minute oral examination (20%) both at the end of semester.

250-316 Horses 1

Credit points: 6.25

Coordinator: Sally Church

Contact: 35 hours of lectures and up to 25 practical/tutorial hours. Estimated total time commitment 88 hours (minimum) *(Semester 2)*.

Description: Students completing Horses 1 should: have a sound knowledge of common equine musculoskeletal, respiratory, gastrointestinal and metabolic diseases; be able to conduct a thorough and logical clinical investigation of the musculo-skeletal, respiratory and gastrointestinal tract of a horse, arrive at a reasonable diagnosis and provide adequate treatment for the problem encountered; know how to castrate a horse competently; be able to implement all common disease prevention strategies; develop skills in analysing case histories.

Topics covered include assessment and management of horses with lameness, diarrhoea, colic, respiratory problems, common injuries, metabolic diseases, hernias and horses requiring castration.

Assessment: One 2-hour written examination at the end of semester (90%). Two written case reports (5%) and assessment during the equine rotation (5%). Students are required to pass each individual component of assessment.

250-317 Cattle 1

Credit points: 6.25

Coordinator: Dr P D Mansell

Contact: 30 hours of lectures and up to 10 practical/tutorial hours. Estimated total time commitment 68 hours (minimum) *(Semester 2)*.

Description: Students completing this subject should be able to: collect a history and epidemiological information of relevance to an individual or herd case; perform a thorough clinical examination of all body systems; suggest a reasonable diagnosis and differential diagnoses from the history, epidemiology, clinical signs and lesions observed in an individual cow, calf or bull, or a herd of cattle; recommend appropriate ancillary laboratory tests, submit a detailed request for a laboratory examination, and interpret the results of the laboratory reports; ascertain if the welfare of a cow or herd is being compromised; specify appropriate therapy or other course of action; provide the owner with a prognosis; advise the owner of the appropriate withholding periods for milk or of the animal from slaughter when antibiotics, drugs or chemicals are administered or applied; explain to the owner the economic costs of the disease; recommend measures to control a disease in a herd or other population; recommend measures to prevent a disease from occurring; prepare a written report for the owner or attendant, or a referring veterinarian; demonstrate competence in the analysis of records of production, health and reproductive performance of cattle herds; and present clinical case material in a professional manner.

Diseases and production management of cattle are covered in this subject. Topics include clinical examination, infectious, metabolic, nutritional and parasitic diseases; diagnosis, treatment and prevention; and herd management and economics.

Assessment: One 2-hour written examination at the end of semester (90%) and assessment during the cattle component of the ruminant rotation (10%). Students are required to pass each individual component of assessment.

250-318 Small Ruminants 1

Credit points: 6.25

Coordinator: Mr Patrick Kluver

Contact: 25 hours of lectures and up to 10 practical/tutorial hours. Estimated total time commitment 63 hours (minimum) *(Semester 2)*.

Description: Students completing this subject should be able to: design a prevention program for diseases and production limiting conditions that commonly affect sheep; suggest a list of differential diagnoses, in descending order of probability, from the history, epidemiology, clinical signs and/or lesions observed in individual sheep or in sheep flocks; submit appropriate samples for laboratory testing and interpret the test results for diseases and production limiting conditions that affect sheep; ascertain if the welfare of sheep is compromised; develop a disease control program that includes a realistic prognosis, treatment advice, consideration of chemical residues, and for commercial flocks an economic appraisal of the program; demonstrate competence in the analysis of farm financial performance and of animal health and production records; develop skills in report writing; and develop skills in verbal presentations.

Topics covered include diseases, preventive medicine and production of sheep, other small ruminants and camelids; clinical examination; infectious, metabolic, nutritional, reproductive and parasitic diseases; and diagnosis, treatment and prevention.

Assessment: One 2-hour end of semester written examination (100%) and satisfactory performance during the small ruminant and camelid component of the ruminant rotation.

250-319 Professional Practice 1 (Hospital)

Note: Special requirements: suitable protective clothing is required for all practical work in the clinics and laboratories. A white scrub suit or white short-sleeved coveralls are required for surgical clinics, a clean white coat for medical clinics, and grey or khaki coveralls and rubber over-boots for all large animal clinics. Students must provide themselves with a stethoscope, thermometer, pen light and dog lead.

Credit points: 25

Coordinator: Dr Steven Holloway

Contact: 12 hours of lectures, up to 255 practical/tutorial hours and extramural work. Estimated total time commitment 347 hours (minimum) *(Semester 2)*.

Description: Lectures will consider the following topics: food safety and public health; state veterinary medicine; legislative control of animals and animal diseases (Livestock Diseases Act, Quarantine Act, Prevention of Cruelty to Animals Act, etc.); reporting adverse drug reactions; handling disease emergencies (Austvetplan); aquatic animal health; animal welfare; and urban animal management.

Students will undertake weekly clinical rotations in sections of the Department of Veterinary Science and Department of Veterinary Clinic and Hospital, with daily attendances from 8am to 1pm. Some sections require out-of-hours work during the week, on weekends and on public holidays.

Clinical rotations include autopsy, clinical pathology, microbiology and parasitology; diagnostic imaging; small animal medicine; small animal surgery; anaesthesiology; equine medicine and surgery; agriculture animal medicine; animal reproduction; and small animal emergency and critical care.

Extramural work between teaching periods and between clinical years involves two weeks in third year and two weeks in final year in the Veterinary Clinic and Hospital, including an out-of-hours component and additional attendance as directed by clinicians; twelve weeks of approved extramural work with an academic associate of the faculty, or other approved experience during the third and final years; and one week at the Rural Veterinary Centre, Maffra. This work must be completed by the end of second semester of final year.

Assessment: Clinical rotations, including Veterinary Public Health assignments (80%) and two 15-minute oral/practical examinations at the end of semester, covering clinical and applied aspects of professional practice (20%). Students are required to pass all components of assessment including all clinical rotations.

Fourth year

Fourth-year coordinator: Mr G A Edwards

Clinical Sciences

250-418 Dogs, Cats & Miscellaneous Pets 2

Credit points: 6.25

Coordinator: Dr Linda Abraham

Contact: 60 lecture hours. Estimated total time commitment 112 hours (minimum) *(Semester 1)*.

Description: Students completing Dogs, Cats and Miscellaneous Pets 2 should: be familiar with breed and behavioural characteristics of small companion animals; possess the essential information on diseases of small animals on which to approach a diagnosis based on epidemiology and clinical signs in an individual animal or group of animals; be able to interpret and utilise the results of laboratory tests in making a diagnosis; be able to devise appropriate forms of therapy or management; be able to devise strategies for prevention and control of disease in small animals; be aware of the public health implications of zoonoses of pet animals; and be aware of disease prevention for laboratory animals and animal welfare issues in research and the community.

This subject continues to examine diseases and preventive medicine of dogs and cats and miscellaneous small pets. Topics include diseases of the gastrointestinal tract, cardiorespiratory diseases, urogenital diseases, dermatology, poisonings, anaemias, nutrition, perinatal medicine, introductory oncology, miscellaneous small pets, greyhound medicine.

Assessment: One 3-hour written paper at the end of semester (100%).

250-419 Horses 2

Credit points: 6.25

Coordinator: Sally Church

Contact: 30 lecture hours and up to 25 practical/tutorial hours. Estimated total time commitment 83 hours (minimum) *(Semester 1)*.

Description: Students completing this subject should: have a sound knowledge of the common equine diseases and diagnostic procedures; be able to conduct a thorough and logical clinical investigation, based on the presenting sign(s), interpret the findings and arrive at a reasonable diagnosis; be able to provide adequate treatment for all problems commonly encountered in equines; be able to implement all common disease prevention strategies; have a working knowledge of exotic equine infectious diseases most likely to threaten Australia and how to deal with a suspected case of same; be able to complete an appropriate pre-purchase or insurance examination and certificate.

Topics covered include assessment and management of horses with neurological signs, skin problems, cardiovascular problems, urinary tract problems, eye problems, anaemia, jaundice, oedema, weight loss, fever or exotic diseases; equine stud farm management and breeding; and special considerations for the assessment and management of neonatal and older foals.

Assessment: One 2-hour end of semester written paper (90%), two written equine case reports (5%) and assessment during the equine rotation (5%). Students are required to pass each individual component of assessment.

250-420 Cattle 2

Credit points: 6.25

Coordinator: Dr P D Mansell

Contact: Up to 30 lecture hours and up to 15 practical/tutorial hours. Estimated total time commitment 73 hours (minimum) *(Semester 1)*.

Description: Students completing this subject should be able to: collect a history and epidemiological information of relevance to an individual or herd case; and perform a thorough clinical examination; suggest a reasonable diagnosis and differential diagnoses from the history, epidemiology, clinical signs and lesions observed in an individual cow, calf or bull, or a herd of cattle; recommend appropriate ancillary laboratory tests, submit a detailed request for a laboratory examination, and interpret the results of any tests or laboratory reports; ascertain if the welfare of a cow or herd is being compromised; specify appropriate therapy or other course of action; provide the owner with a prognosis; advise the owner of the appropriate withholding periods for milk or of the animal from slaughter when antibiotics, drugs or chemicals are administered or applied; explain to the owner the economic costs of the disease; recommend measures to control a disease in a herd or other population; recommend measures to prevent a disease from occurring; prepare a written report for the owner or attendant, or a referring veterinarian; and demonstrate competence in the analysis of records of production, health and reproductive performance of cattle herds; and present clinical case material in a professional manner.

This subject continues to examine diseases and production management of cattle. Topics include clinical examination, infectious, metabolic, nutritional and parasitic diseases; diagnosis, treatment and prevention; and herd management and economics.

Assessment: One 2-hour end of semester written examination (90%) and assessment during the cattle component of the ruminant rotation (10%). Students are required to pass each individual component of assessment.

250-421 Small Ruminants 2

Credit points: 6.25

Coordinator: Mr Patrick Kluver

Contact: 20 lecture hours and up to 10 practical/tutorial hours. Estimated total time commitment 58 hours (minimum) *(Semester 1)*.

Description: Students completing this subject should be able to: suggest a list of differential diagnoses, in descending order of probability, from the history, epidemiology, clinical signs and/or lesions observed in individual sheep, goats, deer or camelids, or in flocks of these animals; submit appropriate samples for laboratory testing and interpret the test results for diseases and production limiting conditions that affect sheep, goats, deer and camelids; design a prevention program for diseases and production limiting conditions that commonly affect sheep, goats, deer and camelids; ascertain if the welfare of sheep, goats, deer or camelids is compromised; develop a disease control program that includes a realistic prognosis, treatment advice, consideration of chemical residues, and for commercial flocks an economic appraisal of the proposed program; develop skills in report writing; and develop skills in verbal presentations.

This subject continues to examine diseases, preventive medicine and production of sheep, other small ruminants and camelids. Topics include clinical examination; infectious, metabolic, nutritional, reproductive and parasitic diseases; and diagnosis, treatment and prevention.

Assessment: One 2-hour end of semester written paper (90%) and assessment during the small ruminant and camelid component of the ruminant rotation (10%).

250-422 Birds and Non-Domestic Animals

Credit points: 6.25

Coordinator: Prof I Beveridge/Dr A Noormohammadi

Contact: 42 lecture hours. Estimated total time commitment 70 hours (minimum) *(Semester 1)*.

Description: At the end of this course students should: be aware of the management and welfare issues associated with the keeping of poultry and other birds; be aware of the variety of diseases affecting poultry and other birds; understand the factors influencing outbreaks of disease in flocks and/or individual animals; be able to suggest a probable diagnosis/differential diagnosis from the history, epidemiology, clinical signs and gross post-mortem lesions; be able to recommend appropriate ancillary tests to facilitate a definitive diagnosis and prognosis; be able to specify appropriate therapy or other course of action for affected flocks and/or individual animals; be able to recommend appropriate measures for disease control and/or prevention; know the statutory regulations applicable to the husbandry, welfare, disease control and use of therapeutic substances/vaccines in these animals; be familiar with the various groups of Australian mammals; possess the essential information to be able to clinically examine and make a diagnosis of disease in non-domestic mammals; understand specific features of the husbandry of these animals as they relate to disease prevention and the management of clinically ill animals; be familiar with the legislation governing protected animals, particularly legislation with specific veterinary involvement; be familiar with the husbandry, clinical examination and the principal diseases of reptiles; and be familiar with the principal features of the management of farmed and aquarium fish, be able to carry out a clinical examination, diagnose and treat specific diseases of fish.

Diseases of birds: topics include clinical signs, diagnosis, pathogenesis and epizootiology of diseases in individual animals as well as affected flocks; poultry management, nutrition, preventive medicine; and cage and aviary bird medicine.

Diseases of non-domestic animals: topics include the role of the veterinary surgeon in wildlife work; characteristic anatomical features of various groups of native mammals; diseases and husbandry of marsupials including orphans; other native mammals; exotic (zoo) mammals; reptiles; veterinary role in regulatory activities and wildlife disasters; and diseases of fish.

Assessment: One 3-hour written paper Birds (60%) and Non-domestic animals (21%) and one 15-minute oral examination on Birds (19%) all at the end of semester. Students are required to pass all three components of assessment.

250-423 Professional Practice 2 (Hospital)

Credit points: 18.75

Coordinator: Dr Steven Holloway

Contact: 10 lecture hours, up to 300 practical/tutorial hours and extramural work. Estimated total time commitment 410 hours (minimum) *(Semester 1)*.

Description: Lectures will consider law and ethics (legal responsibilities); accreditation; industrial relations; insurance and professional indemnity; communication with clients and colleagues; referrals and use of specialists; business systems and practice management; management of personnel; quality assurance; and HACCP.

Students undertake clinical rotations, clinical seminars and extramural work. Clinical rotations are as described in 250-319 Professional Practice 1. Clinical seminars require oral and written presentations of at least one case report.

Extramural work between teaching periods and between clinical years consists of two weeks in third year and two weeks in final year in the Veterinary Clinic and Hospital, including an out-of-hours component and additional attendance as directed by clinicians; twelve weeks of approved extramural work with an academic associate of the faculty, or other approved experience during the third and final years; and one week at the Rural Veterinary Centre, Maffra.

Assessment: Clinical rotations (70%), clinical seminar, oral and written case report (15%) and two 15-minute oral examinations (15%). Students are required to pass all components of assessment.

250-424 Professional Practice 3 (Electives)

Credit points: 50

Coordinator: Associate Professor B W Parry

Contact: Up to 480 practical/tutorial hours (12 weeks) *(Semester 2).*

Description: Blocks of approved practical work in areas selected by the student. This may be undertaken in the Veterinary Clinic and Hospital, specialised academic units, research laboratories or approved practices. This enables students to spend extra time in areas of particular interest to them. Thus they could spend time in a specific practice (such as agricultural animal, aquatic animal, equine, laboratory animal, small animal, or zoo animal practice); or a specific discipline (such as basic research, diagnostic imaging, emergency and critical care, internal medicine, stud work, surgery, ophthalmology, pathology or theriogenology).

Assessment: Satisfactory performance in each of four elective rotations (blocks) undertaken (each 10%). Six 15-minute oral/practical examinations covering all the clinical and applied aspects of all courses and disciplines in the two clinical years (each 10%). Students must pass each oral examination and each elective rotation. The 17 weeks of extramural work requirement (see Professional Practice 1 and 2) undertaken after completion of second year must be completed by the formal assessment in this subject. Reports of academic associates will be taken into account.

Bachelor of Animal Science

250-478 Vet.Anatomy Project

Credit points: 90

Coordinator: T.B.A.

Semester: Semester 1, repeat 2

Content: An original, supervised research project.

Assessment: A written report at the end of October presented in the form of **either** a thesis of 20 to 30 A4 pages in length; **or** in the format of an article, or articles, for publication in a scientific journal and including an introduction and general discussion. The journal style should be selected from a prestigious international journal relevant to the topic of the project.

250-479 Vet.Anatomy Seminar

Credit points: 10

Coordinator: T.B.A.

Semester: Semester 1, repeat 2

Content: Preparation for a seminar presentation on the topic of the project as part of the Faculty's normal research seminar program.

Assessment: A 30-minute oral presentation delivered no later than two weeks before the end of October. Marking is based on the oral presentation; the use of audio-visual aids; and discussion and response to the audience in answering questions.

250-480 Vet.Microbiology Project

Credit points: 90

Coordinator: Professor G F Browning

Semester: Semester 1, repeat 2

Content: As for 250-478.

Assessment: As for 250-478.

250-481 Vet.Microbiology Seminar

Credit points: 10

Coordinator: Professor G F Browning

Semester: Semester 1, repeat 2

Content: As for 250-479.

Assessment: As for 250-479.

250-483 Vet.Clinical Sciences Project

Credit points: 90

Coordinator: Associate Professor B W Parry

Semester: Semester 1, repeat 2

Content: As for 250-478.

Assessment: As for 250-478.

250-482 Vet.Clinical Sciences Seminar

Credit points: 10

Coordinator: Associate Professor B W Parry

Semester: Semester 1, repeat 2

Content: As for 250-479.

Assessment: As for 250-479.

250-494 Vet.Physiology Project

Credit points: 90

Coordinator: T.B.A.

Semester: Semester 1, repeat 2

Content: As for 250-478.

Assessment: As for 250-478.

250-484 Vet.Physiology Seminar

Credit points: 10

Coordinator: T.B.A.

Semester: Semester 1, repeat 2

Content: As for 250-479.

Assessment: As for 250-479.

250-495 Vet.Parasitology Project

Credit points: 90

Coordinator: Professor I Beveridge

Semester: Semester 1, repeat 2

Content: As for 250-478.

Assessment: As for 250-478.

250-485 Vet.Parasitology Seminar

Credit points: 10

Coordinator: Professor I Beveridge

Semester: Semester 1, repeat 2

Content: As for 250-479.

Assessment: As for 250-479.

250-496 Vet.Pathology Project

Credit points: 90

Coordinator: Professor R F Slocombe

Semester: Semester 1, repeat 2

Content: As for 250-478.

Assessment: As for 250-478.

250-486 Vet.Pathology Seminar

Credit points: 10

Coordinator: Professor R F Slocombe

Semester: Semester 1, repeat 2

Content: As for 250-479.

Assessment: As for 250-479.

250-497 Vet.Biochemistry Project

Credit points: 90

Coordinator: Dr I D Walker

Semester: Semester 1, repeat 2

Content: As for 250-478.

Assessment: As for 250-478.

250-487 Vet.Biochemistry Seminar

Credit points: 10

Coordinator: Dr I D Walker

Semester: Semester 1, repeat 2
Content: As for 250-479.
Assessment: As for 250-479.

250-491 Veterinary Pharmacology Project

Credit points: 90
Coordinator: Dr Elizabeth Tudor
Semester: Semester 1, repeat 2
Content: As for 250-478.
Assessment: As for 250-478.

250-490 Veterinary Pharmacology Seminar

Credit points: 10
Coordinator: Dr Elizabeth Tudor
Semester: Semester 1, repeat 2
Content: As for 250-479.
Assessment: As for 250-479

250-493 Animal Hlth Manag.& Welfare Project

Credit points: 90
Coordinator: Professor Ian Beveridge
Semester: Semester 1, repeat 2
Content: As for 250-478.
Assessment: As for 250-478.

250-492 Animal Hlth Manag.& Welfare Seminar

Credit points: 10
Coordinator: Professor Ian Beveridge
Semester: Semester 1, repeat 2
Content: As for 250-479.
Assessment: As for 250-479.