The University of Sydney

Faculty of Veterinary Science Handbook 2006

University dates

University semester and vacation dates 2006

Summer School	
Lectures begin	Tuesday 3 January
Lectures end	Friday 3 March
Semester One	
Lectures begin	Monday 6 March
AVCC common week/non-teaching Easter period	Friday 14 April to Friday 21 April
Last day of lectures	Friday 9 June
Study vacation: one week beginning	Monday 12 June to Friday 16 June
Examination period	Monday 19 June to Saturday 1 July
Semester ends	Saturday 1 July
AVCC common week/non-teaching period	Monday 3 July to Friday 7 July
Semester Two	
Lectures begin	Monday 24 July
AVCC common week/non-teaching period	Monday 25 September to Friday 29 September
Last day of lectures	Friday 27 October
Study vacation	Monday 30 October to Friday 3 November
Examination period	Monday 6 November to Saturday 18 November
Semester ends	Saturday 18 November

Last dates for withdrawal or discontinuation 2006

Semester One units of study	
Last day to add a unit	Friday 17 March
Last day for withdrawal	Friday 31 March
Last day to discontinue without failure (DNF)	Friday 28 April
Last day to discontinue (Discontinued - Fail)	Friday 9 June
Semester Two units of study	
Last day to add a unit	Friday 4 August
Last day for withdrawal	Thursday 31 August
Last day to discontinue without failure (DNF)	Friday 8 September
Last day to discontinue (Discontinued - Fail)	Friday 27 October
Last day to withdraw from a non standard unit of study	By the census date of the non standard unit of study which must not be earlier than 20 per cent of the way through the period of time during which the unit is undertaken.
	Details are in the session calendar on the timetabling website **http://web.timetable.usyd.edu.au**.

These dates (and any updates) are also available at:
www.ugYdxdu.aB/fstodent/on dergrad/apply/scm/dates.shtml

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This book (and other handbooks) can also be found at: www.usyd.edu.au/handbooks

The University of Sydney

Faculty of Veterinary Science Handbook 2006.

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The information in this handbook is subject to approval and/or change by the appropriate faculty of the University. Students should always check the accuracy of the information with faculty staff.

Produced by the Publications Office, The University of Sydney.

Faculty of Veterinary Science

Vision

A world leader in veterinary education and research, focused on the health and welfare of animals and benefit to the community.

Values

Student life-long learning, supported by inspirational teaching

Research excellence creating new knowledge

Service to the profession and the community, as we value and develop our key relationships

A culture built on academic excellence, integrity, respect and encouragement

Animal well being guiding our work

Mission

We will educate and graduate outstanding veterinarians.

We will deliver a high quality, learning environment with a dynamic and responsive curriculum delivered by inspirational academic staff.

We will undertake high quality research and the establishment of research groups of excellence.

We will mentor our graduate students and develop a sense of ongoing commitment to and involvement with their university.

We will manage elite veterinary teaching hospitals where student learning opportunities are maximised, and excellent service is provided to the community.

We will be at all times informed and balanced advocates for the responsible care of animals.

We will work to ensure the financial viability and sustainable future of the Faculty.

We will have clear direction and effective leadership that maintains open avenues of consultation with students, staff and the wider university community.

Faculty of Veterinary Science

Culture statement

'We commit ourselves to developing and strengthening a unified culture that embodies:

A strong sense of common purpose supported by open and honest communication

Mutual trust and respect between all staff and students regardless of position

Fairness for all staff and students with recognition and reward for their achievements

A willingness and capability to adapt to internal and external change

Pride in the Faculty's heritage and belief in our core values

Everyone accepting personal responsibility and shared leadership for our future.[9]

Leadership and innovation in Veterinary Science

Contents

Faculty of Veterinary Science Handbook

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

Welcome from the Dean

It is my pleasure to welcome you to the Faculty of Veterinary Science. Many congratulations on your admission - now you can start fulfilling that dream of becoming a veterinarian. In the next five years you can expect to work hard, but the training will be focused and the rewards high. Upon graduation you will have the knowledge and understanding that will prepare you for success in the veterinary profession. You will, of course, be responsible for showing leadership in all matters relating to animals. As Australia's first university founded in 1850, The University of Sydney is steeped in tradition, but is also mindful of the need to respond to the changing needs of the community and country. The Faculty of Veterinary Science shares that philosophy and is now celebrating more than 90 years of continuous education of world-class veterinarians. You will be instilled with that pride in our tradition and that ability to adapt to the changing needs of animals and their owners.

The excellent staff in the Faculty are committed to providing you with the best possible learning experience in the years to come. They will guide you through the difficult times and prepare you for life-long learning that is so necessary for a member of the veterinary profession. In particular, the Sub-Dean for Students and the supportive staff in the Faculty Office will be essential contacts to enable you to learn effectively. They will assist you in making contact with a wide range of University services that help students who may experience medical, financial, emotional or learning difficulties.

At the very core of your training will be the care and welfare of animals. During your years in the Faculty you will be working with a wide range of animal species and at all times there will be obligations to ensure the highest standards of care for these animals. You will also be given the responsibility early on in the course to act as ambassadors for the Faculty when visiting veterinary practices, farms and other animal facilities. Later in the course you will be involved in the two Veterinary Teaching Hospitals, in Sydney and at Camden, and in external partner practices run by private practitioners. In these clinics you will take part in the treatment of companion and production animals under the supervision of experienced veterinarians. The Faculty's Veterinary Teaching Hospitals also employ many veterinarians with specialist qualifications and you will be trained by them in state-of-the-art methods of diagnosis and therapy.

In this handbook you will find descriptions of study requirements for the Bachelor of Veterinary Science degree, as well as for graduate degrees within the Faculty. While most of our graduates find satisfying careers in clinical practice, the broad knowledge and skills acquired during the five years can open up a wide range of careers. One of these areas is research and the Faculty provides an opportunity for students to interrupt their studies after the later year of their course to undertake one year of supervised research in some area of interest. Successful completion of a small thesis embodying the results of this research leads to the award of a Bachelor of Science (Veterinary) degree. Over the past seven years, more than 40 students have completed this degree and found it to be one of the most satisfying things that they have done, leading to new career aspirations and research opportunities. The requirements for this one-year degree are described in the handbook.

Knowledge in the broad area of Veterinary Science is expanding at a tremendous rate, and it is important to have access to information on new diseases not only in Australia but internationally as well. To deal with this there is an ongoing curriculum review and our aim is to give you the tools to undertake independent learning, which will by necessity have to continue after you graduate. We have made a major commitment, together with the Library and the Postgraduate Foundation in Veterinary Science, to the development of a unique on-line resource, the Veterinary Education and Information Network, VEIN. VEIN will be a key resource during your years in the Faculty and afterwards when you are in practice anywhere in the world. To ensure that our curriculum is meeting your needs, you also will be asked to provide regular evaluation of your courses, which is very important if we are to ensure that we can provide you with the very best possible teaching and learning opportunities.

On behalf of all the staff, I reiterate our welcome to the Faculty and to your first step in becoming professional colleagues in what is a noble and rewarding task - the care and welfare of animals.

Professor Leo Jeffcott
Dean of Veterinary Science

1. Faculty of Veterinary Science

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

Veterinary Science Contact Information

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University of Sydney NSW
2006 Australia

Phone: +61 2 9351 2441 undergraduate enquiries
Phone: +61 2 9351 6933 postgraduate enquiries
Fax:+61 2 9351 3056
Email: undergraduate enquiries vetsci@vetsci.usyd.edu.au
Postgraduate enquiries: pg@vetsci.usyd.edu.au
Web: www.vetsci.usyd.edu.au (http://www.vetsci.usyd.edu.au)

Camden
Phone:+61 2 9351 1665
Fax:+61 2 9351 1693
Email: noelenew@camden.usyd.edu.au
Email: rhondamc@camden.usyd.edu.au

Staff

Dean
Professor Leo Jeffcott

Pro-Dean
Professor Chis Maxwell

Faculty Manager
Shirley Ray

Business Manager
TBA

Associate Deans

Research
Professor Gareth Evans

Staff
TBA

Students
Dr Rhondda Canfield

Teaching and Learning
Associate Professor Jennifer Hodgson

Sub Deans

Bachelor of Animal & Veterinary Bioscience Teaching
Professor Chris Moran

Bachelor of Veterinary Science Teaching
Associate Professor David Evans

Animal Welfare
Dr Robert Dixon

BSc(Vet)
Dr Glenn Shea

Camden Campus
TBA

e-Learning
Dr Paul Sheehy

Postgraduate Coursework
Hannah Forsyth

Postgraduate Education & Research Training
Dr Merran Govendir

Research Development
TBA

Sydney Campus
Associate Professor Nicholas Sangster

Undergraduate Admissions
Dr Paul Hopwood

Academics

Professors
Paul Canfield, BVSc PhD MRCPath DVSc, FACVSc MRCVS. Appointed 2004
Gareth Evans, BA *Oxon* PhD. Appointed 2002
David Fraser, BVSc PhD *Camb* . Appointed 1986
William Fulkerson, BAgrSci *WA* PhD. Appointed 2001
David Hodgson, BVSc PhD DipACVIM, FACBS FACSM MACVSc MRCVS. Appointed 2000
Leo Jeffcott, MA *Camb* BVetMed *Lond* PhD *Lond* DVSc *Melb* VetMedDr *Uppsala,* FRCVS. Appointed 2004
Chis Maxwell, BScAgr PhD. Appointed 2003
Chis Moran, BSc PhD *ANU.* Appointed 2005
Frank Nicholas, BScAgr PhD *Edin* . Appointed 2002
Herman Raadsma, MScAgr PhD. Appointed 2000
Tom Scott, BScAgr *Saskatchewan* MScAgr *McGill* PhD *Syd* . Appointed 2003
Richard Whittington, BVSc PhD, MACVSc. Appointed 2002

Hughes Professor
Alan Husband, BscAgr DSc *N'cle* PhD, FASM. Appointed 1992

Associate Professors
Andrew Dart, BVSc DVCS DipACVS DipECVS
David Emery, BVSc BSc(Vet) PhD
Anthony English, BVSc PhD *Qld,* FACVSc RFD
David L Evans, BVSc PhD
Jennifer Hodgson, BVSc DipVetPath PhD *Washington State*
John House, BVMS DipACVIM PhD *UC, DAVIS*
Geraldine Hunt, BVSc MVetClinStud PhD, FACVSc
Nicholas Sangster, BVSc BSc(Vet) PhD
Rosanne Taylor, BVSc PhD
Peter Windsor, BVSc PhD
Peter Wynn, MRurSc DipEd *NE* PhD
R Max Zuber, BVSc, FACVSc

Senior Lecturers
Vanessa Barrs, BVSc(Hons) MVetClinStud, FACVSc (Feline Medicine)
Julia Beatty, BSc(Hons) BVetMed PhD, FACVSc
Christina Dart, DVetMed Zwn'c/i *MVSc DVSc Guelph* DipACVA
Robert Dixon, BVSc BSc(Vet) PhD *Massey*
Susan Hemsley, BVSc MVSc PhD GradCertEdStud
Patricia Holyoake, BVSc(Hons) *Melb* PhD
Paul Hopwood, DipTertiaryEd *NE* BVSc PhD, MRCVS
Michelle Hyde, BScAgr PhD
Mark Krockenberger, BSc(Vet) BVSc PhD GradCertEdStud, MACVSc
Craig Macpherson, BVSc *Massey* MVCSt, FACVSc MAICD
Paul McGreevy, BVSc *Brist* PhD, MACVSc MRCVS MAW
Tony D Mogg, BVSc(Hons) PhD *Qld* DipACVIM DipACVCP, FACVSc FAAVPT
Jacqui Norris, BVSc(Hons) MVS *Melb* PhD
Glenn Shea, BVSc PhD
Paul Sheehy, BScAgr PhD
Imke Tammen, DVMed *Hannover*
Jenny-Ann Toribio, BVSc PhD
Peter Thomson, MSc MAppStat *Macq* PhD

Lecturers
John Baguley, BVSc(Hons), MACVSc MBA
Katrina Bosward, BVSc BSc(Vet) PhD GradDipVetClinStud

Rhondda Canfield, BVSc PhD, MRCVS
Pietro Celi, DMV *Italy* PhD *WA*
Melanie Collier, BSc PhD *Leeds*
Jeff Downing, DipAgr BSc PhD *Macq*
Merran Govendir, BVSc PhD
Rachel Gray, BVSc PhD
Christine Hawke, BVSc(Hons) BSc(Vet) PhD
Wendy Muir, BScAgr(Hons) PhD
Jane Stevenson, BVetMed *Lond*, MRCVS
Peter C Thomson, MSc MAppStat *Macq* PhD (Biometry Lecturer)
Sanaa Zaki, BVSc(Hons), MACVS

Associate Lecturers
Russell Bush, BScAgr(Hons)

Clinic Staff

Clinic Directors

University Veterinary Centre - Camden
Andrew Dart

University Veterinary Centre - Sydney
Geraldine Hunt

Practice Coordinator [UVCS]
Hazel Bateman

Radiographer
Helen Laurendet, BSc(Appl), MIR

Veterinary Specialist
Christine Smith, DVM Diplomate ACVS
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Senior Registrars
Martine Perkins, BVSc(Hons), MACVS MRCVS
Tom Russell, BVMS, MRCVS MACVSc
Karen Hazell, BVMS, MACVS

Registrars
James Hart, BVSc
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Kieren Maddern, BVSc
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Clinical Residents
Christina Baxter, BVSc
Amy Lingard, BVSc
Kate Makin, BVSc
Lucy Shum, BVSc

Veterinary Interns UVCS
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Tina Knight, BVSc

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Jasmine Feeney, UVCS
Rhonda Foreman, UVCS
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Christine Houston, UVCS
Elizabeth Jones, UVCC
Lorena Munos, UVCS
Alison Nolan, UVCC
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Joanne Tapp, UVCS
Tara Wallace, UVCC

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Mitchell Burns, Sydney
Melinda Hayter, Camden
Warren King, Camden
Antonio Nastasi, Sydney
Renee Seery, Sydney
Nobel Toribio, Camden

Administration Staff

Business Manager
TBA

Research & Student Administration Manager
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Faculty Personnel Officer
Stephanie Stanyer

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Coordinator, Postgraduate Coursework
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Shannon Bennetts, Technical Assistant, Camden
Dhruba Chakravarty, Finance Office, Sydney
Helen Frappell, Personnel, Clinics
Jo-Anne Geist, Poultry Res Fdn, Camden
Michelle Heward, Camden
Elizabeth Kachembere, Pharmacy, UVCS
Karen Kilpatrick, UVCS Reception
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Rhonda McDonald, Receptionist, Camden
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Melanie Robson, Extramural Placements Coordinator, Faculty Office
Marion Saddington, Camden
Sandra Saville, Finance Assistant, Camden
Debbie Sheehan, UVCC
Meg Vost, VPHM, Sydney
Marie Wildridge, ReproGen, Camden
Diane Woods, UVCC
Helen Yeo, Extramural Placements Assistant, Faculty Office

Building Attendants Veterinary Science Conference Centre
William Cao
Russell Clifton

Information Technology

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David Liu

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Federico Costa

Computer Systems Officer, Camden
Chris Stimson

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Gerard Marcus

Technical Staff

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Kaylene Scrimgeour
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George Tsoukalas, PTHC
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Byron Biffin
Sherie Brooker
Sherry Catt
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Pauline Geale
Joy Gill
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Brian Harvey
Ron Henderson
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Maria Morte
Kerry Murdoch
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Angela Reeves
Natalie Schiller
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Jiri Tasler
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B ozena Jantulik

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Eileen Risby
Matthew Silverstein
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Principal Research Fellow
Peter Williamson, BSc(Hons) PhD

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Alexander (Sandy) McClintock, BA MSc PhD

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Matthew Hobbs, PhD
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Lisa Riley, PhD
Deborah Taylor, PhD
Kyall Zenger, PhD

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Lyrissa Di Fiore, PhD
Damien Higgins, PhD
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Yasmin Husaini
Reena Mehta, PhD
Amy Rogers
Diane Titmuss

Honorary Appointments

Emeritus Professors
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Michael M Bryden, BVSc *Qld* DScVM *Cornell* PhD DSc, FAIBiol
RM Butterfield, PhD DVSc *Qld* MVSc, FACVSc
MJ Edwards, MVSc *Liv* PhD DVSc, MRCVS MACVSc
John Egerton, BVSc *Qld* DipBact *Lond* DVSc

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Graeme Allan, MVSc DipACVRad, FACVSc
Chris Bellenger, BVSc PhD, FACVSc MRCVS, FRCVS, FECVS
John Black, BAgSc DipEd, PhD
Grahame Feletti, BA(Hons) *ANU* BSc *UNSW* PhD *NZ*
Graeme Kelly, BSc BVSc PhD

Adjunct Associate Professor
Ian Nielsen, BVSc, MACVSc

Adjunct Senior Lecturer
Karon Hoffmann, BVSc PhD
Paul Mills, BVSc *UQ* PhD *UQ*
Tracey Rogers, BVSc *UQ* DipEd PhD

Adjunct Lecturer
Robert Nicoll, BVSc BSc(Vet) DACVR

Visiting Professor
Stuart Reid, BVMS PhD DVM DipEdECVHP, FRSE MRCVS

Visiting Lecturers/Demonstrators
Anthony P Black, BVSc, FACVSc
David Clarke
Ken Mason
Jeffrey S Smith, BVSC DipACVO, FACVSc

Honorary Associate Professors
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Robert Love, MVSc PhD *Brun*, FACVSc

Honorary Senior Lecturer
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Honorary Associates
Linda Beeney, BArts PhD (Medicine)
Angus Cammeron, BVSc MVSc *Melb* PhD *Qld*
Mike Cannan, PhD GradDipEd
Yizhou Chen, PhD
Juliana Croitoru-Lamoury, BSc *France* PhD *France*
James Delia-Vedova, BVSc

Matthys Draisma, BVSc
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Jeffery Eppleston, BScAg MScAg PhD *UNSW* DipSolarSim (Amer Soc Photobiology) GradDipl *UNSW*
Suresh Gulati BSc *Panjab Uni, India* PGDipl *UNSW* MSc *Macq* PhD *UNSW*
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Ian Lean, BVSc
Joan Lloyd, DVM *Canada* MVetStud PhD
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Ahmad Rabiee, BVSc DVM PhD
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Keith Walker, BVSc PhD
Jerry Wei, MApplSci BSc *Taiwan*
Phillip Widders, BSc BVSc PhD *Bristol*

2. Introduction to undergraduate courses

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

Bachelor of Veterinary Science, BVSc

(see also Bachelor of Veterinary Science units of study)

Veterinary Science at the University of Sydney produces graduates with the knowledge and skills to pursue many career options. The five-year course has a strong emphasis on animal handling skills, and includes teaching programs in a wide range of animal industries. Students spend twelve weeks on horse, pig, beef and dairy cattle, sheep, and poultry farms. These experiences develop competency in animal management. Classes in dog and cat handling are also included in the course.

There is a strong commitment to provision of opportunities for students to spend time in veterinary practices and these extramural links with practising veterinary surgeons are an important component of the BVSc program. The Faculty is committed to a variety of teaching methods, including lectures, laboratory practical classes, tutorials, case studies, workshops, computer assisted learning, and practical demonstrations. In years 4 and 5 students observe and participate in clinical activities at the University Veterinary Centres located at Sydney and Camden. Clinical cases and methods of dealing with real-life veterinary problems are emphasised in the course.

In Year 5 all students are required to undertake rotations at University Veterinary Centres (Sydney and Camden), Extramural Small Animal Practices, Extramural Rural Practices, Rural Lands Protection Boards and at other sites on nomination.

Students are responsible for funding their transport and accommodation expenses to complete each rotation.

The Faculty is committed to a course that will provide students with opportunities to learn about clinical veterinary science and teaching material is organised to demonstrate how basic sciences such as chemistry and biochemistry are applicable to veterinary science. The units of study are described in chapter 3.

General Information on admissions, enrolment and other matters are included in Section 8 of this handbook. Students should also contact the Faculty Office for information on admission procedures and other course details.

Clinical experience

The Faculty of Veterinary Science maintains teaching hospitals at the University Veterinary Centres at Sydney and Camden, where students and veterinarians work together in a clinical teaching and learning environment. Referral and primary accession cases are seen at both sites, and the University Veterinary Centre at Camden also provides veterinary services to farms in the region.

A wide range of companion animals, farm animals, racing animals, exotic and native species are seen. Visiting specialists complement Faculty specialists in most disciplines in providing an excellent learning environment for veterinary students. Knowledge of medicine, surgery, anaesthesia, radiology, clinical pathology and production animal issues are developed with small group teaching.

Practical work requirements

Students are required to complete practical work in animal husbandry in the vacation periods in the first three years of the course. All arrangements for placements are made through the Faculty Office.

Students in Year 5 of the course will complete a minimum of 36 weeks of clinical rotations at approved external veterinary practices and the University Veterinary Centres (Sydney and Camden).

Assumed knowledge for school leavers

NSW Higher School Certificate or equivalent level Mathematics, Chemistry and Physics. Biology would be a distinct advantage.

BVSc Honours

Honours First Class and Honours Second Class may be awarded at graduation. Students who are eligible to pursue honours will enroll in one of the honours units of study instead of the two standard Elective Rotations as follows:

VETS 5355 10 credit points Prerequisites	Honours Elective Research Veterinary Science Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. VETS 5331 Preparation for Veterinary Practice. WAM => 70.
VETS 5356 10 credit points Prerequisites	Honours Elective Clinical Research Veterinary Science Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. VETS 5331 Preparation for Veterinary Practice. WAM => 70.
VETS 5357 10 credit points Prerequisites	Honours Elective ILP Veterinary Science Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. VETS 5331 Preparation for Veterinary Practice. WAM => 70.

Bachelor of Animal and Veterinary Bioscience, BAnVetBioSc

(see also Bachelor of Animal and Veterinary Bioscience units of study)

The new Bachelor of Animal and Veterinary Bioscience degree involves the study of the structure and function of animals, their management and welfare in an agricultural, para-veterinary, laboratory or wildlife context. Its scope is wide and students acquire a sound education in general science together with in-depth knowledge of fields specifically relevant to animal science and production. Students learn how to apply the knowledge and principles of science to the understanding and management of the production, processing and marketing of animal products and the management and conservation of our natural resources, including native and endangered species. Emphasis is placed on the development of analytical, quantitative, computing and communication skills, as well as practical animal handling and management. Specialist research skills are gained in the fourth year through the completion of a research project.

This degree provides an excellent alternative to Veterinary Science for students seeking a professional career working with animals. It covers a wide spectrum of aspects in animal production, health and management.

Assumed knowledge for school leavers

Mathematics, Chemistry and Biology

Areas of Study:

Will include animal genetics, animal nutrition, animal reproduction, animal structure and function, cattle science and production, equine science and management, pig and poultry science and production, sheep science and production, animal health and disease, animal biotechnology and molecular biology.

Professional experience:

Students are required to complete 60 days of approved professional experience and field excursions.

Career opportunities:

Examples include practice, management or research in: conservation of endangered species, zoo animal science, native animal research, animal health and quarantine, sustainable agriculture, animal breeding, animal nutrition, molecular genetics (animal and human), the pharmaceutical industry, medical research, reproductive technology (animal and human), biotechnology (animal and microbial), microbiology, food science, intensive and extensive animal production enterprises, horse, cattle and sheep studs, rural consultancy and extension (domestic and international), marketing, agricultural and veterinary chemicals, media and journalism, National Parks and Wildlife, secondary and tertiary education, Government departments (eg. Department of Agriculture, Forestry and Fisheries).

Bachelor of Science (Veterinary), BSc(Vet)

(see also Bachelor of Science (Veterinary) units of study)

After the completion of third or fourth year students may undertake one year of supervised research in an area of veterinary science. Graduates are awarded a BSc(Vet).

Units of study

Units of study are subject to alteration. Units of study and arrangements for units of study, including staff allocated, as stated in this or any other publication, announcement or advice of the University, are an expression of intent only and are not to be taken as a firm offer or undertaking. The University reserves the right to discontinue or vary such units of study, arrangements or staff allocations at any time without notice.

Coordinators

The coordinator for each unit of study is indicated below the credit point value. These are subject to change.

Books

Students are advised not to buy textbooks until lectures commence and lecturers recommend the preferred books.

3. Units of study

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

Bachelor of Veterinary Science (BVSc)

YEARl

VETS 1006 **Animal Husbandry 1A**
5 credit points. B V Sc. Dr Paul McGreevy. **Session:** Semester 1. **Classes:** Lectures: 43 hours.Practicals: 24 hours. **Assessment:** Intrasemester: 3 items of written assessment totalling 1,000 words (45%). End-of-semester: 2 hour examination (55%). Other: Non-barrier assessment of cat and dog handling.
This unit of study covers aspects of animal husbandry, welfare and management of: horses - their characteristics and management; pig and poultry industries in Australia and production of meat and eggs; cats, dogs and cage and aviary birds - breeds and their management. A series of practical classes including animal training, urban animal management as well as handling of pocket pets, dogs and cats.
Textbooks
VETS 1006 Unit of Study Manual should be purchased. Students should inspect copies of the following books in the library before purchasing those that suit them best.
Gardner JAA. et al. ed. Pig Production in Australia. 2nd edn. Butterworths, 1990.
Houghton-Brown J. Powell-Smith VV. Pilliner S. Horse and Stable Management. Blackwell Publishing, Oxford, 1997.
Page S. Cat Owners Manual. Fog City Press.
McGreevy P. ed. Dog Lovers Companion. Herron Books, Brisbane.
North MO. Bell DD. Commercial Chicken Production Manual. 4th edn. AVI Publishing Company, 1990.
Reid RL. A Manual of Australian Agriculture. 5th edn. Heinemann, 1990.
Sainsbury D. Animal Health. 2nd edn. Blackwell Science, 1998.

VETS 1013 **Cell Biology 1A**
4 credit points. B V Sc. Dr Paul Sheehy. **Session:** Semester 1. **Classes:** Lectures: 38 hours.Practicals: 10 hours. **Assessment:** Intrasemester: Assignment (20%). End of Semester: 1 hour written exam (65%). Other: Cytology Group Learning Exercise (15%).
This unit will introduce students to the biology of the cell. Topics include cell structure and cellular metabolism. The cell structure component includes a description of cell membranes and organelles and the cellular metabolism component includes a discussion of metabolic pathways. Clinical material is used to illustrate normal structure and function.
Textbooks
Alberts B. et al. Essential Cell Biology. 2nd edn. New York: Garland Publishing, 2004.
Cell Biology 1A Handbook.

CHEM 1405 **Chemistry**
6 credit points. B An Vet Bio Sc, B Anim Sc, B V Sc. Dr Adrian George. **Session:** Semester 1. **Classes:** Lectures: 52 hoursPracticals: 27 hours (9 x 3 hr classes). **Assumed Knowledge:** HSC Chemistry. **Assessment:** Intrasemester: 4 x Quizzes (15%), Lab work (10%)End of semester: 3 hr Exam (75%).
This is a one semester unit of study designed to provide (i) a suitable foundation for subsequent units of study such as biochemistry, animal nutrition, physiology and pharmacology, and (ii) a chemical background that will aid in the understanding, diagnosis and treatment of disease. It covers chemical theory, inorganic, physical, and organic chemistry with many examples from biological areas. It pre-supposes a satisfactory prior knowledge of HSC Chemistry. A total of 52 hours of lectures comprising 28 lectures in inorganic and physical chemistry and 24 lectures in organic chemistry.
Textbooks
Detailed information about prescribed texts is available from the School of Chemistry.

VETS 1021 **Professional Practice 1A**
3 credit points. B V Sc. Dr Rhondda Canfield. **Session:** Semester 1. **Classes:** 9 workshop sessions of 2 hours and 18 lectures of 1 hour. **Assessment:** Intrasemester only: Assignments and quiz.
This course aims to introduce students to the veterinary profession and adjust to life in the faculty. The unit should enhance the ability to use libraries, information technology and other resources and enable students to acquire the skills and knowledge necessary for becoming an effective, reflective and self-motivated learner. Students will develop communication skills and an understanding of team work activities.
Students will learn about the history of veterinary science and its major achievements and the wide diversity of occupations and opportunities within the profession. Students will learn how to perform a basic physical examination. Animal Welfare is introduced and the main issues for veterinary students and veterinarians identified. This unit emphasises and encourages collaborative learning, clear communication, professional behaviour and self-care, and provides a background for other units in Year 1.
Textbooks
Unit of Study Handbook.

VETS 1014 **Veterinary Anatomy and Physiology 1A**
6 credit points. B V Sc. Dr Paul Hopwood. **Session:** Semester 1. **Classes:** Lectures: 32 lectures.Practicals: 37 hours.Tutorials: 12 hours. **Assessment:** Intrasemester: April (20%) Anatomy, May (15%) Physiology.End of Semester: June (65%) 2.5 hour written examination anatomy and physiology.
Anatomy and histology refer to studies of the structure of cells, tissues and organs. Physiology refers to processes involved in normal cell, tissue or body function, and biological pathways involved in the maintenance of a healthy animal.

In this unit the gross anatomy and histology of the musculoskeletal system of the dog is studied together with the histology of epithelial tissue and connective tissue including blood. Basic principles of physiological control, water and electrolyte balance and the physiology of nerve and muscle cells complete the course. Clinical material is used to illustrate normal structure and function. Examples of structural and physiological abnormalities that cause dysfunction and disease in animals are included. Computer based tutorials and assessments will be used to assist.
Textbooks
Cunningham JG. Textbook of Veterinary Physiology. 3rd edn. Sydney: WB Saunders Co. 2002.
Dellmann H, Eurell J. Textbook of Veterinary Histology. 5th edn. Williams and Wilkins, 1998.Dyce KM. Sack WO. Wensing CJ. Textbook of Veterinary Anatomy. 3rd edn. Saunders. 2002.
Evans HE. Miller's Anatomy of the Dog. 3rd edn. Philadelphia: Saunders 1993.Practical Class ManualReference BooksList provided by staff.

VETS 1019 **Animal Husbandry IB**
7 credit points. B V Sc. Dr Pietro Celi. **Session:** Semester 2. **Classes:** Lectures: 32 hours.Practical classes: 60 hours. **Assumed Knowledge:** Basic understanding of biological principles. **Prerequisites:** VETS 1006 Animal Husbandry 1A. **Assessment:** Intrasemester: Practical animal handling skills examination (10%).End of Semester: 3 hour written paper (82%).Other: Plant collections (8%).
This unit of study covers aspects of ruminant management and production, especially sheep, beef and dairy cattle. The agronomic and ecological principles of the production and utilisation of native and sown pastures are also covered.
Full day practical handling classes are conducted at the University Farms, Camden, with horses, pigs, poultry, sheep, beef and dairy cattle and pastures. Practical classes must be attended by all students and are assessed.
Textbooks
Students should consult lecturers before purchasing text or reference books.
Anderson RS, Edney ATB. Practical Animal Handling. Pergamon Press, 1991.
Battaglia RA. Handbook of Livestock Management. Prentice Hall, 2001.
Cottle DJ. ed. Australian Sheep and Wool Handbook. Inkata Press, 2000.
Gardner JAA. et al. ed. Pig Production in Australia. 2nd edn. Butterworths, 1990.
Huntington PJ, Cleland F. Horse Sense: The Australian Guide to Horse Husbandry. Agmedia, 1992.
North MO, Bell DD. Commercial Chicken Production Manual. 4th edn. AVI Publishing Company, 1990.
Reid RL. A Manual of Australian Agriculture. 5th edn. Heinemann, 1990.
Sainsbury D. Animal Health. 2nd edn. Blackwell Science, 1998.
Animal Husbandry IB Handbook.

VETS 1018 **Cell Biology IB**
6 credit points. B V Sc. Dr Paul Sheehy. **Session:** Semester 2. **Classes:** Lectures: 43 hours. Practicals: 24 hours.Tutorials/Group Work: 4 hours. **Assumed Knowledge:** VETS 1013 Cell Biology 1A. **Assessment:** Intrasemester: Mid Semester Inquiry Task (25%).End of Semester: 2 hour written paper (65%).Other: Group Learning Activities (10%).
In this unit the study of the molecular biology of the cell is extended to include gene expression, recombinant DNA technology, membrane structure and function, cell cycle, cell differentiation and cancer.

Clinical material is used to illustrate normal structure and function.
Textbooks
Alberts B. et al. Essential Cell Biology. 2nd edn. New York: Garland Publishing, 2004.
Cell Biology IB Handbook.

VETS 1017 **Professional Practice IB**
3 credit points. B V Sc. Dr John Baguley. **Session:** Semester 2. **Classes:** Lectures: 10 x 3 hour presentations.Practicals: 3 x 3 hour visits to Educational Support Practices.

Assumed Knowledge: VETS 1021 Professional Practice 1 A. **Assessment:** Intrasemester: Writing for the public (250 words 20%). Veterinary consultation analysis (1,000 words 40%). Oral Presentation (40%).
This unit of study focuses upon communication in a veterinary practice context and provides opportunities for the student to understand and apply the theory and practice of communication within a variety of veterinary settings through class exercises, assignments, group work and Education Support Practice visits. Assessment emphasises communication skills associated with interactions in the veterinary consultation, writing for the public and communicating with the media. In addition, students will continue to explore other professional practice themes of professionalism, practice management, animal welfare and personal development.

At the end of semester teaching, students are also required to submit the following documents: ESP Learning Agreement Form; Letter of Introduction to ESP; Communication Skill Feedback Form.
Textbooks
Unit of Study Handbook.

VETS 1020 **Veterinary Anatomy and Physiology** IB
8 credit points. B V Sc. Dr Glenn Shea. **Session:** Semester 2. Classes: 51 lectures, 34.5 hours of practical classes and 10 hours of tutorials. **Assessment:** 2 hour written theory paper 55%, physiology in-semester assessment 15% and anatomy tissue identification 30% (10% in-class, 20% end-of-semester).
In this unit the gross anatomy, histology and physiology of the respiratory, endocrine, cardiovascular and urinary systems are studied. Mechanisms of acid base regulation are also included. Clinical material is used to illustrate normal structure and function. Examples of structural and physiological abnormalities that cause dysfunction and disease in animals are included. Computer based tutorials and assessments will be used to assist learning.
Textbooks
Budras K, McCarthy PH, Fricke W, Richter R. Anatomy of the Dog. 4th edn. Schlutersche, 2002. ISBN; 3-87706-619-4
Cunningham JG. Textbook of Veterinary Physiology. 3rd edn. Philadelphia: WB Saunders Co., 2001.
Dellmann H, Eurell J. Textbook of Veterinary Histology. 5th edn. Williams and Wilkins, 1998.Dyce KM, Sack WO, Wensing CJ. Textbook of Veterinary Anatomy. 3rd edn. Saunders. 2002.Practical Class ManualReference BooksEvans HE. Miller's Anatomy of the Dog. 3rd edn. Philadelphia: WB SaundersCo., 1993.

YEAR 2

VETS 2008 **Professional Practice 2**
4 credit points. B V Sc. Dr John Baguley. **Session:** Semester 1. Classes: Lectures: 10 x 2 hour presentations.Practicals: 3 x 3 hour visits to Educational Support Practices.Other: Independent Learning Project (24 hours). **Assumed Knowledge:** VETS1021 Professional Practice 1A and VETS1017 Professional Practice IB. **Assessment:** Intrasemester: Practice Management essay (1,500 words, 60%). In class quizzes (2 x 30 mins, 40%).End of Semester: ILP Report.
This unit provides opportunities for the student to understand and apply basic principles in veterinary practice management. The focus is upon small animal practice and this is enhanced through continued Education Support Practice visits. In addition, students will further explore professional practice themes of animal welfare, communication and personal development.
During this unit of study, students are also required to successfully complete an Independent Learning Project which must be submitted by the end of semester teaching together with the following forms: ESP Agreement Form; Supervisor Report Form; ILP Contract and ILP Report.
Textbooks
Unit of Study Handbook.

VETS 2009 **Genetics and Biometry**
6 credit points. B V Sc. Dr Peter Thomson. **Session:** Semester 1. Classes: Lectures: 26 hours (Genetics),26 hours (Biometry).Practicals: 13 hours (Biometry).Tutorials: 13 hours (Genetics). **Assumed Knowledge:** HSC Mathematics, VETS 1018 Cell Biology IB. **Assessment:** Intrasemester: Genetics: 1 hour Half-way exam (17%).Biometry: Regular quizzes (15%), Practical assignment (15%).End of Semester: 1 hour Genetics exam (33%), 1 hour Biometry exam (20%).
This Unit of Study presents an introduction to those aspects of genetics and statistics that are relevant to veterinarians. The genetics section covers the creation and use of genetic maps; single-locus disorders; chromosomal abnormalities; non-Mendelian familial disorders; immunogenetics; pharmacogenetics; genetic variation in pests, parasites and pathogens; genetic and environmental control of inherited diseases; relationship and inbreeding; heritability; breed history and structure; selection and crossing.

The biometry section covers biological variability; descriptive statistics (numerical and graphical summaries); probability concepts; samples and populations; the normal distribution; hypothesis tests (one-and two-sample tests); confidence intervals; analysis of variance; regression and correlation; experimental design (basic principles, specific design types); and contingency tables.
Textbooks
Nicholas FW. Introduction to Veterinary Genetics. 2nd Edn. Oxford: Blackwell Science, 2003.
Petrie A. Watson P. Statistics for Veterinary and Animal Science. Oxford: Blackwell Science, 1999.
Thomson P. Nicholas F. Moran C. Genetics and Biometry VETS2009, 2006.
Unit of Study handbook.

VETS 2010 **Animal Digestion and Nutrition**
7 credit points. B V Sc. Dr Susan Hemsley. **Session:** Semester 1. Classes: Lectures: 62 hours.Practicals: 17 hours.Tutorials: 12 hours. **Assumed Knowledge:** VETS 1014 Veterinary Anatomy and Physiology 1 A, VETS 1020 Veterinary Anatomy and Physiology IB. **Assessment:** Intrasemester: Practical quiz, theory quiz, assignments (40%).End of Semester: Theory exams (60%).
Animal Digestion and Nutrition is a unit of study that consists of an integrated series of lectures, practical classes, tutorials and workshops focusing on the comparative structure and the function of the digestive system and a series of lectures on the principles and practice of nutrition and interactions between nutrients that influence health and production.
Textbooks
Students are strongly advised to purchase the Unit of Study handbook
Students should consult lecturers before purchasing textbooks. Core texts for this Unit are:
Dellmann H. Eurell J. Textbook of Veterinary Histology, 5th edn. Williams and Wilkins, 1998.
Dyce KM. Sack WO. Wensing CJ. Textbook of Veterinary Anatomy, 2nd edn. Saunders, 1996.
McDonald P. Edwards RA. Greenhalgh JFD. Morgan CA. Animal Nutrition, 6th edn. London, Prentice Hall, 2002.
Cunningham JG. Textbook of Veterinary Physiology, 2nd edn. WB. Saunders. Philadelphia, 1997.

VETS 2011 **Veterinary Anatomy and Physiology 2A**
7 credit points. B V Sc. Assoc Prof David Evans. **Session:** Semester 1. Classes: Lectures: 66 hours.Practicals: 23 hours.Tutorials: 9 hours. **Assumed Knowledge:** Veterinary Science Year 1. **Assessment:** Intrasemester: 1 x .5 hour, 1 x .45 hours (total 45%).End of Semester: 1.5 hour exam (30%).Other: 1 hour practical exam (25%).
This unit has been designed to extend knowledge obtained during Year 1 units in Veterinary Anatomy and Physiology and explore more mechanisms of animal dysfunction. It also deals with some new topics in animal structure and function, particularly the nervous system, and covers the anatomy of common domestic bird species, with an emphasis on the chicken.

The unit focuses on the nervous system and senses, mechanisms by which dysfunction of body systems leads to disease, and development of skills used to recognize normal and abnormal animals. Students will learn through inquiry and problem solving in groups and will be assessed on ability to apply and use their knowledge and development of generic skills. Neurophysiology and neuroanatomy are integrated, and students will learn how neural function is determined by the neural structures and their connections. Students will apply the principles covered in these topics to examine, describe, interpret and explain how animals perceive their environment, process and store information and respond with voluntary and involuntary activities. The primary focus will be on normal animals, however specific lesions will be used to demonstrate the role of components of the nervous system in normal function. The skills and knowledge acquired during this unit will be further used and developed in units of study in years 2-5 of the course. For example the neuroanatomy, neurophysiology and neuropharmacology component of this Unit will provide students with a basis for analysis and management of animals with abnormal neurological function in clinical medicine. The unit also covers aspects of applied cardiovascular and exercise physiology, thermoregulation and integument.

Tutorials and formative assessments on webct will be used to assist learning.
Textbooks
Cunningham JG. Textbook of Veterinary Physiology. 3rd edn. Sydney: WB Saunders Co. 2002.
Dellmann H. Eurell J. Textbook of Veterinary Histology. 5th edn. Williams and Wilkins, 1998.
Dyce KM. Sack WO. Wensing CJ. Textbook of Veterinary Anatomy. 3rd edn. Saunders, 2002 (2nd edn acceptable).
Budras K. McCarthy PH. Fricke W. Richter R. Anatomy of the Dog. 4th.edn. Schlutersche, 2002.
Reference books.
List provided by staff

VETS 2012 **Equine Anatomy**
4 credit points. B V Sc. Dr Glenn Shea. **Session:** Semester 2. Classes: 13 hrs of lectures, 52 hrs of practical classes. **Assumed Knowledge:** VETS1014 Veterinary Anatomy and Physiology 1A, VETS 1020 Veterinary Anatomy and Physiology IB, VETS2011 Veterinary Anatomy and Physiology 2A, VETS2010 Animal Digestion and Nutrition. **Assessment:** Two 1 hour written papers (one in-semester; each 20%); practical examination 40%; assignment 20%.
In this unit of study, the topographic and regional anatomy of the horse, a large domestic animal, is studied by sequential dissection

of entire preserved horses. This unit of study also involves integration of knowledge of systemic anatomy, acquired from VETS 1014,1020, 2010 and 2011, allowing the student to develop an understanding of the regional anatomy of a domestic mammal, knowledge necessary for surgery units of study in later years. Clinically-relevant regions are emphasized, and the relevance illustrated by reference to common clinical conditions.
Textbooks
Dyce KM, Sack WO, Wensing CJ. Textbook of Veterinary Anatomy. 3rd edn. Saunders, 2002 (2nd edn acceptable).
Orsini PG, Sack WO. Rooney's Guide to the Dissection of the Horse. 7th edn. Ithaca: Veterinary Textbooks, 2003. (First printing of 7th edn, by Hackett MS & Sack WO. 2001 acceptable.)
Reference book: Ashdown RR, Done SH. Color Atlas of Veterinary Anatomy. Vol.2. The Horse. London: Mosby-Wolfe, 2000.
Additional course material will be available on webct.

VETS 2013 **Principles of Disease**
8 credit points. B V Sc. Dr Katrina Bosward. **Session:** Semester 2. Classes: Lectures: 61 hours.Practicals: 11 hours. **Assumed Knowledge:** Veterinary Science Year 1 (Semesters 1 and 2) and Year 2 (Semester 1 only). **Assessment:** Intrasemester: Midsemester Quiz plus WebCT quizzes associated with each practical class. Essay.End of Semester: Written exam.Other: Practical Exam.
The overarching theme for this unit of study is the concept of the interaction between the host, the agent of disease and environmental factors. There is a strong emphasis on diseases encountered in veterinary practice to illustrate these concepts. Previous subjects including anatomy, histology, physiology and cell biology, lay the groundwork for this unit of study because it is essential to understand normal structure and function before we can recognize and understand the implications of the disease state. Principles of Disease is vital in preparing the student for the deeper principles studied in systemic pathology, microbiology and parasitology, as well as for some components of pharmacology, in Semester 5 of the course.
Textbooks
It is not essential to purchase a textbook for any component of this course, however the Unit of Study Handbook has a list of recommended textbooks that may assist in the understanding of the course material.

VETS 2015 **Veterinary Conservation Biology**
4 credit points. B V Sc. tba. **Session:** Semester 2. Classes: Lectures: 37 hours.Practicals: 17 hours.Tutorials: 3 hours (Taronga Zoo). **Assessment:** Intrasemester: Essay (2,000 words, 30%).End of Semester: 90 minute exam (70%).
Veterinary Conservation Biology covers activities in the following areas: wildlife health, conservation of endangered species (in situ versus ex situ), sustainable farming and off-reserve conservation (including vertebrate pest management), sustainable use of wildlife and the import and export of wildlife (both quarantine and conservation).

It can be seen from this list that there are many ways in which veterinarians can contribute to the conservation and management of wildlife, and to local and national economies. The profession should not necessarily seek to become wildlife managers in their own right, but in most cases should be seen as essential members of teams undertaking such activities. With the passage of time these opportunities are certain to expand, and veterinarians must be prepared to take on new challenges and new avenues for employment.

The Unit of Study emphasises the role of veterinarians as members of teams
Learning Outcomes
At the end of this Unit of Study, it is expected that students will:
1. Have a broad knowledge and general understanding of the taxonomy, ecology, biology and conservation status of Australia's unique vertebrate fauna.
2. Have knowledge and understanding of specified key aspects of the anatomy and physiology of Australia's native vertebrate fauna (ANF).
3. Be aware and have a good understanding of the principles of the ecology, population dynamics, conservation status and management of macropods in Australia.
4. Have a knowledge and understanding of the threatening processes past and present that continue to adversely affect Australia's fauna.
5. Have knowledge of, and be able to critically evaluate the arguments for and against the sustainable utilisation of wildlife, including the ethical and animal welfare aspects.
6. Have knowledge and understanding of the general principles of disease as they apply to wildlife health.
7. Have a broad knowledge and understanding of the husbandry and handling requirements for captive breeding of ANF.
8. Be aware of and understand the principles, animal welfare aspects and ethics of wildlife rehabilitation and translocation.
9. Be aware of, understand and critically evaluate the basis for current approaches to wildlife emergency management (oil spills, bushfires, marine mammal strandings).
10. Have a working knowledge and understanding of the legislation and treaties that deal with wildlife conservation and management.
Textbooks
The VCB Handbook contains a very large proportion of the information required as background reading for this UofS. In addition, the book by: Burgman MA, Lindermayer DB. Conservation Biology for the Australian Environment. Surrey Beatty & Sons Pty Ltd, 1998. ISBN 0 949324 78 7, is a required reference.

VETS 2016 **Veterinary Anatomy and Physiology 2B**
8 credit points. B V Sc. Dr Rhondda Canfield. **Session:** Semester 2. Classes: Lectures: 58 hours.Practicals: 39 hours.Tutorials: 4. **Assumed Knowledge:** VETS 1014 Veterinary Anatomy and Physiology 1 A, VETS 1020 Veterinary Anatomy and Physiology IB, VETS 2011 Veterinary Anatomy and Physiology 2A, Animal Digestion & Nutrition VETS2010. **Assessment:** Intrasemester: 1 hour (25%).End of Semester: 2 hours theory and 0.5 hours practical (57%).Other: 5 minute oral presentation (5%), 2 written assignments, work in pairs (total 1,200 words) (13%).
Topics studied in this unit of study include the gross anatomy, histology and physiology of the reproductive system and mammary glands of domestic animals, fertility, pregnancy, parturition and prenatal and postnatal development. Students are introduced to clinically relevant material. Classes other than lectures will include tutorials, laboratory work, library research and small group projects. Incorporated into this unit are two sessions on the surface anatomy of the horse and cow - the focus is on clinically relevant structures.
Textbooks
Dyce KM. Sack WO. Wensing CJG. Textbook of Veterinary Anatomy. 3rd edn. Saunders. 2002.
Senger PL. Pathways to Pregnancy and Parturition. 2nd edn. Current Conceptions Inc. 2003.

YEAR 3

VETS 3018 **Animal Behaviour and Animal Welfare Sci**
3 credit points. B V Sc. Dr Paul McGreevy. **Session:** Semester 1. Classes: Lectures: 16 hours.Practicals: 26 hours. **Assumed Knowledge:** Veterinary Science Years 1 - 2. **Assessment:** Intrasemester: 2 written assignments (50%).End of Semester: 2 hour examination (50%).
Animal Behaviour and Animal Welfare Science is the study of normal and abnormal behaviours in domestic and captive species. Animal Behaviour is one of the core knowledge areas for veterinarians because it facilitates the recognition of disease states and helps veterinarians to make informed comment on animal welfare issues. Additional training in the area would be required for those aspiring to become specialist veterinary behaviour therapists.

The Unit of Study draws on knowledge of many aspects of animal husbandry, evolutionary biology and physiology, pharmacology and psychology. The course focuses on the importance of understanding ethology, learning theory and trainers' techniques and includes demonstrations from expert animal handlers and trainers.
Textbooks
Manning A, Dawkins MS. Introduction to Animal Behaviour. Cambridge University Press.
Houpt KA. Domestic Animal Behaviour for Veterinarians and Animal Scientists. Iowa State University Press.
Webster AJF. Animal Welfare - a cool eye towards Eden. Blackwell Scientific Publishing.
VETS3018 Unit of Study manual

VETS 3040 **Veterinary Microbiology**
5 credit points. B V Sc. Dr Jacqui Norris. **Session:** Semester 1. Classes: Lectures: 50 hours.Practicals: 9 hours.Tutorials/CAVMOLs: 6 hours. **Assumed Knowledge:** Veterinary Science Years 1 - 2. **Assessment:** Intrasemester: 20 minute assessment (10%).End of Semester: Theory (45%), Practical (20%).Assignments: 2 assignments (20%).Practical Exam: 1 hour examination (5%).
Veterinary Microbiology encompasses veterinary bacteriology, virology, mycology and the newly discovered microscopic agents such as prions. It uses clinical cases and practical examples to explore the role of these microorganisms as agents of disease in companion and domestic animals. The study of veterinary microbiology is based on an understanding of the structure and morphology of bacteria, viruses and fungi of veterinary signifícance as well as the pathological and immunological processes taught in Principles of Disease. Veterinary microbiology helps to prepare students for Animal Disease, clinical subjects and life in veterinary practice.
Textbooks
Textbook of Veterinary Microbiology (VETS3040) and Animal Disease (VETS3038): Virology, Mycology and Special Bacteria by Norris, Wigney and Hodgson (2006).
Textbook of Veterinary Microbiology (VETS3040) and Animal Disease (VETS3038): Bacteriology by Hodgson, Norris, and Wigney (2006).
Practical Manual for Veterinary Microbiology by Norris, Wigney and Hodgson (2005).
Unit of Study Handbook for Veterinary Microbiology VETS3040, 2006.

VETS 3041 **Veterinary Parasitology**
5 credit points. B V Sc. Assoc Prof David Emery. **Session:** Semester 1. Classes: Lectures: 39 hours.Practicals: 20 hours.Tutorials: 6 hours. **Assumed Knowledge:** Veterinary Science Years 1 and 2. **Prohibitions:** VETS3037. **Assessment:** In-

trasemester: This includes a test, 2 practical exercises (20%) as well as a group project on a topical area of parasitology (20%).End of Semester: There are two final examinations. One is a practical examination which will require some identification of parasites of veterinary importance. The other is a written examination (60%).
Veterinary Parasitology is a study of the common diseases of companion and commercial animals caused by protozoan, nematode, platyhelminth, insect and acarine parasites. The course includes the biology of parasites, and the pathogenesis, diagnosis, epidemiology, treatment and control of parasitic diseases. Veterinary Parasitology assumes an understanding of basic biological principles, and knowledge of the anatomy and physiology of animals. The unit is a preparation for Animal Disease (VETS 3038).
Textbooks
Unit of Study Handbook and a Workbook are available through the Faculty

VETS 3011 **Veterinary Pathology**
7 credit points. B V Sc. Dr Mark Krockenberger. **Session:** Semester 1. **Classes:** Lectures: 54 hours.Practicals: 20 hours gross and microscopic pathology plus 6 hours necropsy technique, description and interpretation. Case-based Learning Activities including tutorials: 12 ICAPs (28 hours timetabled for these activities). **Assumed Knowledge:** Veterinary Science Years 1 - 2. **Assessment:** Intrasemester: ICAPs (20%), PM Class (5%), Lab Class Quizzes (5%).End of Semester: Theory (60%), Practical (10%).
Veterinary Pathology is the study of disease and disease processes in animals and includes learning skills to understand and recognise disease in a range of animal species. Pathology is one of the core knowledge areas for veterinarians and additional training in the area would be required for those aspiring to become a specialist veterinary pathologist.

The course is a practically-orientated systemic pathology unit that builds on the knowledge of normal structure and function, general pathology and agents of disease, developed in Years 1, 2 and 3 of the degree.

The Integrative Case-based Applied Pathology (ICAP) exercises strongly integrate preclinical and paraclinical knowledge in a relevant clinical diagnostic setting.
Textbooks
Unit of Study Handbook.
Jones TC. et al. Veterinary Pathology. 6th edn. Williams and Wilkins, 1997.
McGavin MD. et al. Thomson's Special Veterinary Pathology. 3rd edn. Mosby, 2001.

VETS 3013 **Veterinary Pharmacology and Toxicology**
4 credit points. B V Sc. Dr Merran Govendir. **Session:** Semester 1. Classes: 56 hours. **Assumed Knowledge:** Veterinary Science Years 1 - 2. **Assessment:** Intrasemester quizzes, assignment and final examination.
Pharmacology is the study of the safe use of drugs in the therapy and prevention of animal diseases. Toxicology refers to pharmacologically active toxins which adversely affect animals. These subjects build on knowledge learnt in Chemistry, Cell Biology and Veterinary Physiology and provides the basis to understand how pharmacological agents work at their site of action and how they behave in the body. In order to link the diseases of animals and their therapy the course runs parallel with Units of Study in Veterinary Pathology, Veterinary Microbiology and Veterinary Parasitology. The application of knowledge learnt in Veterinary Pharmacology and Toxicology is a major component of clinical veterinary science.
The Unit covers the principles of drug action and then deals with a range of drug classes pertinent to veterinary science and the peculiarities of drugs in the core species.
Textbooks
Rang HP, Dale MM, Ritter JM, Moore PK. Pharmacology. 5th edn. Edinburgh: Churchill Livingstone, 2003.
Maddison JE, Page S, Church DB. Small Animal Clinical Pharmacology. Philadelphia: WB Saunders & Co, 2002.

VETS 3038 **Animal Disease**
9 credit points. B V Sc. Assoc Prof Jennie Hodgson. **Session:** Semester 2. **Classes:** Lectures: 65 hours.Practicals: 25 hours.Group Work: 20 hours. **Assumed Knowledge:** Veterinary Science Years 1 - 2. **Prohibitions:** VETS3020. **Assessment:** Intrasemester: Mid Semester Exam (15%).End of Semester: Final Exam (65%).Other: 4 assignments, some of which include a group component (5% each).
This unit extends and integrates knowledge in Veterinary Parasitology, Veterinary Microbiology, Veterinary Pathology and Veterinary Pharmacology. The Unit is presented in a series of disease cases in a herd or individual animal. For each case students work through causative agents, differential diagnosis, diagnostic techniques and arrive at treatment and control solutions. The course includes diseases caused by a wide range of infectious organisms, as well as nutritional and genetic disease in a range of animals of veterinary interest. Linked to each case is a major topic which is one theme in Veterinary Public Health (epidemiology, zoonoses, hygiene) or therapy. The cases are also linked to Professional Practice themes.
Textbooks
Unit of Study Handbook

VETS 3039 **Professional Practice 3**
4 credit points. B V Sc. Dr John Baguley. **Session:** Semester 2. **Classes:** Lectures: 20 x 1 hour presentations.Tutorials: 11 x 1 hour tutorials.Group Work: 11 x 1 hour. **Assumed Knowledge:** Professional Practice 1A, IB, 2. **Assessment:** Intrasemester: Group Presentation (40%). Group Work Reflection (20%). Quizzes (40%).
This unit provides students with material to aid their understanding of financial and legal perspectives in the management of cases and scenarios typical of veterinary practice life. There is a focus upon the legislative environment through a preliminary study of the various Acts and other legislation pertaining to the practice of veterinary science. Other perspectives such as implications for practice management and finance are also developed through scenarios linked to clinical material presented in VETS 3020 Animal Disease and VETS 3025 Veterinary Public Health. Classes comprise student presentations supported by talks from appropriate authorities, lectures and tutorials. The majority of learning for this unit of study is completed in groups and hence there is an additional emphasis upon the development of teamwork skills and their application to veterinary practice.
Textbooks
Unit of Study Handbook

VETS 3027 **Veterinary Clinical Sciences 3**
7 credit points. B V Sc. Assoc. Prof. Geraldine Hunt. **Session:** Semester 2. **Classes:** Lectures: 78 hours. Practicals: 12 hours.Tutorials: 6 hours. **Prerequisites:** Veterinary Science Years 1 - 2 and Semester 1 Year 3. **Assessment:** Intrasemester: Multiple choice questionnaire (20%). Essay (20%).End of Semester: 2 hour written examination consisting of short answer questions (60%).
Veterinary Clinical Science is the first Unit of several which develop skills in the clinical sciences. It builds on all of the preclinical Units and precedes a species-based approach to clinical issues. This unit of study is designed to impart basic skills in imaging, anaesthesia, surgery and medicine using relevant clinical case material.
Textbooks
Fossum. Small Animal Surgery 2002. Mosby 2nd edn, 2002.
Nelson & Couto (eds), Small Animal Internal Medicine. Mosby 3rd edn, 2003.
Hall, Clarke & Trim, Veterinary Anaesthesia. W B Saunders, 10th edn, 2001.
Thrall DE (ed). Textbook of Veterinary Diagnostic Radiology. WB Saunders, Philadelphia, 4th edn, 2002.
Nyland TG, Mattoon JS. Small Animal Diagnostic Ultrasound, WB Saunders Co, Philadelphia, 2nd edn, 2002.
Lavin LM, Radiography in Veterinary Technology. WB Saunders, Philadelphia, 3rd edn, 2003.

VETS 3025 **Veterinary Public Health**
4 credit points. B V Sc. Dr Robert Dixon. **Session:** Semester 2. **Classes:** Lectures: 36 hours.Practicals: 8 hours.Abattoir visit: 8 hours. **Assumed Knowledge:** Veterinary Science Years 1 - 2. **Assessment:** Intrasemester: Group project (30%).End of Semester: Final written examination (55%).Other: Food processing plant visit and case study (15%).
Veterinary Public Health encompasses 3 topics: veterinary epidemiology, food safety and zoonoses. Knowledge of these allows veterinarians to play a vital role in maintaining human health. Veterinary Epidemiology which is the study of disease patterns provides understanding of the control of human and animal disease. Veterinarians have an increased role in Food Safety from clinical practice to food standards regulation. Zoonoses are important for veterinary occupational health and safety and for the health of our clients.

The course in Veterinary Public Health builds on Veterinary Pathology, Veterinary Microbiology and Veterinary Parasitology and runs concurrently with Animal Disease. Topics are dealt with in the context provided by the Animal Disease cases.
Textbooks
A Unit of Study Handbook contains detailed notes for Veterinary Public Health.

YEAR 4

VETS 4331 **Animal Husbandry Practical Report**
2 credit points. B V Sc, Grad Dip Vet Sc. Assoc Prof David Evans. **Session:** Semester 1. **Assumed Knowledge:** Veterinary Science Years 1-2 before placements commence. **Assessment:** 1. Assignments that address issues related to nutrition, reproduction, animal welfare, or scope for veterinary involvement on the farm are to be submitted in the first week of semester of the fourth year of the course. Two assignments of 500 words from each of the sheep and cattle placements, one assignment on pigs and poultry (500 words), and one 500 word assignment based on the horse or dairy experiences. 2. A test of skills used for handling horses and cattle will be administered at the Camden farms at the completion of Year 1.
Students are required to undertake periods of time on farms to learn aspects of farm management and the roles of veterinarians on farms. Students may have opportunities to practice their animal handling skills during these placements. The number of days required for placement at each farm type is: horse 5 days, dairy 5 days, beef 5 days, sheep 5 days, pig 3 days, poultry 2 days. Students may also undertake 4 weeks of elective placements, which will not carry any assignment requirements. The unit of study also includes 1 week of practical classes at Camden farms to enable development of animal handling skills with cattle, horses, pigs, sheep and poultry.
Textbooks

None

VETS 4111 **Veterinary Anaesthesia**

4 credit points. B V Sc, Grad Dip Vet Sc. Dr Sanaa Zaki. **Session:** Semester 1. **Classes:** Lectures: 26 hours.Practicals: 10 hours.Tutorials: 4 hours. **Prerequisites:** Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: A combination of assignments, quizzes and practical assessment (40%).End of Semester: 90 minute written examination (60%).Other: Formative assessment through out semester.

This course involves the planning and implementation of safe anaesthesia for small companion animals, incorporating clinical cases from the veterinary teaching hospital. The focus is primarily on cats and dogs; however, discussion of other species is included. Topics for discussion include anaesthesia for common disease conditions, different anaesthetic techniques for different species, equipment used in anaesthesia, analgesia for the peri-operative period, transfusion therapy and resuscitation techniques for cardio-respiratory arrest. Tutorial classes reinforce and develop further the concepts discussed in lectures. Practical classes introduce students to techniques and procedures performed routinely during clinical anaesthesia as well as life saving procedures that may be required in an emergency. Clinical practical sessions introduce students to the anaesthesia unit at the UVCS and provide opportunity for students to observe and perform anaesthetic procedures in the clinical setting.

Textbooks

Unit of Study Handbook

Hall, Clarke, Trim. Veterinary Anaesthesia. 10th edn, Harcourt.

Flecknell, Waterman-Pearson. Pain Management in Animals. WB Saunders.

VETS 4112 **Veterinary Medicine & Clinical Pathology**

8 credit points. B V Sc, Grad Dip Vet Sc. Dr Jules Beatty. **Session:** Semester 1. **Classes:** Lectures: 61 hours approximately.Practicals: 9 hours.Tutorials: 34 hours approximately. **Prerequisites:** Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: Clinical pathology and veterinary medicine (30%).End of Semester: Veterinary Clinical Pathology (20%)Veterinary Medicine (50%). (See the VETS4112 UoS Handbook for details.).

Medicine commenced in third year as part of clinical sciences, and now continues through the first semester of fourth year. Resource sessions on diseases of various organ systems constitute the didactic component. Case based material will be utilized for tutorials and practical classes. Veterinary Clinical Pathology is integrated into the course and assists in the diagnostic process by providing laboratory information, which may also be utilized in monitoring response to treatment. Laboratory data analysis will form the major part of lectures and tutorials. The unit of study is based on the study of dogs and cats with reference to other animal species as necessary.

Textbooks

See the VETS4112 UoS Handbook.

VETS 4113 **Veterinary Radiology**

4 credit points. B V Sc, Grad Dip Vet Sc. Adj. Professor Graeme Allan. **Session:** Semester 1. **Classes:** Lectures: 26 hours.Tutorials: 26 hours. **Prerequisites:** Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: Formative assessment using Multiple Choice Questions and/or Web CT (30%). End of Semester: Written examination (70%).

The course covers the radiographic appearance of the normal structure and function of the various organ systems commonly investigated by radiology. Students will be taught to recognise, describe and diagnose the changes in structure and function related to diseases that are commonly found in radiographs. There will be an introduction to the special radiological techniques, including radiological contrast studies that are commonly used to further demonstrate diseases. The role of diagnostic ultrasound in the diagnosis of the common diseases of soft tissues will also be covered.

Textbooks

Thrall DE. Textbook of Veterinary Diagnostic Radiology. 4th edn. Philadelphia: WB Saunders Company, 2002. Nyland TG and Mattoon JS., Small Animal Diagnostic Ultrasound. 2nd edn, WB Saunders Co, Philadelphia, 2002.

VETS 4114 **Veterinary Surgery**

6 credit points. B V Sc, Grad Dip Vet Sc. Dr Craig Macpherson. **Session:** Semester 1. **Classes:** Lectures: 44 lectures.Practicals: 24 hours. **Prerequisites:** Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: MCQ week 7 or 8 (25%).End of Semester: Written Final Exam (60%).Other: 1,000 word essay (15%).

Lectures, demonstrations and practical classes address the principles and practice of soft tissue and orthopaedic surgery in companion animals using an integrated, systems and problem-orientated approach. Practical classes provide instruction and practice in basic procedures such as desexing, cystotomy, gastrointestinal biopsy and resection, fracture fixation, surgery for cruciate ligament rupture, ophthalmic surgery, and other common surgical procedures.

Textbooks

Brinker WO. et al. Handbook of Small Animal Orthopaedics and Fracture Treatment. 3rd edn. Saunders, 1997.

Fossum TW and others. Small Animal Surgery. 2nd edn. Mosby, St Louis, 2002.

Piermattei DL, Johnson KA. An Atlas of Surgical Approaches to the Bones of the Dog and Cat. 4th edn. Saunders, 2004.

The VETS4114 Handbook provides references and material that supplements the textbooks.

VETS 4221 **Bird Health and Production**

4 credit points. B V Sc, Grad Dip Vet Sc. Dr Patricia Holyoake, Prof. Richard Whittington. **Session:** Semester 2. **Classes:** Lectures: 34 hours (14 chickens + 15 caged birds, reptiles & pocket pets + 5 fish).Practicals: 18 hours (5 chickens + 10 caged birds + 3 fish). **Prerequisites:** Veterinary Science Years 1 - 3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: Case studies (40%).End of Semester: Written Examination (60%).Other: Formative assessment of animal handling during practical class sessions.

The aim is to develop knowledge and skill in medicine of birds (including poultry). Emphasis is placed on the epidemiology, management and preventive medicine of chickens (commercial broiler and layer operations) and diagnostics, medicine and surgery of caged birds.

The cage bird component covers a wide range of avian species including waterfowl, psittacine and passerine birds. It will address the collection and analysis of clinical, necropsy and clinicopathologic information to investigate individual bird and flock problems. It will cover individual bird and flock therapy.

This unit of study also includes medicine of reptiles, "pocket pets" (rabbits, guinea pigs etc.), fisheries and aquaculture. The reptile and "pocket pets" component will cover anatomy and physiology applicable to clinical examination and common problems encountered in practice in Australia. Diagnosis and treatment of common conditions affecting fisheries and aquaculture species will also be presented. Students will gain experience handling representatives of the common species and performing common clinical procedures.

Textbooks

Unit of Study Handbook.

Stoskopf MK. Fish Medicine. WB Saunders Company, 1993. (reference book only-students are advised not to purchase)

VETS 4222 **Horse Medicine and Surgery**

6 credit points. B V Sc, Grad Dip Vet Sc. Professor David Hodgson. **Session:** Semester 2. **Classes:** Lectures: 36 hours.Practicals: 60 hours.Tutorials: 4 hours. **Prerequisites:** Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: Case based assignment. Horse handling practical examination.End of Semester: 90 minute written examination.Other: Practical examination.

Horse Medicine and Surgery is designed to provide a foundation whereby students become competent to deal with a horse or horses experiencing common medical or surgical problems as would be encountered in mixed practice. Much of the lecture course utilises problem-based learning using a case-based approach. This approach is designed to augment skills developed in other disciplines including anatomy, pathology, microbiology and small animal medicine and surgery. The course is designed to assist the student in learning effective problem solving skills, determination of differential diagnoses and the judicious use of appropriate diagnostic aids when attempting to reach a diagnosis. Options and approaches to commonly used therapeutic measures are included. Areas of emphasis in the course include lameness, respiratory diseases, abdominal pain (colic), weight loss, diseases of foals, ophthalmology, reproductive management, dermatology and various other aspects of equine surgery and internal medicine. There are a series of practical classes designed to augment and expand the student's experiences in horse medicine and surgery.

Textbooks

Unit of Study Handbook.

Smith BP ed. Large Animal Internal Medicine. 3rd edn. Mosby.

Reed S. Bayly W Sellon D. eds. Equine Internal Medicine. 2nd edn. Saunders.

Hinchcliff K. Kaneps A. Goer R. eds. Equine Sports Medicine and Surgery. Saunders.

Robinson E. ed. Current Therapy in Equine Medicine. Saunders.

VETS 4223 **Pig Health and Production**

4 credit points. B V Sc, Grad Dip Vet Sc. Dr Trish Holyoake. **Session:** Semester 2. **Classes:** Lectures: 24 hours.Practical: 8 hours.Independent learning: 12 hours. **Prerequisites:** Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: 500-1000 word assignment.End of Semester: 1 hour written exam.Other: Group WebCT exercise.

The aim of this unit of study is to provide students with an understanding of the major factors driving the profitability and sustainability of the commercial pig industry. Students will be provided with the basic skills to resolve production and profit-limiting problems on pork production units. The emphasis is on managing endemic disease and preventive medicine, with consideration given to welfare aspects of intensively housed animals. Practical classes are designed to provide students with the opportunity to observe and participate in specialized husbandry and diagnostic practices undertaken on pig farms.

There is some overlap between this course and "Bird Health and Production".
Textbooks
Unit of Study Handbook.
Straw BE. et al. Diseases of Swine. 8th edn.1999.

VETS 4224 **Ruminant Health and Production**

10 credit points. B V Sc, Grad Dip Vet Sc. Assoc Prof Peter Windsor. **Session:** Semester 2. Classes: Lectures: 58 hours.Practicals: 85 hours.Tutorials: 12 hours TILHAP's. **Prerequisites:** Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: TILHAP's (15%). Mid-semester exam (20%).End of Semester: Exam A (Grazing 40%). Exam B (Intensive 25%).Other: Practical classes: Pass/Fail.
This course aims to facilitate deeper learning approaches to gain an understanding of diseases of ruminants within various livestock production systems. It uses a case-based approach with TILHAP's (Teaching Innovations in Livestock Health & Production) to demonstrate how systematic problem investigations provide an 'evidence basis' for implementing rational disease control by management at the herd and flock level on-farm. This process is extended to problem management at the regional, national and international levels, illustrating the numerous career paths for veterinarians in servicing the food and fibre industries, and preparing students for their extramural training as interns in rural mixed and public practice. The aim is for our graduates to:

- Use systematic pathological and epidemiological principles in the conduct of investigations to diagnose the common management and disease problems of ruminants;

- Readily obtain information from numerous knowledge resources that can lead to constructive advice, facilitating farm animal production and welfare;

- Develop skills in animal handling, clinical examination, pregnancy diagnosis, specimen collection, necropsy procedures, use of diagnostic laboratories and farm animal medicine and surgery;

- Apply their skills and knowledge in problem solving to design applied research and extension programs that promote disease control and prevention programs to assist optimal farm animal production.
Textbooks
Required resources:
Unit of Study Textbook
Practical Class Handbook.
Pregnancy Diagnosis in Cattle (AACV)
Drought manual (NSW DPI)
Recommended text, either:
Veterinary Medicine 9th edition (Radostits et al) OR
Veterinary Internal Medicine (Smith et al)

YEAR 5

VETS 5331 **Preparation Veterinary Practice**

2 credit points. B V Sc. Dr Christine Hawke. **Session:** Semester 1, Semester 2. Classes: Lectures: 12 hours.Practicals: 1 hour.Tutorials: 4 hours. **Prerequisites:** Veterinary Science Years 1 - 4 completed. Permit from Board of Veterinary Surgeons of NSW to perform Acts of Veterinary Science under supervision. **Assessment:** Intrasemester: Required submissions.End of Semester: Examination.Other: Competency testing in animal handling.
This unit of study will prepare students as Veterinary Interns for their Intramural and Extramural Clinical Rotations during Year 5. Students will be instructed in practice management, financial management, skills marketing, insurance for practice and human resources, communication with colleagues and clients, time management and distance learning resources, accessing Virtual Clinical Campus and VEIN, self and stress management and job search. There will be focus sessions for each Year 5 Unit of Study. Professional ethical behaviour will be discussed throughout the course. Preparation and delivery of assignments and all formal requirements for the Extramural Rotations will be presented. Learning activities include didactic presentations, seminars, group tasks, role-plays, self-completion tasks and skills checks.
Textbooks
Unit of Study Handbook.

VETS 5335 **Small Animal Practice (Extramural)**

5 credit points. B V Sc. Dr John Baguley. **Session:** Semester 2, Semester 1. Classes: Practicals: 24 day practicum. **Prerequisites:** Veterinary Science Years 1 - 4 completed. Permit from Board of Veterinary Surgeons of NSW to perform Acts of Veterinary Science under supervision. **Assessment:** Intrasemester: Case Log (4 cases: 2,500 words). Communication Task. Supervisor Report Form.
This unit of study builds upon skills, knowledge and attitudes developed throughout the entire course and is completed at a Faculty approved small animal practice. Veterinary Interns will gain a holistic understanding and experience of small animal practice prior to graduation. As well as this induction to the profession, there is the opportunity to ensure interns demonstrate a satisfactory standard with respect to the relevant graduate attributes and day one clinical skills.

Interns are expected to fully participate in agreed activities whilst attending the practice, typically taking on the role and schedule of a full time supervised associate. The requirements for this rotation include the completion of the following documents: an Introductory Letter to the placement at least four weeks prior to the rotation; a Site Contract; Learning Agreement Form; Skills Report Form; and Rotation Feedback Form. During the rotation interns are expected to participate in three meetings with the extramural supervisor and complete a communication task.
Textbooks
Handbook for Extramural Rotations.

VETS 5336 **Rural Mixed Practice 1 (UVCC)**

5 credit points. B V Sc. Dr Tony D. Mogg. **Session:** Semester 2, Semester 1. Classes: Practicals: 26 day practicum. **Prerequisites:** Veterinary Science Years 1 - 4 completed. Permit from Board of Veterinary Surgeons of NSW to perform Acts of Veterinary Science under supervision. **Assessment:** Intrasemester: Case Log (4 cases: 2 equine, 1 bovine, 1 anaesthesia).Communication task.Supervisor Report Form (3).
This unit of study provides students with an opportunity to practically apply the knowledge and skills they have developed during years 1 to 4. Through participation in professional activities students are expected to develop their communication skills with the public, staff and colleagues.

Veterinary Interns must achieve a satisfactory grade in all three services (equine, bovine and anaesthesia) to fulfil the requirements of this unit of study. Interns are also required to complete a written and/or oral Communication Task which will be evaluated by the UVCC Supervisor or nominee. Forms to be completed and submitted to the Faculty: 1. Site Contract; 2. Rotation Feedback Forms for each service; and 3. Skills Report Forms for each service.
Textbooks
Handbook for Intramural Rotations.

VETS 5337 **Rural Mixed Practice 2 (Extramural)**

5 credit points. B V Sc. Associate Professor John House. **Session:** Semester 1, Semester 2. Classes: Practicals: 24 day practicum. **Prerequisites:** Veterinary Science Years 1 - 4 completed. Permit from Board of Veterinary Surgeons of NSW to perform Acts of Veterinary Science under supervision. **Assessment:** Intrasemester: Case Log (4 cases: 2,500 words). Communication task. Supervisor Report Form.
This unit of study provides students with an opportunity to practically apply the knowledge and skills they have developed during years 1 to 4. In particular, they will gain experience in livestock and equine practice. Through participation in professional activities students are expected to develop their communication skills with the rural community, staff and colleagues.

Interns are expected to fully participate in agreed activities whilst attending the practice, typically taking on the role and schedule of a full time supervised associate. The requirements for this rotation include the completion of the following documents: an Introductory Letter to the placement at least four weeks prior to the rotation; a Site Contract; Learning Agreement Form; Skills Report Form and Rotation Feedback Form. During the rotation interns are expected to participate in three meetings with the extramural supervisor and complete a communication task.
Textbooks
Handbook for Extramural Rotations

VETS 5345 **Primary Accession Med** & **Surgery (UVCS)**

4 credit points. BVSc. Dr Vanessa Barrs. **Session:** Semester 2, Semester 1. **Prerequisites:** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: Supervisor report form. Case presentations at Clinical Rounds.
This 3 week rotation at the University Veterinary Centre, Sydney, is designed to give student interns experience in general practice and exposure to the types of cases they will encounter most commonly upon graduation. Interns will have the opportunity to practice clinically-relevant techniques such as history taking, physical examination, diagnostic sample collection, radiology and ultrasound, medical record keeping, critical analysis of information from different sources, analysis of case-related information, development and implementation of treatment plans and evaluation of outcomes. During this rotation interns will participate in the spey clinic, including routine healthcare evaluation, ovariohysterectomy and castration of small animals and post-operative management. In addition, interns should gain an appreciation of the holistic nature of veterinary practice, the importance of client-veterinarian, veterinarian-patient and veterinarian-colleague interactions, from the moment the client makes an appointment through resolution of the presenting problem

and beyond. Students will participate in other UVCS activities, including routine health management, management of patients in hospital, intensive care duty and weekend duty.
Textbooks
Handbook for Intramural Rotations
Nelson RW, Couto CG. eds. Small Animal Internal Medicine. Mosby. 4th edn. 2003.

VETS 5346 **Referral Medicine (UVCS)**

4 credit points. B V Sc. Dr Vanessa Barrs. **Session:** Semester 1, Semester 2. **Prerequisites:** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: Supervisor Report Form. Case-log. Case-record submission. Case-presentation at clinical rounds. Veterinary literature exercise.
This unit of study aims to consolidate the theory of small animal internal medicine, as learnt in Veterinary Clinical Sciences 3027 and Veterinary Medicine 4112, and to apply it to the diagnosis and treatment of diseases. It aims to provide case-material to facilitate application of the problem-orientated approach to investigative medicine.

In this rotation emphasis will be placed on acquiring appropriate skills in history taking, advanced physical examination, including (but not restricted to) abdominal palpation, thoracic auscultation (including murmur identification, grading and localisation and respiratory auscultation), fundoscopy and non-invasive blood pressure measurement. Interpretation of diagnostic imaging modalities and clinicopathological test results will be an integral part of the rotation. Cases will form the basis of interactive collegiate discussions on identification and assessment of problems on a patient-to-patient basis. Interns will become proficient in professional case-handover procedures through daily presentation of cases at clinical rounds.

As in other UVCS rotations interns will participate in activities, including (but not restricted to) client communication, collection of samples for basic diagnostic tests, developing treatment plans, routine health management, disease management, management of patients in hospital, medical record keeping, intensive care duty and weekend duty.
Textbooks
Handbook for Intramural Rotations
Nelson RW. Couto CG. eds. Small Animal Internal Medicine. Mosby. 4th edn. 2003.

VETS 5347 **Anaesthesia and Intensive Care (UVCS)**

4 credit points. B V Sc. Dr Sanaa Zaki and Dr Kim Ticehurst. **Session:** Semester 1, Semester 2. Classes: Practicals: 15 day practicum including rostered ICU duty, anaesthesia rounds twice weekly and journal club once weekly. **Prerequisites:** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: Supervisor Report Form (continuous). Communication task (written) 500 words. Communication task (oral). Competency based practical skills assessment.Other: Formative self evaluation task.
This Unit of Study provides student interns with an opportunity to apply the principles and practices of veterinary anaesthesia introduced to them in VETS3027 and VETS4111 in the clinical setting of a large veterinary hospital. This unit of study is designed to give student interns exposure and experience in clinical anaesthesia to help develop a deeper understanding of this discipline and prepare them for veterinary practice. Student interns are involved in the management of a wide variety of cases from the time the patient is admitted for anaesthesia up until the patient has fully recovered. This unit of study aims to foster a culture of shared leadership, team work, professional conduct, compassion and open communication in the work environment. Student interns participate in all activities undertaken by the UVCS Anaesthesia Unit including (but not restricted to) pre-anesthetic examination, formulation of anaesthesia and analgesia plans, induction and maintenance of anaesthesia, record keeping, post-operative care (including pain management) and ICU duty. Student interns will learn and practice the many technical skills required to perform general anaesthesia including intravenous catheterisation, endotracheal intubation, collection of blood and urine for diagnostic testing. After completing this unit of study student interns will be able to safely and humanely anaesthetise and recover an ASA health status T o r '2' small animal patient with a degree of proficiency acceptable for a new graduate (refer to the Veterinary Graduate Attributes).
Textbooks
Handbook for Intramural Rotations

VETS 5348 **Small Animal Surgery (UVCS)**

4 credit points. B V Sc. Assoc Prof Geraldine Hunt. **Session:** Semester 1, Semester 2. **Prerequisites:** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Other: Ongoing assessment using supervisor report form, and assessment of communications tasks including written medical records and oral presentation in Surgery Rounds.
The UVCS rotations are designed to give veterinary interns experience in general practice and exposure to the kinds of clients and cases they will encounter upon graduation. In addition, rotation through the referral services will provide students with the opportunity to manage more complex cases and, be exposed to scenarios where referral to a person or practice with more advanced knowledge, training or equipment is indicated. Students will participate in all UVCS activities, including (but not restricted to) client communication, history taking, physical examination, collection of samples for basic diagnostic tests, radiography, developing treatment plans, routine health management, disease management, medical, surgical and anaesthetic procedures, management of patients in hospital, medical record keeping, intensive care duty and weekend duty.
Textbooks
Handbook for Intramural Rotations.

VETS 5349 **Rural Public Practice**

5 credit points. B V Sc. Assoc Prof Peter Windsor. **Session:** Semester 1, Semester 2. Classes: Practicals: 24 day practicum. **Prerequisites:** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: Written Report (max. 2,000 words). Reflective Journal (max. 500 words). Communication task. Supervisor Report Form.
This unit of study involves a 24-day rotation with a public agency or company involved in servicing the rural industries and supporting the food and fire sector. In NSW, this is mainly the Rural Lands Protection Boards and NSW Department of Primary Industries, however interstate and overseas placements in approved agencies is encouraged, particularly for overseas students in their home state or country. The rotation offers practical opportunities to build on and apply knowledge of livestock production industries acquired in semester 8, particularly in herd management and health, legislation and quarantine, food production and hygiene, disease control and prevention, animal welfare and relevant basic and clinical science disciplines.
Students will be under the supervision of District Veterinarians, Veterinary Officers or their equivalent and as veterinary interns, can be involved in ongoing projects, including implementation of regional animal health plans, applied research activities or veterinary surveillance, extension and regulatory programs.
Interns are expected to fully participate in agreed activities whilst attending this placement, typically taking on the role and schedule of a full time supervised associate. The requirements for this rotation include the completion of the following documents: an Introductory Letter to the placement at least four weeks prior to the rotation; a Site Contract; Learning Agreement Form; Skills Report Form; and Rotation Feedback Form. During the rotation interns are expected to participate in three meetings with the extramural supervisor, complete a communication task under the supervision of the associate veterinarian, contribute a reflective journal and comments to the VETS5335 website, and a written report on an applied research or extension project conducted during the rotation and of relevance to the placement.

VETS 5350 **Elective Rotation 1**

5 credit points. B V Sc. Prof David Hodgson. **Session:** Semester 1, Semester 2. Classes: Practicals: 24 day practicum. **Prerequisites:** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: Written assignment (2,500 words). Communication task. Supervisor Report Form.
This Unit of Study consists of a rotation in a suitable location. Suitability of locations will be negotiated between the veterinary intern, elective rotation supervisor and Faculty. In addition to the more traditional elective rotations e.g., small animal practice, equine practice, rural mixed practice and wildlife experience, veterinary interns may wish to undertake novel forms of elective rotation. Examples may include production of educational or scientific resources for use by the profession or animal owners, and promotion of new ideas to the public. Whilst attending elective rotations, students will be under the supervision of an extramural supervisor, who will liaise with Faculty. The extramural supervisor will review the aims of the rotation with the student, who will be expected to have achieved these by the end of the rotation.

Interns are expected to fully participate in agreed activities whilst attending this placement, typically taking on the role and schedule of a full time supervised associate. The requirements for this rotation include the completion of the following documents: an Introductory Letter to the placement at least four weeks prior to the rotation; a Site Contract; Learning Agreement Form; Skills Report Form; and Rotation Feedback Form. During the rotation interns are expected

to participate in three meetings with the extramural supervisor and complete a communication task.
Textbooks
Handbook for Extramural Rotations

VETS 5351 **Elective Rotation 2**
5 credit points. B V Sc. Prof David Hodgson. **Session:** Semester 2, Semester 1. **Classes:** Practicals: 24 day practicum. **Prerequisites:** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision. **Assessment:** Intrasemester: Written assignment (2,500 words). Communication task. Supervisor Report Form.
This Unit of Study consists of a rotation in a suitable location. Suitability of locations will be negotiated between the veterinary intern, elective rotation supervisor and Faculty. In addition to the more traditional elective rotations e.g., small animal practice, equine practice, rural mixed practice and wildlife experience, veterinary interns may wish to undertake novel forms of elective rotation (see Elective Rotation 1). Students may wish to combine two elective rotations at the one site, for example at a referral hospital or research laboratory etc.

Whilst attending elective rotations, students will be under the supervision of an extramural supervisor, who will liaise with Faculty. The extramural supervisor will review the aims of the rotation with the student, who will be expected to have achieved these by the end of the rotation.

Interns are expected to fully participate in agreed activities whilst attending this placement, typically taking on the role and schedule of a full time supervised associate. The requirements for this rotation include the completion of the following documents: an Introductory Letter to the placement at least four weeks prior to the rotation; a Site Contract; Learning Agreement Form; Skills Report Form; and Rotation Feedback Form. During the rotation interns are expected to participate in three meetings with the extramural supervisor and complete a communication task.
Textbooks
Handbook for Extramural Rotations

Bachelor of Science (Veterinary)

VETS 4042 **Veterinary Research A**
24 credit points. B Sc (Vet). Dr Glenn Shea. **Session:** Semester 1. **Classes:** No lectures or other classes. **Prerequisites:** Veterinary Science Years 1, 2 and 3 or 1, 2, 3 and 4. **Corequisites:** VETS4043. **Assessment:** Thesis, oral presentation and oral examination.
NB: Department permission required for enrolment.
In this unit students undertake a period of supervised research in a topic in Veterinary Science.

VETS 4043 **Veterinary Research B**
24 credit points. B Sc (Vet). Dr Glenn Shea. **Session:** Semester 2. **Classes:** No lectures or other classes. **Prerequisites:** VETS4042 Veterinary Research A. **Assessment:** Thesis, oral presentation and oral examination.
NB: Department permission required for enrolment.
This unit of study is a continuation of VETS4042.

Bachelor of Animal and Veterinary Bioscience

YEAR1

AGEC 1006 **Economic Environment of Agriculture**
6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B Sc Agr, UG Study Abroad Program. Ms Liz Nolan, Ms Lynn Henry. **Session:** Semester 1. **Classes:** (3 lee & 1 tut)/wk, seminars/workshops. **Assumed Knowledge:** HSC Mathematics. **Prohibitions:** AGEC1003, AGEC1004.. **Assessment:** One two hour exam, one assignment, tutorial reports.
This unit of study introduces students to the basic principles of economics and to the major features of the economic environment impacting on and driving farm and off-farm agriculture. Topics discussed include the organization of economies and the role agriculture plays, the industrial structure of Australian agriculture, introductory principles of production economics and farm business management; elementary price theory and the factors affecting the demand and supply of agricultural commodities, nature and behaviour of markets for agricultural commodities; marketing of agricultural products; agricultural trade, resource and environmental management, and the political and administrative institutions affecting Australian agriculture.
Textbooks
HE Drummond and JW Goodwin, Agricultural Economics, 2nd edn (Prentice-Hall, 2004).
Reference Books:
KO Campbell and BS Fisher, Agricultural Marketing and Prices (Longman Cheshire, 1991)
F Douglas (ed), Australian Agriculture: the complete reference on rural industry (Morescope, 1995)
LR Malcolm, P Sale and A Egan, Agriculture in Australia: An Introduction (Oxford UP, 1996)

ANSC 2002 **Animal Science 2**
6 credit points. B An Vet Bio Sc, B Anim Sc, B L W Sc, B Sc (Molecular Biotechnology), B Sc Agr. Mrs I van Ekris (coordinator), Dr Melanie Collier, A/Prof Rosanne Taylor, Ms Jane Stevenson. **Session:** Semester 2. **Classes:** 3 hours/week. **Prerequisites:** CROP1001, BIOL1001 OR BIOL1101. **Assessment:** Assignments (65%), end of semester exam (35%).
The unit of study is an integrated course providing a framework for understanding the structure, function and management of agricultural animals. The emphasis of the course is on how animals maintain a steady state in the face of variations in their environment, physiological state and management systems. It aims to help students acquire the language necessary to discuss body structure and function and to understand the fundamental internal processes and their interactions, which take place in the maintenance of normal function. Concepts discussed in lectures are reinforced by practical classes held in the laboratory and on-farm at Camden.
Textbooks
A course handbook will be available for students to purchase. It contains details of lecture outlines, objectives, reference lists, details of practical classes, staffing as well as other relevant class material.
Battaglia, R.A. Handbook of Livestock Management. (Prentice Hall, 2001)
Frandson, R.D., Wilke, W.L. and Fails, A.D. Anatomy and Physiology of Farm Animals (Williams and Wilkins, 2003)
McDonald, P. et al., Animal Nutrition, 4th ed (Longman Scientific & Technical, 1988)
Reece, W.O. Physiology of Domestic Animals (Lea and Febiger, 1991)
Starr, C. and Taggart, R. Animal Structure and Function (Brooks and Cole, 2004)

BIOM 1003 **Biometry 1**
6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Sc Agr, UG Study Abroad Program. A/Prof Mick O'Neill. **Session:** Semester 2. **Classes:** (2 lee & 1 tut)/wk. **Assumed Knowledge:** 70 or more in HSC Mathematics. **Assessment:** Assignments (50%), exam (50%).
It is a core first year unit for all our science-based degrees. It provides a foundation of quantitative skills to be used in further study in applied statistics in later years and in other Units within the Agricultural, Animal, Land & Water, or Horticultural Science degrees. It creates an awareness of the role of experimental design and statistical analysis in the research process. It examines some useful mathematical techniques such as least squares, differentiation and integration as applied to growth curves and linear and nonlinear modelling, especially via the use of computers. Basic statistical topics covered include: describing biological data and variability, sampling and estimation, framing biological hypotheses; estimating a single treatment mean via a confidence interval and testing for a particular mean via a z-test or t-test; estimating or testing the difference between two treatment means. The spreadsheet package Excel and the statistical package GenStat will be used for mathematical and statistical analysis and for graphical presentation.
Textbooks
No single text is recommended as extensive course notes are made available.
Reference books:
Causton, DR (1977). A Biologist's Mathematics. Edward Arnold: London.
Clewer, AG & Scarisbrick, DH (2001). Practical Statistics and Experimental Design for Plant and Crop Science. John Wiley & Sons: West Sussex.
Glover, T and Mitchell, K (2002). An Introduction to Biostatistics. McGraw-Hill: New York
McConway, KJ Jones, MC and Taylor, PC (1999). Statistical Modelling using GenStat. Arnold: London.
Mead, R, Curnow, RN and Hasted, AM (2003). Statistical Methods in Agriculture and Experimental Biology, 3rd ed. Chapman & Hall/CRC: Boca Raton.
Morris, TR (1999). Experimental Design and Analysis in Animal Sciences. Oxon: CABI Publishing

BIOL 1001 **Concepts in Biology**
6 credit points. B A, B Agr Ec, B An Vet Bio Sc, B Anim Sc, B E, B Hort Sc, B L W Sc, B Med Sc, B N, B N (I A H), B N, B A, B N, B Sc, B Pharm, B Pharm (Rural), B Res Ec, B Sc, B Sc (Bioinformatics), B Sc (Environmental), B Sc (Marine Science), B Sc (Molecular Biology & Gene. **Session:** Semester 1, Summer. **Classes:** 3 lee & 3 hrs prac/wk. **Assumed Knowledge:** No previous knowledge required. Students are encouraged to take the Biology Bridging Course. Students who have completed HSC Biology are advised to enrol in BIOL1101 Ecosystems to Genes rather than BIOL1001. **Prohibitions:** BIOL (1101 or 1901). **Assessment:** One 2.5hr exam, assignments, quizzes.
NB: It is recommended that BIOL (1001 or 1101 or 1901) be taken before all Semester 2 Junior units of study in Biology.
Concepts in Biology is an introduction to the major themes of modern biology. We start with introductory cell biology, which particularly emphasises how cells obtain and use energy. We then discuss the structure and function of microorganisms. The significance of

molecular biology is covered, working from the role of DNA in protein synthesis and development through to modern techniques and their uses. The genetics of organisms is then discussed, leading to consideration of theories of evolution and the origins of the diversity of modern organisms. We bring all the abovementioned concepts together to develop an understanding of interactions between organisms in biological communities or ecosystems. Finally we discuss the significance of human impact on other living organisms, with particular reference to finding solutions to problems in areas such as global warming, introduced pests, and extinctions. The unit is designed so that lab classes and the field trip integrate with the lectures. Lab activities are carried out in groups so that team work skills are developed. This unit also incorporates a number of key generic skills such as written communication skills, discussion and data interpretation, and experimental design and hypothesis testing skills.

Textbooks

Knox R B, Ladiges P and Evans B, (2005) Biology, 3rd Ed. McGraw-Hill

A Unit of Study Manual will be available for purchase from the Copy Centre during the first week of semester.

BIOL 1101 **Biology - Ecosystems to Genes**

6 credit points. B A, B Agr Ec, B An Vet Bio Sc, B E, B Hort Sc, B L W Sc, B Med Sc, B N, B N (I A H), B N, B A, B N, B Sc, B Pharm, B Pharm (Rural), B Res Ec, B Sc, B Sc (Bioinformatics), B Sc (Environmental), B Sc (Marine Science), B Sc (Molecular Biology & Genetics), B Sc. **Session:** Semester 1. **Classes:** 3 lee & 2-3 hrs. prac/wk. **Prerequisites:** HSC 2-unit Biology or equivalent. **Prohibitions:** BIOL (1001 or 1901). **Assessment:** One 2.5hr exam, assignments, quizzes.

NB: It is recommended that BIOL (1001 or 1101 or 1901) be taken before all Semester 2 Junior units of study in Biology.

Biology - Ecosystems to Genes builds on the main themes introduced in HSC 2-unit Biology to provide a background to the breadth of biology, including: cell biology, with emphasis on how cells obtain and use energy; diversity of microorganisms; genetics of organisms; modern molecular biology; theories of evolution and the origins of diversity of modern organisms; and interactions between organisms in biological communities.

Textbooks

Knox R B, Ladiges P and Evans B (2005) Biology., 3rd Ed., McGraw-Hill

A Unit of Study Manual will be available for purchase from the Copy Centre during the first week of semester.

BIOL 1901 **Biology - Ecosystems to Genes (Advanced)**

6 credit points. B A, B Agr Ec, B An Vet Bio Sc, B Hort Sc, B L W Sc, B Med Sc, B N, B N (I A H), B N, B A, B N, B Sc, B Sc, B Sc (Bioinformatics), B Sc (Environmental), B Sc (Marine Science), B Sc (Molecular Biology & Genetics), B Sc (Nutrition), B Sc Agr. **Session:** Semester 1. **Classes:** 3 lee & 3 hrs prac/wk. **Prerequisites:** UAI of at least 93 and HSC Biology result in the 90th percentile or better, or Distinction or better in a University level Biology unit, or by invitation. **Prohibitions:** BIOL (1001 or 1101). **Assessment:** One 2.5hr exam, assignments, quizzes.

NB: Department permission required for enrolment. It is recommended that BIOL (1001 or 1101 or 1901) be taken before all Semester 2 Junior units of study in Biology.

This unit of study shares lectures and practical classes with BIOL1101 but also includes more demanding alternative components of Biology - Ecosystems to Genes.

Textbooks

AsforBIOLllOl.

A Unit of Study Manual will be available for purchase from the Copy Centre during the first week of semester.

BIOL 1002 **Living Systems**

6 credit points. B A, B Agr Ec, B An Vet Bio Sc, B Hort Sc, B Med Sc, B Res Ec, B Sc, B Sc (Bioinformatics), B Sc (Environmental), B Sc (Marine Science), B Sc (Nutrition), B Sc Agr, UG Study Abroad Program. **Session:** Semester 2. **Classes:** (3 lee & 2 h prac)/wk. **Assumed Knowledge:** HSC 2-unit Biology. Students who have not undertaken an HSC biology course are strongly advised to complete Biology Bridging Course before lectures commence. **Prohibitions:** BIOL1902. **Assessment:** One 2.5hr exam, assignments, classwork.

Living Systems deals with the biology of all sorts of organisms, from bacteria to large plants and animals, and emphasises the ways in which they can live in a range of habitats. The importance of energy in living systems, and how elements are used and recycled in biological communities, are described. The unit of study includes lectures and laboratory classes on the physiology of nutrition and growth, basic physiological processes of animals and plants, the ways in which organisms control and integrate their activities, and their reproduction. Finally applications of knowledge of genetics and ecology to practical problems in agriculture and conservation are introduced. It is recommended that BIOL (1001 or 1101 or 1901) be taken before this unit of study. This unit of study, together with BIOL (1001 or 1101 or 1901) provides entry to all Intermediate units of study in biology in the School of Biological Sciences.

Textbooks

Knox R B, Ladiges P and Evans B (2005) Biology., 3rd Ed., McGraw-Hill.

A Unit of Study Manual will be available for purchase from the Copy Centre during the first week of semester.

BIOL 1902 **Living Systems (Advanced)**

6 credit points. B A, B Agr Ec, B An Vet Bio Sc, B Hort Sc, B Med Sc, B Sc, B Sc (Bioinformatics), B Sc (Environmental), B Sc (Marine Science), B Sc (Molecular Biology & Genetics), B Sc (Nutrition), B Sc Agr. **Session:** Semester 2. **Classes:** (3 lee & 2 h prac)/wk. **Prerequisites:** UAI of at least 93 and HSC Biology result in the 90th percentile or better, or Distinction or better in a University level Biology unit, or by invitation. **Prohibitions:** BIOL (1002 or 1904 or 1905). **Assessment:** One 2.5hr exam, assignments, quizzes, independent project.

NB: Department permission required for enrolment.

This unit of study shares lectures and practical classes with BIOL 1002 but also includes more demanding alternative components of Living Systems

Textbooks

As for BIOL1002.

A Unit of Study Manual will be available for purchase from the Copy Centre during the first week of semester,

CHEM 1405 **Chemistry**

6 credit points. B An Vet Bio Sc, B Anim Sc, B V Sc. Dr Adrian George. **Session:** Semester 1. **Classes:** Lectures: 52 hoursPracticals: 27 hours (9 x 3 hr classes). **Assumed Knowledge:** HSC Chemistry. **Assessment:** Intrasemester: 4 x Quizzes (15%), Lab work (10%)End of semester: 3 hr Exam (75%).

This is a one semester unit of study designed to provide (i) a suitable foundation for subsequent units of study such as biochemistry, animal nutrition, physiology and pharmacology, and (ii) a chemical background that will aid in the understanding, diagnosis and treatment of disease. It covers chemical theory, inorganic, physical, and organic chemistry with many examples from biological areas. It pre-supposes a satisfactory prior knowledge of HSC Chemistry. A total of 52 hours of lectures comprising 28 lectures in inorganic and physical chemistry and 24 lectures in organic chemistry.

Textbooks

Detailed information about prescribed texts is available from the School of Chemistry.

CROP 1001 **Agricultural Science 1A**

6 credit points. B Agr Ec, B An Vet Bio Sc, B Anim Sc, B Res Ec, B Sc (Molecular Biotechnology), B Sc Agr, UG Study Abroad Program. Assoc. Prof Rose, Prof. Burgess, Prof. Nicholas. **Session:** Semester 1. **Classes:** (3 lee & 3 prac)/wk. **Assumed Knowledge:** HSC Chemistry. **Prohibitions:** HORT1001, LWSC1001. **Assessment:** One 2hr exam, prac, assignments.

This unit of study introduces the principles and practices of modern agriculture and examines the relationships between plants, animals and natural resources that make up agricultural production systems. The concepts of environmental and economic sustainability of agricultural systems will be introduced.

Topics covered include Australian farming systems, regional agricultural industries, farming operations and plant identification.

Textbooks

Reference booksV. Squires and P. Tow (eds) Dryland Farming: a Systems Approach (Sydney University Press, 1992)C.J. Pearson et al. A Plain English Guide to Agricultural Plants (Longman Cheshire, 1993)M.W. Denny Air and Water: The Biology and Physics of Life's Media (Princeton University Press, 1993)

CROP 1002 **Agricultural Science IB**

6 credit points. B Agr Ec, B An Vet Bio Sc, B Anim Sc, B Res Ec, B Sc (Molecular Biotechnology), B Sc Agr, UG Study Abroad Program. Assoc.Prof. Rose, Dr Sharma, DrCook. **Session:** Semester 2. **Classes:** (3 lee & 3 prac)/wk. **Corequisites:** CROP 1001. **Prohibitions:** HORT1002, LWSC1002. **Assessment:** One 2 hr exam, prac, assignments.

This unit of study develops the theme of environmental sustainability of agricultural production, and examines the physical principles which underpin agricultural systems. It examines the broad ecological relationships between the plants, animals and natural resources used in agriculture, and deals with some of the problems facing agriculture in the future. In addition, the static and dynamic forces involved in agricultural structures and equipment, the behaviour and properties of water in agricultural systems and the physical aspects of weather and the changing Australian climate will be discussed.

Textbooks

Reference booksV. Squires and P. Tow (eds) Dryland Farming: a Systems Approach (Sydney University Press, 1992)C.J. Pearson et al. A Plain English Guide to Agricultural Plants (Longman Cheshire, 1993)M.W. Denny Air and Water: The Biology and Physics of Life's Media (Princeton University Press, 1993)

YEAR 2

The normal load is 48 credit points comprising 36 credit points of the core units listed, and 12 credit points of units from either (i) the Ecosystem Management and Animal Production stream OR (ii) the Animal Biosciences stream.

CORE UNITS

AGCH 2004 Agricultural Chemistry

6 credit points. B An Vet Bio Sc, B Anim Sc, UG Study Abroad Program. Dr Caldwell (Coordinator), Prof Fraser. **Session:** Semester 1. **Classes:** 3 lec/wk. **Prerequisites:** CHEM1405. **Prohibitions:** AGCH2003. **Assessment:** One 2hr theory exam, one 1 hr theory of prac exam, lecture quizzes, laboratory reports.

This introductory unit of study consists of aspects of chemistry relevant in studies of basic and applied biological sciences including agriculture, food and the rural environment. Lecture topics include an introduction to quantitative aspects of bio-analytical chemistry; the principles of basic analytical methods such as spectroscopy, chromatography and electrochemistry; environmental aspects of water such as its behaviour as a solvent of hydrophobic solutes, surfactants, neutral hydrophilic solutes, salts and other electrolytes, and gases. A component of the unit will be devoted to basic biological chemistry and enzymology having particular emphasis on biochemical processes in animals.

Seven laboratory sessions will demonstrate aspects of analytical chemistry including: elemental analysis of foods and natural waters, spectrophotometry, chromatographic techniques, preparation of buffers, fundamentals of pH measurement. A further three or four laboratory sessions will demonstrate some features of biological polymers and some fundamental properties of enzymes.

ANSC 2004 Animal Conservation Biology

6 credit points. B An Vet Bio Sc, B Anim Sc. To be announced. **Session:** Semester 2. Classes: Variable consisting of up to 6hrs/week (Students advised to consult weekly timetable). Classes involve lectures, tutorials and practical classes. Lectures will involve guest speakers from specialist areas. **Prohibitions:** As the core component of this unit of study is run in conjunction with Veterinary Conservation Biology (VETS2015) students must consult timetables to determine if subject choices prohibit them from attending these classes.. **Assessment:** 80% of the total grade for this unit shall be gained from assessment within the VETS2015 unit of study. The assessment for this is as follows:Theory examination (2 hour written) (65%), mid semester quiz (10%), assignments/presentations (25%). The final 20% for this unit of study shall be assessed by a second assignment/presentation.

This unit will also provide the student with a broad knowledge and general understanding of the taxonomy, ecology, biology and conservation status of Australia's unique vertebrate fauna, specified key aspects of the anatomy and physiology of Australia's native vertebrate fauna (ANF) and provide an understanding of the principles of the ecology, population dynamics, conservation status and management of macropods in Australia. The threatening processes past and present that continue to adversely affect Australia's fauna will be covered. Instruction into critically evaluating the arguments for and against the sustainable utilisation of wildlife, including the ethical and animal welfare aspects will be introduced to the student. Through examples and guest speakers the student will be shown the general principles of disease as they apply to wildlife health and gain a broad knowledge and understanding of the husbandry and handling requirements for captive breeding of ANF, as well as be made aware of and gain understanding in the principles, animal welfare aspects and ethics of wildlife rehabilitation and translocation. Further topics covered will allow the student to be aware of, understand and critically evaluate the basis for current approaches to wildlife emergency management (oil spills, bushfires, marine mammal strandings), have a working knowledge and understanding of the legislation and treaties that deal with wildlife conservation and management, have exposure to, and knowledge of, a specified range of field techniques for assessing wildlife populations and habitats. The unit provides an introduction to use of reproductive technology as a conservation tool and genetics in the management of endangered populations. It will also look at the economics of biodiversity preservation, including opportunity costs in conservation and preservation.

Assignments will build on the knowledge gained in lectures and practical classes and allow students to investigate topics related to this unit that may be of special interest to them as individuals and a group.

Textbooks

Burgman, M.A. & Lindermayer, D.B. (1998) Conservation Biology for the Australian Environment. Surrey Beatty & Sons Pty Ltd. ISBN 0 949324 78 7

Olsen, P. (1998) Australia's Pest Animals. New Solutions to Old Problems. Bureau of Resource Sciences. ISBN 0 86417 808 5

White, S. (1997) Caring for Australian Wildlife. Australian Geographic Pty Ltd. ISBN 1 86276 021 7

Reference book

Strahan, R. (Ed) (1983) The Australian Museum complete book of Australian Mammals. Angus & Robertson. ISBN 0 207 14454 0

BIOM 2001 Biometry 2

6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Sc Agr, UG Study Abroad Program. A/Prof Mick O'Neill, Ms Kath Bartimote. **Session:** Semester 1. **Classes:** (3 lee, 2 prac & 1 tut)/wk. **Prerequisites:** BIOM1003 or equivalent. **Assessment:** Assignments (50%), one 3 hr theory/prac exam (50%). All open book.

This unit of study extends the techniques considered in Biometry 1, and considers problems of statistical design and analysis encountered in research in the biological, agricultural, horticultural, animal and environmental sciences. In practical classes the computer packages Minitab, GenStat and Excel are used extensively to analyse experimental data. We commence with a revision of one and two sample t tests. We then consider the concepts of randomisation and replication; sampling and experimental units; controlling variability by blocking; analysis of variance for simple and factorial treatment designs; residual diagnostic techniques. Specific experimental designs studied include completely random and randomised complete block designs; Latin square designs; spilt-plot designs. Next we consider linear relationships (regression, correlation) between two biological measurements; multiple linear regression; stepwise regression; analysis of covariance. We finish with a review of non-parametric analyses and the analysis of two-way contingency tables.

Textbooks

Reference book: Mead,R, Curnow, RN and Hasted, AM (2003) Statistical Methods in Agriculture and Experimental Biology, 2nd ed. London: Chapman & Hall.

ENTO 2002 Entomology and Parasitology

6 credit points. B An Vet Bio Sc, B Anim Sc, UG Study Abroad Program. A/Prof Nick Sangster. **Session:** Semester 2. **Classes:** 2 lee & 3 prac/wk; individual insect collection (1 hr/wk). **Assessment:** One 2 hr exam (50%), prac quizzes, test (35%), insect collection (15%).

This unit provides an introduction to insects and animal parasites. In Entomology, lectures include physiology, ecology and principles of insect control. In Parasitology, there will be three lectures per week covering the range of Helminths (round and flatworms) infecting the internal organs of farm animals, including life cycles, parasite identification and biology, host/parasite relationships and control of parasite infections.

Entomology practicals deal with insect morphology and taxonomy including some information on economically important insect pests. Students must make a small but representative insect collection. Parasitology practicals will deal with parasite identification, lifecycles and isolation of parasites and/or their eggs from faeces.

GENE 2001 Agricultural Genetics 2

6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B Sc Agr, UG Study Abroad Program. Dr Sharp, Dr Darvey, Prof. Moran, Assoc. Prof. Nicholas. **Session:** Semester 1. **Classes:** (3 lee, 1 tut & 2 prac)/wk. **Prerequisites:** BIOL1001 and BIOL1002 or BIOL (1101 or 1901) and BIOL 1902, BIOM1001 or BIOM1003. **Assessment:** One 3hr exam, tests, assignments.

This lecture and practical unit of study provides an introduction to the genetics and breeding of plants and animals. It provides an understanding for parallel and following courses. Lectures cover the basics of gene transmission and interaction, cytogenetics, molecular genetics, population and quantitative genetics, as well as the more applied aspects of plant and animal breeding and biotechnology. Practicals emphasise, with agricultural examples, the procedures of genetic and cytogenetic analysis, and the use of computers in simulation procedures in population genetics, quantitative inheritance and selection programs, and provide exposure to current plant and animal breeding and biotechnology.

MICR 2026 Microbes and Animal Health

6 credit points. B An Vet Bio Sc, B Anim Sc. Dr Andrew Holmes. **Session:** Semester 2. **Classes:** 2 lee & 3 prac/wk. **Prerequisites:** 12 credit points of Junior Biology. **Prohibitions:** MICR (2021 or 2921 or 2001 or 2901 or 2003 or 2011 or 2909). **Assessment:** One 2 hr exam, bi-weekly on-line quiz, project report and seminar.

NB: Only available to students in the Bachelor of Animal Science or the Bachelor of Animal and Veterinary Bioscience.

This unit introduces the diversity of microbes in soil, water, air, plant and animal environments. Through an examination of their physiology and genetics it explores their interactions with plants, animals and each other, and their roles as decomposers and recyclers in the environment. There are numerous interactions between animals and microbes that are present in healthy and diseased animals. The basis of these interactions and their influence on animal development, growth, well-being and production will be explored. Practical classes introduce techniques and skills in isolating, quantifying and culturing microbes, designing and interpreting experiments to study microbial growth, and in preparing and presenting data. Students will understand the interactions of microbes and the host through an in-vivo study.

Textbooks

Atlas RM and Bartha R (1997) Microbial Ecology: Fundamentals and applications. 4th Edition. Benjamin/Cummings Scientific Publishing, Menlo Park, CA.

Reference texts:

Tizard, I., (2000) Veterinary Immunology, An Introduction (6th ed), W.B. Saunders Company.

Quinn, PJ.,et al. (2002). Veterinary Microbiology and Microbial Disease. Blackwell Science.

Ecosystem Management and Animal Production Stream

Candidates enrolling in the Ecosystem Management and Animal Production Stream must enrol in ANSC3103 and ANSC3104 in year 3.

PLNT 2003 **Plant Form and Function**

6 credit points. B A, B Agr Ec, B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Res Ec, B Sc, B Sc (Bioinformatics), B Sc (Environmental), B Sc (Marine Science), B Sc (Molecular Biology & Genetics), B Sc (Molecular Biotechnology), B Sc (Nutrition), B Sc Agr, UG Study Abroad. A/Prof Bruce Sutton, A/Prof Robyn Overall. **Session:** Semester 2. **Classes:** 2 lectures, 1hr tutorial and 1 prac, A/V session (2-3hr) or field trip (6hr) per wk. **Assumed Knowledge:** The content of BIOL (1002 or 1902) is assumed knowledge and students entering from BIOL (1003 or 1903) will need to do some preparatory reading. **Prerequisites:** 12 credit points of Junior Biology (or with the Dean's permission), BIOL1201 and BIOL1202 or BIOL1001 and ENVI1001. **Prohibitions:** PLNT2903, BIOL2003, BIOL2903, CROP200L. **Assessment:** One 2hr theory exam (40%), prac exam (20%), anatomy project (10%), quizzes (5%), physiology report (10%), field report (15%).

This unit of study investigates the structure of cells, tissues and organs of flowering plants and relates them to function. Topics include; how photosynthesis, translocation, water transport and nutrition relate to the structures that carry out these processes. Most of the information on plant structure will be provided in self-instructional audio-visual sessions augmented by small group discussions. This is integrated with experiments carried out in the laboratory or on field excursions to investigate the physiological aspects of plant structures. There is a focus on recent advances in plant molecular biology where they have been critical in enhancing our understanding of the form and function of plants. The physiological and anatomical responses of plants to extreme environments such as drought and salinity will also be addressed. Attention will be paid to the anatomy and physiology of crop, horticultural and Australian native plants. This unit of study complements Applied Plant Biochemistry, Australian Flora: ecology and conservation and Cell Biology and leads onto senior units of study in plant sciences, including Plant Growth and Development. It is essential for those seeking a career in plant molecular biology.

Textbooks

Taiz L, Zeiger E (2002) Plant Physiology 3rd ed. Sunderland, Mass Sinauer

Recommended reading:

Atwell B, Kriedemann P, Turnbull C (1999) Plants in Action. Macmillan, South Yarra.
Buchanan BB, Gruissem W, Jones RL (2000) Biochemistry and Molecular Biology of Plants, ASPP, Rockvill, Maryland

A Study Guide for the unit will be available for purchase from the Copy Centre during the first week of Semester.

SOIL 2003 Soil Properties **and** Processes

6 credit points. B Agr Ec, B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Res Ec, B Sc, B Sc (Environmental), B Sc Agr, UG Study Abroad Program. Dr Cattle, Prof McBratney, Dr Singh. **Session:** Semester 1. **Classes:** (3 lee & 3hr prac)/wk. **Assessment:** One 3hr theory exam, one 1hr prac exam, quizzes and prac book.

This unit of study is concerned with the fundamental properties of soil, the factors of soil formation, and the processes that operate in the soil system. The components of the unit of study are: pedology; soil physics and soil chemistry. These components are synthesised by reference to common soil profiles. The study of soil in the field starts with field description and assessment of essential characteristics. The physics of water and gas movement, temperature, density, swelling and strength are considered. Soil chemistry includes properties of organic matter, cation exchange capacity, nitrogen, phosphorus, potassium and acidity. Common soil types of N.S.W. are studied in relation to their formation, properties and classification.

Textbooks

Reference booksN.C. Brady The Nature and Properties of Soils 10th edn (Macmillan, 1990)K.O. Campbell and J.W. Bowyer (eds) The Scientific Basis of Modern Agriculture (Sydney U.P, 1988)D.L. Rowell, Soil Science: Methods and Applications (Longman, 1994)R.E. White Introduction to the Principles and Practice of Soil Science 3rd edn (Blackwells Scientific, 1997)A. Wild (ed.) Russell's Soil Conditions and Plant Growth 11th edn (Wiley, 1988)

Animal Biosciences Stream

ANSC 3103 **Animal** Structure **and Function** 3A

6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Sc (Molecular Biotechnology), B Sc Agr. Dr Melanie Collier. **Session:** Semester 1. **Classes:** lectures (2 hours/week), tutorials (1 hours/week), seminars/workshops (1 hours/week). **Prerequisites:** ANSC2002. **Assessment:** One theory exam (50%), practical test (15%), assignments/presentations (35%).

Animal Structure and Function 3A will build on the understanding of animal form and operation that students have developed in prior Units, particularly ANSC 2002. In ASF3A the structure and function of the digestive, endocrine and immune systems of the body are explored in depth. A study of animal behaviour and welfare is also an integral component of this unit. This Unit enables students to develop a three dimensional appreciation of the species differences in structure of the major visceral organs of the body through demonstrations and dissections and provides the basis for advanced, applied studies in Animal Nutrition.

The overall goals of the Unit are twofold. First, to enable students to develop a rich understanding of the relationships between body systems and structures (begun in ANSC 2002 and continued in ASF3B). Second, to develop an appreciation of the links between structure, function and their relevance to animal production that will be further developed in 4th year Animal Production.

Textbooks

The recommended textbook for the animal structure component of the unit is:
Dyce, K.M., Sack, W.O. and Wensing, C.J.G. (2002). Textbook of Veterinary Anatomy. 3rd edn. W.B. Saunders, Philadelphia

Each student should purchase for the function component of this unit:
Starr, C. and Taggart, R (2001) Animal Structure and Function, 9th edition, Brooks/Cole, Thomson Learning, Australia
OR
Currie, W.B. (1995) Structure and Function of Domestic Animals, CRC, Boca Raton
OR
Cunningham, J.G. (1997) Textbook of Veterinary Physiology. 2nd edition, Saunders, Philadelphia

Handbook: A course handbook will be available for students to purchase. It contains details of lecture outlines, objectives, reference lists, details of practical classes, staffing as well as other relevant class material.

ANSC 3104 **Animal Structure and Function 3B**

6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Sc (Molecular Biotechnology), B Sc Agr. Dr Melanie Collier. **Session:** Semester 2. **Classes:** Lectures (2 hours/week), tutorials (2 hours/week). Activities will vary on a weekly basis. **Prerequisites:** ANSC2002, ANSC3103 OR ANSC 3101. **Assessment:** One exam (55%), anatomy dissection project (15%), assignments (30%).

Through 80 hours of tutorials, practicals and workshops students in this Unit of Study will build on the concepts introduced, and skills acquired in ASF3 A. This unit will introduce topics not covered in ASF3 A and will integrate in livestock animals structure and function of the urinary tract, bone and skin, cardiovascular and nervous systems, avian structure, aquaculture and deer production. The concepts developed will be applied to analysis and resolution of problems in animal production.

Handbook- a comprehensive course handbook will be available. It contains details of practicals, assessments, lecture outlines and handouts, objectives, reference lists and textbooks, staffing.

Textbooks

For Animal Structure :
Dyce, K.M., Sack, W.O. and Wensing, C.J.G. (2002) Textbook of Veterinary Anatomy 3rd Edn W.B.Saunders, Philadelphia OR
Smallwood, J.E. (1973) An introductory study to bovine anatomy. The author, Bryan,Texas
For Animal function:
Starr, C. and Taggart, R. (2001) Animal Structure and Function, 9thEdn, Brooks/Cole, Thompson Learning,Australia OR
Currie, W.B. (1995) Structure and Function of domestic animals, CRC, Boca Raton.

YEAR 3

CORE UNITS

Ecosystem Management **and** Animal Production Stream

The normal load is 48 credit points comprising 24 credit points of the core units listed, and 24 credit points of electives chosen from those listed.

ANSC 3101 **Animal Nutrition 3**

6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Sc (Molecular Biotechnology), B Sc Agr. Dr Michelle Hyde. **Session:** Semester 2. **Classes:** Lectures: 3 hours/weekTutorials: 0.5 hours/week. **Prerequisites:** ANSC2002. **Assessment:** Assignments - including web based problem solving exercises (50%), oral presentation (10%), written end of semester examination (40%).

This Unit of Study builds upon principles discussed in ANSC 2002 (Animal Science 2).

The Unit is broadly divided into four sections, namely:
- Estimating the nutritive value of feeds
- Estimating the nutrient requirements of animals
- Diet formulation
- Errors in feeding

The focus is on coming to an understanding of the assessment of nutritional adequacy and the avoidance and solving of nutritional problems, with a particular emphasis on animals used in agricultural production systems. The principles discussed in this course will be expanded in ANSC 4001 and ANSC 4002 (Animal Production 4A and 4B) in the following year, in which species-specific systems will be described.

The basis of successful feeding management is an understanding of the following:
- the composition of feeds
- the digestibility and efficiency of utilisation of nutrients by the animal
- the requirements of the animal for nutrients
- interactions between nutrients that influence health and production

and following from this an ability to:
- formulate diets to meet animal requirements for a variety of purposes and under a variety of constraints
- identify deficiencies, excesses and imbalances in diets and so avoid a decline in - productive efficiency and/or a decline in health

Textbooks
McDonald, Edwards, Greenhalgh and Morgan (2002) Animal Nutrition 6th ed. Prentice Hall

ANSC 3102 **Animal Reproduction**
6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Sc (Molecular Biotechnology), B Sc Agr. Prof G Evans. **Session:** Semester 1. Classes: lectures (2 hours/week) and tutorials (1 hours/week). **Prerequisites:** ANSC2002. **Assessment:** One written exam (60%), practical report (20%), written and oral assignments (20%).
A comprehensive program on basic and applied male and female reproductive biology with particular emphasis on domestic animals. The unit of study includes reproductive cycles, sexual differentiation, fertilization, development, gestation and parturition. Applied aspects include tuition on semen collection and processing, control and management of reproduction, artificial insemination, embryo transfer, pregnancy diagnosis, and induction of parturition. Tuition is given on campus in Sydney and at the University Farms, Camden.
Textbooks
Hafez, B & Hafez, E.S.E. (Eds) (2000) Reproduction in Farm Animals Lippincott Williams and Wilkins
Senger, PL. (2003) Pathway to Pregnancy and Parturition (2nd Edition). Current Conceptions Inc.

ANSC 3103 **Animal Structure and Function 3A**
6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Sc (Molecular Biotechnology), B Sc Agr. Dr Melanie Collier. **Session:** Semester 1. Classes: lectures (2 hours/week), tutorials (1 hours/week), seminars/workshops (1 hours/week). **Prerequisites:** ANSC2002. **Assessment:** One theory exam (50%), practical test (15%), assignments/presentations (35%).
Animal Structure and Function 3A will build on the understanding of animal form and operation that students have developed in prior Units, particularly ANSC 2002. In ASF3A the structure and function of the digestive, endocrine and immune systems of the body are explored in depth. A study of animal behaviour and welfare is also an integral component of this unit. This Unit enables students to develop a three dimensional appreciation of the species differences in structure of the major visceral organs of the body through demonstrations and dissections and provides the basis for advanced, applied studies in Animal Nutrition.
The overall goals of the Unit are twofold. First, to enable students to develop a rich understanding of the relationships between body systems and structures (begun in ANSC 2002 and continued in ASF3B). Second, to develop an appreciation of the links between structure, function and their relevance to animal production that will be further developed in 4th year Animal Production.
Textbooks
The recommended textbook for the animal structure component of the unit is:
Dyce, K.M., Sack, W.O. andWensing, C.J.G. (2002). Textbook of Veterinary Anatomy. 3rd edn. W.B. Saunders, Philadelphia

Each student should purchase for the function component of this unit:
Starr, C. and Taggart, R (2001) Animal Structure and Function, 9th edition, Brooks/Cole, Thomson Learning, Australia
OR
Currie, W.B. (1995) Structure and Function of Domestic Animals, CRC, Boca Raton
OR
Cunningham, J.G. (1997) Textbook of Veterinary Physiology. 2nd edition, Saunders, Philadelphia

Handbook: A course handbook will be available for students to purchase. It contains details of lecture outlines, objectives, reference lists, details of practical classes, staffing as well as other relevant class material.

ANSC 3104 **Animal Structure and Function 3B**
6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Sc (Molecular Biotechnology), B Sc Agr. Dr Melanie Collier. **Session:** Semester 2. Classes: Lectures (2 hours/week), tutorials (2 hours/week). Activities will vary on a weekly basis. **Prerequisites:** ANSC2002, ANSC3103 OR ANSC 3101. **Assessment:** One exam (55%), anatomy dissection project (15%), assignments (30%).
Through 80 hours of tutorials, practicals and workshops students in this Unit of Study will build on the concepts introduced, and skills acquired in ASF3A. This unit will introduce topics not covered in ASF3 A and will integrate in livestock animals structure and function of the urinary tract, bone and skin, cardiovascular and nervous systems, avian structure, aquaculture and deer production. The concepts developed will be applied to analysis and resolution of problems in animal production.
Handbook- a comprehensive course handbook will be available. It contains details of practicals, assessments, lecture outlines and handouts, objectives, reference lists and textbooks, staffing.
Textbooks
For Animal Structure :
Dyce, K.M., Sack, W.O. and Wensing, C.J.G. (2002) Textbook of Veterinary Anatomy 3rd Edn W.B.Saunders, Philadelphia OR
Smallwood, J.E. (1973) An introductory study to bovine anatomy. The author, Bryan,Texas
For Animal function:
Starr, C. and Taggart, R. (2001) Animal Structure and Function, 9thEdn, Brooks/Cole, Thompson Learning,Australia OR
Currie, W.B. (1995) Structure and Function of domestic animals, CRC, Boca Raton.

Animal Biosciences Stream
The normal load is 48 credit points comprising 12 credit points of the core units listed, and 36 credit points of electives chosen from those listed.
ANSC 3101 **Animal Nutrition 3**
6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Sc (Molecular Biotechnology), B Sc Agr. Dr Michelle Hyde. **Session:** Semester 2. Classes: Lectures: 3 hours/weekTutorials: 0.5 hours/week. **Prerequisites:** ANSC2002. **Assessment:** Assignments - including web based problem solving exercises (50%), oral presentation (10%), written end of semester examination (40%).
This Unit of Study builds upon principles discussed in ANSC 2002 (Animal Science 2).

The Unit is broadly divided into four sections, namely:
- Estimating the nutritive value of feeds
- Estimating the nutrient requirements of animals
- Diet formulation
- Errors in feeding

The focus is on coming to an understanding of the assessment of nutritional adequacy and the avoidance and solving of nutritional problems, with a particular emphasis on animals used in agricultural production systems. The principles discussed in this course will be expanded in ANSC 4001 and ANSC 4002 (Animal Production 4A and 4B) in the following year, in which species-specific systems will be described.

The basis of successful feeding management is an understanding of the following:
- the composition of feeds
- the digestibility and efficiency of utilisation of nutrients by the animal
- the requirements of the animal for nutrients
- interactions between nutrients that influence health and production

and following from this an ability to:
- formulate diets to meet animal requirements for a variety of purposes and under a variety of constraints
- identify deficiencies, excesses and imbalances in diets and so avoid a decline in - productive efficiency and/or a decline in health

Textbooks
McDonald, Edwards, Greenhalgh and Morgan (2002) Animal Nutrition 6th ed. Prentice Hall

ANSC 3102 **Animal Reproduction**
6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Sc (Molecular Biotechnology), B Sc Agr. Prof G Evans. **Session:** Semester 1. Classes: lectures (2 hours/week) and tutorials (1 hours/week). **Prerequisites:** ANSC2002. **Assessment:** One written exam (60%), practical report (20%), written and oral assignments (20%).
A comprehensive program on basic and applied male and female reproductive biology with particular emphasis on domestic animals. The unit of study includes reproductive cycles, sexual differentiation, fertilization, development, gestation and parturition. Applied aspects include tuition on semen collection and processing, control and management of reproduction, artificial insemination, embryo transfer, pregnancy diagnosis, and induction of parturition. Tuition is given on campus in Sydney and at the University Farms, Camden.
Textbooks
Hafez, B & Hafez, E.S.E. (Eds) (2000) Reproduction in Farm Animals Lippincott Williams and Wilkins
Senger, PL. (2003) Pathway to Pregnancy and Parturition (2nd Edition). Current Conceptions Inc.

ELECTIVE UNITS

Enrolment in elective units is subject to prerequisite and corequisite requirements and timetabling constraints.

AGCH 3025 **Chemistry and Biochemistry of Foods A**
6 credit points. B An Vet Bio Sc, B Hort Sc, B L W Sc, B Sc, B Sc (Environmental), B Sc (Nutrition), B Sc Agr, UG Study Abroad Program. Dr Robert Caldwell. **Session:** Semester 1. Classes: 3 lec/wk, 8 x 3 hr prac per semester. **Prerequisites:** 6 credit points of Intermediate units in Agricultural Chemistry, Chemistry or Biochemistry. **Prohibitions:** May not be counted with AGCH (3017, 3024).. **Assessment:** One 2 hr theory exam, one 1 hr theory of prac exam, assignment and prac reports.
This unit of study aims to give students an understanding of the constituents of foods and fibres. The lecture topics cover:
- the chemistry, biochemistry and processing behaviour of major food constituents - oligosaccharides, polysaccharides, lipids and proteins;
- the relationship between molecular structure of constituents and their functionality in foods;
- natural fibres and gel-forming biopolymers - uses in foods, importance in dietary fibre and commercial products;
- enzymes in foods and food processing;
- wheat flour dough and protein chemistry during baking and cooking;
- anti-nutritional and toxic constituents of plants and foods; and
- flavour chemistry

The laboratory exercises aim to give students an understanding of the methods used in the analysis of foods and other biological materials, and will include:
- analysis of carbohydrates including starch and dietary fibre;
- spectroscopic, enzymic, and chromatographic methods.

AGCH 3026 **Chemistry and Biochemistry of Foods B**
6 credit points. B An Vet Bio Sc, B Hort Sc, B L W Sc, B Sc, B Sc (Environmental), B Sc (Nutrition), B Sc Agr, UG Study Abroad Program. Dr Robert Caldwell. **Session:** Semester 1. Classes: 2 hr lec/seminar/workshop/wk; 24 hrs of prac/semester; site visits. **Prerequisites:** 6 credit points of Intermediate Chemistry, Biochemistry or Agricultural Chemistry. **Corequisites:** AGCH 3025. **Prohibitions:** AGCH3003, AGCH3005. **Assessment:** Five written assignments, one 1 hr theory of prac exam, prac reports and poster presentation.
This unit of study aims to give students an understanding of global food systems and global food security. In the lecture/seminar/workshop component, topics covered will include the sustainable production of major food crops; the role of genetically modified crops in food sustainability and quality; principles and methods in food quality control and assessment; chemical and biochemical aspects of food quality in relation to food processing and nutritional values. The laboratory exercises aim to give students an understanding of the methods used in the analysis of foods and other biological materials, and will include:
- analysis and examination of protein functionality in foods;
- spectroscopic, enzymic, and chromatographic methods.

AGCH 3030 **Rural Environmental Chemistry A**
6 credit points. B An Vet Bio Sc, B Hort Sc, B L W Sc, B Sc, B Sc (Environmental), B Sc Agr, UG Study Abroad Program. Prof Ivan Kennedy (Coordinator). **Session:** Semester 1. Classes: 6 day field trip in orientation week, 21 hr lee & 25 hr prac. **Prerequisites:** 6 credit points of either Intermediate Agricultural Chemistry, Chemistry, Biochemistry, Plant Science or Environmental Science. **Prohibitions:** AGCH3020, AGCH3021, AGCH3022.. **Assessment:** One 2 hr exam, field trip and laboratory reports.
This unit commences with a field trip to the Namoi and the Macquarie Valleys, where agriculture largely based on irrigation has been developed. Environmental impacts on vegetation, soil and water of agricultural enterprises such as cotton farming and human settlement will be assessed in a professional field trip report. Field observations on pH, nutrient and salt content, pesticide, and microbial content will be made on water, sediment, soils and in constructed wetlands, with samples returned for more detailed laboratory analysis at the University. Lectures will complement the field trip, including environmental chemistry of heavy metals, their effects on organisms; mechanisms of tolerance and phytoremediation; risk assessment of pesticides including herbicides, their mode of action and environmental fate; analysis and monitoring of pesticide residues by GC, GC-MS and immunoassay (ELISA); maximum residue limits (MRLS) and residue surveys; remediation of pesticides in ecosystems; design of new pesticides and means of pest control. Laboratory sessions will be related to these lecture topics, including 6-7 sessions on atomic absorption analysis for nutrients and heavy metals, mercury analysis, pesticide analysis by GLC, HPLC, MS and ELISA.

AGCH 3031 **Rural Environmental Chemistry B**
6 credit points. B An Vet Bio Sc, B Hort Sc, B L W Sc, B Sc, B Sc (Environmental), B Sc Agr, UG Study Abroad Program. Prof Ivan Kennedy (Coordinator). **Session:** Semester 2. Classes: 5-day field trip in AVCC common break; 21 hr lee and 30 hr prac and project/semester. **Prerequisites:** 6 credit points of either Intermediate Agricultural Chemistry, Chemistry, Biochemistry, Plant Science or Environmental Science. **Prohibitions:** AGCH3020, AGCH3021, AGCH3022. **Assessment:** One 2 hr exam, field-trip report and laboratory reports.
This field-oriented course will (i) provide understanding of chemical and biochemical processes in rural ecosystems and their sustainability, with particular reference to global warming, (ii) include a field trip and professional report to illustrate relevant case studies at several centres in eastern Australia (Canberra, Snowy Mountains, Murray and Murrumbidgee catchments) specialising in research related to global warming, acidification and water quality including salinisation (iii) conduct laboratory sessions and group research project to study a problem in a professional setting. Practical solutions will be sought by students, based on a field theory of action in ecosystems. Lectures will cover the environmental carbon, nitrogen and sulphur cycles, including bioenergetics of autotrophic and heterotrophic action; photosynthesis; nitrification and denitrification; biological nitrogen fixation; sulphur metabolism; production of greenhouse gases; pH balancing and efficient nutrient uptake; acidification of ecosystems and effects on plants and animals; remediation and control of greenhouse emissions; bioremediation of acidification and salinisation. The laboratory sessions and the group project will illustrate these environmental processes, including greenhouse gas production, methane and NOx, photosynthesis and nitrogen fixation, and monitoring of endocrine-disrupting compounds including pesticides using GLC, HPLC and ELISA.

AGEC 2101 **Market and Price Analysis**
6 credit points. B Agr Ec, B An Vet Bio Sc, B Com, B Ec, B Ec Soc Sc, B Hort Sc, B L W Sc, B Res Ec, B Sc Agr, UG Study Abroad Program. A/Professor Fredoun Ahmadi-Esfahani. **Session:** Semester 1. Classes: (3 lee & 1 tut)/wk. **Prerequisites:** ECON 1001 or AGEC 1006 or (AGEC1003 AND 1004). **Prohibitions:** AGEC 2001. **Assessment:** a) Formal Assessment: Mid semester exam (I hour), Final Examination (2 hours), tutorial assignmentsb) Out of class prescribed student workload (e.g. exercises, assignments) c) Other expected student workload (e.g. preparation revision and private study) Out of class prescribed student workload (e.g. exercises, assignments): 8 hours per week of reading, study and assignment workYou may find the Excel spreadsheet "Assessment Audit.xls" (available at this intranet site) useful in allocating assessment tasks through the unit.
This unit focuses on the nature of agricultural and resource commodity markets, market demand relationships, market supply relationships, price determination under alternative market structures, marketing margin relationships, derived demand for inputs, spatially and temporally related markets, market dynamics, price expectations, commodity futures markets and other pertinent topics. Applied examples from the agricultural and resource industries and the overall economy will be used throughout the semester as illustrations of the principles involved.
Textbooks
Tomek, W.G. and Robinson, K.L. 2003, Agricultural Product Prices, Cornell University Press, Ithaca
Pindyck, R.S. and Rubinfeld, D.L. 2005, Microeconomics, Pearson Prentice-Hall, New Jersey.
NB. Students are advised not to buy the textbook before lectures commence in case there are any changes.

AGEC 2102 **Agribusiness Marketing**
6 credit points. B Agr Ec, B An Vet Bio Sc, B Com, B Ec, B Ec Soc Sc, B Hort Sc, B L W Sc, B Res Ec, B Sc Agr, UG Study Abroad Program. A/Professor Fredoun Ahmadi-Esfahani. **Session:** Semester 1. Classes: (2 lee & 1 tut)/wk. **Prerequisites:** AGEC 1006 or (AGEC1003 and AGEC1004) or AGEC 1102 or AGEC1002 or RSEC1031. **Assessment:** Formal Assessment: [e.g. One 2hr exam, 2000w essay, tutorial papers, prac reports] One 1 hour mid semester exam, one 2 hour final exam, tutorial papers, essaysb) Out of class prescribed student workload (e.g. exercises, assignments)c) Other expected student workload (e.g. preparation revision and private study) 9 hours per week of reading, study and assignment workYou may find the Excel spreadsheet "Assessment Audit.xls" (available at this intranet site) useful in allocating assessment tasks through the unit.
This unit of study is designed to provide an introductory understanding of agribusiness marketing. It emphasises firm-level marketing mix and marketing strategy, decision making, marketing management and planning, market research and information. The unit of study will also address the organisation and trends of agribusiness marketing including value-adding and market power in the supply chain, market efficiency and international marketing by agribusiness firms. The unit content is analytical, and draws on applied microeconomics.
Textbooks
Kohls, R.L. and Uhl, J.N. 2002, Marketing of Agricultural Products, Prentice-Hall, Upper Saddle River.
Tomek, W.G. and Robinson, K.L. 2003, Agricultural Product Prices, Cornell University Press, Ithaca

N.B. Students are advised not to buy the textbook before lectures commence in case there are any changes.

AGEC 2103 **Production Economics**
6 credit points. B Agr Ec, B An Vet Bio Sc, B Com, B Ec, B Ec Soc Sc, B Hort Sc, B L W Sc, B Res Ec, B Sc Agr, UG Study Abroad Program. A/Professor Fredoun Ahmadi-Esfahani. **Session:** Semester 2. Classes: (3 lee & 2 tut)/wk. **Prerequisites:** ECON1001 orAGEC1006or(AGEC1003 andAGEC1004). **Prohibitions:** AGEC2003. **Assessment:** a) Formal Assessment: [e.g. One 2hr exam, 2000w essay, tutorial papers, prac reports]One mid semester exam (1 hour) 2 hr exam, assignments, class work.b) Out of class prescribed student workload (e.g. exercises, assignments)2 assignments, weekly exercisesc) Other expected student workload (e.g. preparation revision and private study)To a total of 12 hrs/wk for an average student seeking satisfactory results You

may find the Excel spreadsheet "AssessmentAudit.xls" (available at this intranet site) useful in allocating assessment tasks through the unit.
This unit is concerned with the principles of resource allocation at the firm, industry and economy levels. The topics include: the nature of natural resource based production processes; production functions; factor substitution; constrained and unconstrained optimisation; principles of enterprise combination and multi-product production; input demands; cost functions and other dual relationships; economies of scale, size and scope in farming; principles of resource allocation over time; productivity and technical change; modelling risk in production processes; principles of resource allocation under risk and the illustration of the principles through the use of practical applications and exercises involving both the agricultural and resource industries.
Textbooks
D.L. Debertin Agricultural Production Economics 2nd edn (2002)

AGEC 3101 **Agribusiness Management**

6 credit points. B Agr Ec, B An Vet Bio Sc, B Com, B Ec, B Ec Soc Sc, B Hort Sc, B L W Sc, B Sc Agr, UG Study Abroad Program. A/Professor Fredoun Ahmadi-Esfahani. **Session:** Semester 2. **Classes:** (3 lee & 2 wkshp)/wk. **Prerequisites:** AGEC2103 or AGEC2003 or AGEC1006 or (AGEC1003 and AGEC1004). **Prohibitions:** AGEC1102; AGEC3103; AGEC3001. **Assessment:** a) Formal Assessment: [e.g. One 2hr exam, 2000w essay, tutorial papers, prac reports]One mid semester exam (1 hour) one final exam (2hr), assignmentsb) Out of class prescribed student workload (e.g. exercises, assignments)Computer-based assignmentsc) Other expected student workload (e.g. preparation revision and private study)To a total of 12 hrs/wk for an average student seeking satisfactory results You may find the Excel spreadsheet "AssessmentAudit.xls" (available at this intranet site) useful in allocating assessment tasks through the unit.
This unit of study deals with the application of economic principles and techniques of business management to agribusiness firms, with a particular focus on farms. The topics covered will include: management goals and objectives; budgeting; gross margins analysis; parametric budgeting; sources of management information and its analysis; simple systems simulation; applications of linear programming to farm and agribusiness planning; financial management; risk in planning and management; cash, credit, debt and taxation management; evaluation of investment and firm growth alternatives; acquisition and transfer of assets; the role of financial institutions in the agricultural credit market. Students develop skills in computer-based farm planning.
Textbooks
J.B. Hardaker et al. Coping with Risk in Agriculture, 2nd edn (CABI, 2004)
R.D.Kay et al. Farm Management, 5th edn (McGraw Hill, 2004)

AGRO 3002 **Agronomy** 3

6 credit points. B Agr Ec, B An Vet Bio Sc, B Hort Sc, B L W Sc, B Res Ec, B Sc, B Sc Agr, UG Study Abroad Program. A/Prof Bruce Sutton. **Session:** Semester 1. Classes: 5 student contact hrs/wk, workshops and discussions (36 hr total), labs (26 hr total). **Assumed Knowledge:** CROP 1001 or HORT 1001 or LWSC 1001. **Prerequisites:** PLNT 2003 or PLNT 2903. **Assessment:** One 2 hour exam, consultancy report, practical reports.
Agronomy studies the practices and underlying concepts of sustainable crop and pasture production. The scientific basis of modern practices used in crop production, particularly those relevant to New South Wales, is explored. This knowledge is used to appreciate the scale of future problems such as climate change, soil degradation and increased costs of petrochemical-based inputs like fuel and fertilizer. Possible responses to these problems that will help maintain productivity will be examined. The relationship between agricultural production and natural resource management is also considered as part of a modern production environment, with the impact of recent legislation supporting Ecologically Sustainable Development on agriculture and the agricultural response to it as the focus of discussion. The practical classes will develop key skills appropriate to precision agriculture and use of current decision support systems.

AGRO 3003 **Crop Water Management**

6 credit points. B Agr Ec, B An Vet Bio Sc, B Hort Sc, B L W Sc, B Res Ec, B Sc Agr, UG Study Abroad Program. A/Prof Bruce Sutton. **Session:** Semester 2. **Classes:** Five student contact hours per week (65 h total); Workshops and discussions (36 h total) Laboratories (26 h total). **Assumed Knowledge:** CROP 1001 or HORT 1001 or LWSC 1001. **Prerequisites:** PLNT 2003 or PLNT 2903. **Assessment:** One 2 hour exam, consultancy report, practical reports.
This unit of study provides a scientific understanding and practical working knowledge of water management in dryland and irrigated agricultural systems, with most of the emphasis at the field scale. The first section of the unit examines the mechanisms underlying a crop water balance, its calculation and measurement and management options for using rainfall as effectively as possible. The second section examines the major forms of irrigation, the scientific principles involved in each, their benefits and shortcomings and management to maximize water use efficiency. The practical classes will develop key skills appropriate to irrigation system management and use of current decision support systems.
Textbooks
M.E. Jensen (1980). Design and Operation of Farm Irrigation Systems (ASAE).
Allen, R.G, Periera, L.S., Raes, D. and Smith, M. (1998). Crop Evapotranspiration. Guidelines for computing crop water requirements. FAO Irrigation and Drainage Paper 56.
Hillel, D. (2004). Introduction to Environmental Soil Physics. Elsevier Academic Press.

ANSC 3105 **Animal Biotechnology**

6 credit points. B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Sc (Molecular Biotechnology), B Sc Agr. Prof C Moran. **Session:** Semester 2. **Classes:** Lectures (3 hrs/wk), tutorials (1 hour/week), seminars/workshops (0.25 hours/week). **Prerequisites:** GENE2001, ANSC2002. **Assessment:** One 2 hour exam (60%), essay (20%), seminar (20%).
Lectures, tutorials, laboratories (bioinformatics), seminars and supervised reading and directed learning instruction will cover the application of biotechnology to animal productivity, disease control, the development of new products from animals and the impact of altered micro-organisms and plants on animals. A firm foundation in molecular biology and recombinant DNA technology is provided, with an emphasis on relevance in animals. Regulation of gene expression in vivo and in expression systems, monitoring of gene expression including microarrays and proteomics, gene mapping, genomics and gene discovery are all discussed in contexts relevant to domestic animals. Genetic modifications of animals including transgenesis and gene knockout, and methods for achieving these modifications including cloning by nuclear transfer are detailed. Basic skills in bioinformatics are developed to access and utilise the vast information resources available. Legal methods of protecting intellectual property are described. Finally animal biotechnology is reviewed from an ethical perspective.

BIOM 3004 **Biometry 3**

6 credit points. B An Vet Bio Sc, B Hort Sc, B L W Sc, B Sc Agr, UG Study Abroad Program. A/Prof Mick O'Neill. **Session:** Semester 1. **Classes:** (2 lee, 3 prac)/wk, individual research lhr/wk. **Prerequisites:** BIOM 2001 or equivalent. **Assessment:** Reports (25%), Assignment (20%), Presentation (5%), Theory/Prac Examination (50%). All open book.
NB: (2 lee, 3 labs)/wk
This unit is designed for students who are interested in majoring in Biometry, or for students from other disciplines with an interest in further developing their skills in experimental design and advanced statistical modelling. It builds on the topics introduced in Biometry 2, and aims to give students sufficient skills and confidence to complete the analysis of their own research data in Fourth Year with a high degree of competence. We start by learning how to determine the number of replicates to use in an experiment. We revise multiple regression and extend the linear model to a time series system. We then examine how normally distributed data from designed experiments can be analysed in a general linear model framework, and hence how to cope with missing or incomplete data. The difference between maximum likelihood and residual maximum likelihood (REML) is studied for a single sample. A REML analysis is obtained for complete and incomplete factorial designs; for fixed, random and mixed models; for data collected from repeated observations on the same experimental unit. Next, we consider various techniques for the analysis of non-normal data, specifically: logistic regression for binary and proportion data; Poisson regression for count data; loglinear modelling for multi-way contingency tables; ordinal and nominal logistic regression for scores & ratings. The assignment is to design and analyse a 4th year experiment.

MICR 2022 **Applied Microbiology**

6 credit points. B An Vet Bio Sc, B E, B Hort Sc, B L W Sc, B Sc, B Sc (Bioinformatics), B Sc (Environmental), B Sc (Molecular Biology & Genetics), B Sc (Nutrition), B Sc Agr, UG Study Abroad Program. Dr Peter New. **Session:** Semester 2. **Classes:** 2.5 lee, 0.5 tut or prac & 2.0 prac/wk. **Assumed Knowledge:** MICR (2021 or 2921 or 2024). **Prerequisites:** (6 credit points of Junior Biology or MBLG1001) and 6 credit points of Junior Chemistry. **Prohibitions:** MICR (2922 or 2002 or 2902 or 2004 or 2008 or 2012 or 2909). **Assessment:** One 2hr exam, continuous assessment in prac, 2 assignments, prac exam.
NB: Students are very strongly recommended to complete MICR (2021 or 2921 or 2024) before enrolling in MICR2022 in Semester 2. For progression on to Senior Microbiology units, students must also complete MBLG1001 or PLNT (2001 or 2901).
This unit of study is designed to expand the understanding of, and technical competence in, microbiology, building on the knowledge and skills acquired in Microbiology 2021 or 2921.
The lectures cover two broad topics: molecular microbiology of the organism and microbial biotechnology and applications. The molecular microbiology section covers aspects of microbial genetics and the structure and functioning of procaryotic cells.
The microbial biotechnology section covers food and agricultural microbiology (production, spoilage and preparation, as well as the safety of foods) and aspects of public health and medical microbiology (host parasite relationships, host defences, epidemiology of selected diseases, prevention of disease). Industrial microbiology deals with large scale production, traditional products, recombinant

DNA products, biosensors and biocontrol agents, biodeterioration and bioremediation.
Practical classes enable the study of material which both complements and supplements the lecture topics.
Work experience
On completion of MICR 2022 or 2922, students who have successfully completed MICR2021 and are enrolled in the BSc or BSc (Advanced) may be offered the opportunity to undertake work experience for approximately one month in a microbiology laboratory of choice (hospital, food, research, environmental, etc.), subject to availability of places.
Textbooks
Prescott L M et al. Microbiology. 6th edn, WCB/McGraw-Hill, 2004

PLNT 2002 **Aust Flora: Ecology and Conservation**

6 credit points. B A, B Agr Ec, B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Res Ec, B Sc, B Sc (Bioinformatics), B Sc (Environmental), B Sc (Marine Science), B Sc (Molecular Biology & Genetics), B Sc (Molecular Biotechnology), B Sc (Nutrition), B Sc Agr, UG Study Abroad. Dr Glenda Wardle & Dr Murray Henwood. **Session:** Semester 1. **Classes:** (2 lee & 3 prac)/wk, audiovisual. **Prerequisites:** One of BIOL1001, BIOL1101, BIOL1901; One of BIOL1002, BIOL1003, BIOL1902, BIOL1903, LWSC1002. (With the Dean's permission BIOL1201 and BIOL1202 may be substituted for the above.). **Prohibitions:** PLNT2902, BIOL2004 or BIOL2904.. **Assessment:** One 2-hr exam (40%), laboratory reports (20%) herbarium (20%), one 2-hr practical exam (20%).
This unit provides a broad understanding of the evolution, classification and diversity of terrestrial plants and the principles of plant ecology in an Australian context. The major types of Australian vegetation are discussed across a range of temporal and spatial scales, and their current distribution related to their environment and origins. Selected contemporary issues in plant conservation from Australian natural and managed systems are explored. There is a strong emphasis on practical skills such as phylogenetic inference, plant identification and the collection and analysis of ecological data. The practical component of the unit of study uses examples taken from the Australian flora (including plants of horticultural significance) and major crop plants. Important elements of this unit are half-day field trips to the Royal National Park (or production systems at Camden), the Royal Botanic Gardens Sydney and the construction of student herbaria. The unit of study complements intermediate units of study in plant science, zoology, molecular and cell biology, genetics and biotechnology, and leads on to advanced plant and ecology modules offered through the School of Biological Sciences and the Faculty of Agriculture, Food and Natural Resources.
Textbooks
A Laboratory Manual for the unit will be available for purchase from the Copy Centre during the first week of Semester.

PLNT 2003 **Plant Form and Function**

6 credit points. B A, B Agr Ec, B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Res Ec, B Sc, B Sc (Bioinformatics), B Sc (Environmental), B Sc (Marine Science), B Sc (Molecular Biology & Genetics), B Sc (Molecular Biotechnology), B Sc (Nutrition), B Sc Agr, UG Study Abroad. A/Prof Bruce Sutton, A/Prof Robyn Overall. **Session:** Semester 2. **Classes:** 2 lectures, 1hr tutorial and 1 prac, A/V session (2-3hr) or field trip (6hr) per wk. **Assumed Knowledge:** The content of BIOL (1002 or 1902) is assumed knowledge and students entering from BIOL (1003 or 1903) will need to do some preparatory reading. **Prerequisites:** 12 credit points of Junior Biology (or with the Dean's permission), BIOL1201 and BIOL1202 or BIOL1001 and ENVI1001. **Prohibitions:** PLNT2903, BIOL2003, BIOL2903, CROP200L. **Assessment:** One 2hr theory exam (40%), prac exam (20%), anatomy project (10%), quizzes (5%), physiology report (10%), field report (15%).
This unit of study investigates the structure of cells, tissues and organs of flowering plants and relates them to function. Topics include; how photosynthesis, translocation, water transport and nutrition relate to the structures that carry out these processes. Most of the information on plant structure will be provided in self-instructional audiovisual sessions augmented by small group discussions. This is integrated with experiments carried out in the laboratory or on field excursions to investigate the physiological aspects of plant structures. There is a focus on recent advances in plant molecular biology where they have been critical in enhancing our understanding of the form and function of plants. The physiological and anatomical responses of plants to extreme environments such as drought and salinity will also be addressed. Attention will be paid to the anatomy and physiology of crop, horticultural and Australian native plants. This unit of study complements Applied Plant Biochemistry, Australian Flora: ecology and conservation and Cell Biology and leads onto senior units of study in plant sciences, including Plant Growth and Development. It is essential for those seeking a career in plant molecular biology.
Textbooks
Taiz L, Zeiger E (2002) Plant Physiology 3rd ed. Sunderland, Mass Sinauer
Recommended reading:
Atwell B, Kriedemann P, Turnbull C (1999) Plants in Action. Macmillan, South Yarra.
Buchanan BB, Gruissem W, Jones RL (2000) Biochemistry and Molecular Biology of Plants, ASPP, Rockvill, Maryland
A Study Guide for the unit will be available for purchase from the Copy Centre during the first week of Semester.

SOIL 2003 **Soil Properties and Processes**

6 credit points. B Agr Ec, B An Vet Bio Sc, B Anim Sc, B Hort Sc, B L W Sc, B Res Ec, B Sc, B Sc (Environmental), B Sc Agr, UG Study Abroad Program. Dr Cattle, Prof McBratney, Dr Singh. **Session:** Semester 1. **Classes:** (3 lee & 3hr prac)/wk. **Assessment:** One 3hr theory exam, one 1hr prac exam, quizzes and prac book.
This unit of study is concerned with the fundamental properties of soil, the factors of soil formation, and the processes that operate in the soil system. The components of the unit of study are: pedology; soil physics and soil chemistry. These components are synthesised by reference to common soil profiles. The study of soil in the field starts with field description and assessment of essential characteristics. The physics of water and gas movement, temperature, density, swelling and strength are considered. Soil chemistry includes properties of organic matter, cation exchange capacity, nitrogen, phosphorus, potassium and acidity. Common soil types of N.S.W. are studied in relation to their formation, properties and classification.
Textbooks
Reference booksN.C. Brady The Nature and Properties of Soils 10th edn (Macmillan, 1990)K.O. Campbell and J.W. Bowyer (eds) The Scientific Basis of Modern Agriculture (Sydney U.P., 1988)D.L. Rowell, Soil Science: Methods and Applications (Longman, 1994)R.E. White Introduction to the Principles and Practice of Soil Science 3rd edn (Blackwells Scientific, 1997)A. Wild (ed.) Russell's Soil Conditions and Plant Growth 11th edn (Wiley, 1988)

YEAR 4

ANSC 4001 **Animal Production 4A**

24 credit points. B An Vet Bio Sc, B Anim Sc, B Sc Agr. Dr W Muir, Dr J Downing. **Session:** Semester 1. **Classes:** 12 hours/week of interactive tutorial and practical classes. **Prerequisites:** ANSC3001, ANSC3002, ANSC3003. **Assessment:** Continuous assessment during semester, end of semester examination.
Location: Werombi Road, Camden.
The year is devoted to advanced Animal Production and a certain degree of specialisation by medium of project work is compulsory. Students are in residence at the University Farms, Camden, for a whole year, where advanced lecture and practical courses are taken in the following subjects: genetics, dairying, animal health and disease. About 30 per cent of the time available is spent on project work, for which students undertake projects in the various sections of the Discipline of Animal Science at Camden or Sydney or other agricultural institutes outside the University.
Textbooks
Reference books
Agricultural Research Council The Nutrient Requirements of Farm Livestock,
--No. 1: Poultry 2nd edn (1975)
--No. 2: Ruminants (1980)
--No. 3: Pigs (1981)
Alexander, G. and Williams, O.B. The Pastoral Industries of Australia (Sydney U.P., 1979)
English, P.B. et al. The Sow, Improving her Efficiency (Farming Press. 1977)
Falconer, D.C. Introduction to Quantitative Genetics 2nd edn (Longman, 1981)
Holmes, C.W. and Wilson, G.F Milk Production from Pastures (Butterworths, 1984)
Lindsay, D.R. andPearce, D.I. Reproduction in Sheep (Australian Academy of Sciences, 1984)
Preston, T.R. and Leng, R. A. Matching Ruminant Production Systems with Available Resources in the Tropics and Sub-Tropics (Penambul Books, Armidale, 1987)
Roitt, I.M. Essential Immunology 8th edn (Blackwell, 1994)
Sainsbury, D. Poultry Health and Management 3rd edn (Blackwell, 1992)
Nicholas, FW. Introduction to Veterinary Genetics (Oxford, 1996)
Cottle, D.J. Australian Sheep and Wool Handbook (Inkata Press, 1991)
Lawrie, R.A. Developments in Meat Science No.s 1-2 (Applied Science Publishers, 1980, 1981)
Lawrie, R.A. Developments in Meat Science No.s 3-5 (Elsevier Applied Science, 1985, 1988, 1991)
Chamberlain, A.T. and Wilkinson, J.M. Feeding the Dairy Cows (Chalcombe Publishers, 1996)
Mepham, T.B. Physiology of Lactation (Open University Press, 1987)
Whittemore, C. The Science and Practice of Pig Production (Longman, 1993)
Hickman, J. Horse Management (2nd edn) (Academic Press, 1987)
Other textbooks to be advised

ANSC 4002 **Animal Production 4B**

24 credit points. B An Vet Bio Sc, B Anim Sc, B Sc Agr. Dr W Muir, Dr J Downing. **Session:** Semester 2. **Classes:** 12 hours/week of interactive tutorial and practical classes. **Prerequisites:** ANSC3001, ANSC3002, ANSC3003. **Corequisites:** ANSC4001. **Assessment:** Continuous assessment during semester, end of semester examination, submission of thesis.
The following subject areas are covered: meat technology, pig and poultry production, wool production, cattle and sheep production. Students will complete their research project.
Textbooks
See Animal Production 4A

GENE 4001 **Animal Genetics 4A**

24 credit points. B An Vet Bio Sc, B Sc Agr, UG Study Abroad Program. Prof Moran, Dr Imke Tammen. **Session:** Semester 1. **Classes:** Approximately 18 hours/week of classes, including lectures, tutorials, seminars and practicals. **Assumed Knowledge:** GENE 2001. **Assessment:** Continuous assessment, including essays and seminar presentations. Written examinations.

Domestic animals provide one of the most important sources of food and textile fibre for mankind. Animal Genetics provides one important means for improving the productivity of animals by selective breeding, for better understanding animal functions by understanding the roles of genes and gene products in those functions and for the identification and production of new and potentially valuable products from animals.
The fourth year Units of Study in (Animal) Genetics provide training in population and quantitative genetics and animal breeding, molecular and cell genetics, including bioinformatics, and cytogenetics sufficient to provide a sound basis for developing a career in the growing fields of genetics and biotechnology.

Animal Genetics 4A comprises the following components:
Animal Genetics (6 credit points)
Applications of Recombinant DNA technology (6 credit points)
Bioinformatics & Genomics (6 credit points)
Project (6 credit points)
Textbooks
For the Application of recombinant DNA technology component: Watson, J.D., Gilman, M., Witkowski, J., and Zoller, M. Recombinant DNA (2nd Ed.).Freeman, 1992.
A course handbook will be available for students to purchase. It contains details of lecture outlines, objectives, reference lists, details of practical classes, staffing as well as other relevant class material.

GENE 4002 **Animal Genetics 4B**
24 credit points. B An Vet Bio Sc, B Sc Agr, UG Study Abroad Program. Prof Chris Moran/Dr Imke Tammen. **Session:** Semester 2. **Classes:** A one week intensive block of classes will be held during the July semester holiday for Cytogenetics. **Corequisites:** GENE4001. **Assessment:** The cytogenetics component will be assessed by an essay and exam. Research project assessed by dissertation.
On completion of both Animal Genetics 4A and 4B, students will have obtained an understanding of:
1. The behaviour of genes in populations.
2. The inheritance of quantitative traits, including susceptibility/resistance to disease.
3. The application of quantitative genetics to animal improvement
4. Molecular genetics and recombinant DNA technology
5. The tools and applications of bioinformatics.
6. The structure, behaviour and abnormalities of chromosomes in mitosis and meiosis
7. The general principles of genetic experimentation and a basic familiarity with molecular genetic techniques.
10. Effective communication techniques by both oral and written means.
11. Research techniques by establishing and conducting a research project in one aspect of animal genetics.

In Animal Genetics 4B, students will complete the research component of the independent project begun in Animal Genetics 4A.
Animal Genetics 4B comprises the following components:
Cytogenetics (an intensive 6 credit point unit of study presented in a one week block at PBI, Cobbitty, during the July semester holiday)
Research Project (18 credit points)
Textbooks
A course handbook will be available for students to purchase. It contains details of lecture outlines, objectives, reference lists, details of practical classes, staffing as well as other relevant class material.

4. Tables of units of study

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

Bachelor of Veterinary Science

Table of Undergraduate units of study

Unit of Study		*CP*	*A: Assumed knowledge P: Prerequisites Q: Qualifying C: Corequisites N: Prohibition*	*Session*
YEAR1				
VETS 1006	Animal Husbandry 1A	5		Semester 1
VETS 1013	Cell Biology 1A	4		Semester 1
CHEM 1405	Chemistry	6	A HSC Chemistry	Semester 1
VETS 1021	Professional Practice 1A	3		Semester 1
VETS 1014	Veterinary Anatomy and Physiology 1A	6		Semester 1
VETS 1019	Animal Husbandry IB	7	A Basic understanding of biological principles. P VETS 1006 Animal Husbandry 1A	Semester 2
VETS 1018	Cell Biology IB	6	A VETS1013 Cell Biology 1A	Semester 2
VETS 1017	Professional Practice IB	3	A VETS1021 Professional Practice 1A.	Semester 2
VETS 1020	Veterinary Anatomy and Physiology IB	8		Semester 2
YEAR 2				
VETS 2008	Professional Practice 2	4	A VETS1021 Professional Practice 1A and VETS1017 Professional Practice IB.	Semester 1
VETS 2009	Genetics and Biometry	6	A HSC Mathematics, VETS 1018 Cell Biology IB	Semester 1
VETS 2010	Animal Digestion and Nutrition	7	A VETS 1014 Veterinary Anatomy and Physiology 1 A, VETS 1020 Veterinary Anatomy and Physiology IB.	Semester 1
VETS 2011	Veterinary Anatomy and Physiology 2A	7	A Veterinary Science Year 1.	Semester 1
VETS 2012	Equine Anatomy	4	A VETS 1014 Veterinary Anatomy and Physiology 1A, VETS 1020 Veterinary Anatomy and Physiology IB, VETS2011 Veterinary Anatomy and Physiology 2A, VETS2010 Animal Digestion and Nutrition	Semester 2
VETS 2013	Principles of Disease	8	A Veterinary Science Year 1 (Semesters 1 and 2) and Year 2 (Semester 1 only).	Semester 2
VETS 2015	Veterinary Conservation Biology	4		Semester 2
VETS 2016	Veterinary Anatomy and Physiology 2B	8	A VETS 1014 Veterinary Anatomy and Physiology 1 A, VETS 1020 Veterinary Anatomy and Physiology IB, VETS 2011 Veterinary Anatomy and Physiology 2A, Animal Digestion & Nutrition VETS2010.	Semester 2
YEAR 3				
VETS 3018	Animal Behaviour and Animal Welfare Sci	3	A Veterinary Science Years 1 - 2.	Semester 1
VETS 3040	Veterinary Microbiology	5	A Veterinary Science Years 1 - 2.	Semester 1
VETS 3041	Veterinary Parasitology	5	A Veterinary Science Years 1 and 2. NVETS3037	Semester 1
VETS 3011	Veterinary Pathology	7	A Veterinary Science Years 1 - 2.	Semester 1
VETS 3013	Veterinary Pharmacology and Toxicology	4	A Veterinary Science Years 1 - 2.	Semester 1
VETS 3038	Animal Disease	9	A Veterinary Science Years 1 - 2. NVETS3020	Semester 2
VETS 3039	Professional Practice 3	4	A Professional Practice 1A, IB, 2.	Semester 2
VETS 3027	Veterinary Clinical Sciences 3	7	P Veterinary Science Years 1 - 2 and Semester 1 Year 3.	Semester 2
VETS 3025	Veterinary Public Health	4	A Veterinary Science Years 1 - 2.	Semester 2

Unit of Study		*CP*	*A: Assumed knowledge P: Prerequisites Q: Qualifying C: Corequisites N: Prohibition*	*Session*
YEAR 4				
VETS 4331	Animal Husbandry Practical Report	*2*	A Veterinary Science Years 1-2 before placements commence.	Semester 1
VETS 4111	Veterinary Anaesthesia	4	P Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 1
VETS 4112	Veterinary Medicine & Clinical Pathology	8	P Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 1
VETS 4113	Veterinary Radiology	4	P Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 1
VETS 4114	Veterinary Surgery	6	P Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 1
VETS 4221	Bird Health and Production	4	P Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 2
VETS 4222	Horse Medicine and Surgery	6	P Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 2
VETS 4223	Pig Health and Production	4	P Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 2
VETS 4224	Ruminant Health and Production	10	P Veterinary Science Years 1-3. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 2
YEAR 5				
VETS 5331	Preparation Veterinary Practice	2	**P** Veterinary Science Years 1 - 4 completed. Permit from Board of Veterinary Surgeons of NSW to perform Acts of Veterinary Science under supervision.	Semester 1, Semester 2
VETS 5345	Primary Accession Med & Surgery (UVCS)	4	P Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 1, Semester 2
VETS 5346	Referral Medicine (UVCS)	4	**P** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 1, Semester 2
VETS 5347	Anaesthesia and Intensive Care (UVCS)	4	**P** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 1, Semester 2
VETS 5348	Small Animal Surgery (UVCS)	4	**P** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 1, Semester 2
VETS 5349	Rural Public Practice	5	**P** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 2, Semester 1
VETS 5350	Elective Rotation 1	5	**P** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 1, Semester 2
VETS 5351	Elective Rotation 2	5	**P** Veterinary Sciences Years 1-4. Permit from Board of Veterinary Surgeons of NSW to perform acts of veterinary science under supervision.	Semester 1, Semester 2
VETS 5335	Small Animal Practice (Extramural)	5	**P** Veterinary Science Years 1 - 4 completed. Permit from Board of Veterinary Surgeons of NSW to perform Acts of Veterinary Science under supervision.	Semester 1, Semester 2
VETS 5336	Rural Mixed Practice 1 (UVCC)	5	**P** Veterinary Science Years 1 - 4 completed. Permit from Board of Veterinary Surgeons of NSW to perform Acts of Veterinary Science under supervision.	Semester 1, Semester 2
VETS 5337	Rural Mixed Practice 2 (Extramural)	5	**P** Veterinary Science Years 1 - 4 completed. Permit from Board of Veterinary Surgeons of NSW to perform Acts of Veterinary Science under supervision.	Semester 1, Semester 2
Bachelor of Science (Veterinary)				
VETS 4042	Veterinary Research A	24	**P** Veterinary Science Years 1, 2 and 3 or 1, 2, 3 and 4. CVETS4043 NB: Department permission required for enrolment.	Semester 1
VETS 4043	Veterinary Research B	24	P VETS4042 Veterinary Research A. NB: Department permission required for enrolment.	Semester 2

Bachelor of Science (Veterinary)

Unit of Study		*CP*	*A: Assumed knowledge P: Pre-requisites Q: Qualifying C: Core-quisites N: Prohibition*	*Session*
VETS 4042	Veterinary Research A	24	P Veterinary Science Years 1, 2 and 3 or 1,2, 3 and 4. CVETS4043 NB: Department permission re-quired for enrolment.	Semester 1
VETS 4043	Veterinary Research B	24	P VETS4042 Veterinary Research A. NB: Department permission re-quired for enrolment.	Semester 2

BACHELOR OF ANIMAL AND VETERINARY BIOSCIENCE

Unit of Study		*CP*	*A: Assumed knowledge P: Prerequisites Q: Qualifying C: Corequisites N: Prohibition*	*Session*
YEAR1				
AGEC 1006	Economic Environment of Agriculture	6	A HSC Mathematics N AGEC1003, AGEC1004.	Semester 1
ANSC 2002	Animal Science 2	6	P CROP1001, BIOL1001 ORBIOL1101	Semester 2
BIOM 1003	Biometry 1	6	A 70 or more in HSC Mathematics	Semester 2
BIOL 1001	Concepts in Biology	6	A No previous knowledge required. Students are encouraged to take the Biology Bridging Course. Students who have completed HSC Biology are advised to enrol in BIOL1101 Ecosystems to Genes rather than BIOL1001. N BIOL (1101 or 1901) NB: It is recommended that BIOL (1001 or 1101 or 1901) be taken before all Semester 2 Junior units of study in Biology.	Semester 1, Summer
BIOL 1101	Biology - Ecosystems to Genes	6	P HSC 2-unit Biology or equivalent. N BIOL (1001 or 1901) NB: It is recommended that BIOL (1001 or 1101 or 1901) be taken before all Semester 2 Junior units of study in Biology.	Semester 1
BIOL 1901	Biology - Ecosystems to Genes (Advanced)	6	P UAI of at least 93 and HSC Biology result in the 90th percentile or better, or Distinction or better in a University level Biology unit, or by invitation. N BIOL (1001 or 1101) NB: Department permission required for enrolment. It is recommended that BIOL (1001 or 1101 or 1901) be taken before all Semester 2 Junior units of study in Biology.	Semester 1
BIOL 1002	Living Systems	6	A HSC 2-unit Biology. Students who have not undertaken an HSC biology course are strongly advised to complete Biology Bridging Course before lectures commence. NBIOL1902	Semester 2
BIOL 1902	Living Systems (Advanced)	6	P UAI of at least 93 and HSC Biology result in the 90th percentile or better, or Distinction or better in a University level Biology unit, or by invitation. N BIOL (1002 or 1904 or 1905) NB: Department permission required for enrolment.	Semester 2
CHEM 1405	Chemistry	6	A HSC Chemistry	Semester 1
CROP 1001	Agricultural Science 1A	6	A HSC Chemistry N HORT1001, LWSC1001	Semester 1
CROP 1002	Agricultural Science IB	6	C CROP1001 N HORT1002, LWSC1002	Semester 2
YEAR 2				
The normal load is 48 credit points comprising 36 credit points of the core units listed, and 12 credit points of units from either (i) the Ecosystem Management and Animal Production stream OR (ii) the Animal Biosciences stream.				
CORE UNITS				
AGCH 2004	Agricultural Chemistry	6	P CHEM1405 NAGCH2003	Semester 1
ANSC 2004	Animal Conservation Biology	6	N As the core component of this unit of study is run in conjunction with Veterinary Conservation Biology (VETS2015) students must consult timetables to determine if subject choices prohibit them from attending these classes.	Semester 2
BIOM 2001	Biometry 2	6	P BIOM 1003 or equivalent	Semester 1
ENTO 2002	Entomology and Parasitology	6		Semester 2
GENE 2001	Agricultural Genetics 2	6	P BIOL1001 and BIOL1002 or BIOL (1101 or 1901) and BIOL 1902, BIOM1001 or BIOM1003	Semester 1
MICR 2026	Microbes and Animal Health	6	P 12 credit points of Junior Biology N MICR (2021 or 2921 or 2001 or 2901 or 2003 or 2011 or 2909) NB: Only available to students in the Bachelor of Animal Science or the Bachelor of Animal and Veterinary Bioscience.	Semester 2
Ecosystem Management and Animal Production Stream				
Candidates enrolling in the Ecosystem Management and Animal Production Stream must enrol in ANSC3103 and ANSC3104 in year 3.				
PLNT 2003	Plant Form and Function	6	A The content of BIOL (1002 or 1902) is assumed knowledge and students entering from BIOL (1003 or 1903) will need to do some preparatory reading. P 12 credit points of Junior Biology (or with the Dean's permission), BIOL1201 and BIOL1202 or BIOL1001 and ENVI1001 N PLNT2903, BIOL2003, BIOL2903, CROP2001.	Semester 2
SOIL 2003	Soil Properties and Processes	6		Semester 1

Unit of Study		*CP*	*A: Assumed knowledge P: Prerequisites Q: Qualifying C: Corequisites N: Prohibition*	*Session*
Animal Biosciences Stream				
ANSC 3103	Animal Structure and Function 3A	6	PANSC2002	Semester 1
ANSC 3104	Animal Structure and Function 3B	6	P ANSC2002, ANSC3103 OR ANSC 3101	Semester 2
YEAR 3				
CORE UNITS				
Ecosystem Management and Animal Production Stream				
The normal load is 48 credit points comprising 24 credit points of the core units listed, and 24 credit points of electives chosen from those listed.				
ANSC 3101	Animal Nutrition 3	6	PANSC2002	Semester 2
ANSC 3102	Animal Reproduction	6	PANSC2002	Semester 1
ANSC 3103	Animal Structure and Function 3A	6	PANSC2002	Semester 1
ANSC 3104	Animal Structure and Function 3B	6	P ANSC2002, ANSC3103 OR ANSC 3101	Semester 2
Animal Biosciences Stream				
The normal load is 48 credit points comprising 12 credit points of the core units listed, and 36 credit points of electives chosen from those listed.				
ANSC 3101	Animal Nutrition 3	6	PANSC2002	Semester 2
ANSC 3102	Animal Reproduction	6	PANSC2002	Semester 1
ELECTIVE UNITS				
Enrolment in elective units is subject to prerequisite and corequisite requirements and timetabling constraints.				
AGCH 3025	Chemistry and Biochemistry of Foods A	6	P 6 credit points of Intermediate units in Agricultural Chemistry, Chemistry or Biochemistry N May not be counted with AGCH (3017, 3024).	Semester 1
AGCH 3026	Chemistry and Biochemistry of Foods B	6	P 6 credit points of Intermediate Chemistry, Biochemistry or Agricultural Chemistry C AGCH 3025 N AGCH3003, AGCH3005	Semester 1
AGCH 3030	Rural Environmental Chemistry A	6	P 6 credit points of either Intermediate Agricultural Chemistry, Chemistry, Biochemistry, Plant Science or Environmental Science N AGCH3020, AGCH3021, AGCH3022.	Semester 1
AGCH 3031	Rural Environmental Chemistry B	6	P 6 credit points of either Intermediate Agricultural Chemistry, Chemistry, Biochemistry, Plant Science or Environmental Science N AGCH3020, AGCH3021, AGCH3022	Semester 2
AGEC 2101	Market and Price Analysis	6	P ECON 1001 or AGEC 1006 or (AGEC1003 AND 1004) N AGEC 2001	Semester 1
AGEC 2102	Agribusiness Marketing	6	P AGEC 1006 or (AGEC1003 and AGEC1004) or AGEC 1102 or AGEC1002 or RSEC1031	Semester 1
AGEC 2103	Production Economics	6	P ECON1001 or AGEC1006 or (AGEC1003 and AGEC1004) NAGEC2003	Semester 2
AGEC 3101	Agribusiness Management	6	P AGEC2103 or AGEC2003 or AGEC1006 or (AGEC1003 and AGEC1004) N AGEC1102; AGEC3103; AGEC3001	Semester 2
AGRO 3002	Agronomy 3	6	A CROP 1001 or HORT 1001 or LWSC 1001 P PLNT 2003 or PLNT 2903	Semester 1
AGRO 3003	Crop Water Management	6	A CROP 1001 or HORT 1001 or LWSC 1001 P PLNT 2003 or PLNT 2903	Semester 2
ANSC 3105	Animal Biotechnology	6	P GENE2001, ANSC2002	Semester 2
BIOM 3004	Biometry 3	6	P BIOM 2001 or equivalent NB:(21ec,31abs)/wk.	Semester 1
MICR 2022	Applied Microbiology	6	A MICR (2021 or 2921 or 2024) **P** (6 credit points of Junior Biology or MBLG1001) and 6 credit points of Junior Chemistry. N MICR (2922 or 2002 or 2902 or 2004 or 2008 or 2012 or 2909) NB: Students are very strongly recommended to complete MICR (2021 or 2921 or 2024) before enrolling in MICR2022 in Semester 2. For progression on to Senior Microbiology units, students must also complete MBLG1001 or PLNT (2001 or 2901).	Semester 2
PLNT 2002	Aust Flora: Ecology and Conservation	6	P One of BIOLlOOl, BIOL1101, BIOL1901; One of BIOL1002, BIOL1003, BIOL1902, BIOL1903, LWSC1002. (With the Dean's permission BIOL1201 and BIOL1202 may be substituted for the above.) N PLNT2902, BIOL2004 or BIOL2904.	Semester 1

Unit	*of*	*Study*	*CP*	*A: Assumed knowledge P: Prerequisites Q: Qualifying C: Corequisites N: Prohibition*	*Session*
PLNT 2003	Plant Form and Function		6	A The content of BIOL (1002 or 1902) is assumed knowledge and students entering from BIOL (1003 or 1903) will need to do some preparatory reading. P 12 credit points of Junior Biology (or with the Dean's permission), BIOL1201 and BIOL1202 or BIOLlOOl and ENVI1001 N PLNT2903, BIOL2003, BIOL2903, CROP2001.	Semester 2
SOIL 2003	Soil Properties and Processes		6		Semester 1
YEAR 4					
ANSC 4001	Animal Production 4A		24	P ANSC3001, ANSC3002, ANSC3003	Semester 1
ANSC 4002	Animal Production 4B		24	P ANSC3001, ANSC3002, ANSC3003 CANSC4001	Semester 2
GENE 4001	Animal Genetics 4A		24	A GENE 2001	Semester 1
GENE 4002	Animal Genetics 4B		24	C GENE4001	Semester 2

5. Regulations

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

(Subject to Senate approval)
These Resolutions must be read in conjunction with The University of Sydney (Coursework) Rule 2000.

Resolutions of the Senate

* Enquiries about Faculty Resolutions should be directed to the Faculty Office.

Constitution of the Faculty of Veterinary Science
The Faculty of Veterinary Science shall comprise the following persons:

1.
   (a) the academic staff at levels A, B, C, D and E, being full-time or fractional (50 per cent or greater) members of the tenured, tenurable and fixed term teaching staff within the Faculty;
   (b) the Head of the School of Chemistry, and the Head of the Department of Crop Sciences, or one full-time tenured member of the academic staff of each of these units nominated by the Head of that unit;
   (c) Deans of non-veterinary faculties in the College of Sciences and Technology;
   (d) the Directors of Laboratory Animal Services and the Properties and Investments Office and the Coordinator Library Services (Life Sciences);
   (e) up to three persons distinguished in the field of Veterinary Science appointed by the Faculty on the nomination of the Dean of the Faculty;
   (f) up to three students (two undergraduates and one postgraduate) elected in the manner prescribed by resolution of the Senate;
   (g) up to four members of the general staff elected by the general staff in the manner laid down by the Faculty;
   (h) one nominee from each of the Australian College of Veterinary Scientists and the Australian Veterinary Association;
   (i) the Directors of the Postgraduate Foundation in Veterinary Science, the Dairy Research Foundation, the Poultry Research Foundation, and the Veterinary Science Foundation;
   (j) the research staff of the Faculty, being full-time or fractional (50 per cent or greater), holding the position of Research Fellow or above;
   (k) Senior Registrars and Registrars, being full-time or fractional (50 per cent or greater) employed in the University Veterinary Centres at Camden and Sydney;
   (l) persons holding adjunct or clinical titles within the Faculty; and
   (m) any other persons appointed by the Senate on the nomination of the Dean of the Faculty and with the approval of the Faculty and the Academic Board.
2. All nominees to the Faculty shall be appointed triennially.

Degrees, diplomas and certificates in the Faculty of Veterinary Science

1. The degrees in the Faculty of Veterinary Science shall be:
   (a) Bachelor of Veterinary Science (BVSc)
   (b) Bachelor of Science (Veterinary) (BSc (Vet))
   (c) Bachelor of Animal and Veterinary Bioscience (BAnVetBioSc)
   (d) Master of Animal Science (MAnimSc)
   (e) Master of Science in Veterinary Science (MScVetSc)
   (f) Master of Veterinary Clinical Studies (MVetClinStud)
   (g) Master of Veterinary Science (MVSc)
   (h) Master of Veterinary Studies (MVetStud)
   (i) Master of Veterinary Public Health Management (MVPHMgt)
   (j) Doctor of Philosophy (PhD)
   (k) Doctor of Veterinary Science (DVSc).
2. The diplomas in the Faculty of Veterinary Science shall be:
   (a) Graduate Diploma in Animal Science (GradDipAnimSc)
   (b) Graduate Diploma in Veterinary Clinical Studies (GradDipVetClinStud)
   (c) Graduate Diploma in Veterinary Public Health Management (GradDipVPHMgt)
   (d) Graduate Diploma in Veterinary Science (GradDipVetSc)
3. The certificates in the Faculty of Veterinary Science shall be:
   (a) Graduate Certificate in Animal Science (GradCertAnimSc)
   (b) Graduate Certificate in Veterinary Public Health Management (GradCertVPHMgt)

Bachelor of Veterinary Science, BVSc
These resolutions must be read in conjunction with The University of Sydney (Coursework) Rule 2000.

Section 1

1. Admission
Admission for Year 12 applicants is based on performance in Higher School Certificate Examination with applicants ranked on the basis of their UAI. Non recent school leavers are considered for selection on the basis of their Grade Point Average obtained in previous university degree level study, the Special Tertiary Admissions Test (STAT) and a "Commitment Statement" outlining their commitment to Veterinary Science

2. Units of study
A candidate for the degree of Bachelor of Veterinary Science shall successfully complete the units of study as prescribed by the Faculty in chapter 3 of this Handbook.

3. Requirements for the pass degree

(1) To qualify for the pass degree candidates must:
   (a) complete successfully the units of study prescribed by the Faculty to a total of 240 credit points; and
   (b) satisfy the requirements of all other relevant By-Laws, Rules and Resolutions of the University.

(2) Progression requirements
   Under normal circumstances students will satisfy the degree requirements in five years. Students who fail a unit of study are required to repeat enrolment in that unit.
   Students repeating units of study may, with permission of the Faculty, enrol in one or more units of study in the following year of the course. The Faculty will normally grant permission for students to enrol in a unit of study in the following year when:
   (a) the timetable arrangements are such that students can attend all classes
   (b) all prerequisites for enrolment in the unit of study have been satisfied. Prerequisites are units of study that must be passed before enrolment in the next unit. Corequisites are units of study that must be studied concurrently.

Year 4: A candidate for the degree may enrol in the units of study prescribed for the fourth year of candidature only after completion of Years 1-3.
Year 5: A candidate for the degree may enrol in the units of study prescribed for the final year of candidature only after completion of Years 1-4 and having demonstrated proficiency in the safe handling of animals, in such a manner as may from time to time be prescribed by the Faculty.

4. Combined degrees
Not applicable

5. Requirements for honours degrees

(1) Honours First Class and Honours Second Class may be awarded at graduation.

(2) Honours will be awarded on the basis of an "identifiable discipline-specific individual research, scholarly or creative component". The three separate honours streams in Veterinary Science are research, clinical research and independent learning project.
(3) The Years 1-4 WAM required for entry into a Year 5 identifiable discipline-specific Honours stream will be 70 or greater.
(4) Honours Class I and Honours Class II shall be awarded for all three streams of honours. A normalisation formula will be applied to the marks generated from all three streams to standardise the degree of difficulty in obtaining honours between the streams. No student is to be advantaged or disadvantaged by selecting any particular honours stream.
The Years 1-4 WAM will benchmark the normalisation formula.
(5) The honours WAM will be calculated on the Years 1-4 WAM and the Year 5 normalised honours mark. The weighting will be 50/50.
(6) Honours students will submit a written thesis/clinical report/independent learning project report of not more than 10,000 words in length (4-5,000 words in length for the clinical report). The format of written reports will be supervised by the Associate Dean Research/Director Clinical Teaching/Coordinator Professional Practice program.
Honours students will present an oral defence of their thesis/clinical report/independent learning project to a Faculty panel of assessors. The format of the oral defence will be supervised by the Associate Dean Research/ Director Clinical Teaching/Coordinator Professional Practice program
(7) Honours Class I will be awarded for Honours WAMs of 75 or greater. Honours Class II will be awarded for Honours WAMs of 70 to less than 75.
(8) Honours shall not be awarded to a candidate who has taken longer to complete the course than the minimum period in which a candidate may complete a degree of Bachelor of Veterinary Science.
(9) Notwithstanding the provisions of subsection (8) of this section, the Faculty, for special reasons, may permit the award of Honours to a candidate who has taken longer to complete the course than the period specified in that subsection.
(10) If a candidate graduates with Honours First Class and the Faculty is of the opinion that the candidate's work is of sufficient merit, the candidate shall receive a bronze medal.
(11) BVSc with Merit shall be awarded to students who achieve a Years 1-4 WAM of 70 but choose not to continue with an identifiable discipline specific honours stream in Year 5.

Section 2

1. Details of units of study
Course content, mode of delivery, assessment, assumed knowledge, corequisites and prerequisites for all units of study are published annually in the Veterinary Science Handbook chapter 3 units of study.

2. Enrolment in more/less than minimum load
A normal full-time load is defined as enrolment in a program of approved units of study to a total value of 24 credit points in any one semester. A candidate for the degree will normally enrol in 24 credit points per semester. Notwithstanding, variations in credit point load may be approved in special circumstances.
Cadigal program candidates may enrol with reduced credit points per semester.

3. Cross-institutional study
Cross-institutional study is not normally available to students in the Bachelor of Veterinary Science.

4. Restrictions on enrolment
Units of study in academic years 1-3 enrol candidates on the basis of assumed knowledge. Notwithstanding, VETS 3027 Veterinary Clinical Sciences 3 requires completion of Veterinary Science Years 1 and 2 as a prerequisite to enrolment. Prerequisite to enrolment in all Year 4 units of study is completion of Veterinary Science Years 1 to 3 and acquisition of a permit or equivalent from the Board of Veterinary Surgeons of NSW to perform acts of veterinary science. Prerequisite to enrolment in any Rotation in Veterinary Science Year 5 is the satisfactory completion of VETS 5331 Preparation for Veterinary Practice.
Prerequisite to enrolment in all Rotations in Veterinary Science Year 5 is the acquisition of a permit or equivalent from the Board of Veterinary Surgeons of NSW to perform acts of veterinary science. There are certain circumstances in which a student could be asked to show good cause why they should be permitted to repeat any previously attempted study. Liability for exclusion from re-enrolment is determined by academic attainment during the immediate past one or two academic years (depending upon the faculty, college or board of studies concerned). The resolutions of the Senate restricting re-enrolment may be found in the University's Calendar, Vol. I: Statutes and Regulations. Students should acquaint themselves with the resolutions relating to the studies in which they are enrolled. Students in any doubt about their liability for exclusion following academic failure, unsatisfactory progression or discontinuation of courses should seek advice from the Faculty Office.
It is not possible to define in advance all the reasons that constitute "good cause" but serious ill health, or misadventure properly attested, will be considered. In addition a student's general record, for example in other courses, would be taken into account. In particular where a student transfers from another faculty, record of performance in that faculty would be considered. Not usually acceptable as good cause are such matters as demands of employers, pressure of employment, time devoted to non-university activities and so on, except as they may be relevant to any serious ill health or misadventure.

5. Discontinuation of enrolment
Students contemplating discontinuing should consult the Sub-Dean for students or a student counselor before committing to a decision. Students enrolled in a course for a degree in the Faculty of Veterinary Science and, without permission of the Faculty, discontinue a year or a full-year unit of study after the last day of the first week of July semester, or discontinue a one-semester unit after the last day of the seventh week of teaching, will be deemed to have failed such year or unit. (See page ii in the front of the Faculty handbook.)
The University's regulations governing "Discontinuation, Exclusion and Suspension of Candidature" are available at
www.usyd.edu.au/policy/policy-index.stm

6. Re-enrolment after an absence
A candidate who has been enrolled in the course for the degree of Bachelor of Veterinary Science but has not re-enrolled for a period of one year or more shall complete the requirements for the degree under such conditions as the Faculty may determine.

7. Satisfactory progress pursuant to The University of Sydney (Coursework) Rule 2000
Under normal circumstances students will satisfy the degree requirements in five years. Students who fail a unit of study are required to repeat enrolment in that unit. Students repeating units of study, may, with permission of the Faculty, enrol in one or more units of study in the following year of the course. The Faculty will normally grant permission for students to enrol in a unit of study in the following year when:
(1) the timetable arrangements are such that students can attend all classes;
(2) all prerequisites for enrolment in the unit of study have been satisfied. Prerequisites are units of study that must be passed before enrolment in the next unit. Corequisites are units of study that must be studied concurrently. The handbook provides details of prerequisites and corequisites for all units of study. The Faculty may waive prerequisite or co-requisite requirements if a student demonstrates that such requirements are not appropriate. Applications for such waivers should be submitted to the Associate Dean for Teaching and Learning.

8. Time limit if different from The University of Sydney (Coursework) Rule 2000
A student must complete all requirements for an award course within ten calendar years or any lesser period if specified by Resolutions of the Senate or the faculty.

9. Assessment policy
Assessment methods for units of study offered by the Faculty are published annually in the Veterinary Science Handbook, chapter 3 units of study.

Further Assessment
Students awarded an incomplete (M INC or INC) grade need to undertake further assessment in order to pass the unit of study. Students in this category will be advised of the availability of a further test. Further tests will be organized and scheduled by the unit of study Coordinator concerned.
Students with disabilities, medical conditions or injuries Students with a disability, including serious medical condition, or recent injury, which puts them at a disadvantage during examinations, should contact the Disability Services Office, Level 7, Education Building, Manning Road. Phone +61 2 9351 4554, fax +61 2 9351 7055.
If appropriate, special arrangements can be made to meet particular requirements.

Illness and misadventure - "Special Consideration " regarding examinations (Please contact the Faculty Office for full details of application procedure.)
Your attention is drawn to the following resolutions of the Academic Board:
Applications for special consideration must be made on the form available from the Student Centre or the Faculty Office or the Faculty website and must comply with the University's requirements for supporting documentation.
For consideration due to serious illness a registered medical practitioner or councilor must complete the Professional Practitioners Certificate.
For consideration due to misadventure appropriate documentation must be attached. This documentation must indicate the nature of the misadventure, the date and time where relevant, and the likely impact on the student's ability to perform.
The Professional Practitioners Certificate is available from the Student Centre, Faculty Office or Faculty website. The certificate must be signed by the medical practitioner (who must not be a family member) and must have been obtained during the illness or immediately afterwards (as soon as it is practicable to visit the medical practitioner).
NB This is a summary of the Faculty's and University's policy relating to special consideration. Please read the full policy which may be viewed on the Faculty and University websites.
It is the responsibility of the student to provide written evidence of illness or misadventure to the appropriate unit of study coordinator as soon as possible and practicable and in any case before the close of the relevant examination period. Where such evidence is not presented in time for the student to be offered further assessment on the advertised date, it will only be considered by the unit of study coordinator where there is sufficient reason why it has not been presented by that date.
Please note that special consideration will NOT be granted in respect of any additional assessment. Unsatisfactory performance in, or absence from, additional assessment will result in failure in that assessment.

Additional Assessment
If an application for special consideration is approved, the student will be offered additional assessment. This additional assessment will REPLACE any previous attempt - that is, if a student is offered additional assessment, THE ORIGINAL EXAMINATION PAPER WILL NOT BE MARKED. The only examination which will be considered is the additional assessment task. Please note that the format of the additional assessment is at the discretion of the coordinator and need not be similar to the original assessment. Oral examinations are certainly possible.

10. Credit transfer policy in accordance with The University of Sydney (Coursework) Rule 2000 and Academic Board policy
Credit for courses completed
Students who have already completed university study may be eligible for credit standing in specific units of study.
Credit standing may be granted under the following circumstances:
(1) The student's application substantiates that the content of unit(s) previously studied overlaps by a minimum of 75 per cent, the content of the unit for which credit standing is sought. Applications where previous study has not included vital components of the unit in which credit standing is sought, will be rejected, even if the vital component constitutes less than 25 per cent of the unit;
(2) Relevant previous study took place within five years preceding the year in which credit standing would apply;
(3) The previous study was in a relevant context to the unit for which credit standing is sought: this "relevant context" to be determined by the unit of study coordinator;
(4) The grade achieved in the precious study (studies) was credit or above.

Students must be enrolled in the undergraduate degree program before an application for credit standing will be accepted. An exception is made for Year 1 international students who, upon receipt of the confirmation of enrolment (COE) in the degree program, may apply for credit standing in any unit in which they are required to enroll in their first year of study. Students may submit their application from overseas and obtain a provisional judgement. The provisional judgement will be confirmed when all original relevant documents are viewed by the relevant academic staff of this University.
The application (Faculty form), together with all relevant supporting documentation must be submitted to the Faculty Office at least three weeks prior to the commencement of semester in which enrollment in the unit is required. If students wish to lodge an early application, applications will be accepted up to 12 months in advance.
Relevant supporting documentation should include a detailed unit/subject/course outline (eg class topics on timetable), learning objectives, mode of assessment and original statement of academic result or academic record.
Students with credit standing will be granted the average mark attained by their peers (undertaking the unit in the year in which their enrollment would have been required) for the purpose of calculation of the weighted average mark (WAM) in relation to their eligibility for an honours degree.

Bachelor of Animal and Veterinary Bioscience, BAnVetBioSc

Section 1

1. Admission
Admission for Year 12 applicants is based on performance in Higher School Certificate Examination with applicants ranked on the basis of their UAI or equivalent.
Non recent school leavers are considered for selection on the basis of:
(1) the successful completion of the equivalent of at least 2 full-time semesters of approved tertiary study; or
(2) the successful completion of an approved preparatory course provided that the program of study and the standard of examination are considered to be equivalent to the program and standard required of candidates for the HSC.

2. Units of study
A candidate for the degree of Bachelor of Animal and Veterinary Bioscience shall successfully complete units of study as prescribed by the Faculty.
A candidate may choose elective units of study for which there is no prerequisite unit of study or for which the prerequisite/corequisite has been satisfied, provided that the timetable permits attendance at all classes.

3. Requirements for the pass degree
(1) To qualify for the pass degree candidates must:
(a) complete successfully the units of study prescribed by the Faculty for a total of 192 credit points and Professional Experience specified for the degree course; and
(b) satisfy the requirements of all other relevant By-Laws, Rules and Resolutions of the University.

4. Requirements for honours degrees
(1) Honours First Class and Honours Second Class, Division One or Division Two may be awarded at graduation.
(2) First Class Honours candidates whose work is of sufficient merit, shall receive a bronze medal.

Award of honours at graduation
(1) All candidates who have completed an independent research project as part of the final year degree program are formally eligible to be considered for honours. Except with the special permission of the Faculty, honours shall not be awarded to any candidate for the Bachelor of Animal and Veterinary

Biosciences unless the candidate has completed the course in the minimum time. Notwithstanding the previous condition, candidates who complete the first three years of the course in four years, and who by virtue of their weighted average marks would otherwise qualify for the award of honours, will be considered. Such candidates may however be disadvantaged in terms of honours grading and ranking.

(2) For the determination of the overall honours mark for the award of honours at the end of the Fourth Year:
  (a) each of the units of study provided for in the resolutions in Second and Third Years shall be weighted according to credit point value and a weighted average mark (WAM) obtained;
  (b) the overall honours mark shall be the average of the Second and Third Year WAM and the Fourth Year mark.

(3) In computing the aggregate marks of students, the mark achieved on the first attempt at a unit of study shall be the mark used.

(4) For the award of a particular level of honours, a candidate, except in special circumstances, must obtain the relevant minimum marks as set out in the following table:

Level of honours	Minimum overall honours mark	Minimum WAM Year 4	Minimum WAM Years 2/3
First Class	75	75	70
Second Class Division 1	66	70	63
Second Class Division 2	61	65	58

(5) The Board of Management shall be responsible for the award of the university medal and the award of honours. Achievement of the minimum standards referred to elsewhere in these resolutions is not in itself sufficient justification for these awards.

Resolutions of the Faculty

Section 2

1. Details of units of study
Course content, mode of delivery, assessment, assumed knowledge, corequisites and prerequisites for all units of study are published annually in the Veterinary Science Handbook, Section 3 units of study.

2. Enrolment in more/less than minimum load
In a full-time program the normal load will be 48 credit points in each year for four years.
A student may enrol in units of study additional to the requirements in an academic year, only with the permission of the Dean.
Part-time study for the Bachelor of Animal and Veterinary Biosciences is permitted.

3. Cross-institutional study
Provided that permission has been obtained in advance, the Dean may permit a student to complete a unit of study at another institution and have that unit credited to his/her course requirements provided that either:
(1) the unit of study content is material not taught in any corresponding unit of study in the University, or
(2) the student is unable for good reason to attend a corresponding unit of study at the university.

4. Restrictions on enrolment
A student must obtain the written permission of the Dean to enrol in level 3000 units of study unless he/she has successfully completed or is concurrently enrolled in compulsory level 2000 units of study.
A candidate may choose elective units of study for which there is no prerequisite unit of study or for which the prerequisite/corequisite has been satisfied, provided that the timetable permits attendance at all scheduled classes.

5. Discontinuation of enrolment - any faculty procedures
A student who wishes to discontinue enrolment in a course or a unit of study must apply to the Dean or the Dean's nominee.
Students enrolled in a course for a degree in the Faculty of Veterinary Science and, without permission of the Faculty, discontinue a year or a full-year unit of study after the last day of the first week of July semester, or discontinue a one-semester unit after the last day of the seventh week of teaching, will be deemed to have failed such year or unit.
The university's regulations governing "Discontinuation, Exclusion and Suspension of Candidature" are available at: http://db.usyd.edu.edu.au/policy/policy_index.stm

6. Re-enrolment after an absence
Students who wish to re-enrol after an absence must contact the Dean in writing no less than six weeks prior to commencement of the semester to allow administrative processes to be carried out.

7. Satisfactory progress pursuant to the University of Sydney (Coursework) Rule 2000
Under normal circumstances students will satisfy the degree requirements in four years.
There are certain circumstances in which a student may be asked to show good cause why he/she should be permitted to repeat any previously attempted study, if, in the opinion of the Faculty Exclusions and Re-admissions Committee, he/she has not made satisfactory progress towards fulfilling the requirements of the degree or the unit.
Satisfactory progress cannot be defined in all cases in advance but a student who has:
(1) twice failed (F), or discontinued enrolment to count as a failure (DF), any unit of study as defined in Resolution 2 relating to the Bachelor degrees of the Faculty; or
(2) failed more than 60 per cent of the credit points for which enrolled in any four successive semesters, shall be deemed not to have made satisfactory progress.

In cases where the Faculty permits the re-enrolment of a student whose progress has been deemed unsatisfactory, the Faculty may require the completion of specified units of study in a specified time, and if the student does not comply with these conditions the student may again be called upon to show good cause why he/she should be allowed to re-enrol in the Faculty of Veterinary Science.
It is not possible to define in advance all the reasons that constitute "good cause" but serious ill health, or misadventure properly attested, will be considered. In addition your general record, for example in other courses, would be taken into account. In particular if you were transferring from another faculty your record in your previous faculty would be considered. Not usually acceptable as good cause are such matters as demands of employers, pressure of employment, time devoted to non-university activities and so on, except as they may be relevant to any serious ill health or misadventure.

8. Assessment policy
Assessment methods for units of study offered in the Faculty will be included in unit details in the Faculty Handbook and made available to students enrolled in the units at the beginning of the semester.

Examinations
(1) Completion of unit of study
A student who has been absent from more than ten per cent of classes in a unit may be deemed to have failed to complete the requirements specified by the Faculty for the unit and may be excluded by the Dean from admission to examinations in that unit.
(2) Further assessment
The unit of study coordinator may arrange for further assessment of students in addition to scheduled assessments and examinations, in accordance with the Faculty Special Consideration policy.

Further assessment
(1) Further assessment may be awarded where the candidate has been prevented by sufficient and duly certified illness or misadventure from completing the assessment for a unit of study. The full range of common result grades is available for these candidates.
(2) Applications for special consideration must be made on the form available from the Student Centre or the Faculty Office and must comply with the University's requirements for supporting documentation.

(a) For consideration due to serious illness a registered medical practitioner or councillor must complete the Professional Practitioners Certificate.
(b) For consideration due to misadventure appropriate documentation must be attached. This documentation must indicate the nature of the misadventure, the date and time where relevant, and the likely impact on the student's ability to perform. The Professional Practitioners Certificate is available from the Faculty Office. The certificate must be signed by the medical practitioner (who must not be a family member) and must have been obtained during the illness or immediately afterwards (as soon as it is practicable to visit the medical practitioner).

NB This is a summary of the Faculty's and University's policy relating to special consideration which may be viewed on the Faculty and University websites.

(3) Further assessments will be held according to a timetable which will be posted on the Faculty website. Further assessment may take such form as the unit of study coordinator directs.
(4) A candidate who is absent from a further assessment without sufficient reason will be deemed to have failed the assessment.
(5) It is the responsibility of the student to provide written evidence of illness or misadventure to the appropriate unit of study coordinator as soon as possible and practicable and in any case before the close of the relevant examination period. Where such evidence is not presented in time for the student to be offered further assessment on the advertised date, it will only be considered by the unit of study coordinator where there is sufficient reason why it has not been presented by that date.

9. Credit Transfer policy

(1) Graduates or students in other faculties or other degrees within the Faculty or of other institutions who are admitted to candidature for the degree of Bachelor may be granted credit for units of study required for the degree, as the Dean on behalf of the Faculty may determine, up to a maximum value of 96 credit points.
(2) The Dean may approve credit for a maximum of 36 unspecified credit points for units of study successfully completed elsewhere, but not comparable to units listed in Resolution 2, as part of the 96 credit point maximum credit transfer permitted.

10. Professional Experience and Faculty Excursions

(1) Students are required to undertake professional experience in University vacations as an integral and essential part of their overall training in the degree of Bachelor of Animal and Veterinary Bioscience.

The aims of professional experience are to:

(a) familiarise students with the major animal, agricultural or natural resource industries;
(b) provide the opportunity to experience animal, agricultural and horticultural production across a range of environments and managerial systems;
(c) provide experience with business organisations involved in finance, marketing, research and development and other aspects of the rural industries;
(d) train students to collect, collate, analyse and report.

(2) Candidates must complete 60 days of professional experience. Each component of the experience must be approved on behalf of the Dean before credit is granted. A minimum of 20 days professional experience must be completed as on-farm experience covering the major animal industries: sheep, beef, dairy, pigs, with a maximum visit of 20 days with any single organisation (farm or non-farm). A maximum of 15 days may be credited on property which is owned by the candidate's parents or by the University, however, this time is in addition to and exclusive of the minimum 20 days on-farm requirement.
(3) It is a requirement that on-farm experience includes:
(a) experience in 2 different regions (and not adjacent shires);
(b) experience in 2 rural enterprises.

A significant proportion of this 20 day on-farm component should be completed before non-farm professional experience is undertaken. The farms concerned must be commercial farms not hobby farms. Commercial farms are defined as those having a gross income of at least $25,000.

(4) A separate report must be submitted following each visit to a farm or organisation. Credit is subject to a satisfactory and timely report. Late reports normally are not credited. Time penalties are applied to resubmitted and incomplete reports. A senior report must be completed on a commercial farm. (A maximum of 3 "General Reports" can be credited.)
(5)*Students are required to attend *one* of the North Western, Central or South Western NSW excursions arranged by the Faculty of Agriculture, Food and Natural Resources and may attend each one. A maximum of 15 days professional experience may be gained by attending Faculty excursions provided a satisfactory report is submitted for each excursion. The Dean may approve special activities which will be credited within the 15 day week. Excursion time is exclusive of your 20 day on-farm requirement.
(6) Final year students wishing to graduate must complete all practical work requirements by 14 January of the year of graduation.

Reports from graduands submitted after 14 January will not be marked until the July semester.

Bachelor of Science (Veterinary), BSc(Vet)

Section 1

1. Admission

(1) Candidates for the degree of Bachelor of Veterinary Science who:
(a) have completed not less than three years of candidature for the degree of Bachelor of Veterinary Science; and
(b) are considered to be suitable candidates for advanced work; may be permitted by the Faculty to interrupt their candidature for the degree of Bachelor of Veterinary Science for not more than one academic year to undertake an approved course of advanced study and research as a candidate for the degree of Bachelor of Science (Veterinary).
(2) In response to an application for candidature, the Sub-Dean for BSc(Vet) will, in consultation with the candidate, and the proposed supervisor, ensure that the Faculty's requirements are satisfied in respect of:
(a) eligibility of the candidate;
(b) the proposed field of study;
(c) prerequisite training;
(d) appropriate supervision;
(e) the adequacy of other resources; and
(f) the proposed date of examination.

2. Units of study

A candidate for the degree of Bachelor of Science (Veterinary) shall successfully complete the units of study as prescribed by the Faculty in chapter 3 of this Handbook.

3. Requirements for the pass degree

(1) To qualify for the pass degree candidates must:
(a) complete successfully the units of study prescribed by the Faculty for a total of 48 credit points;
(b) satisfy the requirements of all other relevant By-Laws, Rules and Resolutions of the University.

4. Requirements for honour degrees

(1) Completion of the pass level requirements at an honours grade level qualifies a candidate for award of the degree with honours.
(2) The grades for the award of honours in the BSc (Vet) course comply with Academic Policy 218.

The grades are:

First Class	80-100
Second Class, Division 1	75-79
Second Class, Division 2	70-74
Third Class	65-69
Honours not awarded	<65

Section 2

1. Details of units of study
Course content, mode of delivery, assessment, assumed knowledge, corequisites and prerequisites for all units of study are published annually in the Veterinary Science Handbook, chapter 3 units of study.

2. Enrolment in more/less than minimum load
A normal full-time load is defined as enrolment in a program of approved units of study to a total value of 24 credit point in any one semester.

3. Cross-institutional study
Candidates working outside the Faculty, in departments with guidelines and requirements for science Honours or BSc(Med) students, should follow where possible such departmental requirements, except where these conflict with the regulations for the BSc(Vet) degree.

4. Restrictions on enrolment
The course of advanced study and research shall be in a field of scientific investigation for which adequate prerequisite training has been obtained and for which appropriate supervision and facilities are available.
Applications for admission to candidature for the degree of Bachelor of Science (Veterinary) may be approved by the Dean.

5. Discontinuation of enrolment
(1) Students contemplating discontinuing should consult the Sub-Dean for students or a student counsellor before committing to a decision.
(2) Students enrolled in a course for a degree in the Faculty of Veterinary Science and, without permission of the Faculty, discontinue a year or a full-year unit of study after the last day of the first week of July semester, or discontinue a one-semester unit after the last day of the seventh week of teaching, will be deemed to have failed such year or unit.
(3) The university's regulations governing "Discontinuation, Exclusion and Suspension of Candidature" are available at: db.usyd.edu.edu.au/policy/policy-index.stm

6. Re-enrolment after an absence
Students who were previously enrolled (even if you discontinued all units of study during the past year and were given "repeat" status) and are eligible to re-enrol in the same degree or diploma course, are required to lodge an Application for Re-enrolment by the specified date in the preceding year at the Student Centre. An Application for Re-enrolment form is available from the Student Centre or Faculty Office. Should the application be approved, the student must complete the enrolment in accordance with the instructions included in the letter of approval to enrol.
Students who have enrolled in the course for the degree of Bachelor of Science (Veterinary) but have not re-enrolled for a period of one year or more, must complete the requirements for the degree under such conditions as the Faculty may determine.

7. Satisfactory progress pursuant to The University of Sydney (Coursework) Rule 2000
A candidature may be terminated at any time by the Dean if, in the opinion of the supervisor and the Associate Dean, Research acting on advice from the Sub-Dean for BSc(Vet), the candidate's work is unsatisfactory.

8. Assessment policy
(1) Assessment and examination for the award of the degree shall be by dissertation, oral examination and presentation of seminars.
(2) The assessment and examination procedures are defined as follows:
(a) Each candidate, in the presence of one or more members of the Postgraduate Education and Research Training Committee, shall give an introductory seminar which outlines the proposed program of study and research.
(b) Each candidate, in the presence of one or more members of the Postgraduate Education and Research Training Committee, shall give an open seminar at the end of the program of study to present the results of the research. An assessment of the seminar would normally be given by the members of the Committee who attend.
(c) A dissertation of appropriate style containing an account of the results and conclusions of the program of study should normally be lodged in the year in which the work for the degree is undertaken by a date in late October or November, nominated by the Sub-Dean for BSc(Vet) and approved by the Associate Dean, Research. Late submission will normally disqualify a candidate from consideration for Honours First Class for the BSc(Vet) degree. The dissertation must be in a form approved by Faculty and must be no longer than 100 A4 pages overall.
(d) The thesis is to include an executive summary of five pages maximum. The summary is to be sufficiently informative to reflect the research planning, procedures and outcomes of the research conducted by the candidate.
(e) The dissertation shall be examined by two examiners, neither of whom should normally be a supervisor of the candidate.
(f) The executive summary shall be examined by the Associate Dean, Research, Sub-Dean BSc(Vet), and other members of the Postgraduate Education and Research Training Committee. Each examiner will make an independent assessment and a combined mark from all examiners will constitute the mark for this written component of the degree.
(g) Each candidate shall be examined on the topic of the dissertation at a viva voce examination conducted by a panel including the Associate Dean Research, Sub-Dean for BSc(Vet), the principal supervisor of the candidate and one member of the Postgraduate Education and Research Training Committee. The panel will examine the candidate on research skills acquired during the degree rather than technical content. The panel will also have access to referees reports from the two thesis examiners. The supervisor will be permitted to clarify technical issues and procedural issues relevant to the work conducted by the candidate. The supervisor will also contribute to the assessment of viva voce examination.
(h) The thesis examiners shall separately write reports giving their assessment of the dissertation including a report no less than one page, detailing strengths and weaknesses of the thesis, and an assessment mark. The examiners make separate recommendations to the Sub-Dean for BSc(Vet).
(i) The dissertation is to represent 50 per cent, the viva voce examination 30 per cent, the mark for executive summary 10 per cent, and the assessment of the final seminar 10 per cent of the total assessment for the award of the degree.
(3) The recommendations of the examiners will normally be considered by the Board of Examiners at the December meeting of the year in which the candidate is enrolled.
(4) If a grade is less than 50 per cent, the degree will not be awarded.

6. Postgraduate information

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

The higher degrees in the Faculty of Veterinary Science are:

- GradCertAnSc - Graduate Certificate in Animal Science
- GradDipAnSc - Graduate Diploma in Animal Science
- GradDipVetClinStud - Graduate Diploma in Veterinary Clinical Studies
- GradDipVetClinSc - Graduate Diploma in Veterinary Science
- MAnSc - Master of Animal Science
- MScVetSc - Master of Science in Veterinary Science
- MVSc - Master of Veterinary Science
- MVetStud - Master of Veterinary Studies
- MVetClinStud - Master of Veterinary Clinical Studies
- PhD - Doctor of Philosophy
- DVSc - Doctor of Veterinary Science

Veterinary Public Health Management Program

- Graduate Certificate in Veterinary Public Health Management
- Graduate Diploma in Veterinary Public Health Management
- Master of Veterinary Public Health Management

The regulations covering the award of these degrees are printed in the University's Calendar: Statutes and Regulations. Prospective candidates should consult with the Postgraduate Coordinator most closely concerned before submitting an application for admission to candidature.

The following statements summarise only portions of the by-laws and resolutions of the Senate governing the award of these degrees.

Graduate Certificate in Animal Science

Persons holding a bachelor's degree in a related field (animal science, veterinary science, agriculture) or equivalent with permission from the Dean, may apply for admission to candidature in the Graduate Certificate in Animal Science. Equivalence may comprise, for example, a Bachelor of Science with relevant work experience. A candidate for this award shall satisfactorily complete units of study granting a minimum of 24 credit points by coursework, including core and elective units of study, which may include a supervised research project.
The candidate will develop:

- Knowledge and skills in animal production in a practical context
- The ability to apply advanced skills to a specific problem in a selected area of specialisation (genetics, nutrition or reproduction)

A candidate who elects to complete a research project (6-12 credit points) will also develop:

- Ability to search, identify, evaluate, collate and present scientific knowledge in written and oral form in English
- Skills to manage the planning and implementation of a successful research project
- Ability to write a literature review

A candidate who elects to complete a 12 credit point research project will also develop:

- Ability to conduct research in a highly professional and ethical manner
- Ability to design, conduct and write-up a research project

Graduate Diploma in Animal Science

Persons holding a bachelor's degree in a related field (animal science, veterinary science, agriculture) or equivalent with permission from the Dean, may apply for admission to candidature in the Graduate Diploma in Animal Science. Equivalence may comprise, for example, a Bachelor of Science with relevant work experience. A candidate for this award shall satisfactorily complete units of study granting a minimum of 36 credit points by coursework, including core and elective units of study, which may include a supervised research project.
The candidate will develop:

- Knowledge and skills in animal production in a practical context
- The ability to apply advanced skills to a specific problem in a selected area of specialisation (genetics, nutrition or reproduction)

A candidate who elects to complete a research project (6-24 credit points) will also develop:

- Ability to search, identify, evaluate, collate and present scientific knowledge in written and oral form in English
- Skills to manage the planning and implementation of a successful research project
- Ability to write a literature review

A candidate who elects to complete a 12-24 credit point research project will also develop:

- Ability to conduct research in a highly professional and ethical manner
- Ability to design, conduct and write-up a research project

Graduate Diploma in Veterinary Clinical Studies (Please note: not offered in 2006)

Persons holding the degree of Bachelor of Veterinary Science from The University of Sydney (or equivalent), which is registrable by the Board of Veterinary Surgeons of NSW, may apply for admission to candidature for the Diploma in Veterinary Clinical Studies.

A candidate for this diploma shall pursue, as a full-time student, such units of study as the Faculty, shall prescribe for not less than one year. Assessment is by satisfactory completion of course, practical work and examinations, as prescribed by the Faculty.

Graduate Diploma in Veterinary Science

The Diploma course will provide formal theoretical and practical instruction in veterinary medicine, veterinary surgery and veterinary public health concerned with companion and farm animals and veterinary aspects of animal production. The Diploma course may also include, according to individual needs, instruction in scientific methods and supervised study in supporting disciplines in veterinary anatomy, veterinary physiology, veterinary pathology, infectious diseases, pharmacology and toxicology, animal husbandry, nutrition, applied reproduction and genetics.

The prescribed practical experience will include up to 800 hours of clinical rotation in the Veterinary Teaching Hospital and the Rural Veterinary Centre. Additional practical training of up to 14 weeks will also be required including private veterinary practices, NSW Agriculture, Commonwealth Department of Primary Industry and Energy and relevant industries selected according to the needs of the individual.

Entry requires candidates to:

- be eligible to practise as a veterinarian in a country other than Australia, and
- have submitted evidence of general and professional qualifications and experience to satisfy the Faculty of Veterinary Science that the applicant possesses the educational preparation and capacity to pursue studies for the diploma, has the appropriate time available and meets any additional requirements for admission that may be prescribed by the Faculty of Veterinary Science.

Graduate Certificate in Applied Science - Wildlife Health and Population Management

Offered in conjunction with, and administered by, the Faculty of Science, phone +61 2 9351 5397
Entry requires a Bachelor's degree in science or veterinary science. All prospective students must contact the program chairs - Dr Chris Dickman, +61 2 9351 2318 and Associate Professor Tony English, +61 2 9351 1675 -directly for detailed instructions concerning applications and advice about eligibility.

Graduate Diploma in Applied Science - Wildlife Health and Population Management

Offered in conjunction with, and administered by, the Faculty of Science, phone +61 2 9351 5397
Entry requires a Bachelor's degree in science or veterinary science. All prospective students must contact the program chairs (see above) directly for detailed instructions concerning applications and advice about eligibility.

Master of Applied Science - Wildlife Health and Population Management

Offered in conjunction with, and administered by, the Faculty of Science, phone +61 2 9351 5397
Entry requires a Graduate Certificate in Applied Science (Wildlife Health and Population Management) or a bachelor's degree in science or vet science. All prospective students must contact the program chairs (see above) directly for detailed instructions concerning.

Master of Animal Science

Persons holding a bachelor's degree in a related field (animal science, veterinary science, agriculture) or equivalent with permission from the Dean, may apply for admission to candidature in the Graduate Master of Animal Science. Equivalence may comprise, for example, a Bachelor of Science with relevant work experience. A candidate for this award shall satisfactorily complete units of study granting a minimum of 48 credit points by coursework, including core and elective units of study, and a supervised research project.
The candidate will develop:

- Knowledge and skills in animal production in a practical context
- The ability to apply advanced skills to a specific problem in a selected area of specialisation (genetics, nutrition or reproduction)
- Ability to search, identify, evaluate, collate and present scientific knowledge in written and oral form in English
- Skills to manage the planning and implementation of a successful research project
- Ability to conduct research in a highly professional and ethical manner
- Ability to design, conduct and write-up a research project

Master of Science in Veterinary Science

Persons holding a bachelor's degree with honours first or second class may apply for admission to candidature for the degree of Master of Science in Veterinary Science. Applicants holding the degree of Bachelor of The University of Sydney without honours but who have completed work equivalent to a degree of bachelor with honours or who have passed a preliminary examination or examinations as prescribed by the Faculty may be accepted as candidates.

A candidate for this degree shall complete such units of study as are prescribed by the head of the department concerned and carry out research under the guidance of a supervisor for not less than one year. A thesis must be submitted, embodying the results of this research.

Master of Veterinary Science

Persons holding the degree of Bachelor of Veterinary Science may apply for admission to candidature for the degree of Master of Veterinary Science. Graduates in veterinary science from other universities may also, with the approval of the Faculty and the Academic Board, be admitted as candidates.

A candidate for this degree shall pursue a course of advanced study and research under the guidance of an adviser or supervisor for not less than one year and submit a thesis embodying the results of his or her investigation.

Master of Veterinary Studies

Persons holding the degree of Bachelor of Veterinary Science may apply for admission to candidature for the degree of Master of Veterinary Studies in the following areas: Veterinary Pathology, Veterinary Anaesthesia, Avian Health and Production, Wildlife Medicine and Husbandry. Graduates in veterinary science from other universities may also, with the approval of the Faculty and the Academic Board, be admitted as candidates.

Except for candidature in the subject area of Avian Health and Production, an applicant shall have qualifications registrable by the Board of Veterinary Surgeons of New South Wales. An applicant for admission to candidature in the subject area of Wildlife Medicine and Production shall produce evidence of having worked for a period of not less than eight weeks in an institution which is concerned with the maintenance and care of wildlife and has been approved by the Faculty. A candidate shall, for a period of not less then two years as a part-time student, follow such units of study and pass such examinations as the Faculty, on the recommendation of the Associate Dean, Students, may prescribe.

(Please note: not all areas are offered each year. Email pg@vetsci.usyd.edu.au for more information)

Master of Veterinary Clinical Studies

Persons holding the degree of Bachelor of Veterinary Science may apply for admission to candidature for the degree of Master of Veterinary Clinical Studies. Graduates in veterinary science from other universities may also, with the approval of the Faculty and the Academic Board, be admitted as candidates. Candidates shall be registrable by the Board of Veterinary Surgeons of New South Wales, unless exempted by the Faculty.

A candidate for this degree shall, for at least two years, engage in full-time supervised advanced veterinary clinical study and research and submit a thesis embodying the results of an original investigation.

Doctor of Philosophy

Graduates who hold the degree of Master of Veterinary Science, Master of Veterinary Clinical Studies, Master of Science in Veterinary Science or Bachelor of Veterinary Science with Honours may apply for admission as candidates for the degree of Doctor of Philosophy in the Faculty of Veterinary Science.

Applicants not having an honours degree may be accepted as candidates after passing a qualifying examination. Graduates of other universities may also be admitted as candidates provided that their qualifications satisfy the Academic Board of The University of Sydney.

The degree may be taken on either a full-time or part-time basis. In the case of full-time candidates, the minimum period of candidature is two years for candidates holding a master's degree or equivalent, or three years in the case of those holding a bachelor's degree with first class or second class honours. The maximum period of candidature is normally five years. Part-time candidature may be approved for applicants who can demonstrate that they are engaged in an occupation or other activity which leaves them substantially free to pursue their candidature for the degree. Normally the minimum period of candidature will be determined on the recommendation of the Faculty but in any case will not be less than three years; the maximum period of candidature is normally seven years.

Doctor of Veterinary Science

The degree of Doctor of Veterinary Science is not conferred until the candidate is a graduate of eight years' standing from the degree that qualified him or her for candidature. The degree is awarded for published work that is recognised by scholars as a distinguished contribution to knowledge.

Veterinary Public Health Management Program

Graduate Certificate in Veterinary Public Health Management

Persons holding a bachelor's degree in veterinary science, animal science or equivalent or persons with a minimum of 4 years work experience in a relevant discipline may apply for admission to candidature for the Graduate Certificate in Veterinary Public Health Management.

A candidate for this award shall satisfactorily complete units of study granting a minimum of 24 credit points by a combination of online distance units and 2 short (3-5 day) residential sessions.

The candidate will develop:

- Knowledge and skills in veterinary public health particularly veterinary epidemiology,data analysis, zoonoses, disease.
- Skills in leadership and project management relevant in the modern work environments of animal health professionals.

Graduate Diploma in Veterinary Public Health Management

Persons holding a bachelor's degree in veterinary science, animal science or equivalent, or persons with a Graduate Certificate in Management in Veterinary Public Health may apply for admission to candidature for the degree of Graduate Diploma in Veterinary Public Health Management.

A candidate for this degree shall satisfactorily complete units of study granting a minimum of 36 credit points by a combination of online distance units and 2 short (3-5 day) residential sessions.

The candidate will develop:

- Knowledge and skills in veterinary public health particularly veterinary epidemiology,data analysis, zoonoses, disease control, animal health economics and animal health policy development
- Particular expertise in one or more relevant fields of veterinary public health according to the electives chosen by the candidate
- Enhanced skills in leadership and project management relevant in the modern work environments of animal health professionals

Master of Veterinary Public Health Management

Persons holding a Bachelor's degree in veterinary science, animal science or equivalent, or persons with a Graduate Certificate in Management in Veterinary Public Health or a Graduate Diploma in Management in Veterinary Public Health may apply for admission to candidature for the degree of Master of Veterinary Public Health Management.

A candidate for this degree shall complete satisfactorily units of study granting a minimum of 48 credit points by a combination of online distance units and 2 short (3-5 day) residential sessions and a dissertation worth 6 or 12credit points). The dissertation is the written output of a supervised research project conducted by the candidate. This project can relate closely to the work activities of the candidate.

Candidates must obtain a WAM of 70 or more on their first 24 credit points of candidature to progress to the research project. Candidates who achieve less than a WAM of 70 must transfer their candidature to the GradDipVPHMgt or GradCertVPHMgt.

The candidate will develop:

- Knowledge and skills in veterinary public health particularly veterinary epidemiology, data analysis, zoonoses, disease control, animal health economics and animal health policy development
- Particular expertise in one or more relevant fields of veterinary public health according to the electives chosen by the candidate
- Applied skills in leadership and project management relevant in the modern work environments of animal health professionals
- Skills in research methods via a research project, which addresses both the technical research and management issues involved

Postgraduate scholarships

Faculty scholarships

These awards are similar to APAs but are funded by the Faculty.

NB: Applicants for APAs are automatically considered for all available Faculty scholarships.

The table of scholarships listed below is a summary only. For further information contact the Scholarships Office or view their website (http://www.usyd.edu.au/su/reschols/).

Scholarship	Value $	Closing date	Qualifications
/. Awards restricted to Veterinary Science postgraduates **For further information** regarding these awards contact the Faculty Office.			
Commonwealth Chief Veterinary Officer's Scholarship	equiv. to fees	As advertised	First year student enrolled in the Veterinary Public Health Management Program.
Lionel Lonsdale Clinical Fellowships		As advertised	For research at Sydney Veterinary Teaching Hospital and Clinic in diseases of domestic animals
FH Loxton Postgraduate Studentships	equiv. to APA	As advertised	Graduates of any university for research in veterinary science
Sara & Anne Payten Canine Cancer Research Fund		As advertised	Postgraduate study and research. (Value as recommended by the Associate Dean, Research.)
Jean Walker Trust Fellowships	equiv. to APA	As advertised	Postgraduate study and research
Jean Walker Trust Supplementary Fellowships	Max. 5000	As advertised	Postgraduate study and research
James Ramage Wright Research	Max. 5000	As advertised	Postgraduate Scholarships study and research into the problems of animal production
T.J. Nicholls Memorial Scholarship	equiv. to fees	As advertised	First year student enrolled in the Veterinary Public Health Management Program.
McGarvie Smith Roy Watts Memorial Scholarship	equiv. to fees	As advertised	First year student enrolled in the Veterinary Public Health Management Program.
2. Other awards open to Veterinary Science? postgraduates			
(a) Tenable at The University of Sydney (application through Research Office (http://www. usyd. edu. a u/su/rescho Is/))			
Australian Postgraduate Awards (APA)	$18,837 pa (2005 rate)	October	Open to citizens and permanent residents of Australia for higher degree by research

University of Sydney Postgraduate Award (UPA)	equiv. to APA	October	Similar to APA
(b) Traveling scholarships (application through Research Office (http://www.i'isyd. edu.au/su/reschols/))			
Harriett Beard Scholarship	up to 15 500	March	Postgraduate study and research in physical sciences - engineering, veterinary science and dentistry
Boulton Postgraduate Scholarship	up to 15 500	March	Postgraduate study or research for graduates educated within the Australian public educational system
CG Heydon Travelling Fellowship	up to 15 500	March	Postgraduate study or research in biological sciences at overseas institutions
William and Catherine Mcllrath Scholarship	25 000	March	Postgraduate study or Scholarship research overseas
JB Watt Traveling Scholarship	up to 15 500	March	Postgraduate study or research overseas
Eleanor Sophia Wood Postgraduate Scholarship	up to 15 500	March	Postgraduate study or research overseas
(c) Grants-in-aid restricted to Veterinary Science postgraduates			
Sir Ian Clunies Ross Scholarship	up to 500	As advertised	Postgraduate candidature related to research in the wool industry
NPH Graham Scholarship	up to 500	As advertised	Postgraduate candidature related to research in sheep medicine
Goldia and Susie Lesue Scholarship	up to 3000	As advertised	Postgraduate candidature in the area of Veterinary Clinical Sciences
Neil and Allie Lesue Scholarship	up to 3000	As advertised	Postgraduate candidature in the area of Veterinary Clinical Sciences
Eric Horatio Maclean Scholarships	up to 1000	As advertised	Postgraduate candidature
Stock and Meat Industries Grant-in-Aid	up to 750	As advertised	Postgraduate candidature in research related to the Stock and Meat Industries
(d) Other grants-in-aid open to Veterinary Science postgraduates (application through Research Office (http://www.usyd.edu.au/su/reschols/))			
Royston George Booker Scholarships	up to 1500	April	Postgraduate study or research overseas
Herbert Johnson Travel Grants	up to 1500	April	Postgraduate study or research overseas
James Kentley Memorial Scholarship	up to 1500	April	Postgraduate study or research overseas
James King of Irrawang Travelling Scholarship	up to 1500	April	Postgraduate study or research overseas
GHS and IR Lightoller Scholarship	up to 1000	April	Postgraduate study or research overseas

7. Other Faculty information

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

Important Faculty Information

Animal Welfare Policy of the Faculty of Veterinary Science

The care and well-being of animals will be paramount in the teaching, research, consultation and clinical activities of the Faculty. The education of veterinary students will be focussed on animals and their welfare recognising the diversity of animal use. The goal of the Faculty is to develop veterinary professionals who will be scientific advocates for the welfare of animals in all contexts.

The Faculty is committed to promoting the principles of reduction in, refinement of, and replacement of the use of animals in teaching and research activities and will endeavour to provide leadership in these areas. It will promote research that will advance animal welfare.

The Faculty will uphold the codes of practice and legislation governing the use of animals. It will adopt best practice to ensure animal well-being.

The Faculty has a Policy on Conscientious Objection to the Use of Animals in Teaching and Assessment. This can be viewed on the Faculty website.

Attendance at Lectures

Attendance at lectures and such other classes as are prescribed for individual courses is compulsory. If for good reason you are unable to attend classes you should apply for Leave of Absence or Special Consideration.

Students are required to attend 90 percent of lectures and 100 percent of practical classes. Failure to meet these requirements without excuse may result in unit of study failure.

Appeals against grades

Students who wish to appeal against a mark or grade in a unit of study should complete Examination Grades Appeal Form, available at the Faculty Office.

Faculty policy on plagiarism

Plagiarism can be broadly defined as knowingly presenting another person's ideas, findings or written work as one's own by copying or reproducing them without due acknowledgment of the source. Plagiarism may involve copying the work of another student, or it may involve paraphrasing or copying a published author's text or argument without giving a reference. At its worst, plagiarism is theft.

If plagiarism is detected during assessments of submitted material, the student or group of students will fail the relevant assessment task. Plagiarism may result in failure of the unit of study or no award of the degree. All such decisions are subject to review by the Dean.

All students are required to submit a signed statement of compliance with all Work submitted to the University for assessment, presentation or publication. A statement of compliance must be in the form of:

- a University assignment cover sheet;
- a University electronic form; or
- a University written statement;

certifying that no part of the Work constitutes a breach of this Policy. Please read the University policy which may be viewed on the University website at www.usyd.edu.au/senate/policies/Plagiarism.pdf.

Progression after a failed unit of study

Under normal circumstances students will satisfy the degree requirements for the BVSc in five years. Students who fail a unit of study are required to repeat the unit. Students repeating units of study, may, with permission of the Faculty, enrol in one or more units of study in the following year of the course when:
(i) the timetable arrangements are such that students are able to meet the attendance requirements of the Faculty
(ii) all prerequisites for enrolment in the unit of study have been satisfied

Year 4 : A candidate for the degree may enrol in the units of study prescribed for the fourth year of candidature only after completion of Years 1-3.
Year 5 : A candidate for the degree may enrol in the units of study prescribed for the final year of candidature only after completion of Years 1-4 and having demonstrated proficiency in the safe handling of animals, in such a manner as may from time to time be prescribed by the Faculty.

Please note that the BVSc is a highly structured program with limited opportunity to undertake units of study from adjacent years without significant timetable clashes. As a result of these limitations, students who fail a unit of study may not be able to enroll in enough credit points to qualify for full-time study. This will have implications for International students in relation to visa compliance and Local students who are scholarship holders or those who receive financial support from Centrelink.

Faculty Office

The Office of the Faculty of Veterinary Science is in the JD Stewart Building, in Room 218. All enquiries in relation to matters specific to the Faculty should be made at this office in the first instance, including:

- enrolments in the Faculty,
- special information about admission to the Faculty,
- applications for credit for previous studies,
- facilities available in the Faculty, and
- other Faculty matters.

Timetables

Copies of the Faculty lecture timetables and location of theatres are available from the office prior to the commencement of each academic year. Copies are also displayed on the Faculty noticeboard.

Mail collection

There are pigeon-hole facilities for mail collection in the JD Stewart Building, and you are advised to check them regularly for any messages.

Lockers and change room facilities

Lockers may be hired. Change room facilities including hot showers are also available.

Photocopying

There is a coin-operated photocopying machine for student and staff use in the JD Stewart Building.

Faculty staff

Members of the teaching staff may be consulted throughout the year about any problems regarding the course.

General information and advice

Orientation Week

In Orientation week, newly-enrolled first year students are introduced to the Faculty. There is a short ceremony in which the Dean, Sub-Dean Students, and the President of the Veterinary Student Associ-

ation, welcome the students. This is followed by a tour of the Veterinary Science precinct and a barbecue.

Examinations

Timetables for examinations

Draft timetables are displayed on the University Intranet (http://intranet.usyd.edu.au) approximately three to four weeks before the commencement of examinations. Limited copies of the timetable will also be available in a hard copy format at the Student Centre. Enquiries about these may be made at the Student Centre.

Printed copies of the final timetables are available from the Student Centre and at the University farms.

Study vacation

A break after lectures at the end of each semester is set aside for examination study and preparation. The 2006 Semester 1 study break will extend between Monday, 12 June and Friday, 16 June.

The Semester 2 break will begin on Monday, 30 October and continue through to Friday, 3 November, 2006.

Notification of examination results

The results of annual examinations are available through the University Intranet by accessing the MyUni (http://intranet.usyd.edu.au) system. Results are also posted through the mail service directly to you at the end of each semester. Results will no longer be posted on the notice boards outside the Student Centre.

Disclosure of examination marks

Final marks will appear on your annual result notice. Marks may also be obtained from your faculty for the minor components of assessment which make up the final marks. You are entitled to information about any details of the assessment procedures used to determine the final result.

Your examination scripts and any other assessment material may be retrieved within a reasonable time after the completion of assessment in each unit of study. This does which involve the repeated use of the same material in successive examinations.

The NSW Freedom of Information Act ensures that students may, upon request, obtain a copy of their examination scripts or any other written answers to examinations questions. This is provided that
a) the request is made within six months of the release of the results of the examinations and
b) the examination involved was not a confidential examination paper.

If you miss an examination

You are not automatically entitled to any special consideration should you miss an examination. However, should that occur you should report immediately to the Examinations Office (at the Student Centre, Carslaw Building) to see if any arrangements can be made.

The need to seek early advice

Many students in need of advice fail to make full use of the assistance available to them. If you believe that your performance during a unit of study, or your preparation for your examinations, has been adversely affected by medical, psychological or family circumstances, you should seek advice as early as possible. Members of the teaching staff, of the University Counseling Service, and of the University Health Service, are available for consultation and can give advice on appropriate action to take.

Special enrolment information

These are the special requirements for Veterinary Science students only:

First year science courses

Students in first year will be allotted to particular chemistry practical classes. The lists indicating these class sections will be displayed outside the relevant laboratories before the beginning of the semester.

Students re-enrolling after absence

If you were previously enrolled (even if you discontinued all units of study during the past year and were given "repeat" status) and are eligible to re-enrol in the same degree or diploma course, you are required to lodge an Application for Re-enrolment by the specified date in the preceding year at the Student Centre. An Application for Re-enrolment form is available from the Student Centre or Faculty Office. Should your application be approved, you must complete your enrolment in accordance with the instructions included in the letter of approval to enrol.

If you have been enrolled in the course for the degree of Bachelor of Veterinary Science but have not re-enrolled for a period of one year or more, you must complete the requirements for the degree under such conditions as the Faculty may determine.

Applicants with exclusion records

If you have already attended a tertiary institution and have been excluded, or are liable for exclusion, from a faculty or course, you should give a detailed statement of the reasons for your failure and why you consider you now have a chance of succeeding in the course of your choice. If your statement is based on medical grounds it must be supported by medical reports.

In addition to your UAC application, you must attach your statement to a Special Consideration for Admission form obtainable from the Student Centre, University of Sydney and return it no later than 31 October 2005 to the Admissions Office, University of Sydney, NSW 2006.

International students

Full fee paying overseas students can be admitted to the undergraduate course but must have achieved a similar standard to that expected of an Australian student seeking entry.

If you are an overseas student sitting an Australian Year 12 examination you should apply through UAC (see below). All other overseas applicants should apply to:

The International Office G12
The University of Sydney
NSW 2006 Australia
Phone: +61 2 93514079 Fax: +61 2 93514013
Email: info@io.usyd.edu.au
Web: www.usyd.edu.au/io (http://www.usyd.edu.au/io)

The International Office was established to help all international students with application and enrolment procedures and any other problems they encounter. The International Student Services unit on the main campus can help with any problems arising during an international student's stay.

Other Faculty Information

Academic dress

Members of the University appear in their academic dress on public occasions convened for academic purposes.

Details on the ceremonial robes for all degrees of the University are given in a leaflet on academic dress available from the Student Centre. The particular requirements for the BVSc and BSc(Vet) degrees are as follows:

Bachelor of Veterinary Science - a gown similar to that worn by graduates holding the degree of Bachelor of Arts in the University of Oxford or of Cambridge, hood of black silk edged with amber and purple silk, black cloth trencher cap.

Bachelor of Science (Veterinary) - a gown similar to that worn by graduates holding the degree of Bachelor of Arts in the University of Oxford or of Cambridge, hood of black silk edged with purple and gold silk, black cloth trencher cap.

Bachelor of Animal and Veterinary Bioscience - a gown similar to that worn by graduates holding the degree of Bachelor of Arts in the University of Oxford or of Cambridge, hood of black silk edged with purple and green silk, black cloth trencher cap.

Learning Assistance Centre
The Learning Assistance Centre offers help to all students of the University who wish to develop their learning skills and their use of the English language to carry out their university studies.

Noticeboards
The main Faculty noticeboards are in the ground-floor corridor of the JD Stewart Building.

Current information about timetable changes, course announcements, tutorials, practical work, term tests, essays and recommended books is posted on faculty, college and departmental noticeboards. These noticeboards should be consulted regularly.

Publications
The University of Sydney Diary, the Map Guide, Faculty handbooks and other publications are available from the Student Centre.

Other sources
You may require advice of a different kind and in this case your first enquiries are often best made at the Student Centre.

Financial assistance
The University has a number of loan and bursary funds to assist students who experience financial difficulties. This assistance is not intended to provide ongoing income support but to help in emergencies and to supplement other income.

For information about student allowances provided by the Commonwealth Government go to www.centrelink.gov.au (http://www. centrelink.gov.au).

Financial Assistance Office Level 7,
Education Bldg. A35
Phone:+61 2 9351 2416
Fax:+61 2 9351 7055
Email: fao@stuserv.usyd.edu.au

The Financial Assistance Office is located on Level 7 of the Education Building A35. Our hours of business are Monday to Thursday, 10 am to 4 pm.

Accommodation
If you are planning to reside at the University in the event of an offer of enrolment being made, you should contact the College(s) of your choice early - i.e., before offers are made.

Colleges
St Andrew's College (men and postgraduate women),
Carillon Ave, Newtown 2042 (non-denominational)
Phone +61 2 9565 7300

St John's College (men and women),
Missenden Rd, Camperdown 2050 (Catholic)
Phone +61 2 9394 5200

St Paul's College (men),
City Rd, Newtown 2042 (Anglican)
Phone+61 2 9550 7444

Sancta Sophia College (women and postgraduate men),
Missenden Rd, Camperdown 2050 (Catholic)
Phone +61 2 9577 2100

Wesley College (men and women),
University Grounds, Newtown 2042 (Uniting)
Phone +61 2 9565 3333

Women's College (women and postgraduate men),
Carillon Ave, Newtown 2042 (Non-denominational)
Phone+61 2 9517 5000

Mandelbaum House (men and women),
385 Abercrombie Street, Darlington NSW 2008 (Jewish)
Phone +61 2 9692 5200,
Fax +61 2 9692 5280

Halls of Residence
International House (men and women),
96 City Rd, Chippendale 2008 (Non-denominational).
Preference given to postgraduate and senior undergraduate students
Phone +61 2 9950 9800

WA Selle House (men and women),
4 Arundel St, Forest Lodge 2037 (Non-denominational)
Provides rooms with a community kitchen,
Phone+61 2 9351 3322

STUCCO (men/women),
Phone+61 2 9550 4089

Darlington House (men/women),
Phone+61 2 9550 4727

University Terraces (men/women),
Phone+61 2 9351 3322

Hostels
Arundel House,
Arundel St Forest Lodge 2037 (Anglican)
Phone+61 2 9660 4881

St Michael's College (men),
150 City Rd, Darlington 2008 (Catholic)
Phone +612 9692 0382 (principally for postgraduate students)

Sydney University Village
90 Carillon Avenue, Newtown 2042
Phone+61 2 9036 4000
www. suv.com. au (http://www. suv.com. au)

Foundations

Postgraduate Foundation in Veterinary Science
The purpose of the Foundation is to provide a comprehensive program of continuing veterinary education. The office is located on Level 2 of the Veterinary Science Centre. The Foundation is funded through its activities and also accepts donations from the profession and the wider community in support of its activities. A full-time Director coordinates a program of continuing education which includes refresher courses, distance education, symposia, workshops, publications, commissioned reviews and time-out seminars for veterinarians who have been away from clinical practice. The affairs of the Foundation are controlled by a Council elected by the members of the Foundation and appointed by the Senate of the University.
Web: www.pgf.edu.au (http://www.pgf.edu.au)

Poultry and Dairy Research Foundations
The purpose of both Foundations is to provide an interface between the relevant industries in Australia and The University of Sydney. As such they undertake research relevant to these industries, assist in the training of scientific and technical personnel to service the private and public sectors of the industries and act in an industrial liaison capacity. Both Foundations are actively involved in the dissemination of technical information to the industries through the organisation of annual scientific symposia.

Veterinary Science Foundation
This Foundation was established in 1986 and has a proud record of achievement in raising funds for the Faculty of Veterinary Science. During the past 10 years it has raised nearly $10 million which has funded the purchase of the McMaster Laboratory and the construction of the 250 seat Veterinary Science Conference Centre, which also houses The University of Sydney Post Graduate Foundation in Veterinary Science.

The VSF has as its mission the promotion and support of the vital role of animals in Australian life through an ongoing, creative partnership with the Faculty of Veterinary Science. It aims to increase the public recognition of the importance of farm and companion animals, as well as our native fauna, and the essential role played by veterinarians in all aspects of animal care.

The affairs of the Foundation are conducted by a Council which is chaired by the President. Further information about the Foundation

can be obtained from the Veterinary Science Foundation Office on (02) 9351 18026.

Facilities

The University of Sydney (Camden)

In 1954 the Australian Dairy Produce Board, the Australian Meat Board and the interdepartmental Committee on Wool Research gave The University of Sydney two farms, totaling 324 hectares, for the use of the Faculty of Veterinary Science. Since then, through additional bequests and by acquisition, the University now owns 1400 hectares of land in the Camden district. This, together with other property in the Moree and Marulan districts, comprises the University farms. All the farms are the responsibility of the Director of Properties and Investments.

The Camden farms are grouped into three centres, all of which are about 65km from the main Sydney site and within easy access of the academic centre at Werombi Road. The farms are at Badgery's Creek, Bringelly and Cobbitty.

Academic developments at Camden

Most development is at the Corstorphine Centre. Land from the original gift of the industries boards has been set aside for use by the Faculty of Veterinary Science and the Department of Agronomy of the Faculty of Agriculture. The Faculty of Veterinary Science is based in the JL Shute Building on Werombi Road. There are several major teaching and research units on nearby areas of the Corstorphine Centre. The Faculty has developed laboratories and other facilities for research in dairy cattle, poultry, sheep and meat. The University Veterinary Centre, Camden, is a major component of the Faculty of Veterinary Sciences. It is a mixed veterinary practice, providing services to the district. The Faculty has also established and maintains separate pig and deer units. The Equine Performance Laboratory is also based at Camden.

In 1981 the University acquired a farm at Cobbitty. Here the Faculty of Veterinary Science has a horse breeding unit, and the animal reproduction unit is also located at the same site.

Postgraduate training is a strong feature of the work of academic departments at Camden. Graduate students from Australia and overseas are engaged in research projects mostly concerned with primary industry disease and production problems. Some of their work entails the use of livestock on the University farms.

The University farms as a whole carry more than 400 milking cows and, with beef cattle and replacement stock, a total of more than 1200 cattle. A new dairy is being constructed at Corstorphine in the near future. The farms also carry about 2000 sheep, 30 horses, 30 deer, 2000 hens, 20 goats and 60 pigs. Almost all this stock is used in one way or another for teaching or research purposes, but in addition it produces a commercial income that defrays the basic costs associated with holding the farms and provides some funds for farm development, research and teaching.

The University farms at Camden are under the control of a director, who is responsible to the Vice-Chancellor. A Farms Advisory Committee advises the Vice-Chancellor on the role of the farms in teaching and research in the Faculties of Agriculture and Veterinary Science.

The Corstorphine Centre provides a base for a student accommodation unit, Nepean Hall. This gives students easy access to lectures and practical classes conducted at Camden. Corstorphine is also the site of Faculty of Veterinary Sciences and Agronomy, which occupy the University Veterinary Centre, Camden, the Shute Building, the Breakwell Building, the Poultry Research Centre, the MC Franklin Research Centre and the Dairy Research unit. Further large animal research and teaching facilities are provided on May Farm, which is only 3 kilometres south of Corstorphine.

The Bringelly Farms Centre, 10 kilometres north of Corstorphine, provides extensive sheep, beef and dairy cattle facilities for the Faculty of Veterinary Sciences. Its irrigation resources are being further developed and it is becoming increasingly important as a research-teaching resource for other University departments.

As well as providing basic land, water and animal resources for a wide range of teaching and research areas, the farms serve the plant and animal industries by frequently acting as commercial testing sites for new plants, new fertilisers, new vaccines and antibiotics and new whole-farm management systems.

The University Veterinary Centre, Camden in addition to offering a veterinary service for the district, provides clinical training for senior students.

Student usage of the farms takes two forms. In the first year, students take day excursions to the farms where they receive lectures and are given practice in animal handling and management and the fourth year students will spend the second semester at Camden.

In 1979 an additional livestock holding north of Marulan known as Arthursleigh came to the University as part of the Eric Holt bequest. It now consists of about 7900 hectares and is being developed as a large-scale sheep-beef property.

Corstorphine

Corstorphine is also used for teaching and research in veterinary conservation biology. To reach Corstorphine from Sydney, take Camden Valley Way (not the freeway) to the Cobbitty turn-off, which is to the right, 20 kilometres from the Liverpool Post Office. Follow the road through Cobbitty to the Nepean River, cross the bridge, turn left and travel another 800 metres. The phone numbers are:

- The University of Sydney, Faculty of Veterinary Science (Camden): (02) 9351 1611
- University Veterinary Centre Camden: +612 9351 1777
- Students: +61 2 9351 1678, +61 2 9351 1681, +61 2 9351 1682, +61 2 9351 1683, +61 2 9351 1684.

Appeals

Any person affected by a decision given under Rule 2 may appeal to the Council or the Vice-Chancellor in respect of any decision given by the Warden or any other person authorised with the maintenance of discipline and to the Senate where the decision is given by the Council or the Vice-Chancellor.

Addresses

The University of Sydney
Faculty of Veterinary Science (Camden)
425 Werombi Road (Private Mail Bag 3) Camden 2570
Phone+61 2 9351 1611
Fax+61 2 9351 1618.

University Veterinary Centre (Camden)
410 Werombi Road, Camden 2570
Phone+61 2 9351 1777
Fax+61 2 4655 1212

Nepean Hall,
345 Werombi Road, Camden 2570
Phone+61 2 9351 1662
Fax+61 2 4655 1111.

Camden Library,
Werombi Road, Camden 2570
Phone+61 2 9351 1627
Fax+61 2 4655 6719

Horse Unit
65 Cobbitty Road, Cobbitty 2570
Phone+61 2 4651 2568

Lansdowne Farm
74 Cobbitty Road, Camden 2570
Phone+61 2 4651 2328

May Farm,
May Farm Road, Mt Hunter, Camden 2570
Phone +61 2 4654 5239

Plant Breeding Institute
107 Cobbitty Road, Cobbitty 2570

Phone+61 2 9351 8800
Fax+61 2 9351 8875

Wolverton Dairy Farm
Greendale Road, Bringelly 2171
Phone+61 2 4774 8013

Libraries

University of Sydney Library
A large network of 24 Libraries supports staff and students of The University of Sydney. The specialist libraries for research in Veterinary Science are Badham Library and Camden Library.

Fisher Library holds resources of interest to first year students.

The Library Web site (http://www.library.usyd.edu.au) provides access to services including the Library catalogue and databases that index journal articles. Key databases for Veterinary Science are Medline, CAB Abstracts, Biological Abstracts and Zoological Record. Passwords to access these databases from outside campus are available to staff and students of the University. Please contact the Library for more information.

Badham Library
Ground Floor, Badham Building A16
Science Road, Camperdown Campus
University of Sydney, NSW 2006
Phone:+61 2 9351 2728
Fax:+61 2 9351 3852
Email: badham@library.usyd.edu.au

Open Monday-Friday 8.30 am - 7.30 pm and Saturdays 10 am - 5 pm during semester time; 9 am - 5 pm out of semester. Check the Web (http://www.library.usyd.edu.au/libraries/badham/) for information on the current opening hours.

Camden Library
University of Sydney Farms CI5
Werombi Road, Camden NSW 2570
Phone:+61 2 9351 1627
Fax:+61 2 4655 6719
Email: camden@library.usyd.edu.au

Open Monday 10 am - 6 pm, Tuesday 11 am - 9 pm, Wednesday, Thursday 9 am - 5 pm and Friday 8.30 am - 4.30 pm during semester time and Monday to Friday 8.30 am - 4.30 pm out of semester time. Check the Web (http://www.library.usyd.edu.au/libraries/camden/) for information on the current opening hours.

Museum

Raymond Bullock Museum of Veterinary Anatomy
Established in honour of Ray Bullock a Professional Officer in the Department of Veterinary Anatomy, this museum holds an extensive collection of anatomical specimens.

Located in rooms 311 and 316 of the JD Stewart Building, the museum is open 8.30am to 4.45pm, Monday to Friday. Closed weekends and public holidays.

Clubs and Societies

The Veterinary Alumni Association
The Veterinary Alumni Association was launched in August 1986. The aims of the association are to establish a link between the Faculty and its graduates throughout Australia and overseas and to provide opportunities for graduates to renew acquaintances, participate in educational events and to promote the interests of both the Faculty and veterinary science generally.

Sydney University Veterinary Society
The Sydney University Veterinary Society, which was formed in 1914, seeks to foster good fellowship among graduates and undergraduates in the Faculty of Veterinary Science and to assist the development in its undergraduate element of a broad and comprehensive approach to matters of professional and public interest. The society conducts an annual ball, trivia night and many beginning and end of semester social gatherings, as well as providing surgical equipment and its own t-shirts, jumpers, baseball caps and much more. The journal of the society, Centaur, is published annually (see below).

Sydney University Veterinary Postgraduate Society
The Sydney University Veterinary Postgraduate Society is an association made up of all students enrolled in a postgraduate degree course within the Faculty of Veterinary Science. The postgraduates come from a wide range of undergraduate courses, including Veterinary Science, Agriculture, Science, Medical and even Engineering disciplines. The SUVPS aims to foster a postgraduate community, and to encourage academic and social interaction between postgraduates and staff members from different areas within the Faculty. The Society carries out these goals by organising speakers and social gatherings throughout the year, as well as providing peer support for its members.

Publications
Centaur is an annual, illustrated journal of contributions from students edited by a student elected to the task. It covers the highlights of the year and is eagerly awaited by both students and staff. Costs of producing the latest edition were met by advertisers. Contributions are actively sought throughout the year.

History of the Faculty

Veterinary education in New South Wales began in the 1880s when the Sydney Technical College established the two-year course of instruction, Elementary Veterinary Science. In 1909 The University of Sydney, with the support of the New South Wales Government, established a veterinary school and appointed James Douglas Stewart, MRCVS, the Director and Professor. The School officially opened in 1910 when 16 students enrolled in the first year of a five-year course leading to the degree of Bachelor of Veterinary Science. Initially the students were accommodated in the basement of the then Fisher Library in the southwest corner of the Quadrangle, but towards the end of 1913 they were moved completely into the present main building (JD Stewart Building).

The First World War delayed the development of the School with many graduates and undergraduates volunteering for active service. Even after the war, recovery of the School was slow and it took the full resources of Professor JD Stewart to justify the continuing existence of the Veterinary School. Gradually the numbers of enrolled students increased, while the graduates of the School enhanced its reputation. By 1928 there were 25 undergraduates, which increased to over 100 in 1935. In 1930 the Veterinary School of the University of Melbourne ceased its undergraduate training and the Sydney School became solely responsible for veterinary training in Australia until the Queensland Veterinary School opened in 1936 and the Melbourne Veterinary School reopened in the 1960s.

In 1936 the University, in association with the McGarvie Smith Institute, purchased and developed a 160 hectare property at Badgery's Creek, to be used for the training of veterinary students in animal husbandry. The purchase coincided with the reintroduction, in 1937, of a five-year course of studies and training for the BVSc degree (the course had been reduced to four years in 1914). In 1939 Professor Stewart retired. From the opening of the School he had been the Director, which he remained until 1920 when the Veterinary School was given full status as a faculty and he became Dean of Veterinary Science. It was his energy that had brought about the regulation of the practice of veterinary science in New South Wales with the passing of the Veterinary Surgeons Act in 1923. It was his drive that led to the growth of the Faculty until the Second World War.

With the temporary closure of the Queensland Veterinary School during the Second World War, Sydney once again became solely responsible for veterinary education in Australia. In 1939 extensions to the main buildings were added and in 1946 the temporary building for the Department of Veterinary Pathology and Bacteriology was constructed. In 1949 some temporary buildings were erected to provide further accommodation for the Veterinary Teaching Hospital. In 1954 additional farm facilities were acquired at Camden. The Camden farms provide final year students with animal units for the teaching of husbandry and disease control, and with a veterinary clinic and hospital, lecture theatres and teaching laboratories, and a hall of residence (Nepean Hall).

Although the development of the Veterinary School is far from complete, extensive hospital and clinic buildings (Evelyn Williams Building), an Animal Science building (RMC Gunn Building) and the Veterinary Science Conference Centre (opened 1998) have been erected at the Sydney campus.

In 1997 the Departments of Veterinary Anatomy and Veterinary Pathology amalgamated to form the Department of Veterinary Anatomy and Pathology. In the same year Pathology staff and equipment were relocated into the adjacent building, previously known as the (CSIRO) McMaster Building, enabling the 1946 temporary building (mentioned above) to be demolished.

Also in 1997 the Department of Animal Health amalgamated with the Department of Veterinary Clinical Sciences and the combined department is known as the Department of Veterinary Clinical Sciences.

In 1998 the names of the Faculty's two veterinary hospitals were changed. The Veterinary Teaching Hospital on the Sydney campus was named The University Veterinary Centre, Sydney, and the Rural Veterinary Centre at Camden was named The University Veterinary Centre, Camden.

In 2005, the Faculty offered a new undergraduate degree, the Bachelor of Animal and Veterinary Bioscience. This 4-year degree involves studies in the structure and function of animals, their management and welfare in an agricultural, para-veterinary, laboratory or wildlife context. Apart from the growth in undergraduate teaching, there are a number of postgraduate diplomas as well as courses leading to the degrees of Master of Animal Science, Master of Science in Veterinary Science, Master of Veterinary Science, Master of Veterinary Studies, Master of Veterinary Clinical Studies and Doctor of Philosophy available to graduates.

Future progress is assured.

Undergraduate scholarships and prizes

The table below is a summary only. For further information contact the Faculty Office on +61 2 9351 2441.

Scholarships/Prize	Value $	Criteria for Award
Albert Victor Steers Harris Bequest	1,000.00 x 2	Awarded to the top graduating male and female students in the BVSc receiving the highest marks.
Association of Pet Dog Trainers (APDT-Australia) Prize for Canine Welfare Science	300.00	Awarded for proficiency in VETS3018 Animal Behaviour and Animal Welfare Science behaviour and welfare of the domestic dog.
Australian College of Veterinary Scientists, Surgical Chapter Prize for Veterinary Surgery	Text Book	Awarded for proficiency in Veterinary Surgery in 3rd Year.
Australian Equine Veterinary Association Prize in Horse Medicine and Surgery	First-year graduate' subscription toAEVA + Set of Bain-Fallon Memorial Lectures	Awarded for proficience in horse medicine and surgery in 4th Year.
Australian Small Animal Veterinary Association and Masterfoods Australia New Zealand Prize in Medicine and Surgery	$300 + 2yrs membership to ASAVA	Awarded for proficiency in small animal medicine and surgery.
Australian Society for Parasitology Prize in Veterinary Parasitology	400.00	Awarded for proficiency in Parasitology 3 (may be shared).
Australian Veterinarians in Public Health Students Prize	150 + Cert	Awarded for Excellence in Veterinary Public Health Studies.
Auxiliary to the AVA (NSW Division) Prize for 3rd Year	100.00	Awarded for the greatest improvement in 3rd year after having passed 2nd year with more than 60%.
Auxiliary to the AVA (NSW Division) Prize for Cell Biology and Veterinary Anatomy & Physiology I and II	100.00	Awarded for proficiency in Cell Biology & Veterinary Anatomy & Physiology in 1st and 2nd Years.
Auxiliary to the AVA (NSW Division) Prize in Animal Genetics	100.00	Awarded for proficiency in Animal Genetics.
Auxiliary to the AVA (NSW Division) Prize in Veterinary Medicine & Clinical Pathology	100.00	Awarded for proficiency in 4th year Veterinary Medicine & Clinical Pathology.
AVA Prize for Undergraduates in Veterinary Pathology	200 + 1yr subscription to AVA	Awarded for proficiency in Veterinary Pathology.
AVA Student Award	Certificate + 2yrs subscription	Awarded to a student who through their academic work and participation in student affairs, are considered to be an asset to the student body and potentially an asset to the veterinary profession and the AVA.
Baker and Ridley Memorial Prize for Animal Husbandry	150.00	Awarded for proficiency in 4th year Animal Husbandry Practical Report.
CW Emmens Prize in Veterinary Physiology	100.00	Awarded for the highest aggregate marks in 1st and 2nd year Veterinary Anatomy & Physiology in sequential years.
Cat Protection Society Prize for Feline Welfare Science	150.00	Awarded for proficiency in VETS3018 Animal Behaviour and Animal Welfare Science and the greatest understanding of issues related to domestic feline behaviour and welfare in the Animal Welfare Science Essay.
Chapter of Veterinary Pharmacology of the Australian College of Veterinary Scientists Prize in Veterinary Pharmacology & Toxicology	Medal & Testamur	Awarded for proficiency in 3rd year Veterinary Pharmacology and Toxicology.
Schering-Plough Prize in Veterinary Parasitology	225.00	Awarded for proficiency Veterinary Parasitology in 3rd year.
Elsevier Prize for Exotic Animal Welfare Science	Book Voucher to the value of $200	Awarded for proficiency in VETS3018 Animal Behaviour and Animal Welfare Science and the greatest understanding of issues related to exotic animal behaviour and welfare in the Animal Welfare Science Essay.
Epidemiology Chapter of of the Australian College of Veterinary Scientists Prize in Epidemiology	Medallion + $100	Awarded for proficiency in VETS5338 Rural Public Practice Rotation and knowledge of Epidemiology, based on written reports submitted.

FH Loxton Scholarship in BSc(Vet)	Equiv. To HECS fee Band 4	BSc(Vet) Students - by application only.
Farr Memorial Prize in Animal Husbandry	50.00	Awarded for proficiency in 1st year horse husbandry.
Goodman Fielder - Uncle Tobys Prizes for Animal Nutrition	400.00 x 2	Awarded for proficiency in 2nd year animal nutrition.
Grahame Edgar Scholarship	2,000.00	BSc(Vet) Students - by application only.
HG Belschner Prize in Sheep and Wool	100.00	Awarded for proficiency in 1st year sheep and wool.
HR Carne Prize and Medal for Excellence in the Bachelor of Science (Vet) Degree	Medal + 250	Awarded for proficiency in the examinations for BSc(Vet) degree.
Hill's 'Buddy' Award	Plaque + $500	New prize in 2006 - criteria to be advised
JD Stewart Essay Prize in Veterinary Science	60.00	NEW CRITERIA FOR 2005
Jack Moran Prize in Veterinary Public Health	20.00	NEW CRITERIA FOR 2005
John Gurner and Frederick Ebsworth Scholarship in Cell Biology 1A	350.00	Awarded for proficiency in Cell Biology 1A in 1st year.
John Gurner and Frederick Ebs worth Scholarship in Cell Biology IB	350.00	Awarded for proficiency in Cell Biology IB in 1st year.
John Gurner and Frederick Ebs worth Scholarship in Chemistry	350.00	Awarded for proficiency in Chemistry in 1st year.
KG Johnston Prize in Veterinary Clinical Pathology	150.00	Awarded for proficiency in Veterinary Medicine & Clinical Pathology
Lonsdale Prize (A) in Clinical Studies	400.00	Awarded for proficiency in Clinical Studies in 4th year.
Lonsdale Prize (B) in Clinical Studies	200.00	Awarded for proficiency in Clinical Studies in 4th year.
Mayne Health Vetnostics Prize in Veterinary Clinical Pathology	500.00	Awarded for proficiency in Veterinary Clinical Pathology in 4th Year.
MLA Beef Cattle Welfare Science Prize	400.00	Awarded annually to the student enrolled in VETS3018 Animal Behaviour & Animal Welfare Science who demonstrates the greatest proficiency in the Animal Welfare Science essay with a mark of 85% or more and a focus on beef cattle.
ML A Sheep Welfare Science Prize	400.00	Awarded annually to the student enrolled in VETS3018 Animal Behaviour & Animal Welfare Science who demonstrates the greatest proficiency in the Animal Welfare Science essay with a mark of 85% or more and a focus on sheep.
NPH Graham Prize in Sheep Medicine	200.00	Awarded for proficiency in the sheep component of Veterinary Ruminant Health & Production
Post Graduate Foundation Veterinary Prize	Certificate for $1000 towards further education with PGF	Awarded for clinical competency to a graduating veterinarian
Powerhouse Logistics Prize for Veterinary Conservation Biology	500.00	Awarded for proficiency in VETS2015 Veterinary Conservation Biology
Rex Butterfield Prize in Veterinary Anatomy	50.00	Awarded for proficiency in Veterinary Anatomy in 2nd year
Richard Norman Sanders Prize	600.00	Awarded for proficiency in practical clinical work in both the 4th and 5th years of study
Robert Reeves Hodgekiss Prize	250.00	Awarded for proficiency in the Horse Medicine & Surgery in Year 4
RSPCA/Una Clare Spark Animal Welfare Scholarship	Equiv. To HECS fee Band 4	Established in 2003 to promote and encourage research related to animal welfare. Awarded to a Bachelor of Science (Veterinary) student based on the appropriateness of the proposed program of study.
RSPCA (Australia) Pig Welfare Science Prize	175.00	Awarded annually to the student enrolled in VETS3018 Animal Behaviour and Animal Welfare Science who demonstrates the greatest proficiency in the Animal Welfare Science Essay to do with Pig Welfare Science
RSPCA (Australia) Poultry Welfare Science Prize	175.00	Awarded annually to the student enrolled in VETS3018 Animal Behaviour and Animal Welfare Science who demonstrates the greatest proficiency in the Animal Welfare Science Essay to do with Poultry Welfare Science
STD Symons Prize for Clinical Studies	600.00	Awarded for proficiency in clinical subjects, based on the Year 5 supervisor rotation reports and the best result calculated by the greatest number of overall outstanding grades.
Stewart Prize in Veterinary Medicine	180.00	Awarded for proficiency in Veterinary Medicine in 4th year
The Jean and Ray Blencowe Scholarship	1,000.00	Awarded each year to the student in NSW who achieves the highest aggregate score in the Higher School Certificate and who is admitted to a full-time University course in NSW in Veterinary Science the following year.
The Veterinarian Magazine Prize for Written Communication	One Year Subscription to *The Veterinarian* Magazine	Awarded annually to students enrolled in VETS3018 Animal Behaviour and Animal Welfare Science who achieve a high distinction in the Animal Welfare Science Essay.
Veterinary Imaging Associates Prize in Veterinary Radiology	Book prize to the value of $200.00	Awarded for proficiency in Veterinary Radiology in 4th year
Vet's Best Products Reward	300.00	Awarded for proficiency in VETS3018 Animal Behaviour and Animal Welfare Science for the greatest understanding of animal training in the Animal Welfare Science Essay
VETSOC Final Year Scholarships	250.00 x 2	By application
Virginia Osborne Prize for Anatomy of the Horse	250.00	Awarded for proficiency in anatomy of the horse in 2nd year.
WR Sidman Memorial Prize awarded by AVA (NSW Div) for Clinical Studies in 4th Year	2 yrs membership to AVA	Awarded for proficiency in Veterinary Clinical Studies in 4th year.
Wally McGreevy Prize in Animal Welfare Science	150.00	Awarded for proficiency in Animal Behaviour and Animal Welfare Science
William James McHugh Prize in Equine Medicine or Surgery	300.00	Awarded to a 4th or 5th year student who prepares the best case report in equine medicine or surgery provided the entry is of sufficient merit.

WIRES Wildlife Prize	250.00	Awarded for proficiency in the 'Written Project' component of Veterinary Conservation Biology in Year 2 relating to Australian native wildlife.
Friends of the Brush-Tailed Rock Wallaby Scholarship (NB: The Scholarship will not be awarded in 2006 & 2007)	2,000.00	Awarded to a student enrolled in the Masters of Applied Science (Wildlife Health and Population Management) program, for research that will enhance knowledge of the Brush-tailed Rock Wallaby and/or its habitat.

University of Sydney (Coursework) Rule 2000 (as amended)

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

Approved by: Senate on 4 December 2000
Date of effect: 1 January 2001

Latest amendment approved by: Senate on 3 December 2001
Date of effect: 1 January 2002

University of Sydney (Coursework) Rule 2000 (as amended)

Preliminary

1. Commencement and purpose of Rule

(1) This Rule is made by the Senate pursuant to section 37(1) of the University of Sydney Act 1989 for the purposes of the University of Sydney By-law 1999.

(2) This Rule comes into force on 1 January 2001.

(3) This Rule governs all coursework award courses in the University. It is to be read in conjunction with the University of Sydney (Amendment Act) Rule 1999 and the Resolutions of the Senate and the faculty resolutions relating to each award course in that faculty.

Rules relating to coursework award courses

1. Definitions

In this Rule:

award course means a formally approved program of study which can lead to an academic award granted by the University.

coursework means an award course not designated as a research award course. While the program of study in a coursework award course may include a component of original, supervised research, other forms of instruction and learning normally will be dominant. All undergraduate award courses are coursework award courses.

credit means advanced standing based on previous attainment in another award course at the University or at another institution. The advanced standing is expressed as credit points granted towards the award course. Credit may be granted as specific credit or non-specific credit.

- **specific credit** means the recognition of previously completed studies as directly equivalent to units of study;
- **non-specific credit** means a "block credit" for a specified number of credit points at a particular level. These credit points may be in a particular subject area but are not linked to a specific unit of study; and
- **credit points** means a measure of value indicating the contribution each unit of study provides towards meeting award course completion requirements stated as a total credit point value.

dean means the dean of a faculty or the director or principal of an academic college or the chairperson of a board of studies.

degree means a degree at the level of bachelor or master for the purpose of this Rule.

embedded courses/programs means award courses in the graduate certificate/graduate diploma/master's degree by coursework sequence which allow unit of study credit points to count in more than one of the awards.

faculty means a faculty, college board, a board of studies or the Australian Graduate School of Management Limited as established in each case by its constitution and in these Rules refers to the faculty or faculties responsible for the award course concerned.

major means a defined program of study, generally comprising specified units of study from later stages of the award course.

minor means a defined program of study, generally comprising units of study from later stages of the award course and requiring a smaller number of credit points than a major.

postgraduate award course means an award course leading to the award of a graduate certificate, graduate diploma, degree of master or a doctorate. Normally, a postgraduate award course requires the prior completion of a relevant undergraduate degree or diploma.

research award course means an award course in which students undertake and report systematic, creative work in order to increase the stock of knowledge. The research award courses offered by the University are: higher doctorate, Doctor of Philosophy, doctorates by research and advanced coursework, and certain degrees of master designated as research degrees. The systematic, creative component of a research award course must comprise at least 66 per cent of the overall award course requirements.

stream means a defined program of study within an award course, which requires the completion of a program of study specified by the award course rules for the particular stream, in addition to the core program specified by award course rules for the award course.

student means a person enrolled as a candidate for a course.

testamur means a certificate of award provided to a graduate, usually at a graduation ceremony.

transcript or **academic transcript** means a printed statement setting out a student's academic record at the University.

unit of study means the smallest stand-alone component of a student's award course that is recordable on a student's transcript. Units of study have an integer credit point value, normally in the range 3-24.

undergraduate award course means an award course leading to the award of an associate diploma, diploma, advanced diploma or degree of bachelor.

2. Authorities and responsibilities

(1) Authorities and responsibilities for the functions set out in this Rule are also defined in the document *Academic Delegations of Authority*. The latter document sets out the mechanisms by which a person who has delegated authority may appoint an agent to perform a particular function.

(2) The procedures for consideration of, and deadlines for submission of, proposals for new and amended award courses will be determined by the Academic Board.

Division 1: Award course requirements, credit points and assessment

3. Award course requirements

(1) To qualify for the award of a degree, diploma or certificate, a student must:

(a) complete the award course requirements specified by the Senate for the award of the degree, diploma or certificate concerned;

(b) complete any other award course requirements specified by the Academic Board on the recommendation of the faculty and published in the faculty resolutions relating to the award course;

(c) complete any other award course requirements specified by the faculty in accordance with its delegated authority

and published in the faculty resolutions relating to the award course; and

(d) satisfy the requirements of all other relevant by-laws, rules and resolutions of the University.

4. Units of study and credit points

(1)

(a) A unit of study comprises the forms of teaching and learning approved by a faculty. Where the unit of study is being provided specifically for an award course which is the responsibility of another faculty, that faculty must also provide approval.

(b)Any faculty considering the inclusion of a unit of study in the tables of units available for an award course for which it is responsible may review the forms of teaching and learning of that unit, may consult with the approving faculty about aspects of that unit and may specify additional conditions with respect to inclusion of that unit of study.

(2) A student completes a unit of study if the student:

(a) participates in the learning experiences provided for the unit of study;

(b) meets the standards required by the University for academic honesty;

(c) meets all examination, assessment and attendance requirements for the unit of study; and

(d) passes the required assessments for the unit of study.

(3) Each unit of study is assigned a specified number of credit points by the faculty responsible for the unit of study.

(4) The total number of credit points required for completion of an award course will be as specified in the Senate resolutions relating to the award course.

(5) The total number of credit points required for completion of award courses in an approved combined award course will be specified in the Senate or faculty resolutions relating to the award course.

(6) A student may, under special circumstances, and in accordance with faculty resolutions, be permitted by the relevant dean to undertake a unit or units of study other than those specified in the faculty resolutions relating to the award course and have that unit or those units of study counted towards fulfilling the requirements of the award course in which the student is enrolled.

5. Unit of study assessment

(1) A student who completes a unit of study will normally be awarded grades of high distinction, distinction, credit or pass, in accordance with policies established by the Academic Board. The grades high distinction, distinction and credit indicate work of a standard higher than that required for a pass.

(2) A student who completes a unit of study for which only a pass/fail result is available will be recorded as having satisfied requirements.

(3) In determining the results of a student in any unit of study, the whole of the student's work in the unit of study may be taken into account.

(4) Examination and assessment in the University are conducted in accordance with the policies and directions of the Academic Board.

6. Attendance

(1) A faculty has authority to specify the attendance requirements for courses or units of study in that faculty. A faculty must take into account any University policies concerning modes of attendance, equity and disabled access.

(2) A faculty has authority to specify the circumstances under which a student who does not satisfy attendance requirements may be deemed not to have completed a unit of study or an award course.

Division 2: Enrolment

7. Enrolment restrictions

(1) A student who has completed a unit of study towards the requirements of an award course may not re-enrol in that unit of study, except as permitted by faculty resolution or with the written permission of the dean. A student permitted to re-enrol may receive a higher or lower grade, but not additional credit points.

(2) Except as provided in subsection (1), a student may not enrol in any unit of study which overlaps substantially in content with a unit that has already been completed or for which credit or exemption has been granted towards the award course requirements.

(3) A student may not enrol in units of study additional to award course requirements without first obtaining permission from the relevant dean.

(4) Except as prescribed in faculty resolutions or with the permission of the relevant dean:

(a) a student enrolled in an undergraduate course may not enrol in units of study with a total value of more than 32 credit points in any one semester, or 16 credit points in the summer session; and

(b) a student enrolled in a postgraduate award course may not enrol in units of study with a total value of more than 24 credit points in any one semester, or 12 credit points in the summer session.

Division 3: Credit, cross-institutional study and their upper limits

8. Credit for previous studies

(1) Students may be granted credit on the basis of previous studies.

(2) Notwithstanding any credit granted on the basis of work completed or prior learning in another award course at the University of Sydney or in another institution, in order to qualify for an award a student must:

(a) for undergraduate award courses, complete a minimum of the equivalent of two full-time semesters of the award course at the University; and

(b) for postgraduate award courses, complete at least 50 per cent of the requirements prescribed for the award course at the University.

These requirements may be varied where the work was completed as part of an embedded program at the University or as part of an award course approved by the University in an approved conjoint venture with another institution.

(3) The credit granted on the basis of work completed at an institution other than a university normally should not exceed one third of the overall award course requirements.

(4) A faculty has authority to establish embedded academic sequences in closely related graduate certificate, graduate diploma and master's degree award courses. In such embedded sequences, a student may be granted credit for all or some of the units of study completed in one award of the sequence towards any other award in the sequence, irrespective of whether or not the award has been conferred.

(5) In an award course offered as part of an approved conjoint venture the provisions for the granting of credit are prescribed in the Resolutions of the Senate and the faculty resolutions relating to that award course.

9. Cross-institutional study

(1) The relevant dean may permit a student to complete a unit or units of study at another university or institution and have that unit or those units of study credited to the student's award course.

(2) The relevant dean has authority to determine any conditions applying to cross-institutional study.

Division 4: Progression

10. Repeating a unit of study

(1) A student who repeats a unit of study shall, unless granted exemption by the relevant dean:

(a) participate in the learning experiences provided for the unit of study; and

(b) meet all examination, assessment and attendance requirements for the unit of study.

(2) A student who presents for re-assessment in any unit of study is not eligible for any prize or scholarship awarded in connection with that unit of study without the permission of the relevant dean.

11. Time limits

A student must complete all the requirements for an award course within ten calendar years or any lesser period if specified by resolution of the Senate or the faculty.

Division 5: Discontinuation of enrolment and suspension of candidature

12. Discontinuation of enrolment

(1) A student who wishes to discontinue enrolment in an award course or a unit of study must apply to the relevant dean and will be presumed to have discontinued enrolment from the date of that application, unless evidence is produced showing:
(a) that the discontinuation occurred at an earlier date; and
(b) that there was good reason why the application could not be made at the earlier time.

(2) A student who discontinues enrolment during the first year of enrolment in an award course may not re-enrol in that award course unless:
(a) the relevant dean has granted prior permission to re-enrol; or
(b) the student is reselected for admission to candidature for that course.

(3) No student may discontinue enrolment in an award course or unit of study after the end of classes in that award course or unit of study, unless he or she produces evidence that:
(a) the discontinuation occurred at an earlier date; and
(b) there was good reason why the application could not be made at the earlier time.

(4) A discontinuation of enrolment may be recorded as "Withdrawn (W)" or "Discontinued Not To Count As Failure (DNF)" where that discontinuation occurs within the time-frames specified by the University and published by the faculty, or where the student meets other conditions as specified by the relevant faculty.

13. Suspension of candidature

(1) A student must be enrolled in each semester in which he or she is actively completing the requirements for the award course. A student who wishes to suspend candidature must first obtain approval from the relevant dean.

(2) The candidature of a student who has not re-enrolled and who has not obtained approval from the dean for suspension will be deemed to have lapsed.

(3) A student whose candidature has lapsed must apply for re-admission in accordance with procedures determined by the relevant faculty.

(4) A student who enrols after suspending candidature shall complete the requirements for the award course under such conditions as determined by the dean.

Division 6: Unsatisfactory progress and exclusion

14. Satisfactory progress

A faculty has authority to determine what constitutes satisfactory progress for all students enrolled in award courses in that faculty, in accordance with the policies and directions of the Academic Board.

15. Requirement to show good cause

(1) For the purposes of this Rule, "good cause" means circumstances beyond the reasonable control of a student, which may include serious ill health or misadventure, but does not include demands of employers, pressure of employment or time devoted to non-University activities, unless these are relevant to serious ill health or misadventure. In all cases the onus is on the student to provide the University with satisfactory evidence to establish good cause. The University may take into account relevant aspects of a student's record in other courses or units of study within the University and relevant aspects of academic studies at other institutions provided that the student presents this information to the University.

(2) The relevant dean may require a student who has not made satisfactory progress to show good cause why he or she should be allowed to re-enrol.

(3) The dean will permit a student who has shown good cause to re-enrol.

16. Exclusion for failure to show good cause

The dean may, where good cause has not been established:

(1) exclude the student from the relevant course; or

(2) permit the student to re-enrol in the relevant award course subject to restrictions on units of study, which may include, but are not restricted to:
(a) completion of a unit or units of study within a specified time;
(b) exclusion from a unit or units of study, provided that the dean must first consult the head of the department responsible for the unit or units of study; and
(c) specification of the earliest date upon which a student may re-enrol in a unit or units of study.

17. Applying for re-admission after exclusion

(1) A student who has been excluded from an award course or from a unit or units of study may apply to the relevant dean for re-admission to the award course or re-enrolment in the unit or units of study concerned after at least four semesters, and that dean may readmit the student to the award course or permit the student to re-enrol in the unit or units of study concerned.

(2) With the written approval of the relevant dean, a student who has been excluded may be given credit for any work completed elsewhere in the University or in another university during a period of exclusion.

18. Appeals against exclusion

(1) In this Rule a reference to the Appeals Committee is a reference to the Senate Student Appeals Committee (Exclusions and Re-admissions).

(2) (a) (i) A student who has been excluded in accordance with this Rule may appeal to the Appeals Committee.
(ii) A student who has applied for re-admission to an award course or re-enrolment in a unit of study after a period of exclusion, and who is refused re-admission or re-enrolment may also apply to the Appeals Committee.
(b) The Appeals Committee shall comprise:
(i) three ex officio members (the Chancellor, the Deputy Chancellor and the Vice-Chancellor and Principal);
(ii) the Chair and Deputy Chairs of the Academic Board;
(hi) two student Fellows; and
(iv) up to four other Fellows.
(c) The Appeals Committee may meet as one or more subcommittees providing that each subcommittee shall include at least one member of each of the categories of:
(i) ex officio member;
(ii) Chair or Deputy Chair of the Academic Board;
(hi) student Fellow; and
(iv) other Fellows.
(d) Three members shall constitute a quorum for a meeting of the Appeals Committee or a subcommittee.
(e) The Appeals Committee and its subcommittees have authority to hear and determine all such appeals and must report its decision to the Senate annually.
(f) The Appeals Committee or a subcommittee may uphold or disallow any appeal and, at its discretion, may determine the earliest date within a maximum of four semesters at which a student who has been excluded shall be permitted to apply to re-enrol.
(g) No appeal shall be determined without granting the student the opportunity to appear in person before the Appeals Committee or subcommittee considering the appeal. A student so appearing may be accompanied by a friend or adviser.
(h) The Appeals Committee or subcommittee may hear the relevant dean but that dean may only be present at those stages at which the student is permitted to be present. Similarly, the dean is entitled to be present when the Committee or subcommittee hears the student.
(i) If, due notice having been given, a student fails to attend a meeting of the Appeals Committee or subcommittee scheduled to consider that student's appeal, the Appeals Committee or subcommittee, at its discretion, may defer consideration of the appeal or may proceed to determine the appeal.
(j) A student who has been excluded in accordance with these resolutions and has lodged a timely appeal against that exclusion may re-enrol pending determination of that appeal if it has not been determined by the commencement of classes in the next appropriate semester.

Division 7: Exceptional circumstances

19. Variation of award course requirements in exceptional circumstances

The relevant dean may vary any requirement for a particular student enrolled in an award course in that faculty where, in the opinion of the dean, exceptional circumstances exist.

Division 8: Award of degrees, diplomas and certificates

20. Classes of award

(1) Undergraduate diplomas may be awarded in five grades - pass, pass with merit, pass with distinction, pass with high distinction or honours.
(2) Degrees of bachelor may be awarded in two grades - pass or honours.
(3) Graduate diplomas and graduate certificates may be awarded in one grade only - pass.
(4) Degrees of master by coursework may be awarded three grades - pass, pass with merit or honours.

21. Award of the degree of bachelor with honours

(1) The award of honours is reserved to indicate special proficiency. The basis on which a student may qualify for the award of honours in a particular award course is specified in the faculty resolutions relating to the course.
(2) Each faculty shall publish the grading systems and criteria for the award of honours in that faculty.
(3) Classes which may be used for the award of honours are:
First Class
Second Class/Division 1
Second Class/Division 2
Third Class
(4) With respect to award courses which include an additional honours year:
(a) a student may not graduate with the pass degree while enrolled in the honours year;
(b) on the recommendation of the head of the department concerned, a dean may permit a student who has been awarded the pass degree at a recognised tertiary institution to enrol in the honours year in that faculty;
(c) faculties may prescribe the conditions under which a student may enrol part-time in the honours year;
(d) a student who fails or discontinues the honours year may not re-enrol in it, except with the approval of the dean.

22. University Medal

An honours bachelor's degree student with an outstanding academic record throughout the award course may be eligible for the award of a University Medal, in accordance with Academic Board policy and the requirements of the faculty resolutions relating to the award course concerned.

23. Award of the degree of master with honours or merit

The award of honours or pass with merit is reserved to indicate special proficiency or particular pathways to completion. The basis on which a student may qualify for the award of honours or the award with merit in a particular degree is specified in the Faculty Resolutions relating to that degree.

24. Transcripts and testamurs

(1) A student who has completed an award course or a unit of study at the University will receive an academic transcript upon application and payment of any charges required.
(2) Testamurs may indicate streams or majors or both as specified in the relevant faculty resolutions.

Division 9: Transitional provisions

25. Application of this Rule during transition

This Rule applies to all candidates for degrees, diplomas and certificates who commence candidature after 1 January 2001. Candidates who commenced candidature prior to this date may choose to proceed in accordance with the resolutions of the Senate in force at the time they enrolled, except that the faculty may determine specific conditions for any student who has re-enrolled in an award course after a period of suspension.

General University information

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

Accommodation Service

The Accommodation Service helps students find off-campus accommodation. The service maintains an extensive database of accommodation close to the Camperdown and Darlington Campus or within easy access via public transport. Currently enrolled students can access the database online through the MyUni student portal (http://myuni.usyd.edu.au), or the accommodation website via your MyUni student portal or the Services for Students website (http://www.usyd.edu.au/stuserv).

Level 7, Education Building A3 5
The University of Sydney
NSW 2006 Australia

Phone: +61 29351 3312
Fax:+61 2 9351 8262
Email: accomm@stuserv.usyd.edu.au
Web: www.usyd.edu.au/accom

Admissions Office

The Admissions Office, located in the Student Centre, is responsible for overseeing the distribution of offers to undergraduate applicants through the Universities Admission Centre (UAC). They can advise prospective local undergraduate students on admission requirements. Postgraduate students should contact the appropriate faculty. If you are an Australian citizen or a permanent resident but have qualifications from a non-Australian institution phone +61 2 9351 4118 for more information. For enquiries regarding special admissions (including mature-age entry) phone +61 2 9351 3615. Applicants without Australian citizenship or permanent residency should contact the International Office (see International Student Centre entry).

Student Centre
Ground Floor, Carslaw Building F07
The University of Sydney
NSW 2006 Australia

Phone: +61 2 9351 4117 or +61 2 9351 4118
Fax:+61 2 9351 4869
Email: admissions@records.usyd.edu.au
Web: www.usyd.edu.au/su/studentcentre

Applying for a course

Local applicants for undergraduate courses and programs of study

For the purpose of admission and enrolment "local applicant" refers to citizens and permanent residents of Australia and citizens of New Zealand. If you are in this group and wish to apply for admission into an undergraduate course, you would generally apply through the Universities Admissions Centre (UAC). The deadline for application is the last working day of September in the year before enrolment. Go to the UAC website (http://www.uac.edu.au) for more information.

Note that some faculties, such as Pharmacy, the Sydney Conservatorium of Music and Sydney College of the Arts, have additional application procedures.

Local applicants for postgraduate courses and programs of study

For the purpose of admission and enrolment "local applicant" refers to citizens and permanent residents of Australia and citizens of New Zealand. Application is direct to the faculty which offers the course that you are interested in. Application forms for postgraduate coursework, postgraduate research and the Master's qualifying or preliminary program and for non-award postgraduate study can be found at www.usyd.edu.au/su/studentcentre/applications/applications.html.

Please note that some faculties use their own specially tailored application forms for admission into their courses. Please contact the relevant faculty.

International applicants for all course types (undergraduate and postgraduate)

"International applicants" refers to all applicants other than Australian citizens, Australian permanent residents and citizens of New Zealand. In the majority of cases international applicants apply for admission through the University's International Office (IO) (see International Student Centre entry). All the information international applicants need, including application forms, is available from the IO website.

Assessment

For assessment matters refer to the relevant department or school.

Careers Centre

The Careers Centre will help you with careers preparation and gradutate recruitment.

Careers Centre
Ground Floor, Mackie Building KOI
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 3481
Fax:+61 2 9351 5134
Email: info@careers.usyd.edu.au
Web: www.careers.usyd.edu.au

Casual Employment Service

The Casual Employment Service helps students find casual and part-time work during their studies and during University vacations. The service maintains a database of casual employment vacancies. Currently enrolled students can access the database online through the MyUni student portal, or the casual employment website via your MyUni student portal, or the Services for Students website (http://www.usyd.edu.au/stuserv).

Level 7, Education Building A3 5
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 8714
Fax:+61 2 9351 8717
Email: ces@stuserv.usyd.edu.au
Web: www.usyd.edu.au/cas_emp

Centre for Continuing Education

The Centre for Continuing Education offers a wide range of short courses for special interest, university preparation and professional development.
Centre for Continuing Education
Cnr Missenden Road and Campbell Street
Sydney University Village
Newtown NSW 2042

Postal address:
Locked Bag 20
Glebe NSW 2037

Ph:+61 2 9036 4789
Fax:+61 2 9036 4799
Email: info@cce.usyd.edu.au
Web: www.cce.usyd.edu.au

Subject areas include: history and culture, creative arts, social sciences, languages, IT, business and overseas study tours. Courses are open to everyone.

Centre for English Teaching (CET)

The Centre for English Teaching (CET) offers English language and academic study skills programs to students from overseas and Australian residents from non-English speaking backgrounds who need to develop their English language skills to meet academic entry requirements.

Mallett Street Campus M02

Phone:+61 2 9351 0760
Fax:+61 2 9351 0710
Email: info@cet.usyd.edu.au
Web: www.usyd.edu.au/cet

Child care

Contact the Child Care Information Officer for information about child care for students and staff of the University who are parents. For details of centres, vacation and occasional care see the child care website via your MyUni student portal or the Services for Students website (http://www.usyd.edu.au/stuserv)

Child Care Information Officer
Level 7, Education Building A3 5

Phone:+61 2 9351 5667
Fax:+61 2 9351 7055
Email: childc@stuserv.usyd.edu.au
Web: www.usyd.edu.au/childcare

Client Services, Information and Communications Technology (ICT)

Client Services are responsible for the delivery of many of the computing services provided to students. Students can contact Client Services by phoning the ICT Helpdesk on 9351 6000, through the IT Assist website (www.itassist.usyd.edu.au) or by visiting the staff of the University Access Labs.
The access labs on the Camperdown and Darlington campus are located in:

- Fisher Library (Level 2);
- Carslaw Building (Room 201);
- Education Building (Room 232);
- Christopher Brennan Building (Room 232);
- Engineering Link Building (Room 222); and
- Pharmacy and Bank Building (Room 510).

Other labs are available at the Law, Westmead Hospital and Cumberland campuses.

The labs provide students free access to computers including office productivity and desktop publishing software.

Services available on a fee for service basis include Internet access, printing facilities and the opportunity to host their own non-commercial website.

Each student is supplied with an account, called a "Unikey" account, which allows access to a number of services including:

- free email (www-mail.usyd.edu.au);
- access to the Internet from home or residential colleges (www.itassist.usyd.edu.au/services.html);
- student facilities via the MyUni student portal (http://my-uni.usyd.edu.au), including exam results, enrolment variations and timetabling; and
- free courses in basic computing (such as MS Office; basic html and excel) that are run by Access Lab staff in the week following orientation week. To register contact the Access Lab Supervisor on+61 2 9351 6870.

Client Services, Helpdesk
University Computer Centre, H08
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 6000
Fax:+61 2 9351 6004
Email: support@usyd.edu.au
Web: www.itassist.usyd.edu.au

The Co-op Bookshop

The Co-op Bookshop is a one-stop bookshop for:

- textbooks;
- general books;
- course notes;
- reference books;
- DVDs;
- flash drives; and
- software at academic prices.

Lifetime membership costs $20.00 and gives a ten per cent discount on purchases (conditions apply).

Sports and Aquatic Centre Building G09

Phone:+61 2 9351 3705
Fax: +61 2 9660 5256
Email: sydu@coop-bookshop.com.au
Web: www.coop-bookshop.com.au

Counselling Service

The Counselling Service aims to help students fulfil their academic, individual and social goals through professional counselling. Counselling is free and confidential. The service provides short-term, problem-focused counselling to promote psychological wellbeing and to help students develop effective and realistic coping strategies. The service runs a program of workshops during each semester. For details of workshops, activities and online resources provided by the service see the Counselling Service website via your MyUni student portal or the Services for Students website www.usyd.edu.au/stuserv.

Camperdown and Darlington

Level 7, Education Building A35
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 2228
Fax:+61 2 9351 7055
Email: counsell@mail.usyd.edu.au
Web: www.usyd.edu.au/counsel

Cumberland Campus

Ground Floor, A Block, Cumberland Campus C42
The University of Sydney
East Street
Lidcombe
NSW 2141 Australia

Phone:+61 2 9351 9638
Fax:+61 2 9351 9635
Email: CS_Cumberland@fhs.usyd.edu.au
Web: www.usyd.edu.au/counsel

Disability Services

Disability Services is the principal point of contact for advice on assistance available for students with disabilities. The service works closely with academic and administrative staff to ensure that students receive reasonable accommodations in their areas of study. Assistance available includes the provision of note taking, interpreters and advocacy with academic staff to negotiate assessment and course requirement modifications where appropriate. For details on registering with the service and online resources see the Disability Services website via your MyUni student portal or the Services for Students website www.usyd.edu.au/stuserv.

Camperdown and Darlington campuses

Level 7, Education Building A3 5
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 7040
Fax:+61 2 9351 3320
TTY:+61 2 9351 3412
Email: disserv @ stuserv.usyd.edu.au
Web: www.usyd.edu.au/disability

Cumberland Campus

Ground Floor, A Block, Cumberland Campus C42
The University of Sydney
East Street
Lidcombe
NSW 2141 Australia
Phone:+61 2 9351 9638
Fax:+61 2 9351 9635
Email: DS_Cumberland@fhs.usyd.edu.au
Web: www.usyd.edu.au/disability

Enrolment

Students entering first year

Details of enrolment procedures will be sent to you with your UAC offer of enrolment. Enrolment takes place at a specific time and date, usually during the last week of January, depending on your surname and the faculty in which you are enrolling. You must attend the University in person or else nominate somebody in writing to act on your behalf. On enrolment day you pay the compulsory fees for joining the Student Union, the Students' Representative Council and sporting bodies. (These are currently subject to Parliamentary Review and may be voluntary in 2006.) You also nominate your preferred payment option, either "up front" or deferred, for your Higher Contribution Scheme (HECS) liability. You will also choose your first-year units of study, so it's important to consult the appropriate faculty handbook before enrolling.

All other students

A pre-enrolment package is sent to all enrolled students in late September and contains instructions on the procedure for pre-enrolment.

Environmental Policy

The University of Sydney's Environmental Policy promotes sustainable resource and product use; and encourages the practice of environmental stewardship by staff and students. The policy is supported by the University wide Sustainable Campus Program.

Enquiries can be directed to the Manager, Environmental Strategies phone +61 2 93512063, email: janet.broady@usyd.edu.au, or go to www.facilities.usyd.edu.au/projects/environ/about.shtml where you can find out what the University is doing and how you can get involved, make suggestions or receive the Sustainable Campus Newsletter.

Examinations

The Examinations and Exclusions Office looks after the majority of examination arrangements and student progression. Some faculties, such as the Sydney Conservatorium of Music, make all examination arrangements for the units of study that they offer.

Examinations and Exclusions Office
Student Centre
Level 1, Carslaw Building F07
The University of Sydney
NSW 2006 Australia

Phone: +61 2 9351 4005 or +61 2 9351 4006
Fax:+61 2 9351 7330
Email: exams.office@exams.usyd.edu.au

Fees

The Fees Office provides information on how to pay fees, where to pay fees and if payments have been received. The office also has information on obtaining a refund for fee payments.

Fees Office
Margaret Telfer Building K07
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 5222
Fax:+61 2 9351 4202

Financial Assistance Office

The University of Sydney has a number of loan and bursary funds to assist students experiencing financial difficulties. Loan assistance is available for undergraduate and postgraduate students enrolled in degree and diploma courses at the University. The assistance is not intended to provide the principle means of support but to help enrolled students in financial need with expenses such as housing bonds and rent; phone and electricity bills; medical expenses; buying textbooks and course equipment. Loans are interest free and are repayable usually within one year. Bursaries may be awarded depending on financial need and academic merit and are usually only available to local full-time undergraduate students. Advertised bursaries, including First Year Bursaries, are advertised through the MyUni student portal in January each year. For details of types of assistance and online resources provided by the service see the Financial Assistance website via your MyUni student protal or the Services for Students website www.usyd.edu.au/stuserv

Level 7, Education Building A3 5
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 2416
Fax:+61 2 9351 7055
Email: fao@stuserv.usyd.edu.au
Web: www.usyd.edu.au/fin_assist

Freedom of Information

The University of Sydney falls within the jurisdiction of the *NSW Freedom of Information Act, 1989* . The act:

- requires information concerning documents held by the University to be made available to the public;
- enables a member of the public to obtain access to documents held by the University; and
- enables a member of the public to ensure that records held by the University concerning his or her personal affairs are not incomplete, incorrect, out of date or misleading.

(Note that a "member of the public" includes staff and students of the University.)

It is a requirement of the act that applications be processed and a determination made within a specified time period, generally 21 days. Determinations are made by the University's Registrar.

While application may be made to access University documents, some may not be released in accordance with particular exemptions

provided by the act. There are review and appeal mechanisms which apply when access has been refused.

The University is required to report to the public on its freedom of information (FOI) activities on a regular basis. The two reports produced are the *Statement of Affairs* and the *Summary of Affairs* . The *Statement of Affairs* contains information about the University, its structure, function and the kinds of documents held. The *Summary of Affairs* identifies the University's policy documents and provides information on how to make an application for access to University documents.

Further information and copies of the current reports may be found at www.usyd.edu.au/arms/foi

Graduations Office

The Graduations Office is responsible for organising graduation ceremonies and informing students of their graduation arrangements.

Student Centre
Carslaw Building F07
The University of Sydney
NSW 2006 Australia

Phone: +61 2 9351 3199, +61 2 9351 4009
Protocol:+61 2 9351 4612
Fax:+61 2 9351 5072

(Grievances) Appeals

You may consider that a decision affecting your candidature for a degree or other activities at the University has not taken into account all relevant matters.

In some cases the by-laws or resolutions of the Senate (see the University Calendar (http://www.usyd.edu.au/about/publication/pub/calendar.shtml)) provide for a right of appeal against particular decisions; for example, there is provision for appeal against academic decisions, disciplinary decisions and exclusion after failure.

A document outlining the current procedures for appeals against academic decisions is available at the Student Centre, at the SRC, and on the University's policy online website (http://www.usyd.edu.au/policy) (click on "Study at the University", then click on "Appeals" - see the Academic Board and Senate resolutions).

For assistance or advice regarding an appeal contact:

Students' Representative Council
Level 1, Wentworth Building G01
The University of Sydney
NSW 2006 Australia

Phone: +61 2 9660 5222

HECS and Fees Office

Student Centre
Ground Floor, Carslaw Building F07
The University of Sydney
NSW 2006 Australia

Phone: +61 2 9351 5659, +61 2 9351 5062, +61 2 9351 2086
Fax:+61 2 9351 5081

International Student Centre

The International Student Centre consists of the International Office and the Study Abroad and Exchange Office. The IO provides assistance with application, admission and enrolment procedures and administers scholarships for international students. The Study Abroad and Exchange unit assists both domestic and international students who wish to enrol for study abroad or exchange programs.

International Student Centre

Services Building G12
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 4079
Fax:+61 2 9351 4013
Email: info@io.usyd.edu.au
Web: www.usyd.edu.au/international

Study Abroad and Exchange Unit

Study Abroad
Phone:+61 2 9351 3699
Fax:+61 2 9351 2795
Email: studyabroad@io.usyd.edu.au
Web: www.usyd.edu.au/fstudent/studyabroad/index.shtml

Exchange
Phone:+61 2 9351 3699
Fax:+61 2 9351 2795
Email: exchange@io.usyd.edu.au
Web: w w w.usyd. edu. au/fstudent/study abroad/partners. shtml

International Student Services Unit

The International Student Services Unit assists international students through the provision of orientation, counselling and welfare services to both students and their families. ISSU aims to help international students cope successfully with the challenges of living and studying in a unfamiliar culture, to achieve success in their studies and to make the experience of being an international student rewarding and enjoyable. For details of orientation activities, counselling and welfare services provided to both students and their families and online resources, see the MyUni student portal or the Services for Students website www.usyd.edu.au/stuserv. International students also have access to all University student support services.

Camperdown and Darlington campuses

Ground Floor, Services Building G12
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 4749
Fax:+61 2 9351 6818
Email: info@issu.usyd.edu.au
Web: www.usyd.edu.au/issu

Cumberland Campus

Ground Floor, A Block, Cumberland Campus C42
The University of Sydney
East Street
Lidcombe
NSW 2141 Australia

Phone:+61 2 9351 9638
Fax:+61 2 9351 9635
Email: ISSU_Cumberland@fhs.usyd.edu.au
Web: www.usyd.edu.au/issu

Koori Centre and Yooroang Garang

The Koori Centre provides programs, services and facilities to encourage and support the involvement of Aboriginal and Torres Strait Islander people in all aspects of tertiary education at the University of Sydney. The Cadigal Special Entry Program assists Indigenous Australians to enter undergraduate study across all areas of the University.

As well as delivering block-mode courses for Indigenous Australian students, the Koori Centre teaches Aboriginal Studies in various mainstream courses. In addition the Centre provides tutorial assistance, and student facilities such as: computer lab, Indigenous research library and study rooms.
In particular the Koori Centre aims to increase the successful participation of Indigenous Australians in undergraduate and postgraduate degrees, develop the teaching of Aboriginal Studies, conduct research

in the field of Aboriginal education, and establish working ties with schools and communities.

The Koori Centre works in close collaboration with Yooroang Garang: School of Indigenous Health Studies in the Faculty of Health Sciences at the University's Cumberland Campus. Yooroang Garang provides advice, assistance and academic support for Indigenous students in the faculty, as well as preparatory undergraduate and postgraduate courses.

Koori Centre
Ground Floor, Old Teachers College A22
The University of Sydney
NSW 2006 Australia

Phone: +61 2 9351 2046 (general enquiries)
Toll Free: 1800 622 742
Community Liaison Officer: +61 2 9351 7003
Fax:+61 2 9351 6923
Email: koori@koori.usyd.edu.au
Web: www.koori.usyd.edu.au

Yooroang Garang
T Block, Level 4, Cumberland Campus C42
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 9393
Toll Free: 1800 000 418
Fax:+61 2 9351 9400
Email: yginfo@fhs.usyd.edu.au
Web: www.yg.fhs.usyd.edu.au

Learning Centre

The Learning Centre helps students develop the generic learning and communication skills that are necessary for university study and beyond. The centre is committed to helping students achieve their academic potential throughout their undergraduate and postgraduate studies. The centre's program includes a wide range of workshops on study skills, academic reading and writing, oral communication skills and postgraduate writing and research skills. Other services include an individual learning program, a special program for international students, faculty-based workshops, computer-based learning resources, publications of learning resources and library facilities. For details of programs, activities and online resources provided by the centre see the website via your MyUni student portal or the Services for Students website www.usyd.edu.au/stuserv.

Camperdown and Darlington campuses
Level 7, Education Building A3 5
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 3853
Fax:+61 2 9351 4865
Email: lc@stuserv.usyd.edu.au
Web: www.usyd.edu.au/lc

Cumberland Campus
Ground Floor, A Block, Cumberland Campus C42
The University of Sydney
East Street
Lidcombe
NSW 2141 Australia

Phone:+61 2 9351 9638
Fax:+61 2 9351 9635
Email: LC_Cumberland@fhs.usyd.edu.au
Web: www.usyd.edu.au/lc

Library

The University of Sydney Library, the largest academic library in the Southern Hemisphere, is a network of 18 libraries located on nine campuses. The Library website (http://www.library.usyd.edu.au) provides access to services and resources, anywhere at anytime. The locations, opening hours and subject specialities of the libraries are listed on the website.

Over five million items are available via the Library catalogue, including more than 52,000 electronic journals and 270,000 electronic books. Past exam papers are also available online. Enrolled students are entitled to borrow from any of the University Libraries. More information is available at www.library.usyd.edu.au/borrowing.

Reading list items are available via the reserve service. Increasingly, reading list material is becoming available in electronic form. For details see the reserve service website (http://opac.library.usyd.edu.au/screens/reserve.html).

Library staff are always available to support students in their studies. "Ask a Librarian" in person, by email, or by using an online chat service (http://www.library.usyd.edu.au/contacts/index.html).

A specialist librarian is available for all discipline areas and will provide training in finding high quality information. Courses cover a range of skills including research methodology, database searching, effective use of the Internet and the use of reference management software. See the subject contact page (http://www.library.usyd.edu.au/contacts/subjectcontacts.html).

Library facilities include individual and group study spaces, computers, printers, multimedia equipment, photocopiers and adaptive technologies. Check the "Libraries" link on the home page (http://www.library.usyd.edu.au) to find out about services and facilities in specific libraries.

The *Client Service Charter* describes the Library's commitment to supporting students' learning, including those with special needs. See the *Client Service Charter* online (http://www.library.usyd.edu.au/about/policies/clientcharter.html).

Your comments and suggestions are always welcome.

University of Sydney Library F03
University of Sydney
NSW 2006 Australia

Phone: +61 2 9351 2993 (general enquiries)
Fax: +61 2 9351 2890 (administration), +61 2 9351 7278 (renewals)
Email: loanenq@library.usyd.edu.au (loan enquiries), udd@library.usyd.edu.au (document delivery enquiries)
Web: www.library.usyd.edu.au

Mathematics Learning Centre

The Mathematics Learning Centre assists undergraduate students to develop the mathematical knowledge, skills and confidence that are needed for studying first level mathematics or statistics units at university. The entre runs bridging courses in mathematics at the beginning of the academic year (fees apply). The centre also provides ongoing support to eligible students during the year through individual assistance and small group tutorials. For details of activities and online resources provided by the centre see the website via your MyUni student portal or the Services for Students website www.usyd.edu.au/stuserv.

Level 4, Carslaw Building F07
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 4061
Fax:+61 2 9351 5797
Email: mlc@stuserv.usyd.edu.au
Web: www.usyd.edu.au/mlc

Multimedia and Educational Technologies in Arts (META) Resource Centre (Languages and E-Learning)

The centre provides access to lectures, class work and interactive self-paced learning materials for students of languages other than English (LOTE) and English as a second language (ESL). The library

holds materials in over 90 LOTE languages. The self study room provides interactive computer assisted learning and access to live multilingual satellite television broadcasts. Computer access labs provide Internet, email and word processing access. The centre also provides teaching rooms with state-of-the-art multimedia equipment, language laboratories and video conferencing facilities for Faculty of Arts courses.

Level 2, Brennan Building (opposite Manning House)
The University of Sydney
NSW 2006 Australia

Phone: For language enquiries +612 9351 2371, for all other enquiries+61 2 9351 6781
Fax:+61 2 9351 3626
Email: For language related enquiries language.enquiries® arts.usyd.edu.au, for all other enquiries METAResource-Centre@arts.usyd.edu
Web: www. arts .usyd. edu. au/centres/meta

MyUni Student Portal

Launched in July 2004, the MyUni student portal (http://my-uni.usyd.edu.au) is the starting point and "one-stop" environment for students to access all their web-based University information and services. MyUni automatically tailors what a student sees based on thier login-in and offers students the option of further personalising content. Most importantly, MyUni allows students to complete tasks online that would previously have required attendance in person. The following are examples of MyUni services and information:

- support services for students in health, counselling, child care, accommodation, employment and wellbeing;
- student administration systems for obtaining exam results, enrolment and variations, timetabling, email services and links to courses and units of study information;
- links to the University's e-learning systems;
- library services;
- important messages and student alerts;
- information technology and support services;
- information for international students; and
- campus maps, with descriptions of cultural, sporting and campus facilities.

Part-time, full-time

Undergraduate Students

Undergraduate students are usually considered full-time if they have a student load of at least 0.375 each semester. Anything under this amount is considered a part-time study load. Note that some faculties have minimum study load requirements for satisfactory progress.

Postgraduate Students (Coursework)

For postgraduate coursework students part-time or full-time status is determined by credit-point load. Enrolment in units of study which total at least 18 credit points in a semester is classed as full-time. Anything under this amount is a part-time study load. Please note that classes for some coursework programs are held in the evenings (usually 6-9pm).

Postgraduate Students (Research)

Full-time candidates for research degrees do not keep to the normal semester schedule, instead they work continuously throughout the year with a period of four weeks recreation leave. There is no strict definition of what constitutes full-time candidature but if you have employment or other commitments that would prevent you from devoting at least the equivalent of a 35-hour working week to your candidature (including attendance at the University for lectures, seminars, practical work and consultation with your supervisor) you should enrol as a part-time candidate. If in doubt you should consult your faculty or supervisor.

International Students

Student visa regulations require international students to undertake full-time study. International students on visas other than student visas may be permitted to study part-time.

Privacy

The University is subject to the *NSW Privacy and Personal Information Protection Act 1998* and the *NSW Health Records and Information Privacy Act 2002* . Central to both acts are the sets of information protection principles (IPPs) and health privacy principles which regulate the collection, management, use and disclosure of personal and health information. In compliance with the *Privacy and Personal Information Protection Act* the University developed a *Privacy Management Plan* which includes the *University Privacy Policy* . The *Privacy Management Plan* sets out the IPPs and how they apply to functions and activities carried out by the University. Both the plan and the *University Privacy Policy* were endorsed by the Vice-Chancellor on 28 June 2000.

Further information and a copy of the plan may be found at www.usyd.edu.au/arms/privacy.

Any questions regarding the *Freedom of Information Act*, the *Privacy and Personal Information Protection Act*, the *Health Records and Information Privacy Act* or the *Privacy Management Plan* should be directed to:

Tim Robinson: +61 2 9351 4263, or Anne Picot: +61 2 9351 7262
Email: foi@mail.usyd.edu.au

Scholarships for undergraduates

Scholarships Unit
Room 147, Ground Floor, Mackie Building KOI
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 2717
Fax:+61 2 9351 5134
Email: scholarships @careers.usyd.edu.au
Web: www.usyd.edu.au/scholarships

Student Centre

Ground Floor, Carslaw Building F07
The University of Sydney
NSW 2006 Australia

Phone: +61 2 9351 3023 (general enquiries)
Academic records: +61 2 9351 4109
Discontinuation of enrolment: +61 2 9351 3023
Handbooks: +61 2 9351 5057
Prizes:+61 2 9351 5060
Fax: +61 2 9351 5081, +61 2 9351 5350 (academic records)
Web: www.usyd.edu.au/su/studentcentre

Student Identity Cards

The student identity card functions as a library borrowing card, a transport concession card (when suitably endorsed) and a general identity card. The card must be carried at all times on the grounds of the University and must be shown on demand. Students are required to provide a passport-sized colour photograph of their head and shoulders for lamination on to this card. Free lamination is provided at a range of sites throughout the University during the January/February enrolment/pre-enrolment period. Cards that are not laminated, or do not include a photograph, will be rejected. New identity cards are required for each year of a student's enrolment.

Student Services

The University provides personal, welfare, administrative and academic support services to facilitate your success at University. Many factors can impact on your wellbeing while studying at university and student services can assist you in managing and handling these more effectively. For details of services and online resources provided see the Student Services website (http://www.usyd.edu.au/stuserv).

The Sydney Summer School

Most faculties at the University offer units of study from undergraduate degree programs during summer. There are also some units of study available for postgraduate coursework programs from some faculties. As the University uses its entire quota of Commonwealth supported places in first and second semester, these units are full fee-paying for both local and international students and enrolment is entirely voluntary. However, Summer School units enable students to accelerate their degree progress, make up for a failed unit or fit in a unit which otherwise would not suit their timetables. New students may also gain a head start by completing subjects before they commence their degrees. Units start at various times from late November and run for up to six weeks (followed by an examination week). Notice of the units available is on the Summer School website (http://www.summer.usyd.edu.au) and is usually circulated to students with their results notices. A smaller Winter School is also run from the Summer School office. It commences on 3 July and runs for up to three weeks (followed by an examination week). It offers mainly postgraduate and a few undergraduate units of study. Information can be found on the Summer School website (http://www.summer.usyd.edu.au).

Timetabling Unit

The Timetabling Unit in the Student Centre is responsible for producing students' class and tutorial timetables. Semester One timetables are available from the Wednesday of O Week through the MyUni website (http://myuni.usyd.edu.au).

The Faculty of Health Sciences, The Sydney College of the Arts, The Sydney Conservatorium of Music and the Faculty of Vetinary Science produce their own timetables for all teaching that they deliver. These timetables are available from the faculties.

University Health Service

The University Health Service provides full general practitioner services and emergency medical care to all members of the University community. Medical centres on the Camperdown and Darlington Campuses offer general practioners, physiotherapy and some specialist services.

Email: director@unihealth.usyd.edu.au
Web: www.unihealth.usyd.edu.au

University Health Service (Wentworth)
Level 3, Wentworth Building G01
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 3484
Fax:+61 2 93514110

University Health Service (Holme)
Science Rd entry, Holme Building A09
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 4095
Fax:+61 2 9351 4338

See also the Glossary for administrative information relating to particular terms.

Student organisations

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

Students[1] Representative Council

The Students' Representative Council (SRC) is the organisation which represents undergraduates both within the University and in the wider community. All students enrolling in an undergraduate course automatically become members of the SRC.

Level 1, Wentworth Building G01
The University of Sydney
NSW 2006 Australia

Phone: + 61 2 9660 5222 (editors, *Honi Soit* /Legal Aid, Student Welfare and Centrelink advice, interest free loans)
Second-hand Bookshop: +61 2 9660 4756
Mallet Street: +61 2 9351 0691
Conservatorium: +61 2 9351 1291
Fax: +61 2 9660 4260
Email: info@src.usyd.edu.au
Web: www.src.usyd.edu.au

Sydney University Postgraduate Representative Association (SUPRA)

SUPRA is an organisation that provides services to and represents the interests of postgraduate students.
All postgraduate students at the University of Sydney are members of SUPRA.

Raglan Street Building G10
University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 3715
Freecall: 1800 249 950
Fax:+61 2 9351 6400
Email: supra@mail.usyd.edu.au
Web: www.supra.usyd.edu.au

Sydney University Sport

Sydney University Sport provides opportunities for participation in a range of sporting and recreational activities along with first class facilities.

University Sports and Aquatic Centre G09
The University of Sydney
NSW 2006 Australia

Phone:+61 2 9351 4960
Fax:+61 2 9351 4962
Email: admin@susport.usyd.edu.au
Web: www.susport.com

University of Sydney Union

The University of Sydney Union is the main provider of catering facilities, retail services, welfare programs and social and cultural events for the University community on the Camperdown and Darlington campuses and at many of the University's affiliated campuses.

University of Sydney Union
Level 1, Manning House A23
The University of Sydney
NSW 2006 Australia

Phone: 1800 013 201 (switchboard)
Fax: +61 2 9563 6109
Email: info@usu.usyd.edu.au
Web: www.usydunion.com

Abbreviations

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

For a glossary of terms, describing the terminology in use at the University of Sydney, please see the glossary section.

Listed below are the more commonly used acronyms that appear in University documents and publications.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A

AARNet	Australian Academic Research Network
AAUT	Australian Awards for University Teaching
AAM	Annual Average Mark
ABC	Activity Based Costing
ABSTUDY	Aboriginal Study Assistance Scheme
ACER	Australian Council for Educational Research
AGSM	Australian Graduate School of Management
ANZAAS	Australian and New Zealand Association for the Advancement of Science
APA	Australian Postgraduate Awards
APAC	Australian Partnership for Advanced Computing
APAI	Australian Postgraduate Awards (Industry)
APA-IT	Australian Postgraduate Awards in Information Technology
APDI	Australian Postdoctoral Fellowships Industry
APEC	Asia-Pacific Economic Cooperation
APF	Australian Postdoctoral Fellowship
AQF	Australian Qualifications Framework
ARC	Australian Research Council
ARTS	Automated Results Transfer System
ASDOT	Assessment Fee Subsidy for Disadvantaged Overseas Students
ATN	Australian Technology Network
ATP	Australian Technology Park
ATPL	Australian Technology Park Limited
AUQA	Australian Universities Quality Agency
AusAID	Australian Agency for International Development
AUTC	Australian Universities Teaching Committee
AVCC	Australian Vice-Chancellors Committee

B

BAA	Backing Australia's Ability
BAC	Budget Advisory Committee
BITLab	Business Intelligence Lab
BLO	Business Liaison Office
BOTPLS	Bridging for Overseas Trained Professionals Loans Scheme

C

CAF	Cost Adjustment Factor
CAUT	Committee for Advancement of University Teaching
CDP	Capital Development Program
CEP	Country Education Profile
CEQ	Course Experience Questionnaire
CFO	Chief Financial Officer
CHASS	College of Humanities and Social Sciences
CHESSN	Commonwealth Higher Education System Student Number
CHS	College of Health Sciences
CIO	Chief Information Officer
COE	Confirmation of Enrolment
CPSU	Community and Public Sector Union
CRC	Cooperative Research Centre

C

CREO	Centre for Regional Education, Orange
CRICOS	Commonwealth Register of Institutions and Courses for Overseas Students
CRRI	Centre for Rural and Regional Innovation
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CST	College of Sciences and Technology
CULT	Combined Universities Language Test
CUTSD	Committee for University Teaching and Staff Development

D

DAC	Data Audit Committee
DEST	Commonwealth Department of Education, Science and Training
DET	NSW Department of Education and Training
D-IRD	Discovery-Indigenous Researchers Development Program
DVC	Deputy Vice-Chancellor

E

EB	Enterprise Bargaining
EFTSU	Equivalent Full-Time Student Unit
EFTSL	Equivalent Full-Time Student Load
EIP	Evaluations and Investigations Program
ELICOS	English Language Intensive Course of Study
EMU	Electron Microscope Unit
ESOS Act	Education Services for Overseas Student Act

F

FFT	Fractional Full-Time (Equivalent Staff)
FlexSIS	Flexible Student Information System
FHS	Faculty of Health Sciences
FMO	Facilities Management Office
FOS	Field of Study
FTE	Full-Time Equivalent (Staff)
FRM	Faculty of Rural Management

G

GATS	General Agreement on Trade in Services
GCCA	Graduate Careers Council of Australia
GDS	Graduate Destination Survey
GPOF	General Purpose Operating Funds
GSA	Graduate Skills Assessment
GSG	Graduate School of Government
GWSLN	Greater Western Sydney Learning Network

H

HDR	Higher Degree Research
HECS	Higher Education Contribution Scheme
HEEP	Higher Education Equity Program
HEFA	Higher Education Funding Act 1988
HEIMS	Higher Education Information Management System
HEIP	Higher Education Innovation Program (DEST)
HELP	Higher Education Loan Program

H

HEO	Higher Education Officer
HEP	Higher Education Provider
HERDC	Higher Education Research Data Collection
HESA	Higher Education Support Act
HOD	Head of Department

I

IAF	Institutional Assessment Framework (This is a new name for what was previously the DEST Profile process.)
IAS	Institute of Advanced Studies
ICT	Information and Communication Technology
ICTR	Information and Communication Technology Resources
IELTS	International English Language Testing Scheme
IGS	Institutional Grants Scheme (DEST)
10	International Office
IP	Intellectual Property
IPRS	International Postgraduate Research Scholarships
IREX	International Researcher Exchange Scheme
ISFP	Indigenous Support Funding Program
ISIG	Innovation Summit Implementation Group
ISSU	International Student Services Unit
ITC	Information Technology Committee
ITL	Institute for Teaching and Learning
ITS	Information Technology Services

J

JASON	Joint Academic Scholarships Online Network

L

LBOTE	Language Background Other Than English

M

MBA	Master of Business Administration
MISG	Management Information Steering Group
MNRF	Major National Research Facilities Scheme
MOU	Memorandum of Understanding
MPG	Major Projects Group
MRB	Medical Rural Bonded Scholarship Scheme

N

NBCOTP	National Bridging Courses for Overseas Trained Program
NCG	National Competitive Grant
NESB	Non-English-Speaking Background
NHMRC	National Health and Medical Research Council
NOIE	National Office for the Information Economy
NOOSR	National Office for Overseas Skill Recognition
NRSL	Non-Recent School Leaver
NSWVCC	New South Wales Vice-Chancellors' Conference
NTEU	National Tertiary Education Industry Union

O

OECD	Organisation for Economic Cooperation and Development
OLA	Open Learning Australia
OLDPS	Open Learning Deferred Payment Scheme
OPRS	Overseas Postgraduate Research Scholarships

P

PELS	Postgraduate Education Loans Scheme
PSO	Planning Support Office
PVC	Pro-Vice-Chancellor

Q

QA	Quality Assurance
QACG	Quality Advisory and Coordination Group

R

R&D	Research and Development
R&R	Restructuring and Rationalisation Program
RC	Responsibility Centre
REG	Research and Earmarked Grants
REP	Research Education Program
RFM	Relative Funding Model
RIBG	Research Infrastructure Block Grant (DEST)
RIEF	Research Infrastructure Equipment and Facilities Scheme
RISF	Restructuring Initiatives Support Fund
RMO	Risk Management Office
ROA	Record of Achievement
RQ	Research Quantum
RQU	Recognition Quality Unit (Higher Education Division - DEST)
RRTMR	Research and Research Training Management Reports
RSL	Recent School Leaver
RTS	Research Training Scheme (DEST)

S

SCA	Sydney College of the Arts
SCEQ	Sydney Course Experience Questionnaire
SCM	Sydney Conservatorium of Music
SCR	Science Capability Review
SDF	Strategic Development Fund
SEG	Senior Executive Group
SES	Socioeconomic Status
SI	Scholarship Index
SLE	Student Learning Entitlement
SNA	Safety Net Adjustment
SPIRT	Strategic Partnerships with Industry - Research and Training Scheme
SPR	Student Progress Rate
SRC	Students' Representative Council
SSR	Student/Staff Ratio
STABEX	Study Abroad Exchange (database)
SUPRA	Sydney University Postgraduate Students' Representative Association
SUSport	Sydney Univerisity Sport

T

TAFE	Technical and Further Education
TOEFL	Test of English as a foreign language
TPI	Teaching Performance Indicator

u

UAC	Universities Admissions Centre
UMAP	University Mobility in Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UPA	University Postgraduate Awards

V

VCAC	Vice-Chancellor's Advisory Committee
VET	Vocational Education and Training

W

WAM	Weighted Average Mark
WRP	Workplace Reform Program
WTO	World Trade Organization

Y

YFE	Year of First Enrolment

Glossary

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

For a table of the more commonly used acronyms and abbreviations that appear in University documents and publications please see the abbreviations section.

This glossary describes terminology in use at the University of Sydney.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A

Annual average mark (AAM)

The average mark over all units of study attempted in a given academic year (equivalent to the calendar year).

The formula for this calculation is:

$$AAM = \frac{\wedge\ (marks\ \text{x}\ \textbf{credit}\ point\ value)}{\wedge\ (credit\ point\ value)}$$

(sums over all units of study completed in the selected period)

Where the mark is the actual mark obtained by the student for the unit of study, or in the case of a failing grade with no mark - 0. Pass/Fail assessed subjects and credit transfer subjects (from another institution) are excluded from these calculations; however, the marks from all attempts at a unit of study are included.

Academic Board

The senior academic body within the University. In conjunction with faculties, the Academic Board has responsibility for approving, or recommending to Senate for approval, new or amended courses and units of study and policy relating to the admission and candidature of students. (For further information, see the University Calendar.)

Academic cycle

The program of teaching sessions offered over a year. Currently the cycle runs from the enrolment period for Semester One through to the completion of the processing of results at the end of Semester Two. (See also Stage.)

Academic dishonesty

Academic dishonesty occurs when a student presents another person's ideas, findings or written work as his or her own by copying or reproducing them without due acknowledgement of the source and with intent to deceive the examiner. Academic dishonesty also covers recycling, fabrication of data, engaging another person to complete an assessment or cheating in exams. (See also Plagiarism.)

Academic record

The complete academic history of a student at the University. It includes, among other things: personal details; all units of study and courses taken; assessment results (marks and grades); awards and prizes obtained: infringements of progression rules; approvals for variation in course requirements and course leave; thesis and supervision details.

Access to a student's academic record is restricted to authorised University staff and is not released to a third party without the written authorisation of the student. (See also Academic transcript.)

Academic transcript

A printed statement setting out a student's academic record at the University. There are two forms of academic transcript: external and internal. (See also External transcript, Internal transcript.)

Academic year

The current calendar year in which a student is enrolled.
(See also Academic cycle, Stage.)

Admission

Governed by the University's admission policy, this is the process for identifying applicants eligible to receive an initial offer of enrolment in a course at the University. Admission to most courses is based on performance in the HSC, with applicants ranked on the basis of their UAI. Other criteria such as a portfolio, interview, audition, or results in standard tests may also be taken into account for certain courses.

Admission basis

The main criteria used by a faculty in assessing an application for admission to a course. The criteria used include, among other things, previous secondary, TAFE or tertiary studies; work experience; special admission; and the Universities Admission Index (UAI).

Admission (Deferment)

An applicant who receives an offer of admission to a course may apply to defer enrolment in that course for one semester or one academic cycle.

Admission mode

A classification based on how a student was admitted to a course, for example "UAC" or "direct".

Admission period

The period during which applications for admission to courses are considered.

Admission year

The year the student expects to begin the course (see also Commencement date.)

Advanced diplomas

(See Award course.)

Advanced standing

(See Credit.)

Advisor

A member of academic staff appointed in an advisory role for some postgraduate coursework students. (See also Associate supervisor, Instrumental supervisor/teacher, Research supervisor, Supervision.)

Aegrotat

In exceptional circumstances involving serious illness or death of a student prior to completion of their course, the award of aegrotat and posthumous degrees and diplomas may be conferred.

Alumni sidneiensis

A searchable database of graduates of the University from 1857 to 30 years prior to the current year.

Annual average mark (AAM)

The average mark over all units of study attempted in a given academic year (equivalent to the calendar year).

The formula for this calculation is:
(mark*credit_pt_value)/ (credit_pt_value)
(sums over all units of study completed in the selected period)

Where the mark is the actual mark obtained by the student for the unit of study, or in the case of a failing grade with no mark -- 0. Pass/Fail assessed subjects and credit transfer subjects (from another institution) are excluded from these calculations; however, the marks from all attempts at a unit of study are included.

Annual progress report

A form which is used to monitor a research student's progress each year. The form provides for comments by the student, the supervisor, the head of the department and the dean (or their nominee). The completed form is attached to the student's official file.

Appeals

Students may lodge an appeal against academic or disciplinary decisions. An academic appeal (e.g. against exclusion) is managed by the Student Centre - Exclusions Office while it is under consideration and a record of the outcome of the appeal will be retained.

Assessment

The process of measuring the performance of students in units of study and courses. Performance may be assessed by examinations, essays, laboratory projects, assignments, theses, treatises or dissertations. (See also Result processing, Result processing schedule.)

Formative assessment
Formative assessment is used principally to provide students with feedback on their progress in learning. It reinforces successful learning, and is an opportunity for students to expose the limitations in their knowledge and understanding.

Summative assessment
Summative assessment is used to certify competence, or to arrange students in a rank order of merit. It certifies the attainment of a standard, and is used as the basis for progression to the next part of a program, or to graduation.

Associate supervisor

A person who is appointed in addition to the supervisor of a research student, who can provide the day-to-day contact with the candidate or provide particular expertise or additional experience in supervision. (See also Advisor, Instrumental supervisor/teacher, Research supervisor, Supervision.)

Assumed knowledge

For some units of study, a student is assumed to have passed a relevant subject at the HSC and this is called assumed knowledge. While students are generally advised against taking a unit of study for which they do not have the assumed knowledge, they are not prevented from enrolling in the unit of study. (See also Prerequisite.)

Attendance pattern

Attendance pattern is classified as full-time, part-time or external, this is dependant on the student's mode of attendance and the student load.

Attendance mode

A Department of Education, Science and Technology (DEST) classification defining the manner in which a student is undertaking a course, i.e. internal, external, mixed or offshore.

Australian Graduate School of Management (AGSM)

A joint venture with the University of New South Wales. The AGSM is derived from the Graduate School of Business at the University of Sydney and the then AGSM at the University of New South Wales.

Australian Qualifications Framework (AQF)

The framework for recognition and endorsement of qualifications established by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA).

AUSTUDY

Austudy provides financial help to students who are aged 25 years or more who meet the required criteria, and are undertaking an approved full-time course at an approved institution. (See also Youth Allowance.)

Automated Results Transfer System (ARTS)

This system was developed by the Australasian Conference of Tertiary Admissions Centres (ACTAC) to allow the electronic academic record of a student to be accessed, via an admission centre, by tertiary institutions.

Award course
(See Course.)

B

Bachelor's degree

The highest undergraduate award offered at the University. A bachelor's degree course normally requires three or four years of full-time study or the part-time equivalent. (See also Award course.)

Barrier

An instruction placed on a student's record that prevents the student from re-enrolling or graduating. (See also Deadlines (fees), Suppression of results.)

Board of Studies

An academic body which supervises a course or courses, and which is similar to a faculty except that it is headed by a chair rather than a dean and does not supervise PhD candidates.

Bursaries

Financial award made to a student, based primarily on need. (See also Scholarships.)

C

Cadigal program

A program, named in recognition of the Aboriginal people of the land on which the University is located, designed to increase the successful participation of Aboriginal and Torres Strait Islander people in degree courses in all faculties at the University of Sydney.

Campus

The grounds on which the University is situated. There are 11 campuses of the University of Sydney:

- Burren Street (Institute for International Health, Institute of Transport Studies)
- Camperdown and Darlington (formerly known as Main Campus)
- Camden (Agriculture and Veterinary Science)
- Conservatorium (Sydney Conservatorium of Music)
- Cumberland (Health Sciences)
- Mallett Street (Nursing)
- Orange (Faculty of Rural Management and Centre for Regional Education)
- Rozelle (Sydney College of the Arts)
- St James (Law)
- Surry Hills (Dentistry)

Cancellation

Where enrolment is cancelled for non-payment of fees.

Candidature

Candidature commences when a student is admitted to a course of study leading to the award of a degree, diploma or certificate. There are maximum periods and in some cases minimum periods of can-

didature depending on the award course and whether the candidate is a full-time or part-time student.

Census date

The date at which a student's enrolment, load and HECS liability are finalised before this information is reported to DEST. (See also HECS.)

Ceremony

(See Graduation ceremony.)

Chancellor

The non-executive head of the University. An honorary position, the Chancellor presides over meetings of the University's governing body, the Senate, and important ceremonial occasions such as graduations.

Clinical experience

Students undertake clinical placements in a professional environment as part of their course requirements. Many require University approved supervision. In order to undertake clinical placements a student may be required to fulfil additional requirements.

College of Health Sciences

Consists of the Faculties of Dentistry; Health Sciences; Medicine; Nursing; and Pharmacy.

College of Humanities and Social Sciences (CHASS)

Consists of the Faculties of Arts; Economics and Business; Education; Law; the Sydney College of the Arts; and the Sydney Conservatorium of Music.

College of Sciences and Technology (CST)

Consists of the Faculties of Agriculture, Food and Natural Resources; Architecture; Engineering; Rural Management; Science; and Veterinary Science.

Combined course

A course which leads to two awards. For example the Arts/Law course leads to the separate awards of Bachelor of Arts and Bachelor of Laws.

Combined degree

A combined degree is a single program with a single set of course resolutions leading to the award of two degrees (unless otherwise specified in the resolutions). (See also Combined course.)

Commencement date

The date a student commences candidature.

Compulsory subscriptions

Each enrolled student is liable to pay annual (or semester) subscriptions, as determined by the Senate, to the student organisations at the University. There are different organisations for undergraduate and postgraduate students.

The student organisations are specific to different campuses. The organisations at campuses other than Camperdown and Darlington include: the Conservatorium Student Association, the Cumberland Student Guild, the Orange Agricultural College Student Association and the Student Association of Sydney College of the Arts. (See also Compulsory subscription exemption, Joining fee, Life membership.)

Compulsory subscription exemption

Students of a certain age or those with disabilities or medical conditions may be exempt from the subscription to the sports body.

Conscientious objectors to the payment of subscriptions to unions of any kind may apply to the Registrar for exemption. The Registrar may permit such a student to make the payment to the Jean Foley Bursary Fund instead. (See also Compulsory subscriptions.)

Confirmation of Enrolment form (COE)

This form is issued to each student after enrolment, showing the course and the units of study in which the student is enrolled, together with the credit point value of the units of study and the HECS weights. Until all fees are paid, it is issued provisionally.

A new confirmation of enrolment form is produced every time a student's enrolment is varied.

Conjoint ventures

Two or more institutions cooperate to provide a unit or course of study to postgraduate coursework students. Arrangements exist between individual departments at the University of Sydney and individual departments at the University of New South Wales (UNSW) and the University of Technology Sydney (UTS), whereby students enrolled for a degree at one institution complete one or more units of study at the other institution to count towards the award program at their "home" institution.

Continuing professional education

A process which provides a number of programs of continuing education courses for professionals as they move through their career. These programs are presently administered by the Centre for Continuing Education and a number of departments and foundations across the University. This process supports the whole of life learning concept and involves the maintenance of a long term relationship between the student and the University.

Convocation

The body comprising all graduates of the University.

Core unit of study

A unit of study that is compulsory for a particular course or subject area. (See also Unit of study.)

Corequisite

A unit of study which must be taken in the same semester or year as a given unit of study (unless it has already been completed). These are determined by the faculty or board of studies concerned, published in the faculty handbook and shown in FlexSIS. (See also Prerequisite, Waiver.)

Cotutelle Scheme

Agreement between the University and any overseas university for joint supervision and examination of a PhD student as part of an ongoing cooperative research collaboration. If successful, the student receives a doctorate from both universities with each testamur acknowledging the circumstances under which the award was made.

Course

An undertaking of study at the University of Sydney

Award course

A formal course of study that will see attainment of a recognised award. Award courses are approved by Senate, on the recommendation of the Academic Board. The University broadly classifies courses as undergraduate, postgraduate coursework or postgraduate research. (See also Bachelor's degree, Course rules, Diploma, Doctorate, Major, Master's degree, Minor, PhD, Stream.)

Non-award course

Studies undertaken by students who are not seeking an award from the University. (See also Cross-institutional enrolment.)

Coursework

An award course not designated as a research award course. While the program of study in a coursework award course may include a component of original, supervised, other forms of instruction and learning normally will be dominant.

Research

A course in which at least 66 per cent of the overall course requirements involve students in undertaking supervised research, leading to the production of a thesis or other piece of written or creative work, over a prescribed period of time.

Course alias

A unique five character alpha-numeric code which identifies a University course.

Course code

(See Course alias.)

Course enrolment status

A student's enrolment status in a course is either "enrolled" or "not enrolled". "Not enrolled" reasons include: cancelled; suspended; under examination; or terminated. (See also Cancellation, Candidature, Course leave, Enrolment, Enrolment variation, Terminated, Under examination.)

Course leave

Students are permitted to apply for a period away from their course without losing their place. Course leave is formally approved by the supervising faculty for a minimum of one semester. Students on leave are regarded as having an active candidature, but they are not entitled to a student card. At undergraduate level, leave is not counted towards the total length of the course. Students who are absent from study without approved leave may be discontinued and may be required to formally reapply for admission. (See also Progression.)

Course rules

Rules which govern the allowable enrolment of a student in a course. Course rules may be expressed in terms of types of units of study taken, length of study, and credit points accumulated, e.g. a candidate may not enrol in units of study having a total value of more than 32 credit points per semester. Course rules also govern the requirements for the award of the course, e.g. a candidate must have completed a minimum of 144 credit points. (See also Award course, Corequisite, Prerequisite.)

Course suspension

See Course leave.

Course transfer

A transfer occurs when a student changes from one course in the University to another course in the University without the requirement for an application and selection process (e.g. from a PhD to a master's program in the same faculty).

Credit

The recognition of previous studies successfully completed at this University, or another university or tertiary institution recognised by the University of Sydney, as contributing to the requirements of the course to which the applicant requesting such recognition has been admitted. Credit may be granted as specified credit or non-specified credit.

Specified credit
The recognition of previously completed studies as directly equivalent to units of study.

Non-specified credit
A "block credit" for a specified number of credit points at a particular level. These credit points may be in a particular subject area but are not linked to a specific unit of study.
(See also AAM - Annual average mark, Waiver, Weighted average mark (WAM).)

Credit points

The value of the contribution each unit of study provides towards meeting course completion requirements. Each unit of study will have a credit point value assigned to it. The total number of credit points required for completion of award courses will be specified in the Senate Resolutions relevant to the award course.

Cross-institutional enrolment

An enrolment in units of study at one university to count towards an award course at another university. Cross-institutional enrolments incur a HECS liability or tuition fee charge at the institution at which the unit of study is being undertaken. Students pay compulsory subscriptions to one university only (usually their home university, i.e. the university which will award their degree). (See also Non-award course).

Course enrolment status

A student's enrolment status in a course is either "enrolled" or "not enrolled". "Not enrolled" reasons include: cancelled, suspended, under examination or terminated. (See also Cancellation, Candidature, Course leave, Enrolment, Enrolment variation, Terminated, Under examination.)

D

The Data Audit Committee's role is to oversee the integrity and accuracy of the course and unit of study data as strategic University data. It also advises the Academic Board on suggested policy changes related to course and unit of study data. A sub-committee of the VCAC Enrolment Working Party, it is chaired by the Registrar, with membership including the deans, the Student Centre, FlexSIS and the Planning Support Office.

Deadlines (Enrolment variations)

(See Enrolment variation.)

Deadlines (Fees)

The University has deadlines for the payment of fees (e.g. HECS, compulsory subscriptions, course fees). Students who do not pay fees by these deadlines may have their enrolment cancelled or they may have a barrier placed on the release of their record. (See also Barrier, Cancellation.)

Dean

The head of a faculty, or the principal or director of a college (such as the Sydney Conservatorium of Music or the Sydney College of Arts).

Dean's certificate

A statement from the Dean certifying that all requirements, including fieldwork and practical work, have been met and that the student is eligible to graduate. Not all faculties use Dean's Certificates. In faculties that do, qualified students have "Dean's Certificate" noted on their academic record.

Deferment (Deferral)

See Admission (deferment), Course leave.

Degree

See also Award course, Bachelor's degree.

Delivery mode

Indicates how students receive the instruction for a unit of study. The delivery mode must be recorded for each unit as distinct from the attendance mode of the student, i.e. an internal student may take one or more units by distance mode and an external student may attend campus for one or more units.

Distance education
Where subject matter is delivered in a more flexible manner, such as correspondence notes, and student may only attend campus if required. (See also Extended semester, Distance education, International - off shore.)

Intensive on campus
Core content is delivered with support learning in an intensive (one or more days) format on campus. Participation is usually compulsory. Previously this may have been called residential, block mode, or weekend workshop.

On campus (normal)
Attendance of scheduled lectures, tutorials etc at a campus of the University.

Department

(See School.)

Department of Education, Science and Training (DEST)
The Commonwealth Government department responsible for higher education.

Differential HECS
(See Higher Education Contribution Scheme (HECS).)

Diploma
The award granted following successful completion of diploma course requirements. A diploma course usually requires less study than a degree course. (See also Award course.)

Direct admissions
For some courses, applications may be made directly to the University. Applications are received by faculties or the International Office, and considered by the relevant department or faculty body. Decisions are recorded and letters are forwarded to applicants advising them of the outcome. (See also Admission, UAC.)

Disability information
Students may inform the University of any temporary or permanent disability which affects their life as a student. Disability information is recorded but it is only available to particular authorised users because of its sensitive nature.

Disciplinary action
Undertaken as the result of academic or other misconduct, e.g. plagiarism, cheating, security infringement, criminal activity.

Discipline
A defined area of study, for example, chemistry, physics, economics.

Discipline group
A DEST code used to classify units of study in terms of the subject matter being taught or being researched.

Discontinuation (course)
(See Enrolment variation.)

Discontinuation (unit of study)
(See Enrolment variation.)

Dissertation
A written exposition of a topic which may include original argument substantiated by reference to acknowledged authorities. It is a required unit of study for some postgraduate award courses in the faculties of Architecture and Law.

Distance education
Where a student does not attend campus on a daily basis for a given course or unit of study. (See also Delivery mode, Extended semester.)

Doctorate
A high-level postgraduate award. A doctorate course normally involves research and coursework; the candidate submits a thesis that is an original contribution to the field of study. Entry to a doctorate course often requires completion of a Master's degree course. Note that the doctorate course is not available in all departments at the University. (See also Award course, PhD.)

Domestic Student
A student who is not an international student. See also Local student.)

Double degree
A double degree is a program where students are permitted by participating faculties (and/or by specific resolutions within a single award) to transfer between courses in order to complete two awards.

Downgrade
Where a student enrolled in a PhD reverts to a master's by research, either on the recommendation of the University on the basis that the research they are undertaking is not at an appropriate level for a PhD; or at the student's own request, for personal or academic reasons.

E

Earliest date
(See Research candidature.)

Equivalent full-time student unit (EFTSU)
The equivalent full-time student unit (EFTSU) is a measure of student load based on the workload for a student undertaking a full year of study in a particular course. A student is then recorded as having generated one EFTSU. (See also Load, Stage.)

Equivalent full-time student load (EFTSL)
The equivalent full-time student load (EFTSL) for a year. It is a measure, in respect of a course of study, of the study load for a year of a student undertaking that course of study on a full-time basis. (effective 1 January 2005)

Embedded courses
Award courses in the Graduate Certificate, Graduate Diploma and Master's degree by coursework sequence which allow unit of study credit points to count in more than one of the awards, e.g. the Graduate Certificate in Information Technology, Graduate Diploma in Information Technology and Master of Information Technology.

Enrolment
A student enrols in a course by registering with the supervising faculty in the units of study to be taken in the coming year, semester or session.

Commencing
An enrolment is classified as commencing if a student has enrolled in a particular degree or diploma for the first time.

Continuing
Students already in a course at the University re-enrol each year or semester. Most continuing students are required to pre-enrol. (See also Pre-enrolment.)

Enrolment list
A list of all currently enrolled students in a particular unit of study. (See also Unit of study.)

Enrolment status
(See Course enrolment status.)

Enrolment Variation
Students may vary their enrolment at the beginning of each semester. Each faculty determines its deadlines for variations, but HECS liability depends on the HECS census date. (See also HECS.)

Examination
A set of questions or exercises evaluating on a given subject given by a department or faculty. (See Examination period, Assessment.)

Examination period
The time set each semester for the conduct of formal examinations.

Examiner (Coursework)
The person assessing either the written/oral examination, coursework assignments, presentations, etc of a student or group of students.

Exchange student
Either a student of the University of Sydney who is participating in a formally agreed program involving study at an overseas university or an overseas student who is studying here on the same basis. The International Office provides administrative support for some exchanges.

Exclusion
A faculty may ask a student whose academic progress is considered to be unsatisfactory to "show good cause" why the student should

be allowed to re-enrol. If the faculty deems the student's explanation unsatisfactory, or if the student does not provide an explanation, the student may be excluded either from a unit of study or from a course or faculty. An excluded student may apply to the faculty for permission to re-enrol. Normally, at least two years must have elapsed before such an application would be considered.

University policy relating to exclusion is set out in the University Calendar. (See also Progression, Senate appeals.)

Exemption

A decision made at a sub-unit of study level to allow a student to complete a unit of study without also completing all the prescribed components of coursework and/or assessment. (See also Credit, Waiver.)

Expulsion

The ultimate penalty of disciplinary action is to expel the student from the University. The effect of expulsion is:

- the student is not allowed to be admitted or to re-enrol in any course at the University;
- the student does not receive their results;
- the student is not allowed to graduate; and
- the student does not receive a transcript or testamur.

Extended semester

A distance-learning student may be allowed more time to complete a module or program if circumstances beyond the student's control, e.g. drought, flood or illness, affect the student's ability to complete the module or program in the specified time. (See also Distance education.)

External

(See Attendance mode, Distance education.)

External transcript

A certified statement of a student's academic record printed on official University security paper. It includes the student's name, any credit granted, all courses the student was enrolled in and the final course result and all units of study attempted within each course together with the result. It also acknowledges prizes the student has received. Marks can be included or omitted, as required. (See also Academic transcript, Internal transcript.)

F

Faculty

A formal part of the University's academic governance structure, consisting mainly of academic staff members and headed by a dean, which is responsible for all matters concerning the award courses that it supervises. Usually, a faculty office administers the faculty and student or staff inquiries related to its courses. The University Calendar sets out the constitution of each of the University's faculties. (See also Board of Studies, Supervising faculty.)

Fee-paying students

Students who pay tuition fees to the University and are not liable forHECS.

Flexible learning

(See Delivery mode, Distance education.)

Flexible start date

Full fee-paying distance students are not restricted to the same enrolment time frames as campus-based or HECS students.

Flexible Student Information System (FlexSIS)

The computer-based Flexible Student Information System at the University of Sydney. FlexSIS holds details of courses and units of study being offered by the University and the complete academic records of all students enrolled at the University.

Formative assessment

(See Assessment.)

Full-time student

(See also Attendance pattern, EFTSU.)

G

Grade

The outcome for a unit of study linked with a mark range. For example, a mark in the range 85-100 attracts the grade "high distinction" ("HD"). (See also Mark.)

Grade	Description	Comment
HD	High distinction	A mark of 85-100.
D	Distinction	A mark of 75-84.
CR	Credit	A mark of 65-74.
P	Pass	A mark of 50-64.
R	Satisfied requirements	This is used in pass/fail only outcomes.
UCN	Unit of study continuing	Used at the end of semester for units of study that have been approved to extend into a following semester. This will automatically flag that no final result is required until the end of the last semester of the unit of study.
PGDN	Pass (concessional)	A mark of 46-49. Use of this grade is restricted to those courses that allow for a concessional pass of some kind to be awarded. A student may re-enrol in a unit of study for which the result was PCON. Each faculty will determine and state in its course regulations what proportion, if any, may count - e.g. "no more than one sixth of the total credit points for a course can be made up from PCON results".
F	Fail	A mark of 0-49. This grade may be used for students with marks of 46-49 in those faculties which do not use PCON.
AF	Absent fail	Includes non-submission of compulsory work (or non-attendance at compulsory labs, etc) as well as failure to attend an examination.
W	Withdrawn	Not recorded on an external transcript. This is the result that obtains where a student applies to discontinue a unit of study by the HECS census date (i.e. within the first four weeks of enrolment).
DNF	Discontinued - not to count as failure	Recorded on external transcript. This result applies automatically where a student discontinues after the HECS census date but before the end of the seventh week of the semester (or before half of the unit of study has run, in the case of units of study which are not semester-length). A faculty may determine that the result of DNF is warranted after this date if the student has made out a special case based on illness or misadventure.
INC	Incomplete	This result is used when examiners have grounds (such as illness or misadventure) for seeking further information or for considering additional work from the student before confirming the final result. Except in special cases approved by the Academic Board, this result will be converted to a normal permanent passing or failing grade either: by the dean at the review of examination results conducted pursuant to section 2 (4) of the Academic Board policy "Examinations and Assessment Procedures"; or automatically to an AF grade by the third week of the immediately subsequent academic session. Deans are authorised to approve the extension of a MINC grade for individual students having a valid reason for their incomplete status.
UCN	Incomplete	A MINC or INC grade is converted, on the advice of the dean, to UCN when all or many students in a unit of study have not completed the requirements of the unit. The students may be engaged in practicum or clinical placements, or in programs extending beyond the end of semester (e.g. Honours).

Graduand

A student who has completed all the requirements for an award course but has not yet graduated. (See also Graduation, Potential graduand.)

Graduate

A person who holds an award from a recognised tertiary institution. (See also Graduand, Graduation.)

Graduate Certificate

(See Award course.)

Graduate Diploma

(See Award course.)

Graduation

The formal conferring of awards either at a ceremony or in absentia. (See also In absentia, Potential graduand.)

Graduation ceremony

A ceremony where the Chancellor confers awards upon graduands.

Group work

Means a formally established project to be conducted by a number of students in common, resulting in a single piece of assessment or a number of associated pieces of assessment. (See also Legitimate cooperation.)

H

Head of department (HOD)

The head of the academic unit which has responsibility for the relevant unit of study, or equivalent program leader.

Higher doctorates

See Award course.

HECS (Higher Education Contribution Scheme)

All students, unless they qualify for an exemption, are obliged to contribute towards the cost of their education under the Higher Education Contribution Scheme. These contributions are determined annually by the Commonwealth Government. This scheme will cease in its current form from 1 January, 2005.

Honorary degrees

A degree *honoris causa* (translated from the Latin as "for the purpose of honouring") is conferred on a person whom the University wishes to honour. Long-standing full-time members of the University's academic staff who are not graduates of the University may be considered by Senate, upon their retirement, for admission ad eundem gradum, to an appropriate degree of the University.

Honours

Some degrees may be completed "with Honours". This may involve either the completion of a separate Honours year or additional work in the later years of the course or meritorious achievement over all years of the course. Honours are awarded in a class (Class I, Class II - which may have two divisions or, Class **III).**

NSW Higher School Certificate (HSC)

The NSW Higher School Certificate (HSC), which is normally completed at the end of year 12 of secondary school. The UAI (Universities Admission Index) is a rank out of 100 that is computed from a student's performance in the HSC.

I

In absentia

Latin for "in the absence of". Awards are conferred in absentia when graduands do not, or cannot, attend the graduation ceremony scheduled for them. Those who have graduated in absentia may later request that they be presented to the Chancellor at a graduation ceremony. (See also Graduation.)

Instrumental supervisor / teacher

All students at the Sydney Conservatorium of Music and BMus students on the Camperdown Campus have an instrumental teacher appointed. (See also Advisor, Associate supervisor, Research supervisor, Supervision.)

Internal mode

(See Attendance mode.)

Internal transcript

A record of a student's academic record for the University's own internal use. It includes the student's name, student identifier (SID), address, all courses in which the student was enrolled and the final course result, and all units of study attempted within each course together with the unit of study result. (See also Academic transcript, External transcript.)

International student

Any student who is not an Australian or New Zealand citizen or a permanent resident of Australia is an international student. An international student is required to hold a visa that allows study in Australia and may be liable for international tuition fees.

Fee-paying

A private International Student who is liable to pay tuition fees for their studies with the University.

Fee-paying - Outgoing exchange

An international fee-paying student undertaking short term study at a recognised overseas institution with which the University has a student exchange agreement. Exchange study counts towards the student's University of Sydney award and students remain enrolled in their University of Sydney course during the period of exchange.

International - cross-institutional

An international fee paying student undertaking non-award study at the University on a cross-institutional basis. They are liable to pay fees for the study they undertake at the University, but there is no compliance reporting requirement, which rests with their "home" institution.

International — Sponsored

A private international student who is fully sponsored for his/her tuition; his/her sponsorship may also cover Overseas Health Cover and Compulsory Subscriptions.

Offshore studies

International offshore students undertake their program of study at one of the University's offshore campuses and hence do not enter Australia; therefore they do not require a visa. The are distinct from international students who are on outbound exchange programs as they never enter Australia during their program of study.

Short course

An international fee-paying student undertaking a short course with the University of Sydney comprising such programs as international development programs, executive training or study visits. The study undertaken by these students is non-award and generally a student visa is not required.

Sponsored award

An international student sponsored by the Australian government, undertaking a program of study at the University. Currently Australian Development Scholarships holders, funded by AusAID, are the only students in this category. These students are fully sponsored for their tuition and other costs such as travel and health cover, and are paid a stipend.

Study Abroad

An international student who is undertaking short-term study at the University under the Study Abroad scheme. Study Abroad students must have completed at least one year of study towards a degree at a recognised institution in their home country and are continuing towards the degree of their home institution.

(See also Local student, Student type.)

J

Joining fee

Students enrolling for the first time pay a joining fee in addition to the standard subscription for the University of Sydney Union or equivalent student organisation. (See also Compulsory subscription.)

L

Leave

See Course leave.

Legitimate cooperation

Any constructive educational and intellectual practice that aims to facilitate optimal learning outcomes through interaction between students. (See also Group work.)

Life membership

Under some circumstances (e.g. after five full-time years of enrolments and contributions) students may be granted life membership of various organisations. This means they are exempt from paying yearly fees. (See also Compulsory subscriptions.)

Load

The sum of the weights of all the units of study in which a student is enrolled. The weight is determined by the proportion of a full year's work represented by the unit of study in the degree or diploma for which the student is a candidate. Student load is measured in terms of Equivalent full-time student units (EFTSU). (See also Equivalent full-time student units (EFTSU).)

Local Student

Either an Australian or New Zealand citizen or Australian permanent resident. New Zealand citizens are required to pay their Higher Education Contribution Scheme (HECS) fees upfront. (See also Domestic student, HECS, International student.)

M

Major

A field of study, chosen by a student, to represent their principal interest this would consist of specified units of study from later stages of the award course. Students select and transfer between majors by virtue of their selection of units of study. One or more majors may be awarded upon the graduands assessment of study. (See also Award course, Minor, Stream.)

Major timetable clash

The term used when a student attempts to enrol in units of study which have so much overlap in the teaching times that it has been decided that students must not enrol in the units simultaneously.

Mark

An integer (rounded if necessary) from 0 to 100 indicating a student's performance in a unit of study. (See also Grade.)

Master's degree

A postgraduate award. Master's degree courses may be offered by coursework, research only or a combination of coursework and research. Entry to the course often requires completion of an honours year at an undergraduate level. (See also Award course.)

Method of candidature

A course is either a research course or a coursework course and so the methods of candidature are "research" and "coursework". (See also Course - coursework, Course - research.)

Minor

Studies undertaken to support a Major. Requiring a smaller number of credit points than a major students select and transfer between minors (and majors) by virtue of their selection of units of study. One or more minors may be awarded upon the graduand's assessment of study. (See also Award course, Major, Stream.)

Mixed mode

(See Attendance mode.)

Mutually exclusive units of study

(See Prohibited combinations of units of study.)

N

Non-award course

(See Course.)

Non-standard session

A teaching session other than the standard February and August sessions - e.g. Summer School, in which units of study are delivered and assessed in an intensive mode during January. (See also Semester, Session.)

O

Orientation Week

Orientation or "O Week", takes place in the week before lectures begin in Semester One. During O Week, students can join various clubs, societies and organisations, register for courses with departments and take part in activities provided by the University of Sydney Union.

P

Part-time student

(See Attendance mode, Attendance pattern, Equivalent full-tme student units (EFTSU).)

Permanent home address

The address used for all official University correspondence with a student, both inside and outside of semester time (e.g. during semester breaks), unless the student provides a different overridden by semester address for use during the semester. (See also Semester address.)

PhD

The Doctor of Philosophy (PhD) and other doctorate awards are the highest awards available at the University. A PhD course is normally purely research-based; the candidate submits a thesis that is an original contribution to the field of study. (See also Award course, Doctorate.)

Plagiarism

Presenting another person's ideas, findings or work as one's own by copying or reproducing them without the acknowledgement of the source. (See also Academic dishonesty.)

Postgraduate

A term used to describe a course leading to an award such as graduate diploma, a Master's degree or PhD which usually requires prior completion of a relevant undergraduate degree (or diploma) course. A "postgraduate" is a student enrolled in such a course. (See also Course - Coursework, Course - Research)

Postgraduate Education Loans Scheme (PELS)

An interest-free loans facility for eligible students who are enrolled in fee-paying, postgraduate non-research courses. It is similar to the deferred payment arrangements available under the Higher Education Contribution Scheme (HECS). This scheme will cease in this manner from 1 January, 2005, and will be replaced by the FEE-HELP scheme.

Potential graduand

A student who has been identified as being eligible to graduate on the satisfactory completion of their current studies. (See also Graduand, Graduation.)

Pre-enrolment

Pre-enrolment - also known as provisional re-enrolment - takes place in October, when students indicate their choice of unit of study enrolment for the following year. After results are approved, pre-enrolment students are regarded as enrolled in those units of study for which they are qualified. Their status is "enrolled" and remains so provided they pay any money owing and comply with other requirements by the due date. Students who do not successfully pre-enrol in their units of study for the next regular session are required to attend the University on set dates during the January/February enrolment period. (See also Enrolment.)

Prerequisite

A unit of study that is required to be successfully completed before another unit of study can be attempted. Prerequisites can be mandatory (compulsory) or advisory. (See also Assumed knowledge, Corequisite, Waiver, Qualifier.)

Prizes

Awarded in recognition of outstanding performance, academic achievement or service to the community or University.

Probationary candidature

A student who is enrolled in a postgraduate course on probation for a period of time up to one year. The head of department is required to consider the candidate's progress during the period of probation and make a recommendation for normal candidature or otherwise to the faculty.

Professional practice

Students undertake placement in a professional practice as a part of their course requirements. May require University approved supervision. Professional placements are located in a wide range of professional practices environments, and may not require additional criteria to be fulfilled.

Progression

Satisfactory progression is satisfying all course and faculty rules (normally assessed on an annual basis) to enable the completion of the chosen award within the (maximum) completion time allowed. (See also Exclusion.)

Prohibited combinations of units of study

When two or more units of study contain a sufficient overlap of content, enrolment in any one such unit prohibits enrolment in any other identified unit. (See also unit of study.)

Provisional re-enrolment

See Pre-enrolment.

Q

Qualification

An academic attainment recognised by the University.

Qualifier

A mandatory (compulsory) prerequisite unit of study which must have a grade of pass or better. (See also Assumed knowledge, Corequisite, Prerequisite, Waiver.)

R

Recycling

The submission for assessment of one's own work, or of work which substantially the same, which has previously been counted towards the satisfactory completion of another unit of study, and credited towards a university degree, and where the examiner has not been informed that the student has already received credit for that work.

Registration

In addition to enrolling with the faculty in units of study, students must register with the department responsible for teaching each unit. This is normally done during Orientation Week. Note that unlike enrolment, registration is not a formal record of units attempted by the student.

Research course

See Course - research.

Research supervisor

A supervisor is appointed to each student undertaking a research postgraduate degree. The supervisor will be a full-time member of the academic staff or a person external to the University recognised for their association with the clinical teaching or the research work of the University. A research supervisor is commonly referred to as a supervisor. (See also Advisor, Associate supervisor, Instrumental supervisor/teacher, Supervision.)

Result processing

Refers to the processing of assessment results for units of study. For each unit of study, departments tabulate results for all assessment activities and assign preliminary results. (See also Assessment, Formative assessment, Examination period, Summative assessment)

Result processing schedule

The result processing schedule will be determined for each academic cycle. All departments and faculties are expected to comply with this schedule. (See also Assessment, Examination period, Result processing.)

Result

The official statement of a student's performance in each unit of study attempted as recorded on the academic transcript, usually expressed as a mark and grade. (See also Grade, Mark.)

Research Training Scheme (RTS)

The RTS provides Commonwealth-funded higher degree by research (HDR) students with an "entitlement" to a HECS exemption for the duration of an accredited HDR course, up to a maximum period of four years full-time equivalent study for a doctorate by research and two years full-time equivalent study for a master's by research.

S

Scholarships

Financial or other form of support made available to enable students to further their studies. (See also Bursaries.)

School

A school or academic unit shall encourage and facilitate teaching, scholarship and research and coordinate the teaching and examining duties of members of staff in the subjects or courses of study with which it is concerned.

Semester

A half-yearly teaching session whose dates are determined by the Academic Board. Normally all undergraduate sessions will conform to the semesters approved by the Academic Board. Any offering of an undergraduate unit not conforming to the semester dates (non-standard session) must be given special permission by the Academic Board. (See also Session, Non-standard session.)

Semester address

The address to which all official University correspondence is sent during semester time, if it is different to the permanent address.

Senate

The governing body of the University. (See the University Calendar for more details of its charter and powers.)

Senate appeals

Senate appeals are held for those students who, after being excluded by a faculty from a course, appeal to the Senate for readmission. While any student may appeal to the Senate against an academic decision, such an appeal will normally be heard only after the student has exhausted all other avenues, i.e. the department, faculty, board of study and, in the case of postgraduates, the Committee for Graduate Studies. (See also Exclusion.)

Session

Any period of time during which a unit of study is taught. A session differs from a semester in that it need not be a six-month teaching period, but it cannot be longer than six months. Each session maps to either Semester One or Two for DEST reporting purposes. Session offerings are approved by the relevant dean, taking into account all the necessary resources, including teaching space and staffing. The Academic Board must approve variation to the normal session pattern. (See also Semester, Non-standard teaching period.)

Session address

(See Semester address.)

Short course

A fee paying student undertaking a short course with the University of Sydney comprising professional development, executive training etc. The study undertaken by these students is a non-award course.

Show cause

(See Progression, Exclusion.)

Special consideration

Candidates who suffer serious illness or misadventure which may affect performance in any assessment, may request that they be given special consideration in relation to the determination of their results.

Sponsorship

Financial support of a student by a company or government body.

Stage

A normal full-time course of study taken in a year. (See also Course rules, EFTSU, Progression.)

Stream

A defined award course, which requires the completion of set units of study as specified by the course rules for the particular stream, in addition to the core program specified by the course rules. A stream will appear with the award course name on testamurs, e.g. Bachelor of Engineering in Civil Engineering (Construction Management). (See also Award course, Major, Minor.)

Student

Student means a person enrolled as a candidate for an award course or unit of study.

Student identifier (SID)

A nine-digit number which uniquely identifies a student at the University.

Student ID Card

All students who enrol are issued with an identification card. The card includes the student's name, SID, the course code, a library borrower's bar code and a passport-style photo. The card identifies the student as eligible to attend classes and must be displayed at formal examinations. It must be presented to secure student concessions and to borrow books from all sections of the University Library.

Student progress rate (SPR)

A calculation which measures the rate at which load undertaken is passed annually in each award program.

Student type

Student type identifies whether a student is local or international and the type of study the student is undertaking. (See also International student, Domestic student, Exchange student.)

Study Abroad program

A scheme administered by the International Office which allows international students who are not part of an exchange program to take units of study at the University of Sydney, but not towards an award program. In most cases the units of study taken here are credited towards an award at their home institution. (See also Exchange student.)

Subject area

A unit of study may be associated with one or more subject areas. The subject area can be used to define prerequisite and course rules, e.g. the unit of study "History of Momoyama and Edo Art" may count towards the requirements for the subject areas "Art History and Theory" and "Asian Studies".

Summative assessment

See Assessment.

Summer School

(See Sydney Summer School.)

Supervising faculty

The faculty which has the responsibility for managing the academic administration of a particular course, i.e. the interpretation and administration of course rules, approving students' enrolments and variations to enrolments. Normally the supervising faculty is the faculty offering the course. However, in the case of combined courses, one of the two faculties involved will usually be designated the supervising faculty. Further, in the case where one course is jointly offered by two or more faculties (e.g. the Liberal Studies course), a joint committee may make academic decisions about candidature and the student may be assigned a supervising faculty for administration.

Supervision

Refers to a one-to-one relationship between a student and a nominated member of the academic staff or a person specifically appointed to the role. (See also Advisor, Associate supervisor, Instrumental supervisor/teacher, Research supervisor.)

Suppression of results

Results for a particular student can be suppressed by the University when the student has an outstanding debt to the University; or the student is facing disciplinary action. A student may also request a suppression for personal reasons.

Suspension

(See Course leave.)

Sydney Summer School

A program of accelerated, intensive study running for approximately six weeks during January and February each year. Both undergraduate and postgraduate units are offered. Summer School provides an opportunity for students at Sydney and other universities to catch up on needed units of study, to accelerate completion of a course or to undertake a unit that is outside their award course. All units attract full fees and enrolled students are also liable for compulsory subscriptions. Some fee-waiver scholarships are available.

T

Teaching department

(See School.)

Teaching end date

Official finish date of formal timetabled classes.

Teaching start date
Official commencement date of formal timetabled classes.

Terminated
Term used when a student's candidature has been officially closed because they are not able to complete the Course requirements. (See also Candidature.)

Testamur
A certificate of award provided to a graduand, usually at a graduation ceremony. The Award conferred will be displayed along with other appropriate detail.

Thesis
A major work that is the product of an extended period of supervised independent research. (See also Course -- research.)

Timetable
The schedule of lectures, tutorials, laboratories and other academic activities that a student must attend.

Transcript
(See Academic transcript.)

Transfer
(See Course transfer.)

Tuition fees
Tuition fees may be charged to students in designated tuition fee-paying courses. Students who pay fees are not liable for HECS.

U

Universities Admissions Centre (UAC)
The UAC receives and processes applications for admission to undergraduate courses at recognised universities in NSW and the ACT. Most commencing, local undergraduate students at the University apply through the UAC.

Universities Admission Index (UAI)
A measure of overall academic achievement in the HSC that assists universities in ranking applicants for university selection. The UAI is based on the aggregate of scaled marks in ten units of the HSC, and is a number between 0.00 and 100.00 with increments of 0.05.

Under examination
Indicates that a research student has submitted their written work (thesis) for assessment, and is awaiting the finalisation of the examiners' outcome and recommendation.

Undergraduate
A term used to describe both a course leading to a diploma or bachelor's degree and a student enrolled in such a course.

Unit of study
Unit of study or unit means a stand-alone component of an award course. Each unit of study is the responsibility of a department. (See also Prohibited combinations of unit of study.)

Unit of study enrolment status
The enrolment status indicates whether the student is still actively attending the unit of study (i.e. currently enrolled) or is no longer enrolled. (See also Discontinuation or Cancellation.)

Unit of study level
Units of study are divided into Junior, Intermediate, Senior, Honours, Year 5, and Year 6. Most majors consist of 32 Senior credit points in a subject area (either 3000 level units of study or a mix of 2000 and 3000 level units of study).

University
Unless otherwise indicated, University in this document refers to the University of Sydney.

University Medal
A faculty may recommend the award of a University Medal to a student qualified for the award of an undergraduate honours degree (or some master's degrees), whose academic performance is judged to be outstanding.

Upgrade
Where a student enrolled in a Master's by research course is undertaking research at such a standard that either the University recommends that the student upgrade their degree to a PhD, or the student seeks to upgrade to a PhD and this is supported by the University.

USYDnet
The University of Sydney's intranet system. It provides access to other services such as directories (maps, staff and student, organisations), a calendar of events (to which staff and students can submit entries), and a software download area.

V

Variation of enrolment
(See Enrolment variation.)

Vice-Chancellor and Principal
The chief executive officer of the University, responsible for its leadership and management. The Vice-Chancellor and Principal is head of both academic and administrative divisions.

W

Waiver
In a prescribed course, a faculty may waive the prerequisite or corequisite requirement for a unit of study or the course rules for a particular student. Unlike credit, waivers do not involve a reduction in the number of credit points required for a course.
(See also Credit, Exemption.)

Winter School
An intensive session offered by the University during the mid-year break.

Weighted average mark (WAM)
This mark uses the unit of study credit point value in conjunction with an agreed "weight". The formula for this calculation is:

$$WAM = \frac{\sum (W_C \times M_C)}{\mathbf{Z(wy}}$$

Where Wc is the weighted credit point value - ie, the product of the credit point value and the level of weighting of 1, 2, 3, or 4 for a first, second, third or fourth year unit of study respectively; and where Mc is the greater of 45 or the mark out of 100 for the unit of study.

The mark is the actual mark obtained by the student for the unit of study, or in the case of a failing grade with no mark - 0. Pass/Fail assessed subjects and credit transfer subjects (from another institution) are excluded from these calculations; however, the marks from all attempts at a unit of study are included. (Effective from 1 January 2004.)

In addition, faculties may adopt other average mark formulae for specific progression or entry requirements. If such a formula is not specified in the faculty resolutions, the formula outlined above is used. (See also WAM weight.)

WAM weight

A weight assigned to each unit of study to assist in the calculation ofWAMs.

Y

Year of first enrolment (YFE)

The year in which a student first enrols at the University. (See also Commencement date.)

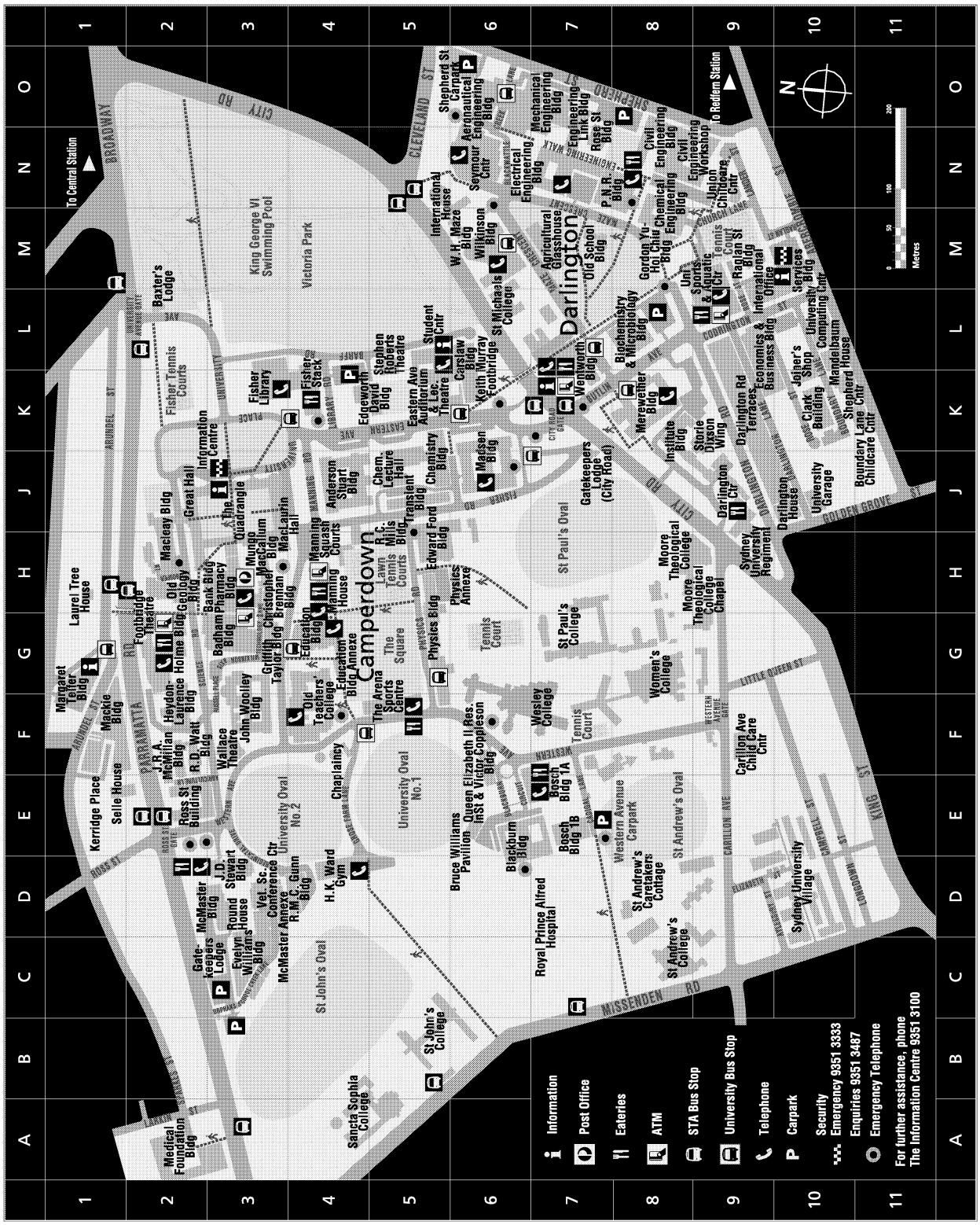
Youth Allowance

Youth Allowance is payable to a full-time student or trainee aged 16-24 years of age who is enrolled at an approved institution such as a school, college, TAFE or university, and undertaking at least 15 hours a week face-to-face contact.

Index

The following information is a printed version of the information available through Handbooks Online, on the University of Sydney website. Please visit "http://www.usyd.edu.au/handbooks/".

Camperdown / Darlington campus map



University Buildings

06 Aeronautical Engineering Building
J4 Anderson Stuart Building
G3 Badham Building
H3 Bank Building
L2 Baxter's Lodge
L8 Biochemistry and Microbiology Building
E6 Blackburn Building
E7 Bosch Building 1A
E7 Bosch Building IB
E6 Bruce Williams Pavilion
L6 Carslaw Building
F4 Chaplaincy
M8 Chemical Engineering Building
J5 Chemistry Building
H3 Christopher Brennan Building
N8 Civil Engineering Building
N9 Civil Engineering Workshop
K10 Clark Building
J9 Darlington Centre
J10 Darlington House
K9 Darlington Road Terraces
K5 Eastern Avenue Auditorium and Lecture Theatre Complex
L9 Economics and Business Building
K4 Edgeworth David Building
G4 Education Building
G4 Education Building Annexe
H5 Edward Ford Building
N7 Electrical Engineering Building
N7 Engineering Link Building
C3 Evelyn Williams Building
K3 Fisher Library
K4 Fisher Library Stack
C3 Gatekeeper's Lodge
J7 Gatekeeper's Lodge (City Road)
M8 Gordon Yu-Hoi Chui Building
J2 Great Hall
G3 Griffith Taylor Building
D4 H.K.Ward Gymnasium
F2 Hey don-Laurence Building
G2 Holme Building
K8 Institute Building
N5 International House
F2 J.R.A.McMillan Building
D3 J.D.Stewart Building
F3 John Woolley Building
Fl Mackie Building
H3 MacLaurin Hall
H2 Macleay Building
Gl Margaret Telfer Building
J6 Madsen Building
H4 Manning House
H4 Manning Squash Courts
D3 McMaster Annexe
D3 McMaster Building
06 Mechanical Engineering Building
A2 Medical Foundation Building
K8 Merewether Building
H3 Mungo MacCallum Building
H2 Old Geology Building
M7 Old School Building
F4 Old Teachers' College
H3 Pharmacy Building
H6 Physics Annexe
G5 Physics Building
N8 P.N.R.Building
E6 Queen Elizabeth II Research Institute
H5 R.C.Mills Building
F2 R.D.Watt Building
D4 R.M.C.Gunn Building
M9 Raglan Street Building
N7 Rose Street Building
E2 Ross Street Building
G2 Science Road Cottage
El Selle House
M10 Services Building
N6 Seymour Centre
K10 Shepherd Centre
06 Shepherd Street Carpark
L5 Stephen Roberts Theatre
K9 Storie Dixson Wing
F5 The Arena Sports Centre
J3 The Quadrangle
J5 Transient Building
L10 University Computing Centre
J10 University Garage
M9 University Sports and Aquatic Centre
D3 Veterinary Science Conference Centre
E6 Victor Coppleson Building
F3 Wallace Theatre
K7 Wentworth Building
E7 Western Avenue Carpark
M6 W.H.Maze Building
M6 Wilkinson Building

Academic Colleges (offices)

H5 Health Sciences
F4 Humanities and Social Sciences
N8 Sciences and Technology

Childcare Centres

K1l Boundary Lane
F9 Carillon Avenue
HI Laurel Tree House
N9 Union

Colleges and Residential Accommodation

J10 Darlington House
K9 Darlington Road Terraces
N5 International House
L10 Mandelbaum House
A4 Sancta Sophia College
C8 St Andrew's College
B5 St John's College
L6 St Michael's College
G7 St Paul's College
El Selle House
D10 Sydney University Village
F7 Wesley College
G8 Women's College

Computer Access Centres (ITS)

G3 Brennan
G4 Education
K3 Fisher
N7 Link
L6 McGrath (Carslaw)
H3 Pharmacy

Cultural Venues

G2 Footbridge Theatre
H2 Macleay Museum
J3 Nicholson Museum
N6 Seymour Centre
K7 Sir Hermann Black Gallery
M6 Tin Sheds Gallery
J2 War Memorial Art Gallery

Faculties (offices)

F2 Agriculture
M6 Architecture
H3 Arts
K8 Economics and Business
G4 Education and Social Work
N7 Engineering
H5 Medicine
H3 Pharmacy
L6 Science
D3 Veterinary Science

Libraries

M6 Architecture
G3 Badham
H5 Burkitt-Ford
K3 Curriculum Resources
N8 Engineering
K3 Fisher
J6 Madsen
L6 Mathematics
E7 Medical
N6 Music
H6 Physics
H5 S chaeffer Fine Arts

Retail

H3 Australia Post Office
H3 Bank Building
J9 Darlington Centre
G2 Holme Building
H4 Manning House
F5 The Arena Sports Centre
M9 University Copy Centre
K7 University Health Service
M9 University Sports and Aquatic Centre
M9 University Co-op Bookshop
D3 Veterinary Hospital and Clinic
K7 Wentworth Building

Security

M10 Emergency Services
M10 Lost Property
J3 Information Centre
M10 Traffic and Parking

Sports and Recreational Venues

K2 Fisher Tennis Courts
D4 HK Ward Gymnasium
H5 Lawn Tennis Courts
H4 Manning Squash Courts
F5 The Arena Sports Centre
G5 The Square
E5 University Oval No1
E3 University Oval No2
M9 University Sports and Aquatic Centre

Unions and Associations (offices)

K7 Students' Representative Council (SRC)
M9 Sydney University Postgraduate Representative Association (SUPRA)
M9 Sydney University Sport
G2 University of Sydney Union

University Administration and Services

F3 Business Liaison Office
F1 Careers Centre
G1 Cashier
F1 Centre for Continuing Education
H3 Chancellor
L10 Computing Centre
H3 Development, Alumni Relations and Events
M10 Development Services
H2 Executive Offices
J3 Information Centre
L10 Information Technology Services
L9 International Office
G1 Personnel
M10 Printing Services (UPS)
H2 Publications Office
H3 Research Office
M10 Room Bookings and Venue Management
F1 Scholarships Unit
L5 Student Centre
G1 Student Housing
G4 Student Services Unit
K8 Summer School
C3 Veterinary Hospital and Clinic
H2 Vice-Chancellor

The University of Sydney

Faculty of Veterinary Science Handbook 2006

Amendments

Amendments

Please note that the following Handbook amendments should be read in conjunction with the 2006 Handbooks as published on www.usyd.edu.au/handbooks

- All amendments are listed by item number and referenced by the page to which they refer in the Handbook.
- The relevant Handbook and those amendments listed below are binding and final.
- Inquiries and questions relating to the information below should be directed to the relevant faculty.

Item	Amendment	Handbook page number
1	Under 'Camden Campus' Replace TBA with Imke Tammen	3
2	Under 'Research Development' Replace TBA with David Emery	3
3	Move 'Peter Thomson, MSC, …' (bottom right-hand column 'Senior Lecturers') to 'Associate Professors' position	3
4	Update 'Senior Lecturers' as follows: Julia Beatty, BSc(Hons) BVetMed PhD, FACVSc (Feline Medicine), MRCVS	3
5	Update 'Lecturers' as follows: Kate Bosward, BVSc BSc(Vet) PhD GradDip VetClinStud GradCert EducStud	3
6	Add to 'Sub Deans' *Animal Husbandry,* Dr Pietro Celi	3
		Authorised by Lee Mashman 03/04/06